



PLANNING & URBAN DESIGN REVIEW
RIDDELL ST, BELLEVUE HILL
Final Report

July 2021

Prepared for Woollahra Municipal Council

by Studio GL

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1. Introduction

1.1. Background

1.2. Study area

1.3. Strategic review

1.4. DA review

1.1. Background



Introduction

Woollahra Municipal Council commissioned Studio GL in May 2021 to undertake a planning and urban design review of land around Riddell Street in Bellevue Hill and investigate the suitability of the current land zoning. The land surrounding Riddell Street is currently dominated by low density housing but is zoned R3 Medium Density Residential.

A recent development proposal that complies with the current controls has raised concerns relating to its suitability with the existing character of the area, as well as the potential for excessive impacts on existing trees and landscaping, the risk posed by excavation, and issues related to parking and traffic generation.

Subsequently, Council resolved to investigate the down zoning of this land, from R3 Medium Density Residential to a R2 Low Density Residential zoning.

This review will identify potential development outcomes based on the current land use zone and applicable controls and make recommendations in response to the analysis of the appropriateness of these outcomes.

Approach and Methodology

This report is divided into the following chapters:

- Introduction - Provides background to the study area and reviews existing controls under local planning instruments (LEP and DCP). A recent development approval is also investigated to understand the nature of applications previously lodged and determined in the study area.
- Existing Context - This chapter presents a photographic study showing the existing condition and character of the built form and public domain. It also includes context mapping showing the pattern of development (urban structure, blocks and lot), topography, landscape and public domain and key local infrastructure. The analysis is further supported by views of a 3D model of the location.
- Potential Scenarios and Impacts - This chapter identifies potential development scenarios based on the retention or change in the land use zone and the related relevant controls. The impact and advantages and disadvantages of these options on the surrounding context is also discussed.
- Recommendations - This chapter provides a summary of the findings of scenario testing and provides clear recommendations and justifications for the proposed option. It also identifies any changes required to be made to the current planning controls and outlines the impacts of any proposed change on development capacity of the area, including housing and housing targets, jobs and parking.

1.2. Study area



Riddell Street is located within the suburb of Bellevue Hill. The street runs north east for approximately 215m from an intersection with Bellevue Road. Technically the north eastern corner of Riddell Street intersects with Victoria Road, however after Bradley Avenue the land falls steeply and the road was not constructed. This section of the road has become a park and is known as the Bradley Avenue Reserve.

The study area includes 17 residential properties located on the south-east side of the street and 3 properties on the north-west side. The majority of the properties within the study area are accessed via Riddell Street. Two lots are accessed off Buller Street and one property is accessed off Victoria Road.

The study area includes a terraced public reserve, known as the Bradley Avenue Reserve, which provides pedestrian access from Bradley Avenue to Victoria Road. The study area is immediately adjacent to the Bellevue Hill Shops located to the south, which is identified as a neighbourhood business centre in the Woollahra Local Strategic Planning Statement 2020.

The local character of the area is a combination of the natural undulating landform, the urban structure of lots with respect to the street, the dense tree canopy, and the prominent views to the harbour, and the low rise built form. These elements shape the physical attributes of the place.

The study area lies within the Woollahra Municipal Council Local Government Area (LGA) and is subject to the Woollahra Local Environmental Plan (LEP) 2014 and the Woollahra Development Control Plan (DCP) 2015.





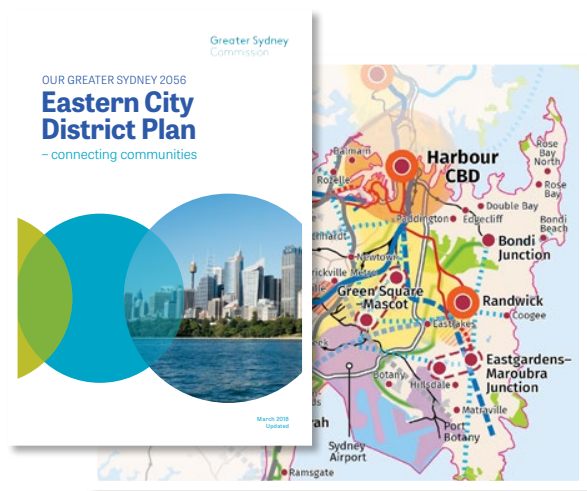
— Study area boundary

Figure 1 Aerial map of the study area and local context (aerial source: nearmap.com 2021)

1.3. Strategic review

Eastern City District Plan 2036

Author: Greater Sydney Commission (March 2018)



The Eastern City District Plan (the District Plan) is a 20-year plan to manage growth in the Eastern City District comprising the Council areas of Bayside, Burwood, City of Canada Bay, City of Sydney, Inner West, Randwick, Strathfield, Waverley and Woollahra.

The aims of the District Plan are to help achieve the 40-year vision of the Region Plan which aligns growth in the Eastern City District to support innovation and global competitiveness. The Plan seeks to achieve a liveable, productive and sustainable future for the district, leading to an improvement in the District's lifestyle and environmental assets.

The District Plan outlines a set of twenty-one planning priorities which local planning strategies, planning proposals, controls and policies must be consistent with. These planning priorities are to be implemented through associated action by Councils, NSW Government departments and agencies by 2036.

The District Plan outlines the need for an increase in dwellings to support the growing population within the district over the next 20 years. It proposes an 157,500 increase in the number of dwellings in the district which will generally be achieved through urban renewal and infill development.

The plan promotes a place-based approach and consideration of the local context for the provision of any new housing. It also encourages additional dwellings to respond to predicted changes in household and age structures, which forecasts a significant increase in single-person households.

In accordance with the Planning Priority W5 regarding housing supply, the District Plan seeks to provide a diverse mix of housing to match the community's needs and preferences. It also encourages councils to investigate additional opportunities for medium density housing.

The District Plan recognises the value of local neighbourhoods within leafy suburbs such as Bellevue Hill, and their contribution to creating a sense of place and identity. The plan seeks to retain such great places and foster the sense of belonging.

The District Plan aims to improve the sustainability of the district, via increasing urban tree canopy cover and expanding the Green Grid to link open spaces, waterways and bushland.

