



DOUBLE BAY PLANNING AND URBAN DESIGN STRATEGY BACKGROUND REPORT

October 2023



Acknowledgement of Country

Woollahra Council acknowledges the Gadigal and Birrabirragal people who are the traditional custodians of this land and pay respects to Elders past, present and emerging.

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CHAPTER 1 INTRODUCTION

1.1 Overview

This background report provides a summary of relevant literature case studies and contextual analysis that informed the development and finalisation of the Double Bay Centre Planning and Urban Design Strategy (the Strategy).

Our analysis of Double Bay included a literature review of the existing strategic planning framework, key policies, plans, guidelines and studies including:

- A Metropolis of Three Cities by Greater Sydney Commission (GSC) 2018
- The Eastern City District Plan by Greater Sydney Commission (GSC) 2018
- State Environmental Planning Policy No 65 (Design Quality of Residential Flat Development)
- Woollahra Local Strategic Planning Statement 2020
- Woollahra Local Environmental Plan 2014
- Woollahra Development Control Plan 2015
- Double Bay Place Plan 2014 & 2019
- Woollahra 2030 (Community Strategic Plan)
- Draft Woollahra Integrated Transport Study 2021
- Draft Woollahra Active Transport Plan 2022
- Draft Woollahra Municipal Recreation Strategy 2023.
- Double Bay Centre Pedestrianisation Study 2020
- Double Bay Centre Hydrogeological Study 2020
- Double Bay Centre Commercial Waste Management Study 2020
- Double Bay Centre Public Domain Strategy 2016, prepared by ASPECT Studios
- Double Bay Centre Public Domain Lighting Strategy 2016, prepared by Arup.
- Double Bay Centre Feasibility Assessment 2015 & 2018, prepared by Hill PDA
- Double Bay Centre Urban Design Strategy 2002, prepared by Hill Thalys Architecture and Urban Projects
- Woollahra Social and Cultural Plan 2018-2030
- Footway Dining Policy 2019
- Footway Dining Guidelines 2019
- Night Time Economy Policy 2019
- Kiaora Lands Redevelopment.

The analysis found in this background report includes:

- A literature review of the relevant strategic documents.
- An analysis of the building uses, streetscape character, movement and access network, and the public domain character.
- An assessment of urban design principles and built form strategies that respond to the development pressures in the Centre.

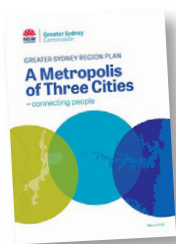
Best practice urban design principles and two case studies have been considered in more detail by this background report. The urban design principles and learnings from the case study outcomes have been incorporated throughout the development and finalisation of the Strategy.



CHAPTER 2

STRATEGIC CONTEXT LITERATURE REVIEW

2.1 A Metropolis of Three Cities 2018



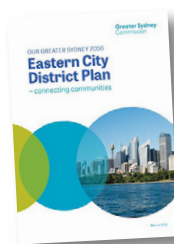
'A Metropolis of Three Cities' is the regional strategic plan for all of Greater Sydney. The Plan emphasises the important role of local centres which provide day-to-day goods and services close to where people live. The Plan recommends increasing residential development within

walking distance of centres with services and community facilities.

One of the Plan's main goals is to achieve a '30-minute' city where people can live and work within a '30-minute' distance of the metropolitan or strategic centres using public transport. According to the Plan, the 30-minute city aspiration will guide decision making on locations for new jobs and housing and the prioritisation of transport, health, schools and social infrastructure investments.

The Centre is located less than a '30-minute' distance to strategic centres and major job hubs including Sydney CBD and Bondi Junction (via public transport) and Randwick Health and Education Precinct (via private vehicle). Frequent public transport Train, Ferry and Bus services connect the Centre to surrounding Strategic Centres and Sydney CBD.

2.2 Eastern City District Plan 2018



Five District Plans set out a vision to implement 'A Metropolis of Three Cities'. The Eastern City District Plan applies to Double Bay.

The Plan identifies Double Bay as a local centre in close proximity to Edgecliff (Local

Centre) and Bondi Junction (Strategic Centre). The Plan has also identified the Centre for potential housing, retail and commercial growth opportunities within 400m walking catchment focusing on its public transport nodes.

Planning Priority E6: Creating and renewing great places and local centres, and respecting the District's heritage (Eastern City District Plan, P 46).

Principles for local centres- *Councils will need to consider which centres:*

- *will be appropriate to accommodate additional housing as part of their housing strategy*
- *will need to grow to provide for the required goods and services of the community*
- *may also need to grow to deliver other roles for the community, such as recreation, cultural, arts and community hubs.* (Eastern City District Plan, P 49).

The Centre's main strategic strengths in terms of its context are:

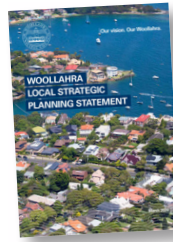
- Location- in close proximity to several major centres and regional job hubs, including City of Sydney, Randwick Health and Education Precinct, Edgecliff Local Centre, as well as major recreational facilities including The Royal Sydney Golf Club, Bondi Beach, Moore Park and Centennial Park.
- Access to a regional transport corridor (railway, bus and ferry).
- Location on New South Head Road which is the main spine connecting the Centre to its surroundings.
- Proximity to the harbour foreshore area (to the north of the study area) and a number of surrounding parks such as The Royal Sydney Golf Club and Cooper Park which are connected to the Greater Sydney Green Grid¹.

Double Bay is primely positioned in the Eastern City District to facilitate a highly liveable centre with increased and sustainable housing, jobs and services. This provides an opportunity for the Centre to contribute to the future growth of the District by creating additional housing and infrastructure such as services and accommodation.

Placemaking and a strong focus on our villages are central to Council's approach to promoting productivity and a prosperous local economy

Woollahra LSPS, P 50

2.3 Woollahra Local Strategic Planning Statement (LSPS) 2020



The Woollahra LSPS sets out a 20-year vision and planning priorities for the future of Woollahra LGA, including how we will:

- *Manage future growth, new technology and changing community needs.*
- *Conserve our heritage, villages, local character and environment.*
- *Ensure resilience and sustainability despite challenges such as climate change.*
- *Identify areas for further detailed strategic planning*
- *Link our plans to the implementation of the NSW Government's strategic plans (WLSPS, P 4).*

The Woollahra LSPS encourages a diverse range of housing choices in well-planned locations that are the right fit for our area and have easy access to public transport, jobs, and community services. This will help to enhance the vibrancy and attractiveness of our villages and destinations whilst protecting our distinctive village character through fine-grain human scale design.

One of the actions (43) of the Woollahra LSPS is to support the implementation of the Place Plans for centres including Double Bay Centre. This is to ensure that our villages adapt and thrive in response to change and remain a prosperous part of our local economy and community life.

Planning Priority 6 (Action 37) is to undertake community consultation on the Double Bay Centre Planning and Urban Design Study (2020) which includes provisions to promote fine-grain, human-scale, place driven outcomes that prioritise people, local character and place, solar access and design excellence (WLSPS, P 91).

The Woollahra LSPS also emphasises a number of actions in the Centre including potential redevelopment of Cross Street Car park (Action 13, short term) and improving Jamberoo Creek's health and ecosystem (Action 50, medium to long term).

2.4 Community Strategic Plan; Woollahra 2032



Woollahra 2032, a Community Strategic Plan (Strategic Plan) was adopted by Council on 27 June 2022. It represents Council's long term vision for Woollahra, identifies community priorities and aspirations and outlines strategies for their achievement.

The Strategic Plan establishes the following Vision: *"A thriving, inclusive, sustainable and resilient community that will benefit future generations."*

The Mission statement set down in the Strategic Plan is *"To lead climate action and promote respectful connections between people and place, so we can enhance, protect and celebrate Woollahra's beauty, heritage and quality of life, for the enjoyment of all."*

The Strategic Plan will do this by:

- *Prioritising carbon neutrality, environmental sustainability and community resilience to meet the challenges of climate change and social and economic wellbeing.*
- *Acting as custodians and stewards of our highlyvalued natural environment, including our harbour foreshore and marine ecosystems, and our leafy streetscapes and urban forest.*
- *Acknowledging the Aboriginal custodianship of Woollahra and fostering greater community understanding and appreciation of our Aboriginal history, heritage and culture.*
- *Celebrating the unique built heritage of our area by honouring it and furthering generational efforts to conserve it.*
- *Creating opportunities for community connection, engagement and partnerships so we can be proud of our shared commitment and achievements.*
- *Demonstrating our commitment to customer experience by being respectful, open, responsive, accountable and agile.*
- *Building long term financial sustainability so we are in the best economic position to provide for the diverse needs of our community now and in the future.*

The Plan establishes the following values:

- *Respect for people*
- *Integrity and excellent performance*
- *Professional, quality service*
- *Open, accountable communication.*

Council also commits to making access to engagement opportunities easy and equitable.

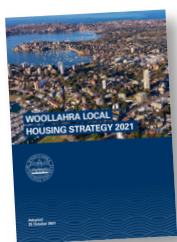
Through community engagement Council will:

- *Ensure Council decisions reflect the whole community by incorporating the community's views, concerns and aspirations into the decision-making process.*
- *Increase community confidence and trust in Council by building or improving relationships with the community through on-going, open and meaningful two-way conversations.*
- *Encourage the community to actively participate in civic life and to take responsibility for identifying and providing solutions to their concerns.*
- *Strengthen community capacity by building the community's understanding of how local government operates, how decisions are made, and how they can participate.*

Council values the community as a source of local expertise and actively seeks community feedback and input to help shape decisions that affect residents and people who visit, work or go to school in Woollahra. The feedback obtained from the community on the Draft Double Bay Centre Planning and Urban Design Strategy has been carefully considered with amendments made to the final Strategy in light of the comments.

The Strategy addresses the social, economic and civic focus areas found within the Strategic Plan and seeks to provide public places and spaces that enable a liveable and convenient place to live, work and visit.

2.5 Woollahra Local Housing Strategy (LHS) 2021



The Woollahra LHS establishes the long term housing vision for our local area. It recognises and responds to evidence to establish what types of housing will be needed for our future population and where it is best located. It sets out a housing target of 1,200 new dwellings

between 2016 and 2036, noting that Council cannot control the delivery of new dwellings by the market which are also influenced by a wide range of economic and other factors.

The Woollahra LHS identifies our vision is for housing that is designed to be the right fit for the character, heritage, landscape, and village scale of our area. Planning for future housing considers our constraints including access to public transport, tree canopy, heritage, natural hazards, and infrastructure capacity.

To implement the housing vision for the Woollahra LGA, the LHS establishes the following objectives:

1. *Sustain a diverse range of housing types and protect low density neighbourhoods and villages*
2. *Facilitate opportunities for housing growth in locations identified in the Woollahra Local Housing Strategy*
3. *Ensure housing conserves heritage, maintains local character and achieves design excellence*
4. *Ensure that new housing contributes to tree canopy and to long-term sustainability outcomes*
5. *Support increased supply of accessible housing and affordable rental housing.*

The vision and objectives of the LHS are supported by a number of housing actions. This Strategy is consistent with the aims of the LHS, specifically the following housing actions:

- *Action 2 - Encourage a range of housing choices through unit mix*
- *Action 4 - Ensure new housing does not adversely affect the business, employment and community role of our business zones*
- *Action 13 - Continue to conserve heritage and heritage conservation areas*
- *Action 14 - Encourage design excellence and high levels of amenity.*





CHAPTER 3 LOCAL CONTEXT LITERATURE REVIEW

FLOOR SPACE RATIO (FSR)

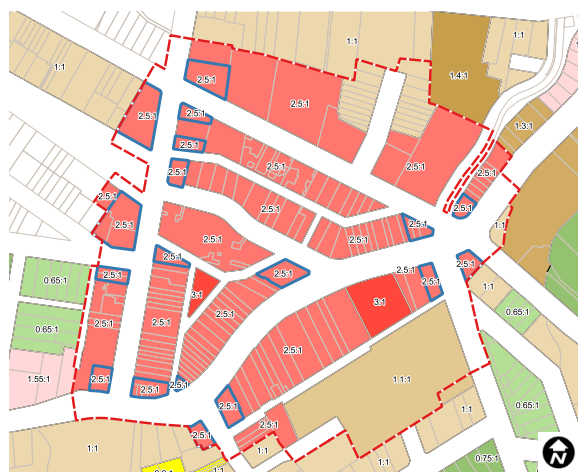
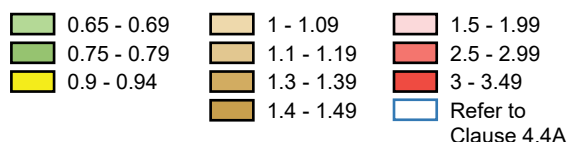


Figure 3. Floor Space Ratio Map



Most of the Centre has an FSR of 2.5:1. A number of prominent corner sites along New South Head Road and Bay Street have a greater FSR up to 3- 4.5:1. The purpose of this additional FSR is to encourage the development of prominent corner buildings, subject to achieving 'compatibility with the desired future character of the area in terms of building bulk and scale'.

HERITAGE

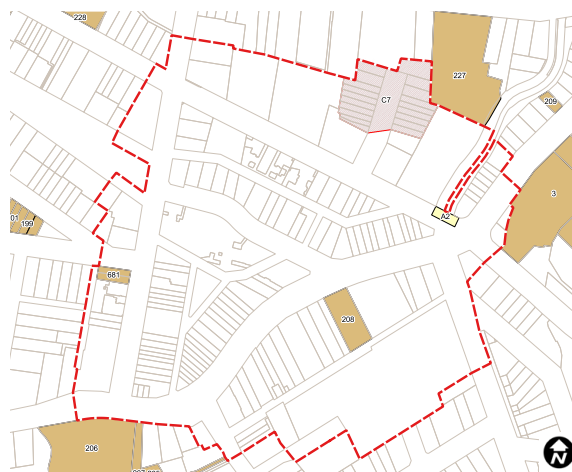
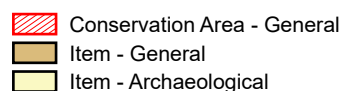


Figure 4. Heritage Map



The objectives of Clause 5.10 of Woollahra LEP are:

- (a) to conserve the environmental heritage of Woollahra,
- (b) to conserve the heritage significance of heritage items and heritage conservation areas, including associated fabric, settings and views,
- (c) to conserve archaeological sites,
- (d) to conserve Aboriginal objects and Aboriginal places of heritage significance

There are two local heritage items, one state heritage item (archaeological site) and one heritage conservation area that have been identified in the Woollahra LEP 2014. These are:

- Local item 681- Gaden House including interiors
- Local item 208- The Golden Sheaf Hotel and interiors
- State item A2- Double Bay Compressed Air Ejector Station
- Transvaal Avenue Heritage Conservation Area.

FLOOD PLANNING



Figure 5. Flood Planning Map

 Flood Planning Area

Most of the Centre is identified as Flood Planning Area. This affectation should be taken into account as part of any site future development.

Following the recommendations of a recent hydrogeological study undertaken by GHD Consultants for the Double Bay area, Council staff have progressed projects to strengthen our existing planning provisions to minimise the impacts of dewatering from the construction of underground structures. These projects are further discussed under section 3.8 of this Strategy.

ACID SULFATE SOILS

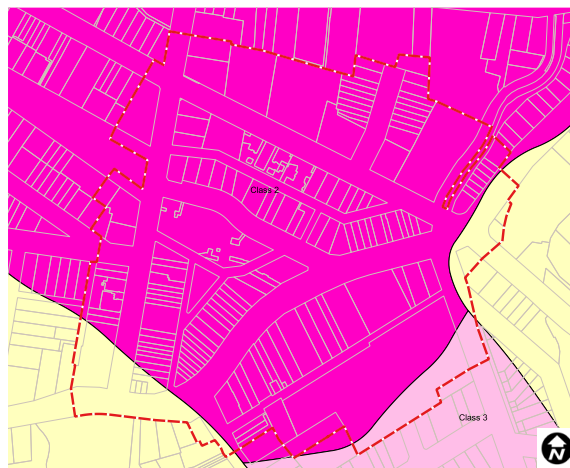



Figure 6. Acid Sulfate Soils Map

 Class 2

 Class 3

 Class 5

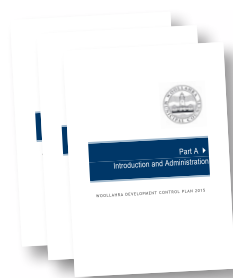
The majority of the Centre is identified as Class 2 which requires development consent for:

- *work below the natural ground surface*
- *works by which the watertable is likely to be lowered*

A small portion of the Centre on its southern boundary is Class 3, which requires development consent for '*works more than 1 metres below the natural ground surface, and works by which the watertable is likely to be lowered more than 1 metres below the natural ground surface*'.

The Centre also includes sites in Class 5. They require development consent for '*works within 500 metres of adjacent Class 1, 2, 3 or 4 land that is below 5 metres Australian Height Datum and by which the watertable is likely to be lowered below 1 metre Australian Height Datum on adjacent Class 1, 2, 3 or 4 land*'.

3.2 Current planning controls – Woollahra Development Control Plan 2015



Woollahra DCP 2015 establishes the detailed planning and design guidelines for development across the municipality. Chapter D5 of Woollahra DCP 2015 sets out detailed built form controls for the Centre.

Applicants seeking to redevelop or alter sites in the Centre must carefully consider the context of their proposal and identify the Built Form Envelopes, Control Drawings and Development Controls in this chapter.

The DCP's key built form objectives for the Centre are to:

- (O1) *Retain and enhance through block connections which allow pedestrians to move freely within the Double Bay Centre.*
- (O2) *To develop the particular qualities of different parts of the Double Bay Centre.*
- (O3) *Encourage a diverse mix of uses in the Double Bay Centre and maintain retail uses at ground level.*
- (O4) *Conserve and enhance the visual and environmental amenity of all buildings and places of heritage significance in the Double Bay Centre.*
- (O5) *Enhance the way development contributes to a sense of place.*
- (O6) *Ensure a high standard of architectural and landscape design in any new developments within the Double Bay Centre.*
- (O7) *To preserve and enhance the diversity of uses in the Double Bay Centre.*
- (O8) *Ensure that new development is compatible with the existing built form, and streetscape and village character.*
- (O9) *To encourage view sharing and individual privacy.*
- (O10) *To ensure new development is designed to be compatible with the heritage significance of listed heritage items.*

In addition, the Woollahra DCP 2015 sets out a number of strategies for the Centre in Section D5.3.2. A summary of the strategies that are most relevant to this Strategy are listed below:

Enhance and improve the public domain and the provision of public facilities. This aims to:

- Promote the role of public transport and encourage multiple uses of Council car park sites.

Ensure that the Centre maintains its commercial viability and competitive position within the Sydney retail market. This is to:

- Foster the existing mix of uses of the Centre.
- Encourage active retail frontage to laneways.
- Provide transition areas on the edge of the Centre to mediate between the Centre and residential areas beyond.
- Enhance the image of Double Bay as a premier boutique and designer fashion store destination.

Develop the particular qualities of different parts of the Centre. This is to:

- Intensify the urban scale and vitality of New South Head Road.
- Respond to the curved form of New South Head Road.
- Spatially define the distinctive street geometry of Knox Street.
- Reinforce the Bay Street promenade and vista to the harbour foreshore.
- Retain the scale of small lot development and street character of Bay Street south of Short Street.
- Create a new local focus on Kiaora Lane by completing the Kiaora Lands development which includes new retail shops, a library and public plaza.

Retain and enhance pedestrian access and amenity in and around the Centre. This is to promote:

- An intimate scale, active retail frontage and pedestrian amenity of the lanes and little streets in the Centre.
- Pedestrian environment through building setbacks, continuous awnings and permeable blocks.

Improve Double Bay's built form to provide appropriate definition to the public domain. This encourages:

- A coherent street scale and a variety of building types.
- New developments compatible with the existing built, streetscape and village character.
- Presence of corner buildings addressing the public domain, recognising their importance in the Centre in terms of street vistas, urban scale and identity.

- Vehicle access from rear lanes, while retaining active use and addressing to those lanes.
- 'Small shop' urban character.