Summary points

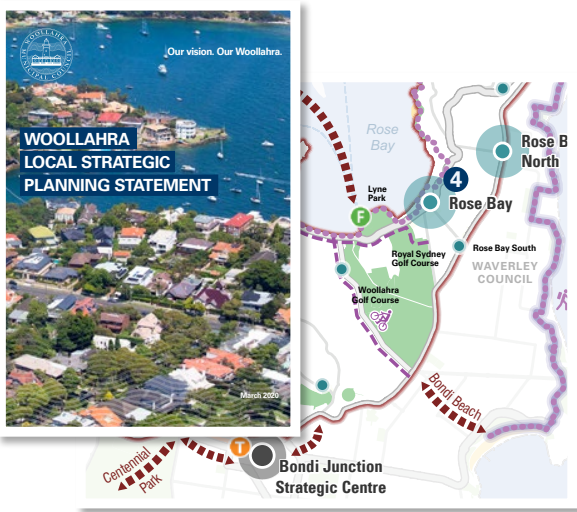
The strategy encourages councils to identify opportunities for the provision of medium density housing.

Housing should respond to the changes in household structures.

The plan encourages suburbs to foster great places and retain the sense of belonging within local neighbourhoods.

Woollahra Local Strategic Planning Statement 2020

Author: Woollahra Municipal Council (2020)



The Local Strategic Planning Statement (Woollahra LSPS) is a 20-year planning vision, emphasising land use, transport and sustainability objectives in alignment with the directions set out by A Metropolis of Three Cities - The Greater Sydney Region Plan. It directs how future growth and change is to be managed in the Woollahra LGA.

The plan envisions Woollahra as "Outstanding heritage, lifestyle, leafy, boutique villages and an unrivalled open, sunny harbour-side landscape in Sydney's east." In addition to providing the vision, the document outlines planning priorities and actions.

The structure plan illustrates the close proximity of the study area to the Bellevue Hill Shops, schools, parks, playground, and the Bondi Junction Strategic Centre. The LSPS identifies an aspiration to sustain diverse and affordable housing options provided within accessible locations provide for a range of needs and incomes. The LSPS references the changing age demographics of the area in outlining the need for diverse housing solutions that cater to the changing needs.

The LSPS states that new housing developments in and around the villages need to respect the area's character, heritage, lifestyle and scenic landscape. Future housing should also consider the sloping topography and protecting tree canopy and urban forest. One of the actions within the LSPS aims to develop a local character statement which identifies "areas in our low density residential zones where a local exclusion from the Low Rise Medium Density Housing Code may be appropriate".

The LSPS identifies Bellevue Hill to have a dense tree canopy coverage and encourages strengthening controls to protect deep soil landscape areas and ensure any development responds appropriately to topography and reduces excavation.

Summary points

The council aims to ensure new housing supports diversity, affordability and accessibility.

All development should respond appropriately to the local character, heritage, topography and protect the tree canopy cover.

1.4. Strategic review

The Woollahra Local Environmental Plan 2014

Author: Woollahra Municipal Council (2014)

The Woollahra Local Environmental Plan (LEP) 2014 guides development and planning decisions within the local government area. LEP provisions provide a framework for land use to ensure development is appropriate and supports the relevant objectives such as achieving the desired future character. The key planning controls are land use zoning, limits to the permissible floor space ratio, lot size and building height, and identification of heritage listed items and conservation zones.

Land Use Zoning

The predominant land use zone within the study area is R3 Medium Density Residential. The objectives of this zone are:

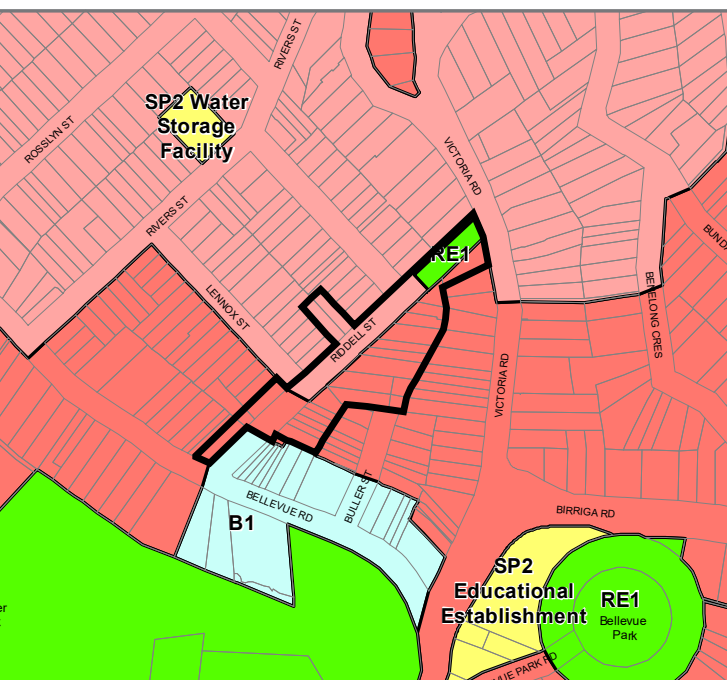
- To provide for the housing needs of the community within a medium density residential environment.
- To provide a variety of housing types within a medium density residential environment.
- To enable other land uses that provide facilities or services to meet the day to day needs of residents.
- To ensure that development is of a height and scale that achieves the desired future character of the neighbourhood.

The zoning permits residential dwelling houses and a range of other uses are permitted with consent, including Boarding houses, Centre-based child care facilities, Hostels, Community facilities, Dual occupancies, Office premises, Residential flat buildings, Semi-detached dwellings, Seniors housing, Multi dwelling housing, Dwelling houses, Neighbourhood shops and Recreation areas.

Two lots within the study area are zoned R2 Low Density Residential. These lots are consistent with the surrounding development north of the study area. This zone seeks to provide housing within a low density residential environment and ensures the compatibility of any proposed development with the character and amenity of the surrounding neighbourhood.

The study area also includes an open space located to the north east of the study area identified as RE1 Public Recreation zone. There is also extensive land, known as Cooper Park, south-west of Bellevue Road and south-east of Victoria Road that has been zoned RE1 Public Recreation.

Land immediately south of the study area, along Bellevue Road is zoned B1 Neighbourhood Centre, which consists of small-scale retail and businesses.



Land Use Zoning

R2 Low Density Residential	B1 Neighbourhood Centre
R3 Medium Density Residential	SP2 Infrastructure
RE1 Public Recreation	
— Study area boundary	

Floor Space Ratio

Density regulations are expressed as a floor space ratio (FSR). The objectives of this control for development in Zone R3 Medium Density Residential are:

- To ensure the bulk and scale of new development is compatible with the desired future character of the area
- To minimise adverse environmental effects on the use or enjoyment of adjoining properties and the public domain
- To ensure that development allows adequate provision on the land for deep soil planting and areas of private open space

The LEP generally applies an FSR of 0.75:1 across the R3 Medium Density Residential areas within the study area, with an increased ratio of 1:1 for the lot fronting Bellevue Road. No FSR currently applies to land zoned R2 Low Density Residential. Additionally, the FSR is not applicable for development of dwelling-house, dual occupancy or semi-detached dwelling sited on the identified land on the map.