Conserve and enhance the visual and environmental amenity of all buildings and places of heritage significance in the centre. This aims to:

- Identify character buildings within the Centre.
- Ensure that alterations and additions to character buildings and heritage items are *compatible in scale, form and material with these buildings and items, and adjoining developments.*

Figure 7 identifies those buildings which are identified as 'character buildings' due to their high streetscape value and strong architectural character.

Note: On 11 September 2023, Council resolved to remove the controls relating to character buildings from Chapter D5 Double Bay Centre, as part of a future amendment to the Woollahra DCP 2015.

Improve parking in the Centre. This aims to:

- Improve parking and traffic conditions in the Centre.
- To improve traffic and parking management in the Centre and minimise vehicular/pedestrian conflicts.

Figure 8 shows an example of a control drawing for Centre taken from Page 44 in Part D5.5.9. This guides the buildings setbacks, separation distances, articulation and building depth.

The control drawings show building envelopes for every site in the Centre. The envelopes generally establish:

- *Four storey street wall heights along streets.*
- *Two storey street wall heights along lanes.*
- *Reduced building depths above the first floor to achieve high amenity development flexible for residential or commercial uses (WDCP D5.5.1).*

Figure 9 shows the 3D view of building envelopes for Centre taken from Page 52 in Part D5.5.13.

Chapters 3 and 4 of the Double Bay Planning and Urban Design Strategy discuss the urban design principles and built form strategies to guide the future of the Centre. They will also inform potential future amendments to the Woollahra DCP 2015.



Figure 7. WDCP 2015. D5.6 Character building

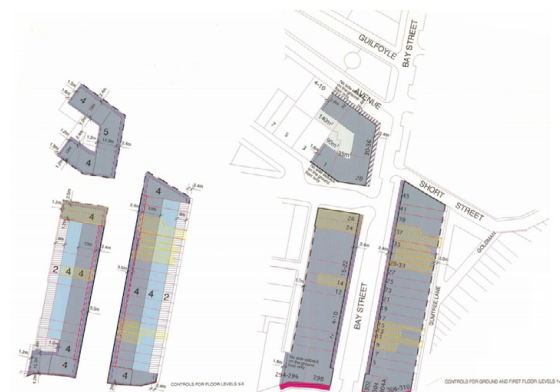


Figure 8. WDCP 2015. D5.5.9 Control drawing 5

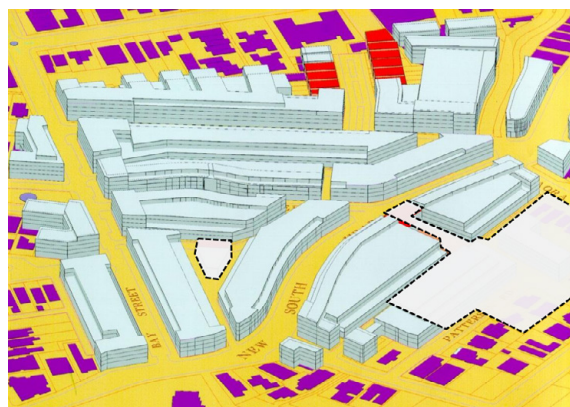
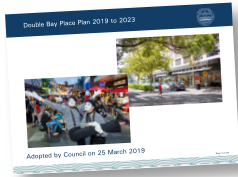


Figure 9. WDCP 2015. D5.5.13 View 2: 3D view of building envelopes

3.3 Double Bay Place Plan 2019–2023



The Place Plan sets out strategies and actions to achieve the vision and place story for the Centre. It sets out a placemaking approach to the management, future planning and development of Double Bay to ensure that the vision and place story are achieved.

Double Bay is Sydney's stylish bayside village

Double Bay Place Plan, P 7

The strategies, priorities and actions of the Place Plan have been arranged under five broad themes:

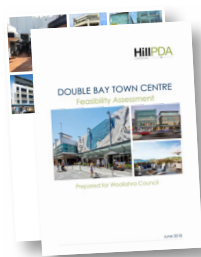
- 1. *Place Governance* – to ensure that the Centre is holistically managed as an important regional asset.
- 2. *People* – which aims to attract people to Double Bay as a place where there are many things to do, a place of arts and culture, a place with regular promotions, events and festivals, a place with vibrant street life.
- 3. *Planning and Place* – to ensure that the planning controls align with the vision and place story, and that there are strategies in place to improve and enhance the amenity and quality of the built environment.
- 4. *Identity and Image* – to ensure The Double Bay 'brand' supports our vision and place story.
- 5. *Business Operations* – which aims to assist businesses to support the vision and place story and to ensure that service and product standards are of the highest quality.

Theme 3 of the Place Plan is the most relevant to this Strategy, and emphasises the importance of increasing housing opportunities for people to live in Double Bay.

Priority 3.2.1: Create a more diverse housing mix in Double Bay to make housing more affordable for young people and to increase the resident population of the village

The Place Plan, P 23

3.4 Double Bay Economic Feasibility Study 2015 and 2018



In 2015, Hill PDA was appointed to investigate the challenges and barriers to the future redevelopment in the Centre from an economic perspective. The study was considered necessary to provide a better understanding of why limited development

had taken place in the Centre in recent years.

The study identified:

- Significant demand for housing in the Centre due to its distinctive waterfront location and proximity to the Sydney CBD.
- Living in the Centre is attractive to a younger demographic, however this is not attainable based on the current offerings and market values.

The main conclusion of this study was that redevelopment under the current planning controls, in most cases, was not economically viable. The economic constraints were:

- *The high underlying land values in the Centre.*
- *The high investment value of sites (that is the return achieved by the existing businesses and uses on the sites).*
- *The need to amalgamate sites to achieve a development site of a reasonable scale* (Hill PDA, P 11).

The key recommendation from this study was that whilst the Centre has become increasingly attractive for investment, most sites require an FSR of between 3:1 and 3.5:1 to facilitate development. The report qualified that an appropriate FSR in this range will require the consideration of the built form impacts associated with building bulk, scale and heights. The report did not comment on built form impacts. The report recognised that the economic viability of new development was only one of a number of planning and urban design considerations.

Additionally, the report recommended five other options to support appropriate future development:

- A reduction in mandatory car parking rates for studio and one bedroom apartments.
- A minimum requirement for provision of studio and/or one bedroom apartments to attract a younger demographic of 'city makers' and support overall vitality of the Centre.

- A maximum unit size for all (or the majority) of 1 bedroom and 2 bedroom apartments (no more than 10% in size above SEPP 65¹ minimums) with the aim of providing more affordable prices.
- A bonus FSR as an incentive for development proposals to include additional smaller units.
- A range of compact apartments sized below the SEPP 65 guidelines of 50sqm for 1 bedroom apartments e.g. 40sqm to facilitating additional residents and more affordable prices.

In early 2018, staff expressed concerns with the proposed land use mix in recent development applications (DAs) in Double Bay. These recent DAs incorporated retail elements on the ground floor and residential dwellings above. However, no office or business floor space was proposed. The long term benefits of providing office and business floor space are:

- Future proofing/flexible land use opportunities
- Protection of employment opportunities
- Daytime foot traffic to support businesses such as retail uses,
- Encourage live/work opportunities
- Maintain and enhance day time vitality & vibrancy
- High-quality businesses and activities that attract people to the centre
- Products and services for the needs of residents

To maintain and enhance the non-residential character of the Centre, it was recommended to retain two levels of non-residential floor space. However, this requirement may impact the viability of new development in the Centre resulting in higher residential FSRs to offset the commercial value. To test this viability, in May 2018 Hill PDA were commissioned to provide an economic feasibility test.

This report recommends that Council consider a review of the FSRs controls in the Centre to permit an FSR of 4:1 for one floor of commercial floor space and an FSR of 4.5:1 for two floors of commercial floor space. Consistent with the Hill PDA Study from 2015, the most appropriate FSR or FSRs within this range would be dependent on urban design testing and other environmental considerations. Each site and its "tipping point" must be considered on its merits.

¹State Environmental Planning Policy No 65

3.5 Double Bay Public Domain Strategy 2016



The Double Bay Public Domain Strategy (Double Bay PDS) studies the main public domain strengths and opportunities of the Centre. It provides an overarching strategy and detailed designs which improve and activate the public domain in the Centre, by creating a people

orientated environment which is comfortable, safe, attractive and active.

The Double Bay PDS sets out key moves for the Centre to:

- Maintain and emphasise outdoor activities and street life.
- Upgrade the streetscapes, laneways, lighting and public spaces.
- Enhance outdoor urban life and experiences.
- Promote active frontages and activate laneways and key public open spaces.
- Improve access to the Centre and its surrounding area (Double Bay PDS, P 6).

The Double Bay PDS has identified nine precincts in and around Double Bay for the purposes of dealing with specific issues and recommending improvements. See Figure 10.

The main opportunities for each precinct are:

Precincts 1–3: Gateway Precincts

- Enhance the sense of arrival into the Centre.
- Improve the Centre's sense of connection to its surrounding precincts.
- Improve pedestrian, cycling and public transport access to enhance its accessibility.

Precincts 4-8: Precincts in the Centre

- Strengthen retail activities to improve the public domain.
- Upgrade the existing public domain and create new spaces.
- Encourage new outdoor activities.
- Provide a new retail and hospitality focus in the laneways and smaller streets.
- Enhance legibility and wayfinding in the Centre.

Precincts 9: The northern section of Jamberoo Creek

- Upgrade public open spaces.
- Improve pedestrian connection.
- Celebrate the creek line and improve the connection to the upstream areas.

The Double Bay PDS identified the road and laneway hierarchy, including pedestrian and cycling routes, as shown in Figure 11. It also establishes a number of urban projects with more detailed recommendations at gateway areas, lanes and public open spaces. These projects include:

- Upgrade Knox Lane to the same standard and detail as Kiaora Place
- Upgrade the existing Guilfoyle Plaza
- Create a new public square and urban park at the intersection of Cross Street and Jamberoo Lane
- Upgrade Goldman Lane public domain to allow new retail and hospitality to open to the street

In crafting our proposed built form strategies, we have taken into account the role and hierarchy of the public domain elements identified by the Double Bay PDS. For example, setbacks and street wall heights have been crafted differently to reflect the role of laneways versus streets. The recommendations of the Double Bay PDS, including the role and hierarchy of the streets in the Centre, should be considered by applicants as they progress their development applications.

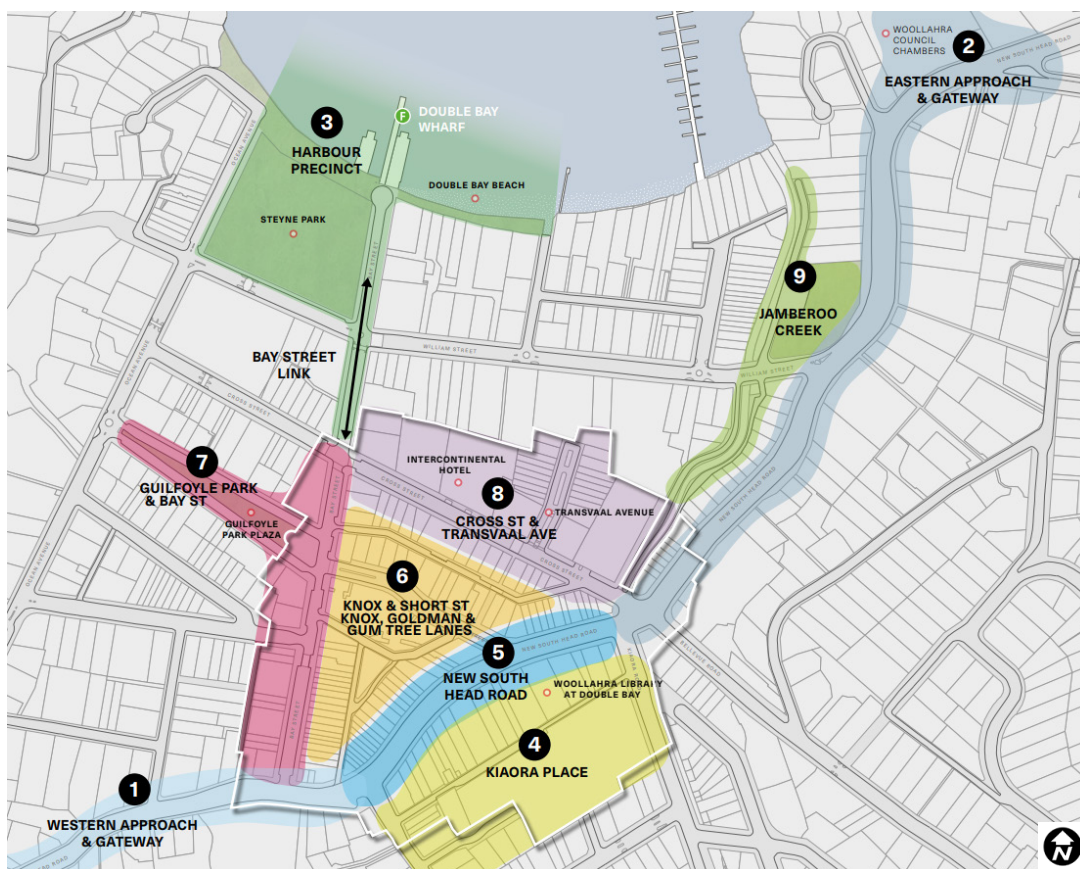


Figure 10. Double Bay Precinct (Double Bay PDS, 2016. P 3)

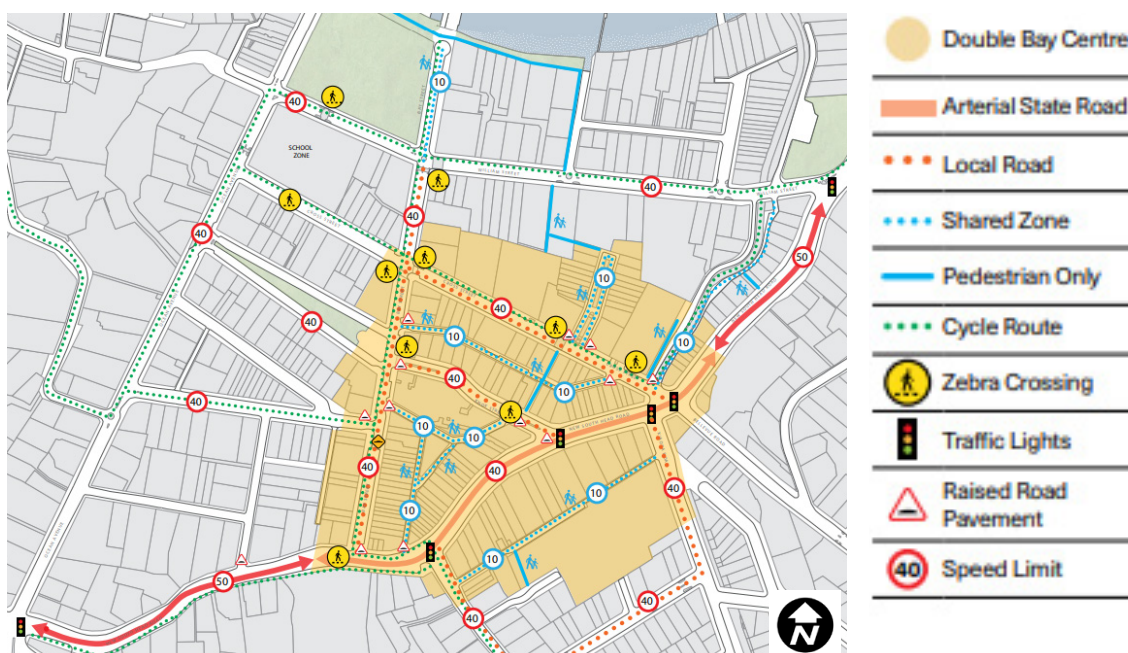


Figure 11. Proposed road and laneway hierarchy (Double Bay PDS, 2016. P 22)

3.6 Draft Woollahra Integrated Transport Strategy



The Draft Woollahra Integrated Transport Strategy (ITS) was prepared by Council in 2021. The Strategy seeks to support the provision and uptake of accessible

and sustainable transport options.

Current problems hindering an increase to the active transport uptake include:

- too many cars on the road
- not enough ways to walk or cycle to places
- not easy for children and people who need help to move around
- not safe for pedestrians and cyclists
- fast and reckless driving
- more trucks and vans on the road
- far away from jobs and services.

The ITS seeks to support the travel behaviour and choices of residents to reduce car dependency and increase liveability in Woollahra. Woollahra's population is growing and the safety of the active transport network is paramount. Council recognises that there is a need for viable public and active transport alternatives to private vehicles. The ITS is divided into four key themes:

- Access, Mobility and Liveable Places: Helping people in Woollahra to move around, no matter how old or able they are.
- Public Transport: Working with the State Government to improve public transport.
- Active Transport: Making walking and cycling the best option for most trips.
- Roads and Parking: Managing the road network to reduce traffic, noise and speeding.

Three of the four key signature projects identified in the Draft ITS are located in Double Bay. These are:

- The Knox Street Plaza
- The Transvaal Avenue Pedestrianisation Project
- Reduced Speed Limits in the Double Bay Centre.

The Knox Street Plaza and the Transvaal Avenue Pedestrianisation Project are discussed in more detail here.

The Knox Street Plaza

A pedestrianised public plaza between Bay Street and Goldman Lane was identified in the Double Bay Pedestrianisation Study. The paved public plaza will provide spaces for people to enjoy the Double Bay Centre with al fresco dining, seating areas, landscaping, lighting, public art and the ability to host social events. The public plaza will close Knox Street, between Bay Street and Goldman Lane to vehicles.

Note: On 14 November 2022, Council resolved to postpone the progression of the Knox Street Pedestrian Plaza. Notwithstanding, Council reaffirmed its commitment to the pedestrianisation of Knox Street in the future and to consider funding the project in future budgets, with the intent being that other levels of Government would also contribute substantial funding to this project.

The Transvaal Avenue Pedestrianisation Project

A pedestrianised area on Transvaal Avenue was identified in the Double Bay Pedestrianisation Study to support increased outdoor dining opportunities. The paved pedestrianised area will support new street furniture while the western side of Transvaal Avenue is turned into a "Shared Zone" to allow vehicular access to private properties but prioritises pedestrian use in the space.

Key Challenges to transport accessibility in Woollahra

- Accessibility needs for wheelchairs, prams and older residents
- Poor accessibility in areas such as Watsons Bay and Vaucluse
- Narrow roads and footpaths for parents and caregivers using prams and wheelchairs.

Opportunities

There are four key opportunities relating to access and mobility in Woollahra:

- Access to Services
- Community Transport Network
- Accessibility auditing
- Inclusive design for all abilities.



Figure 12. Draft Woollahra ITS Structure of Vision, Principles, Objectives and Themes (Draft Woollahra ITS, 2021, P 8)

3.7 Draft Woollahra Active Transport Plan



The Draft Woollahra Active Transport Plan (Draft Plan) was prepared by Council in 2022. It aims to make active transport a safe, easy and healthy option for as many people as

possible and to meet Council's emission reduction targets.

The vision is to make walking and cycling the most convenient, comfortable and safe choice for short trips in Woollahra. To achieve this, Council will invest in safe, accessible and attractive pedestrian paths, crossings, cycleways, bicycle parking and supporting infrastructure. The plan includes short-term priority projects and a longer-term plan for the growth and development of the walking and cycling networks. The vision is intended to guide investment and design decisions for the next 10-15 years.

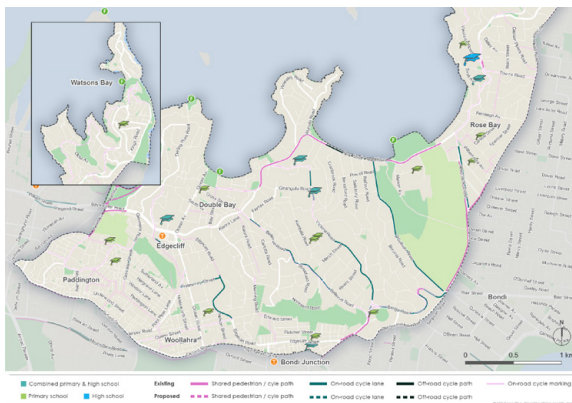


Figure 13. Woollahra Council's cycling network (Draft Woollahra ATS, 2022, P 17)

Objectives for the Draft Active Transport Plan

The following objectives support Council's long-term vision:

- Deliver attractive, vibrant and safe walking areas for pedestrians.
- Develop, design and deliver pedestrian and cycling networks focussed on the centres in Woollahra that connect to the City of Sydney and to Waverley.
- Make our roads safer for pedestrians and cyclists - supporting Transport for NSW's vision for zero deaths and serious injuries on the road network.
- Improve the pedestrian accessibility, inclusivity and amenity at parks and reserves, the harbour and the ocean front.
- Maintain and improve the existing pedestrian network, including those that link with adjacent Councils such as the Bondi to Manly Walk

Implementing the Draft Active Transport Plan

The Draft Plan outlines Council's strategy for enhancing walking and cycling over the next 10-15 years. It aims to improve streets for these activities, with the goal of making active transport the first choice for short trips in Woollahra as they are accessible, comfortable, inclusive, and safe.