Maximum Floor Space Ratio

N1 1	P 1.25	 Refer to Clause 4.4B
G1 0.65	S1 1.5	 Study area boundary
I1 0.75	T 2	

Height of Buildings

The maximum building height control seeks to be in alignment with the character of the area, provide a transition in scale between zones, provide adequate solar access to existing buildings and open space, protect views and privacy, and minimise overshadowing.

The permissible maximum height of buildings is generally 10.5m within the study area, although the two lots zoned R2 Low Density Residential have a maximum height of 9.5m. However, the LEP applies a maximum height of 9.5 metres for development of a dwelling house, dual occupancy or semi-detached dwelling on land in Zone R3 Medium Density Residential.



Maximum Building Heights

J2 9.5	Q2 19.5	 Refer to Clause 4.3A
K 10.5	Q3 20.5	 Study area boundary
L1 11	N2 13.5	

1.4. Strategic review

Minimum Lot Size

Minimum lot size is established by the LEP and relates to the resultant size of a lot after subdivision. The objectives of this control seek to ensure that development is consistent with the desired future character of the neighbourhood, lots have a minimum size to retain or enhance amenity by providing useable areas for building and landscaping and identifies locations that are suitable for increased development density.

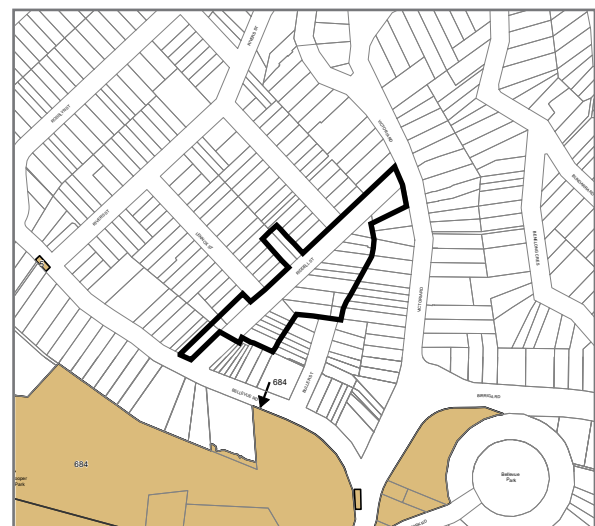
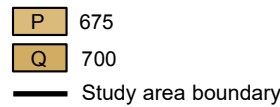
All lots zoned R3 Medium Density Residential within the study area have a minimum lot size of 700m². The minimum lot size for lots zoned R2 Low Density Residential is 675m². However, R3 Medium Density Residential zoned land may be subdivided into 3 or more lots for the erection of a dwelling house/ attached dwelling/ semi-detached dwelling if the size of each lot is equal to or greater than 230m².

Heritage

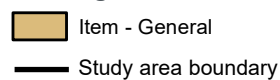
There are no heritage items or conservation areas identified within the study area or in its immediate vicinity. Cooper Park and the Bellevue Hill Public School located south-west and south-east of the study area are the only identified heritage items in the general area. Cooper Park is in the process of being nominated for State Heritage listing.



Minimum Lot Size

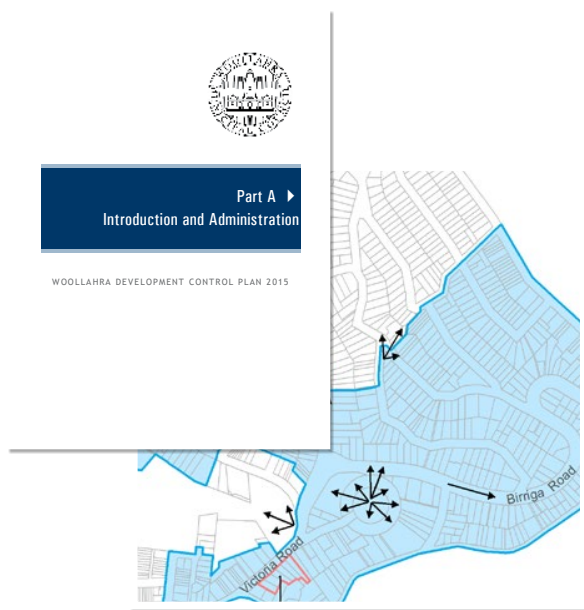


Heritage



The Woollahra Development Control Plan 2015

Author: Woollahra Municipal Council (2015)



The Woollahra Development Control Plan (DCP) 2015 provides more detailed provisions for development to achieve the purpose of the Woollahra LEP 2014.

Part A is a general Introduction. It identifies how the DCP is to be used and then covers general items such as the Purpose of the DCP, the land that is affected by the controls, the aims of the DCP and the relationship of the DCP to the LEP, State Environmental Planning Policies and other DCPs. There is also a Dictionary, setting out the meaning of identified terms.

Part B of the DCP applies to general residential. The most relevant parts within this section, for the study area, are Chapter B1.7 Bellevue Hill South Precinct and Chapter B1.8 Bellevue Hill North Precinct which set site specific controls, and Chapter B3 General

Development Controls which guides development in predominantly R2 Low Density Residential and R3 Medium Density Residential zones but also sets controls for other land uses such as Public Recreation and Infrastructure.

The objectives set out in Chapter B2 Residential Precincts are to ensure that any proposed development is compatible with the future desired character of the area, to protect the key contributing features of precincts with unique character, to ensure that the design response is well founded and responsive to the site context, to consider amenity for both the users of the site, and the surrounding locality and, to protect prominent views, streetscape quality and tree canopies.

Character Statement: The study area lies at the boundary between two residential precincts outlined within the DCP: Bellevue Hill South Precinct and Bellevue Hill North Precinct. Most lots within the study area form part of the south precinct. Only two lots on the north-east side of Riddell Street fall within the Bellevue Hill North Precinct.

The character of Bellevue Hill South Precinct as identified by the DCP is highlighted by the nature of its landform and how the urban structure responds to it, including the mix of dwelling houses, prominent views, significant open spaces, and existing tree canopy.

The DCP encourages new development along local roads to consist of a mix of well designed dwelling densities and styles. All development should respond sympathetically to the existing topography, minimising cut and fill, and promoting view sharing. Provisions should be made for deep soil landscaping within the front and rear setbacks to reinforce the landscape setting and maintain the tree canopy. Development should 'establish a transition of development scale from the detached dwelling houses at the northern end of Bellevue Hill to the residential flat buildings that address the major streets'.