Future infrastructure projects outlined in the Draft Plan and relevant to the Strategy include:

- Reduced speed limits in the Double Bay Centre
- Double Bay Pedestrianisation (Knox Street)
- Bay Street pedestrian plaza upgrade
- Cycleway on New South Head Road (Edgecliff to Double Bay).

3.8 Woollahra Municipal Recreation Strategy 2023



Public open spaces are vital to the Woollahra Local Government Area (LGA), with the ability to enhance neighbourhood character, promote healthy lifestyles, and foster community cohesion.

With recent development in Woollahra, nearly 80% of residents live in medium or high density housing with little or no communal outdoor space. The importance of these open spaces is critical in supporting residents as they offer diverse recreational, sporting, and social activities, while also helping to build social networks and a sense of community.

The established nature of Woollahra's neighbourhoods limits opportunities to increase public open space. High land values, low development contribution revenues, and steep land topography make it costly to acquire and develop new open spaces. The focus of the Draft Woollahra Municipal Recreation Strategy seeks to improve the quality and usability of existing open spaces.

Like other Sydney councils, Woollahra is experiencing increased use of its public open spaces. The high to medium density living environment and attractive foreshore parks draw both residents and visitors, leading to high demand and competing interests for quality open spaces.

The strategy aims to provide strategic directions for developing and managing a quality open space network that caters to the community's recreational and sporting preferences. It focuses on Council-owned or managed public open spaces but also considers natural areas and waterways for water-based recreation and tourism.

The provision of dedicated recreational spaces is not identified within the Strategy however opportunities exist to consider recreational uses within future developments in the Centre.

3.9 Double Bay Centre Public Domain Lighting Strategy 2016



The Double Bay Centre Public Domain Lighting Strategy (Double Bay PDLS) 2016 was developed to facilitate a distinctive and elegant night-time experience

whilst also complementing the natural beauty of the area. It provides a set of lighting recommendations and guidelines to create a cohesive night-time experience, enhance the visitor experience and support creativity in the economy.

The themes of future lighting projects in the Centre have been introduced with two types of overlays, as shown in Figures 14 and 15. The functional overlay provides recommendations regarding compliance with relevant design codes and street hierarchy¹. The creative overlay identifies opportunities to illuminate key elements. These elements are corner buildings and gateways, furniture, trees and public art. In addition, the Double Bay PDLS recommended pilot projects for locations such as Knox Street, Kiaora Lane and Short Street.

Note: The implementation of Double Bay PDLS is subject to funding.

The objectives and design principles of the Double Bay PDLS are to:

- *Develop distinctive gateways from land and water.*
- *Build on the bay's natural beauty.*
- *Connect Guilfoyle Ave to the Centre.*
- *Activate streets with footpath dining and attractive, vibrant displays.*
- *Creating a distinctive and elegant after dark ambience in the public domain of Double Bay.*
- *Provide vertical lighting to heritage and notable buildings.*
- *Create nodes along axis street by accenting trees and furniture (Double Bay PDLS, P 7 and 8).*

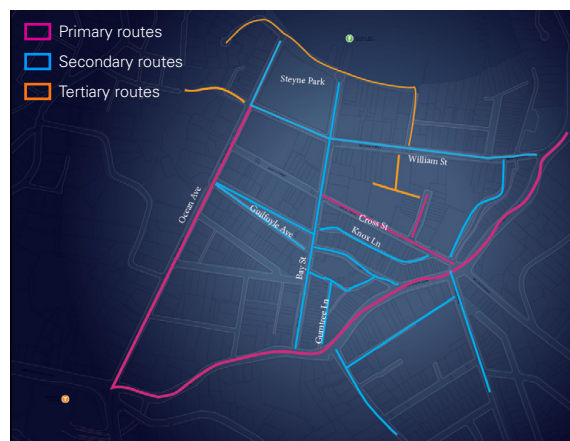


Figure 14. Functional overlay - hierarchy of roads and streets (Double Bay PDLS, 2016. P 9)

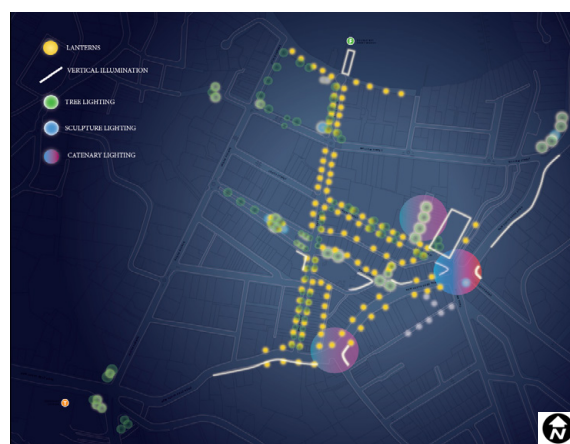


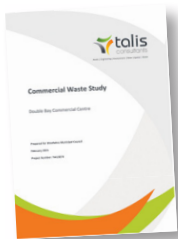
Figure 15. Creative overlay plan (Double Bay PDLS, 2016. P 12)

This process has been informed by and developed to support the Double Bay Place Plan 2014 and is consistent with the principles of placemaking in order to maximise Double Bay's distinctive brand'

Double Bay PDLS, P 5

¹The Double Bay PDLS identifies its own hierarchy of the street which varies slightly from Double Bay PDS.

3.10 Double Bay Centre Commercial Waste Management Study 2021



Talis Consultants were engaged to provide a Commercial Waste Management Study (Double Bay CWS) to inform this Strategy with best practice examples and principles for transforming laneways in the Centre into attractive, activated places.

This Strategy provides redevelopment opportunities for the existing sites in the Centre. Therefore, there is an opportunity to incorporate the recommendations of the CWS towards creating a cleaner, smarter, more sustainable and attractive public domain.

Should this Strategy be endorsed, the recommendations of the Double Bay CWS will be used to inform future changes to planning controls in Chapter D5 Double Bay Centre of the Woollahra DCP 2015. These potential amendments will seek to strengthen the consideration of waste management during the initial planning stages of new development.

The key objectives of the Double Bay CWS are to provide recommendations/ solutions to:

- *Improve the attractiveness and physical appeal of the Centre.*
- *Minimise the impact of commercial waste such as noise, odour, amenity and the congestion associated with the management and location of business waste.*
- *Provide quality cleansing, maintenance and waste services.*
- *Maintain and improve Double Bay's pedestrian network of roads, footways and laneways and reduce the impact of waste management on these networks.*

The Double Bay CWS provides the following recommendations:

- A Sustainable Events Policy guided by the Waste Education Program
- Review of the essential information on businesses within the Centre's laneways to enable adequate waste planning
- Review of the planning documents and Pre DA Service to emphasise/implement smart city technologies
- Emphasise on liaison with Council's waste staff and waste management experts in the planning process
- Improve waste diversion from landfill by targeting recycling, particularly food organics
- Develop trial recycling spokes in tandem with business recycling collection within a selected laneway/s
- Install a trial recycling hub and smart general waste hub in the vicinity of a selected laneway/s
- Consider the addition of Wheel-Out services to Council's traditional waste collection service.



3.11 Double Bay Centre Hydrogeological Study 2020



GHD Consultants were engaged to carry out a Geotechnical and Hydrogeological Study of Double Bay to identify the potential impacts of the groundwater lowering as a result of future developments in the Double Bay area, including the Double Bay Centre.

The study was deemed necessary due to concerns regarding the lowering of the groundwater as a consequence of recent development applications. The study includes extensive technical analysis in:

- Identification of the groundwater study area and its groundwater setting
- Assessment of the potential cumulative impact of future developments on long-term groundwater change
- Assessment of the risk of damage to adjacent buildings from short-term construction dewatering.

Following GHD's technical analysis and recommendations, Council staff have progressed the following projects to strengthen our existing planning provisions to minimise the impacts of dewatering from the construction of underground structures:

- A planning proposal to amend the Woollahra LEP 2014 parts 1.2 Aims of the Plan and 6.2 Earthworks. This planning proposal was on public exhibition from 9 February 2022 to 11 March 2022.
- An amendment to the Woollahra DCP 2015 Chapters D5 Double Bay Centre and E2 Stormwater and Flood Risk Management. This amendment came into force on 6 December 2021.

The recommendations of this Strategy have been developed with regard to the enhanced provisions for earthworks and associated dewatering.

3.12 Double Bay Centre Pedestrianisation Study 2020



SCT Consultants were engaged to provide guidance to Council on options to expand on Double Bay's vibrant local centre and create highly

activated, safe and exciting pedestrian streets. The intent behind the study is to increase the attractiveness and activity levels in the Centre, so that businesses attract more customers and customers travel by more sustainable modes of transport.

The pedestrianisation study proposes an alternative street network arrangement based on extensive traffic analysis. The alternative arrangement aims to reduce the existing vehicle speeds and traffic volume, enhance pedestrian connectivity, transform servicing laneways into more lively places, and allocate more spaces for pedestrian activities in the Centre. The main recommendations as shown in Figure 16, are:

- Pedestrianising Knox Street (between Bay Street and Goldman Lane) and Transvaal Avenue (east)
- Shared zones along lanes with high pedestrian activity such as Knox Lane and Transvaal Avenue (west).

Council's plans to pedestrianise Knox Street were on public exhibition from 3- 23 February 2022. Future projects such as the pedestrianisation of Transvaal Avenue (east) and the creation of shared zones in laneways will be progressed as funding options become available.

The built form recommendations of this Strategy aim to complement the vision of the pedestrianisation study. The Double Bay Centre Pedestrianisation Study was endorsed by Council on 29 September 2020.

Note: On 14 November 2022, Council resolved to postpone the progression of the Knox Street Pedestrian Plaza. Notwithstanding, Council reaffirmed its commitment to the pedestrianisation of Knox Street in the future and to consider funding the project in future budgets, with the intent being that other levels of Government would also contribute substantial funding to this project.



Figure 16. Preferred Pedestrianisation Option (Double Bay Centre Pedestrianisation Study, 2020. P 22)



CHAPTER 4 DOUBLE BAY TODAY

4.1 Building uses

The Centre contains a mix of retail, commercial, service and residential uses.

Ground level retail activity is concentrated between Knox and Cross Streets, along New South Head Road and Bay Street. High quality small scale specialty retailing defines the image and character of the Centre. See Figure 17.

Major commercial uses and community facilities such as the InterContinental Hotel, Cosmopolitan Centre, Double Bay Library and supermarket provide high quality offerings to meet the needs of all the users of the Centre. See Figures 17 and 20.

More recent development has consisted of shop-top housing with limited area for retail uses on the ground level and no office or business floor space. This has significantly reduced the commercial floor space of the Centre. See an example at Figure 19.

There are numerous long term benefits of providing non-residential floorspace in the Centre such as providing local employment opportunities and enhancing day time vitality and viability.

Council's policies, including Woollahra LSPS, are consistent in this approach by retaining and reinforcing the mixed uses nature of the Centre, whilst supporting an increase of residential floorspace to further enhance its vitality and economic viability.

Introduce planning controls into the Woollahra Local Environmental Plan 2014 and Woollahra Development Control Plan 2015 to protect and enhance floor space for commercial, retail, business, health and community uses in centres, particularly in Double Bay and Edgecliff.

Woollahra LSPS - Action 41

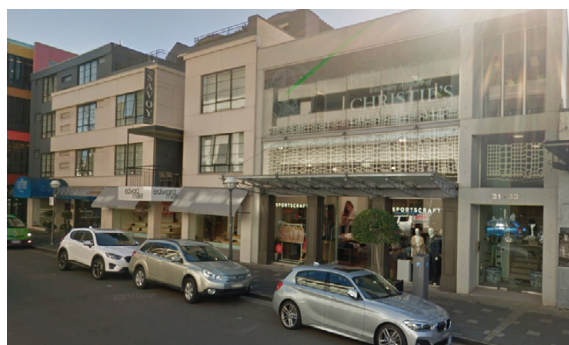


Figure 17. Existing fine-grain retail uses on Knox Street (Google Map, 2019)



Figure 18. Cosmopolitan Cafe as a memorable gathering place for our community (Google Map, 2019)



Figure 19. Recent approved development application - shop top housing with retail uses on the ground level



Figure 20. A laneway transformed including facilities to serve the day to day needs of our community.

4.2 Existing movement network and accessibility

In developing the Centre, an extensive urban design analysis of the local movement and public transport networks was undertaken. This included mapping out the Centre's accessibility and the level of connectivity to the surrounding area.

The Centre is well-served by a network of public transport modes (bus, ferry and train, with Edgecliff Station in a 10-15 minute walking catchment), along with vehicle and active transport modes including pedestrian and cycling pathways as shown in Figure 21.

Figures 22 and 23 show the existing pedestrian links, laneways, arcades and cycling pathways. These fine-grained, human scale links and connections significantly enhance the permeability and walkability of the Centre. They help to give the Centre its village character with higher amenity and convenience for residents and workers alike.

The role of the existing laneways are primarily to service the existing commercial and residential uses including loading/unloading and waste collection with high levels of on street parking.

These arrangements conflict with easy pedestrian movement and reduce the attractiveness of the laneways for pedestrians and as places to linger. Recent upgrades at Kiaora Lane have showcased how a laneway can maintain its service function and also be transformed into an active, human scale and pedestrian-oriented space.



Figure 21. Existing public transport and active transport links (Double Bay PDS, 2016. p. 19)



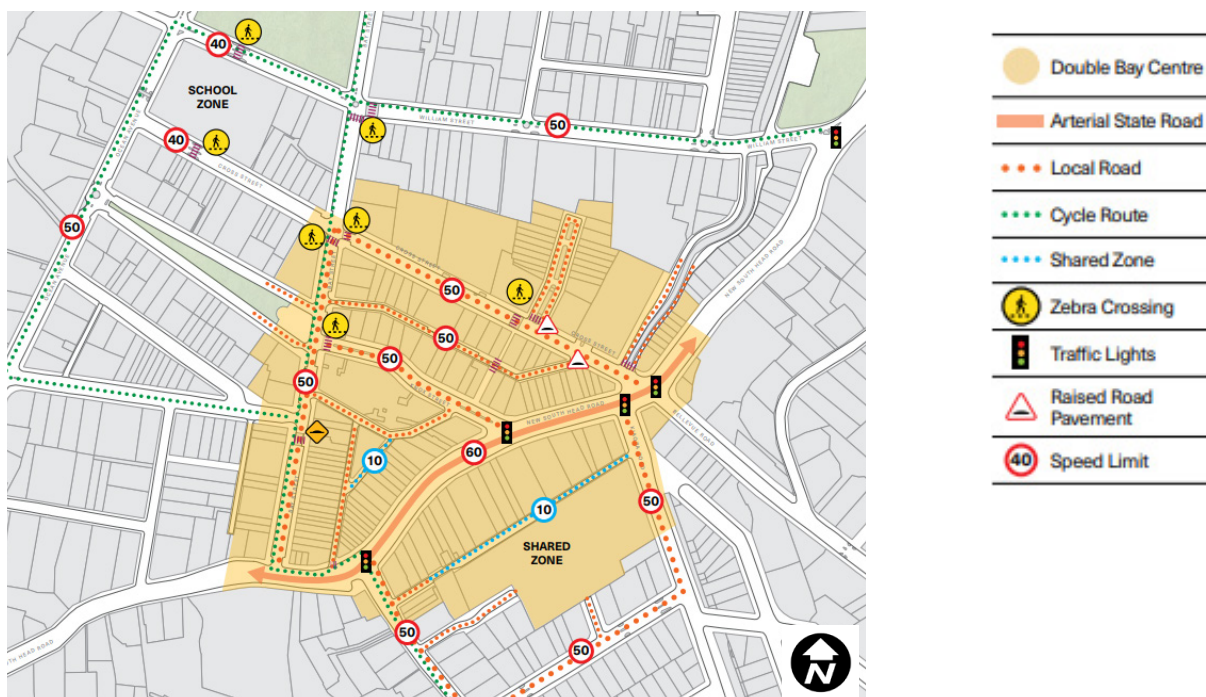


Figure 22. Existing road and laneway hierarchy (Double Bay PDS, 2016. p. 21)

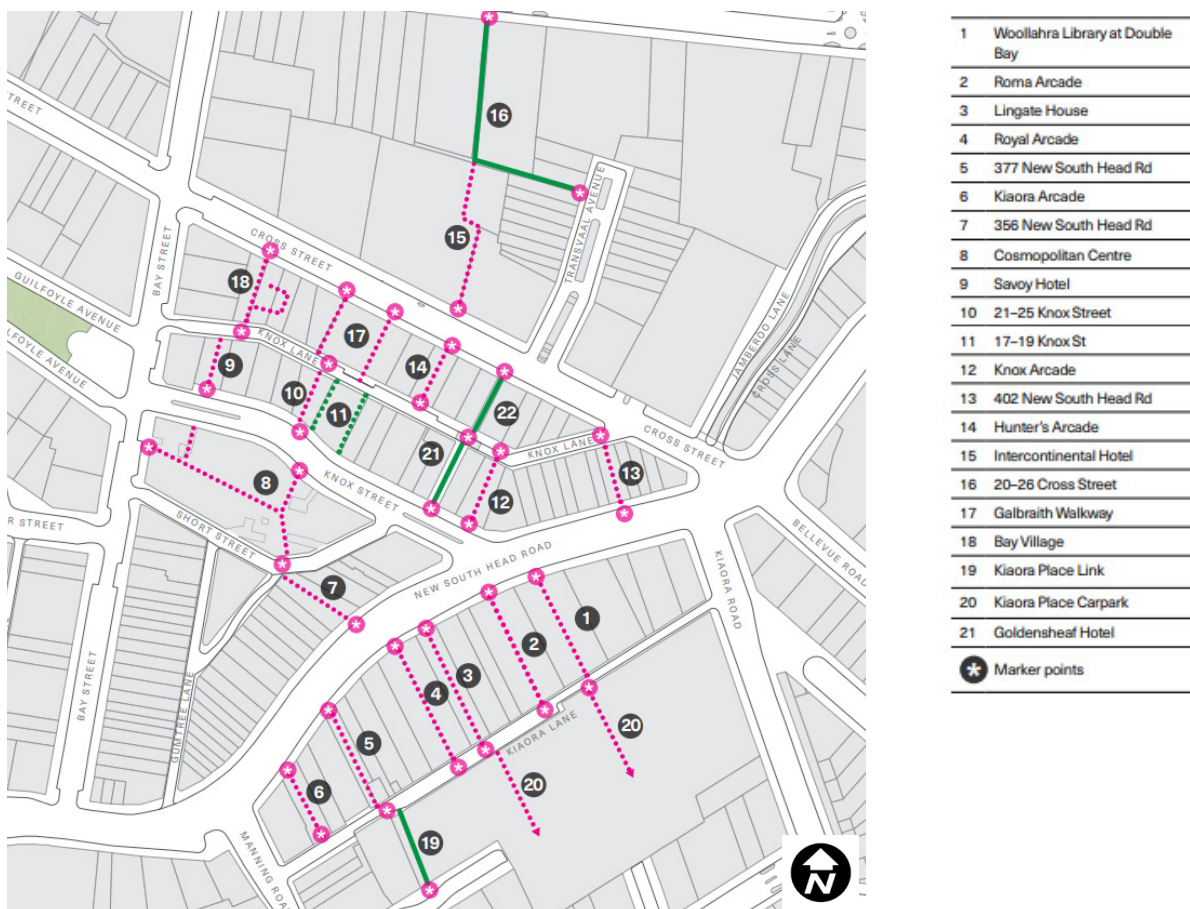


Figure 23. Pedestrian lanes and arcades (Double Bay PDS, 2016. P. 43)

4.3 Topography

The Centre is located at a valley floor and has a gentle downward slope to the north. The Centre is located at a lower level than the surrounding context to the east, west and south. This forms a natural amphitheatre with surrounding residential areas looking over and down on to the Centre and to the harbour.