1.4. Strategic review

The key elements that help characterise Bellevue Hill North Precinct include the variety of quality residential architectural styles and forms set within highly visible gardens, prominent views of the harbour, mature street trees and grassed verges and sandstone walls. New development should respect the existing scale, character and built form of the streets; respond in form and siting to the street and subdivision pattern; and ensure that any on-site parking does not dominate the streetscape.

Chapter B3 of the DCP sets general objectives and controls under a wide range of topics to ensure design excellence is achieved by all future development. Selected provisions considered of most relevance to the study area are summarised below.

Building envelope: Controls set for development in the R2 Low Density Residential Zone are also applicable to dwelling houses, semi-detached dwellings and dual occupancies that are located within the R3 Medium Density Residential Zone set by the WLEP 2014. Numeric controls are set to maintain consistent front, side and rear setbacks for all development. Controls also determine the maximum wall height and inclined plane for dwelling houses to limit the visual impact of the bulk and scale of built form on the street, limit overshadowing and promote views.

Floorplate: These controls set the maximum development potential for the sites where FSR does not apply. It limits the size of all development within the R2 Low Density Residential Zone, and dwelling houses, semi-detached dwellings and dual occupancies within the R3 Medium Density Residential Zone.

Excavation: Provisions are made to limit the volume of land on a site that can be excavated to accommodate residential development. This is to encourage buildings to respond appropriately to the natural topography, minimise extensive excavation and structural risks to adjoining structures. The extent of excavation is determined by the type and site area of the dwelling. These controls do not apply to backyard swimming pools and tennis courts located outside the building envelope.

Built form and context: This section provides controls for residential development to address considerations such as streetscape and local character, overshadowing, public and private views, acoustic and visual privacy, and internal amenity. The objectives of this part address a range of issues, but the most relevant for this review include the support of development which does not dominate, but harmonises with a treed landscape, contributes to the desired future character of the area, is sympathetic to the street and locality in which it is located, corresponds with the topography, and the imperative to protect and manage the impact of development on adjoining properties in terms of solar access and privacy.

The DCP recognises the contribution of views to the unique character of Woollahra and focuses on preserving the public and private views between buildings and vegetation terminating at the Sydney Harbour or other local landmarks. Controls seek to promote view sharing between properties, and to 'strike a balance between accommodating new development while providing, where practical, reasonable access to views from surrounding properties.'

On-site parking: The specified parking controls relate to the requirement for minimal visual impact of garages, car parking structures and driveways on the streetscape. This allows for the preservation of trees and on-street parking. The controls for car parking structures include its maximum width, location, maximum height, form, materials, and interface with the street.

External areas: The controls relating to external areas address landscaped area and private open space with a focus on the retention of existing mature trees, vegetation and other landscape features. The controls also ensure the provision of well-designed and adequate open spaces that add to the amenity of the dwellings. Provisions for the design of private facilities such as swimming pools, tennis courts and outbuildings seek to provide enhanced private amenity without adversely affecting the natural landform or landscape.

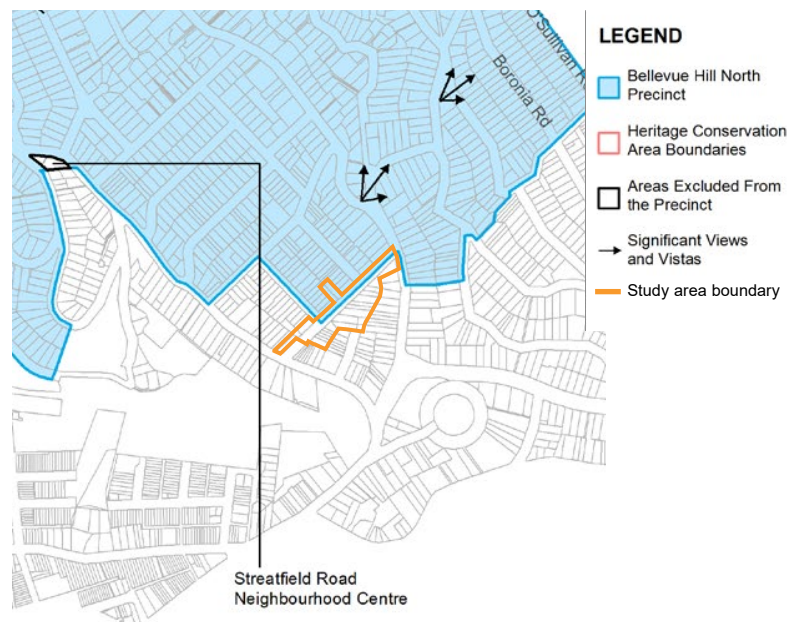
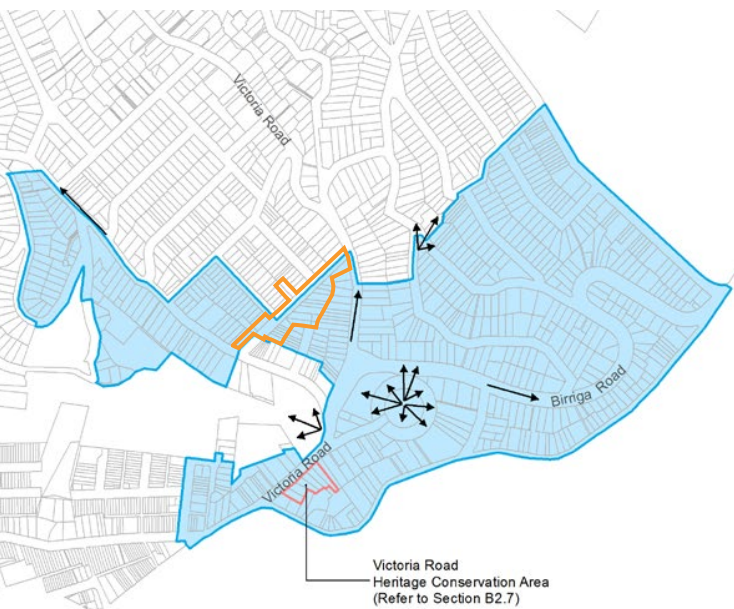


Figure 2 Extent of Bellevue Hill North and South Precinct Boundaries (DCP 2015)

This section also provides controls for the design, size and arrangement of fences in order to ensure they contribute positively to the streetscape and the surrounding views, whilst also maintaining private amenity.

Additional controls for development other than dwelling houses: This section provides controls that relate to other types of dwellings such as secondary dwellings, semi-detached dwellings, residential flat buildings, Inter-War flat buildings, etc. These are arranged into a series of sub-parts, addressing considerations for each type of development, with differing objectives that address issues under each type.