As New South Head Road approaches the Centre, the topography drops significantly. This provides extended views at the western and eastern gateways and presents an opportunity to mark the Centre's arrival points with visually prominent built form and landscape elements. See Figure 24.

Future development should provide a varied and responsive built form that reflects and reinforces the natural land form whilst sharing views of the harbour and district views.

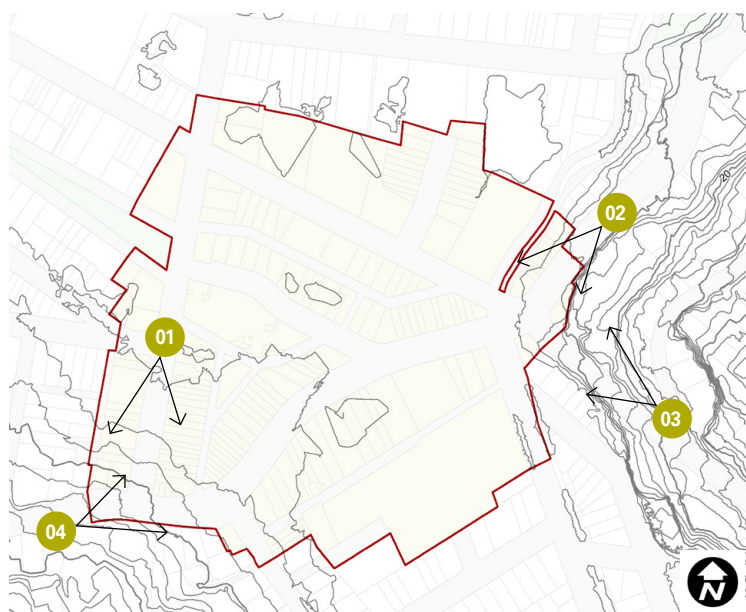


Figure 24. Topography



(Images from Google Maps, 2019)

4.4 Destinations and facilities

The Centre has a wide range of offerings which draws people to the Centre including recreational facilities, open spaces, retail and dining precincts, education and community services. Places such as Kiaora Lane, the Cosmopolitan Cafe, Transvaal Avenue dining area and Guilfoyle Market play an important role in our community's collective memory.

Figure 25 illustrates local destinations including Steyne Park, Murray Rose Pool, Kiaora Place and the library. They are easily accessible via New South Head Road and Bay Street (within a 400- 800m walking catchment).

Good connectivity and access to open spaces and foreshore areas provide opportunities for active and passive recreational activities and support walking and cycling. This combination makes Double Bay a highly desirable and liveable place.

1. Double Bay Wharf
2. Edgecliff Station
3. Edgecliff Centre
4. Ascham School
5. Cranbrook School (St Marks Preschool)
6. Double Bay Public School
7. The Prep School
8. Woollahra Preschool
9. Cranbrook School
10. Eastern Suburbs Artistic School
11. Trumper Oval and Park
12. Yarranabbe Park
13. Double Bay Beach
14. Murray Rose Pool and Blackburn Gardens
15. Foster Park
16. Cosmopolitan Centre
17. Intercontinental Hotel
18. Cross St Car Park
19. Kiaora Place
20. Library
21. Post office and Synagogue
22. Guilfoyle Park
23. Double Bay Creek
24. Steyne Park

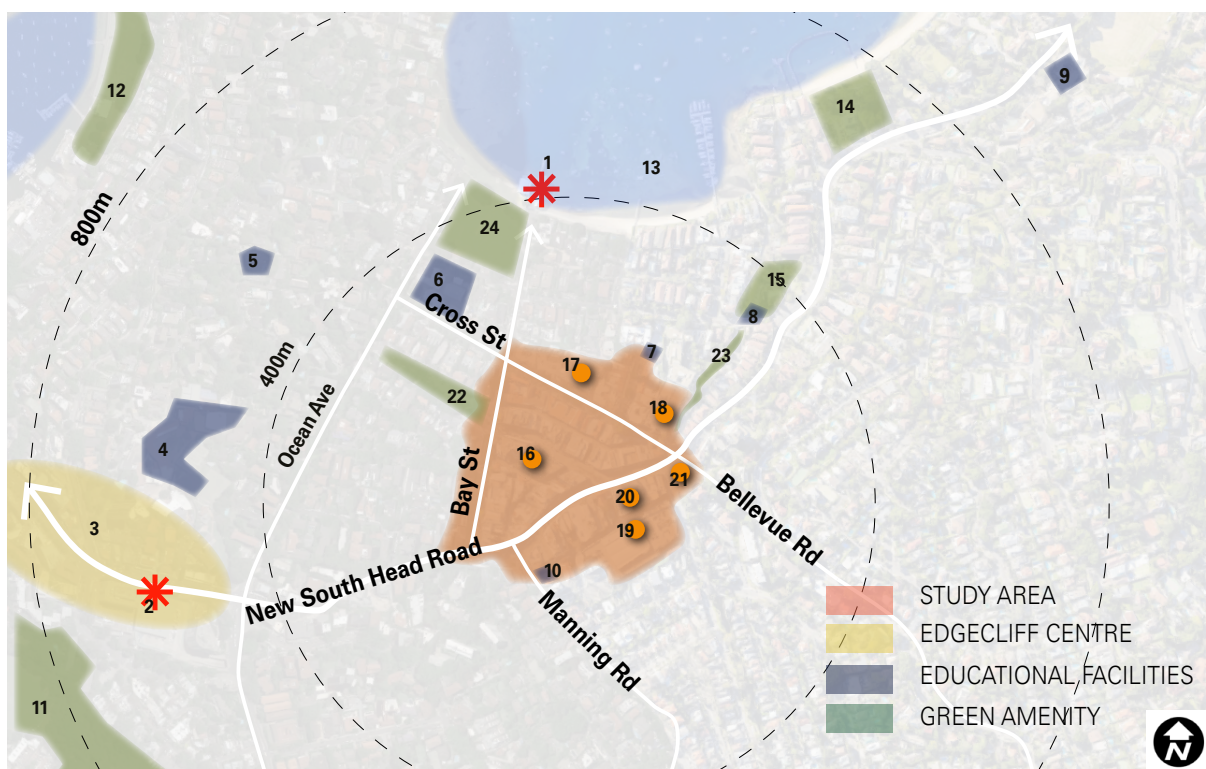


Figure 25. Local facilities and destinations (Six maps 2019)

4.5 Colonnades

Woollahra DCP 2015 D5.6.4. establishes objectives and controls for the street frontage elements of built form such as awnings, colonnades, arcades, walkways, courtyards and outdoor eating areas. The controls encourage colonnading in the area surrounding Guilfoyle Park as shown in Figure 26.

In relation to these controls, the following built forms are noted:

- The five storey “Chancellery” building on the north side of Guilfoyle Park has a colonnade on each of its three street frontages.
- The Cosmopolitan did not integrate colonnades.
- There are two buildings on the northern side of Cross Street that include colonnades, which were not required by Woollahra DCP 2015.
- The approved development application (2020) at No. 30-36 Bay Street (DA2019/289/1) includes alterations and additions of the existing building which does not include colonnades at its ground level.

The existing colonnade controls are inconsistently applied. It is noted that Woollahra DCP 2015 has the following statement:

‘Colonnades are most successful when they are continuous and consistent. Guilfoyle Park on Bay Street makes a substantial contribution to the ambience of the Centre. This quality could be enhanced through appropriate built form which interprets the park’s civic importance in its address to the park.’ (Woollahra DCP 2015 5.6.4.2)

Contrary to this statement, the existing colonnades have not been successful in creating a consistent streetscape. Based on urban design best practice, the use of colonnades is not supported, as they result in:

- Obscured active frontages.
- Visually and physically separated ground level activities from pedestrian activity.
- Reduced capacity for ground floor non-residential floor space.
- Segregation of footpaths.

Due to the reasons given above, colonnades are not supported. Consequently there are very limited Australian examples which have controls relating to colonnades. For example, the City of Sydney DCP 2014. Section 3.2.5 Objective (a) discourages the provision of the colonnades, except in exceptional circumstances where *(a) they are continuous for an entire street block.*

Provision (1) Colonnades are generally not permitted as they obscure views of retail frontages and separate street frontage activity from the street.

Another example is the City of Adelaide Design Manual. This manual discourages colonnades on new developments as they set activity and life back from the footpath and passing pedestrian activity, and create unsafe public areas with concealed spaces and disrupted sight lines. If absolutely necessary, the colonnades should extend across the whole pedestrian pathway to create a continuous walking path (Figure 27, City of Adelaide, 2014).

The implications of extending colonnades across the whole footpath requires the upper level buildings to move forward beyond the site boundary. This changes the spacial character and the proportion of the street and has the effect of privatising the public domain.

To enhance buildings' relationships with the public domain and improve the civic importance of Guilfoyle Plaza, this Strategy recommends a alternative solution. A better urban design solution is to integrate awnings or verandah's into the front elevation. These will protect the pedestrian pathways in adverse weather conditions and maximise the active frontages.