Additional controls for development in sensitive locations: This part focuses on controls relating to specific situations, such as development on land adjoining public open space. Given the significance of landscape, trees, landform and character of an area as outlined in the previous sections, the need for sensitive management of all new development adjacent to public open space areas has been highlighted. The requirements seek to protect public use, access, safety and vegetation of the open space.

Summary points

A dedicated section in the Woollahra DCP is site specific to the Bellevue Hill North and South Precincts and outlines the existing and desired character for the area with a range of objectives. Riddell Street lies at the junction of these two residential precincts, and therefore needs to consider the impact of any future development on both the identified precinct characters.

The significance of views, landform and landscape are highlighted within both the residential precincts.

The majority of general controls describe the intent and desired outcome and target both the design of the public domain and private development. Most private development is regulated by numerical provisions.

1.4. DA review

Address: 21 & 23 Riddell Street

DA Number: DA2018/487 | Date: 2018-2020



Key Characteristics

Site Parameters	
Existing	
Lot width	31m
Lot Depth	48m
Proposed development	
Type of development	Residential flat building
Total height	11m
No of floors	3 storeys
No of units	6 X 3-bedroom apartments
Front setback	2m
Side setback	3m
FSR	0.75:1
Parking	Basement parking for 12 vehicles
Landscaping	-Provided on site and within embankment -Removal of 6 existing trees
Status	Approved by the Court

This section illustrates how the planning controls are being used by proponents in developing proposals that are permissible in Riddell Street under the current land zone. A recent development application, a proposal for 21 & 23 Riddell Street creates a precedent for future residential flat buildings. This section reviews the design and impacts of the proposal.

The development proposed construction of a 3 storey residential flat building over two lots on the south-east side of Riddell Street. The proposal involved the demolition of two existing single dwellings, removal of 6 on-site and street trees, and excavation of the embankment fronting the lot to accommodate a driveway to the proposed basement parking. Pedestrian access is retained along the existing embankment to the ground level of the building, separate from the vehicular entry point.

The development is surrounded by single dwelling houses to the north and semi-detached dwelling houses to the south. Dwellings on either side of the development are two storeys high with a pitched roof. Predominantly, existing dwellings that face the same side of the street currently do not have their street fronting edge aligned parallel with the street, creating a varying front setback. The proposed development creates a variation to this character by aligning its fronting edge parallel to the street.

Design characteristics of the proposed development

The proposed residential building has an overall height of 11m. The height excludes the depth of the basement. The units have an east-west orientation with balconies overlooking the street and the rear of the building. The development provides a private swimming pool for each of the two units on the ground floor.

The development proposes a 2m setback from the street, 3m side setbacks, and a deep rear setback that varies between 9m to 14m (approximately).

The landscape plan illustrates the provision of 4 new trees and the retention of 1 existing tree along one of the side boundaries within the site. Additional vegetation includes shrubs, groundcovers, climbers and planting within all the setbacks.

The building predominantly has a flat roof with shallow eaves along its edges. It proposes a paint and render finish with aluminium battens vertically across the front and side elevations.

Outcome of the proposal

The development application was refused by the Woollahra Local Planning Panel on the grounds of its inconsistency with certain objectives and provisions set out within the Woollahra Development Control Plan 2015, Woollahra Local Environmental Plan 2014, and SEPP 65.

In general, the notice of refusal outlined that the development application was at variance with the built form, height and scale for the desired character of the neighbourhood.

The notice highlighted that the extent of excavation to accommodate the driveway and basement, and demolition of existing trees were inconsistent with the objectives and controls provided within the controls governing all development in the area.

As per the notice, the proposed front setback does not comply with the objectives laid out by the DCP. Additional issues identified include risks of excessive traffic generation, inadequate deep soil landscaping, blockage of views and amenity of the adjacent dwellings, and public submissions in opposition to the proposal.

The proposal was amended and appealed to the Land and Environment Court in 2019. Following a conciliation conference, the court ruled to uphold the appeal.

Amendments made to the drawings include an increase in the front setback by shifting the entire building 2m towards the rear, minor adjustments to the built form, changes to internal layouts of the units and provision of additional fenestration.

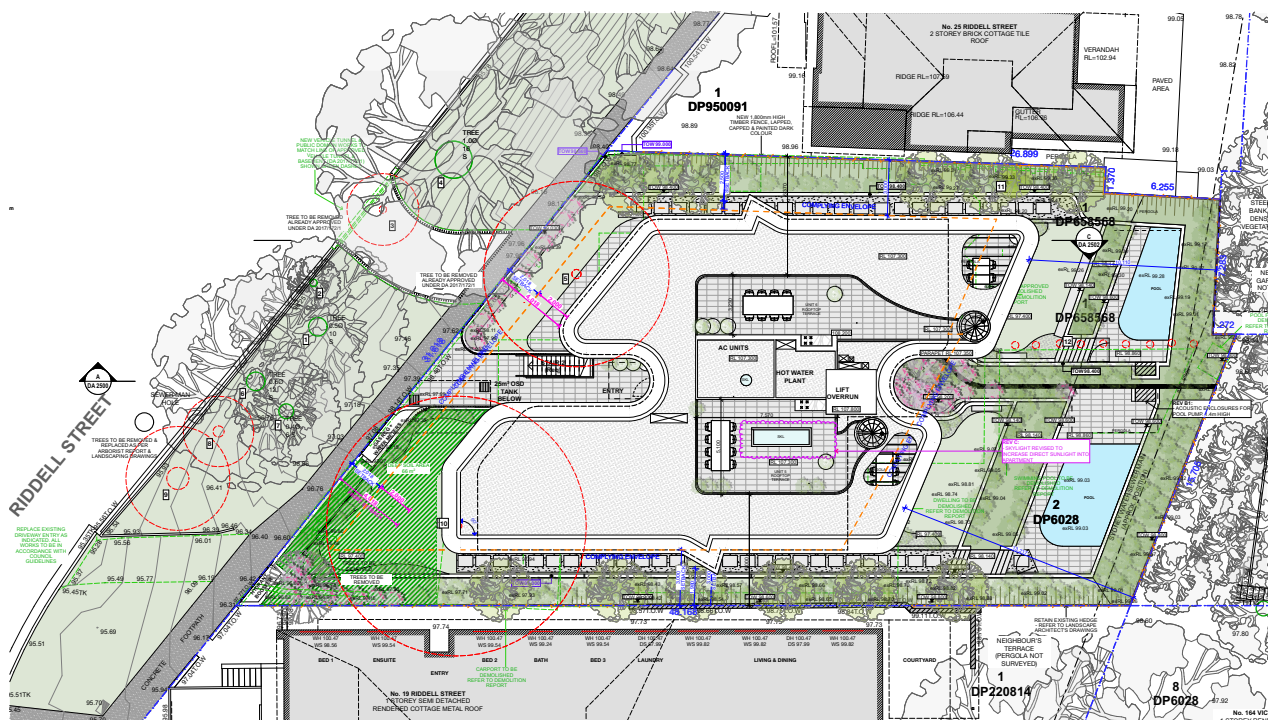


Figure 3 Roof plan of amended development application submitted in 2019



2. Existing Context

2.1. Study Area Photos

2.2. Local Context

2.3. Urban Structure

2.4. Landform, Topography & Views

2.5. Landscape & Public Domain

2.6. Built Form

2.7. Lot Sizes

2.1. Study Area Photos

Riddell Street is a characteristic example of the leafiness of Bellevue Hill, which has an above average tree canopy cover as compared with the wider LGA. Many mature trees line Riddell Street forming an arbour, and adding to the aesthetic character of the streetscape.