Figure 26. The location of the colonnades

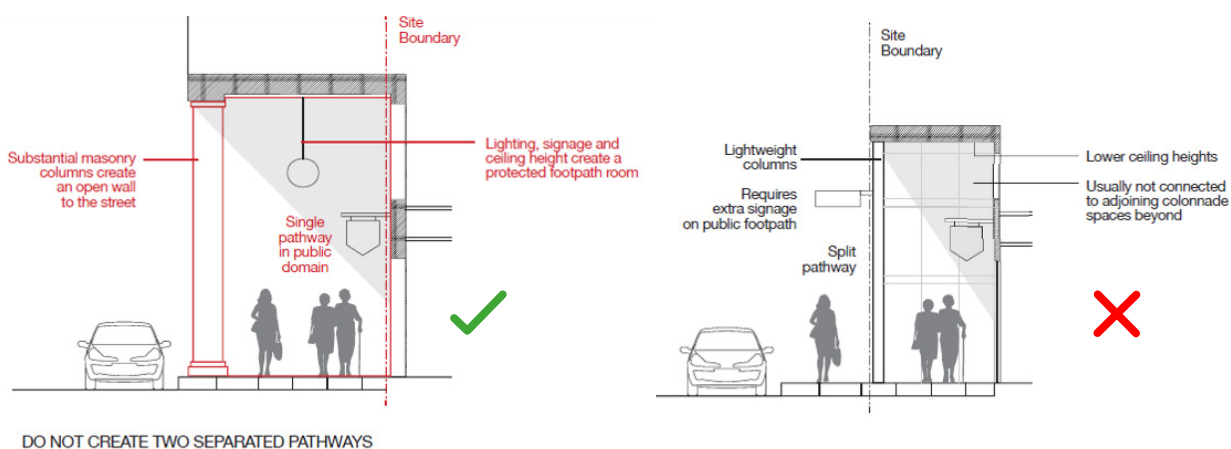


Figure 27. The preferred implementation of colonnades (City of Adelaide, 2014)



CHAPTER 5 CASE STUDIES

5.1 Urban Village Character

To achieve our vision and retain the Centre as a stylish village, we have investigated the main characteristics of an 'urban village' in academic and best practice urban design resources.

Six characteristics to define an urban village - London School of Economics and Political Science (LSE)

An independent report by LSE introduced the concept of 'urban village' by:

- a mixture of uses and dwelling types
- a range of employment, leisure and community facilities
- appropriate infrastructure and services
- high standards of urban design
- access to public open space and green spaces
- access to public transport.

The report has identified six main characteristics for new London Villages. The main characteristics are demonstrated in Figure 28.

1

Small and intimate

- The area can comfortably be covered on foot.
- The scale of the buildings and spaces is suitable and comfortable.
- The residential density can sustain a range of key services.

2

Unique (spacial identity, traditions and collective memory)

- *The area has defined boundaries and an identifiable centre.*
- *The area has its own atmosphere and sense of place.*
- *There are community landmarks.*
- *There are regular community events and festivals.*
- *Residents create collective memory.*

3

Designed for social interaction

- *There is ample public and green space, which is used in many ways.*
- *Facilities are provided for community events and everyday activities.*
- *The central hub generates social interaction, and there is a network of walkable routes.*

4

Locally driven and locally responsive

- *Residents are involved in managing the life of the village.*
- *There is a long-term vision that residents support.*
- *Leaders represent the community and reflect its concerns.*

5

Functional

- *The community is well served by both public and private transport.*
- *Core services are available locally.*
- *There is a mix of uses.*

6

A mixed community

- *There is a mix of ages, backgrounds, incomes and housing tenures.*
- *Residents know and trust each other.*
- *There are long-term residents who provide continuity.*

¹ London School of Economics and Political Science (LSE), 2016. New London Villages, P 13) Available at <http://www.lse.ac.uk/business-and-consultancy/consulting/assets/documents/New-London-Villages-Final-Report.pdf>

Figure 28. Six characteristics for new London Villages¹

5.2 Characteristics of urban villages - Curtin University

Another key academic resource prepared by Professor Jeffrey R. Kenworthy¹ (Curtin University) has further informed our definition of 'Urban Village'. Professor Kenworthy identifies that an Urban Village includes:

- *High density land uses within walking and cycling distance.*
- *Mixed land use with offices, shops, businesses and community facilities on main spines or in nodes, surrounded by residential development.*
- *A heavy rail or light rail station near the core.*
- *Considerable landscaping, including gardens on top of buildings and on balconies and attractive gardens in the public spaces.*
- *Extensive provision for children, such as playgrounds.*
- *Recreational opportunities and Community facilities.*
- *Pedestrian and cycle links with car parks placed underground and traffic calming on peripheral roads.*
- *Public spaces with strong design features.*
- *A high degree of self-sufficiency for the community for local needs, but with good rail and bus links to the wider city for employment.*

(Melbourne School of Design. [Online] Available at: <https://msd.unimelb.edu.au/> [Accessed September 2019]).

“When buildings physically define public spaces particularly through proportions between height and width in an area to create places that are comfortable to pedestrians.”

(Haile, C. 2012. A Myth of Urban Design)

Both definitions refer to the various built form and public domain aspects of an 'urban village' such as scale, public transport, open spaces and land use character. One of the key elements of LSE's definition which we have translated into our strategy is:

A 'suitable and comfortable' built form scale.

What built form scale is appropriate to achieve a village?

To answer this question, we have further studied best practice urban design.

Figures 29 to 32 demonstrate built form aspects that are crucial in creating and enhancing human scale development and a comfortable sense of place for people. The following principles are fundamental to our built form strategies for the Centre:

- Connection between building and street - Jan Gehl identifies that the connection between a building and street is possible from the lowest five floors. Above this height, buildings lose contact with the public domain and the life that is happening in the street.
- Active frontages - Facades with fine-grain shop fronts and doorways, enhance the pedestrians' experience. Approximately 10-20 doorways per 100m are recommended by Jan Gehl².
- Built form articulation - As opposed to horizontal articulation, facades with vertical articulation provide a more pleasant walking experience for pedestrians.
- A sense of enclosure - A suitable sense of enclosure (height-to-width ratio) is³:
 - 1:1 - 1:1.5 for minor streets.
 - 1:1.5 - 1:3 for typical streets.
 - 1:4 - 1:6 for squares.

¹Kenworthy (2000) Techniques of Urban Sustainability

²(Gehl, J., 2010. In: *Cities for People*. s.l.:s.n., p. 241)

³(Haile, C. 2012. A Myth of Urban Design: The 'Sense of Enclosure' Theory. Available at: <http://www.chrishaille.com/2012/01/a-myth-of-urbandesign-the-sense-of-enclosure-theory/>)

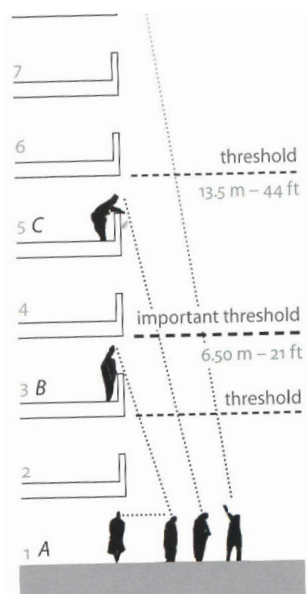


Figure 29. Connection between building and street
(Gehl, J., 2010. In: *Cities for People*. p. 41)



Figure 30. Active frontage
(<http://centersandedges.org>)



Figure 31. An example of vertical built form articulation
(Image source: <https://thecityateyelevel.com>)

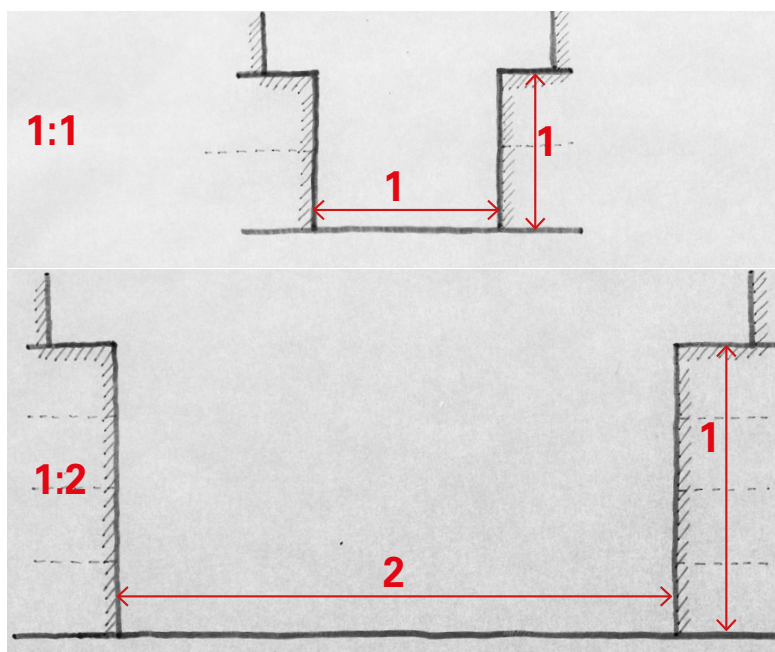


Figure 32. Sense of enclosure

5.3 Kelvin Grove Urban Village, Brisbane, Queensland

'The Kelvin Grove Urban Village is a master-planned community, bringing together residential, educational, retail, health, recreational and business opportunities into a vibrant new precinct. It demonstrates best practice as a sustainable, mixed use community in an infill (existing) city fringe location'.

'The Village was a partnership between the Queensland Government and Queensland University of Technology'

(Kelvin Grove Urban Village., Available at: <http://www.activehealthycommunities.com.au/case-study-kelvin-grove-urban-village/> [Accessed November 2019]).

The precinct acts as an employment and business node for the residential areas, the existing university campus and the new university uses in the Village. It provides a variety of built form scales.

Development is up to seven storeys with retail and community services on the street level and a variety of commercial, residential and educational uses on levels above (QLD.gov.au, 2005).

The main characteristics of the village are:

- Mixed use community with a range of medium- to high-density residential, employment, retail, open space, and recreational facilities in a walkable catchment.
- Accessible by frequent public transport with transport nodes within 600 metres.
- Architectural design excellence.
- Good provision for cyclists, including on-road and off-road cycle paths.
- Permeable blocks and active street frontages.
- Visually interesting and attractive places for walking and cycling.
- High visual quality particularly in prominent locations.

Kelvin Grove Urban Village received the Planning Institute of Australia's 2003 State Award for Environmental Planning.

We want to draw on this positive example, and incorporate the elements that made it a success into our built form strategy.



Figure 33. Active frontage character of the precinct¹



Figure 34. Street character - Mixed use development with active frontage on the ground level²



Figure 35. Built form character of the precinct - medium to high density development³

¹ (Available at: <https://au.myfun.com/en/neighbourhoods/kelvin-grove-4059-qld> [Accessed 2019])

² (Available at: https://en.wikipedia.org/wiki/Kelvin_Grove_Urban_Village [Accessed 2019])

³ (Available at: <https://www.couriermail.com.au/subscribe/news> [Accessed 2019])