Houses along Riddell Street are predominantly low density dwellings, which vary in height, width and alignment to the street. The houses are typically 1- 2 storeys in height on the street front side. They also vary in styles, ranging from traditional to contemporary.



The only exception to the generally low density dwelling houses along Riddell Street is an Inter-War flat building at the corner of Riddell Street and Lennox Street.



Due to the lot structure and alignment of houses to the street, a few dwellings have a large front setback which is often well landscaped and consists of mature trees.



EXISTING CONTEXT



◀ Within the road reserve width of Riddell Street is one traffic lane in each direction, significant provision for parking, and a wide verge and narrow footpath on both sides of the street.



◀ As a result of the varying landform along Riddell Street, the dwellings at the north-eastern end of Riddell Street are set much higher than the street level. These properties are accessed via an elevated pedestrian footpath leading up to the houses. The embankment between the footpath and travel lane is densely vegetated.



◀ Riddell Street terminates into Bradley Avenue Reserve, a small terraced open space which slopes down to Victoria Road. Alongside the landscaped reserve, a flight of steps provides pedestrian access to Victoria Road.



◀ The undulating topography and the corresponding stepping of dwellings down the hillside allows for views towards Sydney Harbour. The views from public spaces and view corridors between buildings add to the character of the area.

The study area is adjacent to a Neighbourhood Centre on Bellevue Road, consisting of small-scale retail, restaurants and cafes. The close proximity of this centre, along with the provision of bus stops, adds to the amenity of the study area. It also results in increased traffic generation along Riddell Street.



A 9-storey residential flat building along Bellevue Road is the tallest building in Bellevue Hill and is visible from Riddell Street. The building is located on land zoned B1 Neighbourhood Centre and consists of shops on the ground level fronting Bellevue Road.



The study area is located north of Cooper Park, a large bushland reserve with many walking tracks and recreational facilities. Cooper Park is a heritage item and is in the process of being nominated for State Heritage listing.



The Bellevue Hill Public School, which is also a local heritage item, is located 250m south-east of the study area. The study area is within the catchment area for the school. The study area is also located within 1.5km of Scots College.



2.2. Local Context



High tree canopy cover adds to the streetscape amenity



Stepping of the built form in response to the topography



The neighbourhood centre adjacent to the study area

Bellevue Hill is located about 5.5km south-east of Sydney CBD and 2km north-east of Bondi Junction. Its proximity to Bondi Junction, identified as a Strategic Centre in The Greater Sydney Region Plan, makes it a location with high amenity and with good proximity to local facilities. The area is accessible by car via New South Head Road and Old South Head Road, and by bus from Bondi Junction Station and Edgecliff Station.

Places of interest nearby include Cooper Park, Royal Sydney Golf Club, Bellevue Hill Public School, Scots College, Crambrook Hill, and small-scale neighbourhood shops along Bellevue Road.

Bellevue Hill is characterised by a landscaped setting with an undulating topography generating views and split level built form. Small pockets of open space throughout the suburb capture distant views of the city skyline and the harbour.

The roads respond to the landform, resulting in an organic mix of curvilinear and rectilinear street patterns. Similarly, the blocks sizes are irregular, with development stepping down the hillside on sloping sites.

There is a diverse mix of housing types and styles available in the suburb, including dwelling houses, semi-detached houses, multi-dwelling housing and residential flat buildings. The height and scale of built form in the southern part of Bellevue Hill is higher than the low density residences to the north, providing a transition from high density residential flat buildings along the main roads that tend to follow a ridgeline.





- Study area boundary
- Neighbourhood Centre
- Public Recreation (RE1)
- Main road

Figure 4 Local Context

2.3. Urban Structure

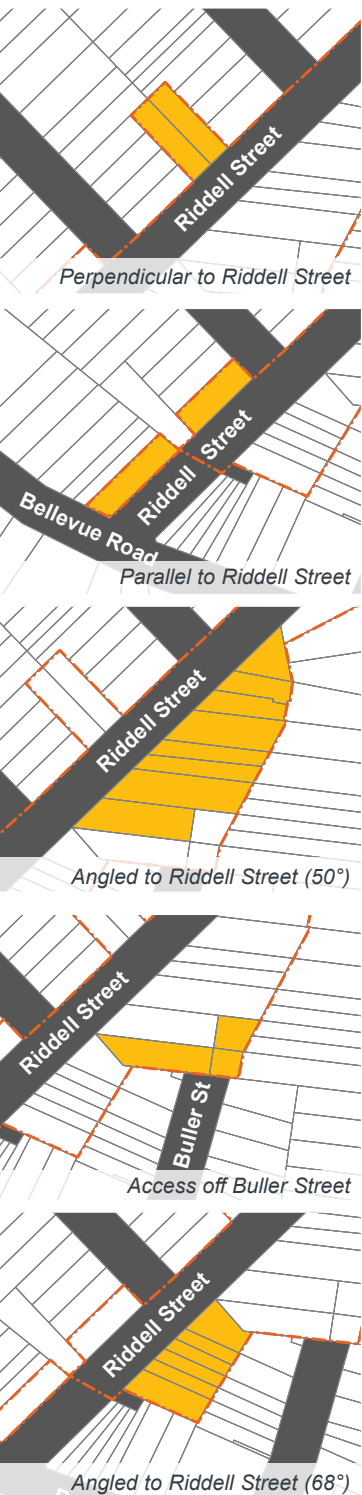


Figure 5 Lot orientation types

The urban structure of Bellevue Hill is predominantly dictated by its undulating topography, with Victoria Road generally following a contour around the hillside while Riddell, Bradley and Lennox Streets are located on a plateau. The blocks facing Victoria Road and in hillside areas are typically irregular in shape as they follow the street alignment. On the plateau lots are more regular and rectilinear in size. Smaller, narrower lots are located close to the shops along Bellevue Road.

The study area is part of a block that is defined by Victoria Road, Bellevue Road and Riddell Street. The alignments of these three streets has created an 'angled' block geometry and the shape, orientation and size of lots within this block vary widely. Three lots within the study area have a primary frontage that is not on Riddell Street but on the adjacent streets of Victoria Road and Buller Street.

The lots within the Riddell Street study area have five different orientations, as shown in Figure 6.

- Lots north of the street are perpendicular to the street
- Lots south-west of the street are aligned parallel to the street.
- Lots to the north-east are aligned at 50° to the street and align with the lots at the rear that are perpendicular to Victoria Road.
- Two lots aligned at 50° to the street to the south-east are accessed off Buller Street.
- Lots to the south-east are oriented at 68° to the street.

The Urban structure diagram also identifies intersections to highlight the high 'intersection density', or walkability of the surrounding study area and shows where a choice of travel is possible. The diagram shows the majority of intersections within and around the study area are three-way intersections.

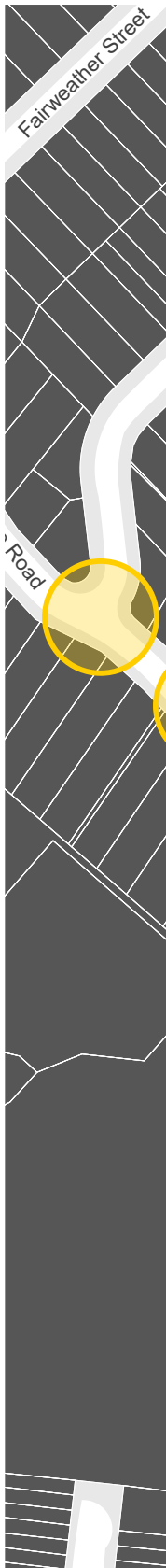




Figure 6 Urban Structure

2.4. Landform, Topography & Views



Views of the Harbour available from the north-eastern end of the Riddell Street



The steep terrain in Cooper Park forms a natural gully



Roads and development adjacent to the study area are laid over a plateau

The area is characterised by the topography gently sloping down north-westwards towards the Sydney Harbour and the steeply sloping down eastwards towards Bondi Beach and the Pacific Ocean. The main roads adjacent to the study area, such as Bellevue Road and Victoria Road are curvilinear in response to the natural topography.

Riddell Street is located on the eastern edge of a natural plateau which is generally flat. The majority of surrounding development to the east and north of the study area steps down to follow the slope.

The north-eastern part of the study area is situated on one of the highest points in the suburb. From this high point, the steep slope of the terrain northward and eastward provides opportunities of long distant views to the harbour and the ocean, which is captured from private dwellings and the terraced public open space, known as Bradley Avenue Reserve, located at the north-eastern end of Riddell Street. This reserve extends Riddell Street via a flight of stairs alongside the reserve and connects with Victoria Road.

Other local high points located within 400m of the study area include Bellevue Hill Park and dwelling houses along Rosslyn Street and Buller Street. Cooper Park to the south of the study area is located within a natural gully with a creek running through the park.

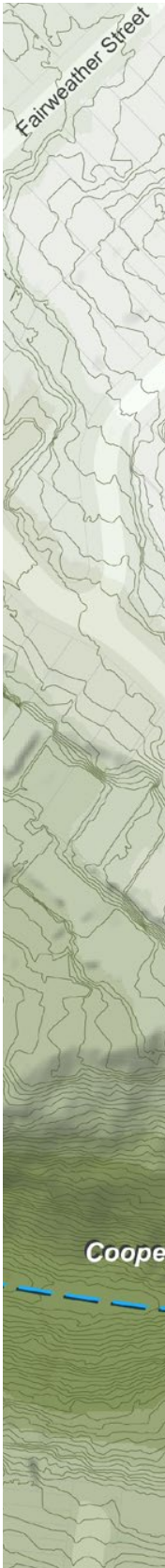




Figure 7 Topography

2.5. Landscape & Public Domain



The arbour formed by mature trees on either side of Riddell Street adds to its aesthetic appeal



Raised footpath and vegetated embankment on the north-eastern end of Riddell Street



Wide landscaped verges incorporated within the road reserve of Riddell Street

The study area and surrounding streets contain large mature trees, both along streets and within private lots. The area is heavily vegetated which screens the built form and this is a characteristic of the area. The Landscape and Tree Canopy Cover diagram illustrates the extent of the existing tree canopy coverage within the study area and surrounding streets. The high tree canopy cover helps to create shady streets and has a positive impact on the local micro-climate.

Wide landscaped verges within road reserves and the arbours formed by the street trees add to the aesthetic character of the streetscape. The undulating landform, in particular within the study area, has created opportunities for densely terraced and landscaped street verges.

Bradley Avenue Reserve, which terminates Riddell Street on the north-eastern end, is a small terraced open space located within the study area. It provides seating and mature, shady trees. Other important public open spaces surrounding the study area include Cooper Park and Bellevue Hill Park, both located south of the study area. Cooper Park, in particular, is a popular destination with recreational facilities, walking tracks, and dense foliage.

Cycleways exist along Bellevue Road and Victoria Road. Riddell Street is not identified as a cycling route, however the street has limited through traffic providing a slow speed environment.





Figure 8 Landscape and Tree Canopy Cover

2.6. Built Form



A mix of housing densities along Riddell Street



Large landscaped gardens formed due to varying setbacks



Existing Inter-War residential flat building within the study area

The Built Form diagram illustrates simplified massing of the existing built form within and around the study area. It shows that the majority of buildings within the study area are detached and small scale residential built form with small front setback, very small side setbacks and deeper rear setbacks. The setbacks of dwellings along Riddell Street varies with lot orientation. Dwellings located on the angled lots tend to be located parallel to the side boundaries which creates an irregular setback to the street. This triangular front setback is generally well landscaped.

The built form surrounding the study area varies in size and type. There is a mix of dwelling houses, semi-detached houses, multi-dwelling housing and residential flat buildings throughout Bellevue Hill. Within the study area is a small two storey apartment building located south-east of the street along Bellevue Road and a few two storey semi-detached houses. A recently approved three storey apartment building is currently under construction.

Residential buildings with larger floor plates are located along Bellevue Road and Victoria Road. A few lots at the intersection between Riddell Street and Bellevue Road are built to the boundary which creates an urban character that defines the public domain and activates the local centre.

The overall height of dwellings within the study area is currently one and two storeys. Despite the consistent height limit set by LEP controls, the differences in elevation across the study area results in some dwellings appearing significantly taller than others in the street.

The heights of buildings surrounding the study area also varies. Many sites along Bellevue Road and Victoria Road utilize the topography to achieve additional storeys within the maximum building height limit.

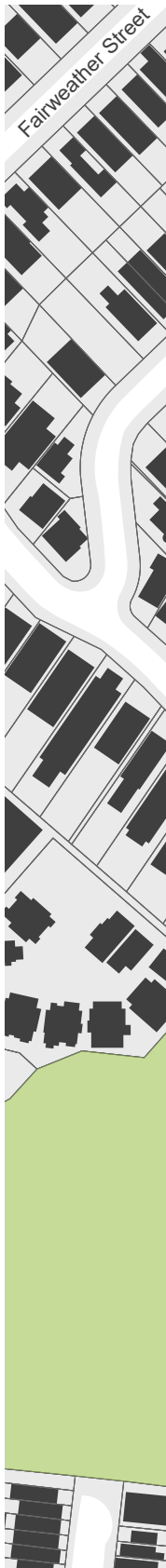




Figure 9 Built Form

2.7. Lot Sizes



Varying size of lots along Riddell Street



Smaller lot sizes at the intersection of Riddell Street and Bellevue Road allows for fine-grain retail

The adjacent diagram shows the existing sizes of lots within and surrounding the study area. The size of lots along Riddell Street varies considerably. Lot sizes range from below 200m² to greater than 700m². The current controls regarding lot sizes set out a minimum requirement of 700m² to allow the development of residential flat buildings and a minimum of 460m² for attached dual occupancies.

Given that a majority of lots within the study area are zoned R3 Medium Density Residential, the diagram illustrates that with the exception of two lots, the existing lots would not be able to support the development of residential apartments. This means that amalgamation of multiple lots would be required to achieve the minimum area requirements. While amalgamation of two lots is possible, development of smaller sites which require multiple lots to amalgamate is less common and can have high cost implications.

The smaller narrow frontage lots create a rhythm and variety along the streetscape which adds to the character of the street. If multiple lots were to be amalgamated, resulting in a wider development fronting the street, the rhythm would be broken. The smaller lots also contribute to a diversity of dwelling size in the street.

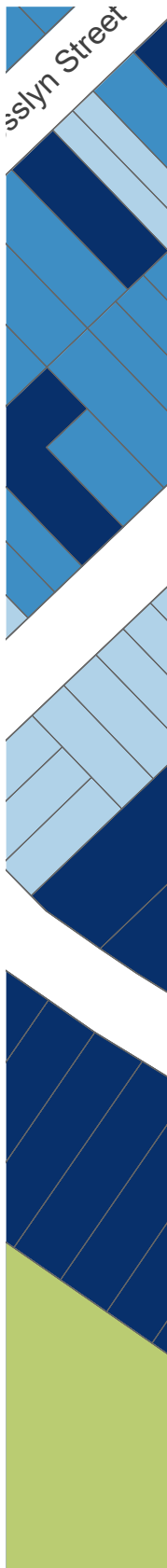




Figure 10 Lot sizes



3. Potential Scenarios & Impacts

3.1. Introduction

3.2. Scenario 1 - Maintain Existing Zones

3.3. Scenario 2 - Rezone to R2 Low Density

3.4. Scenario 3 - Rezone sites less likely to develop

3.5. Scenario 4 - Rezone sites more likely to develop

3.1. Introduction

This chapter builds on the previous chapters and explores the potential impact of development under the current LEP and DCP controls and explores the impact that varying these controls would have.

The eastern side of Riddell Street is zoned for Medium Density dwellings and given the accessibility and amenity of the neighbourhood, and its proximity to the key strategic centre of Bondi Junction, it seems likely it would be desirable location for the provision of new housing supply. The recent approval of an apartment building in Riddell Street will remove street trees and alter the character of the street. An increase in the number of low rise apartments along Riddell Street appears likely to impact the scale and character of the streetscape.

A myriad of possible options and permutations are possible within a study area of this size and so assumptions about the amalgamation pattern, type and intensity of development, and potential achievable within the applicable LEP and DCP controls have been provided. Common to all scenarios is the assumption that will development will be similar to recent approvals and all developments will seek to maximise FSR and/or site coverage and all apartments will be large (3 bedroom). Each scenario also considers solar access, tree canopy, landscape area, parking, overshadowing, and impact on the character of the place.

The potential development outcomes consider four different scenarios:

Scenario 1 assumes no changes are made to the existing controls and development occurs to the full potential allowable under the R3 Medium Density Residential zone and other applicable controls.

Scenario 2 analyses the impact of down zoning of all medium density lots within the study area to a R2 Low Density Residential zoning and models the subsequent development permissible under these revised controls.

Scenario 3 considers the retention of lots within the study area that are most likely to develop as apartments and down zoning sites less likely to develop to a R2 Low Density Residential zoning and models the subsequent development permissible under the revised controls.

Scenario 4 explores ways to minimise the impact of development of key sites on the character of Riddell Street. This scenario considers down zoning lots within the study area that are most likely to develop to R2 Low Density Residential and retaining the remaining sites as R3 Medium Density Residential.



Lots currently under construction within the study area



Recent development within the study area

3.2. Scenario 1 - Maintain Existing Zones

Scenario 1 assumes no changes to existing controls and all lots within the study area currently zoned R3 Medium Density Residential retain this zoning.



Key Assumptions

The minimum lot size required for residential apartments in a R3 zone under the Woollahra LEP 2014 is 700m². Amalgamation of some lots have been assumed in order to support the development of a residential apartment building.

- A** No change is assumed for lots on the north-western side of Riddell Street, south of Lennox Street (29 Lennox Street and 29A, B, C Bellevue Road) remain as they are too small to be apartment sites and have already been developed to their maximum capacity.
- B** Lots on the north-western side of Riddell Street, north of Lennox Street (4 and 6 Riddell Street) are not up zoned to R3 Medium Density as these sites are surrounded by low density housing. These sites are too small to be developed as dual occupancies but a larger dwelling could be constructed on each site.
- C** 154 Victoria Rd, 25 and 27 Riddell Street provide the best opportunities to capitalise on the surrounding views. Each site is too small to be developed individually however if the lots were amalgamated the resultant site would be approximately 1,200m² and could be developed as two separate buildings with addresses off Victoria Road and Riddell Street.
- D** No change is assumed on sites at 21, 23, 17 and 19 Riddell Street as two are currently under construction and the other two appear to have been recently constructed.
- E** 13 and 15 Riddell Street are each large enough sites to develop as individual apartment buildings. However, in this scenario, it is assumed that 15 Riddell Street, 14 and 15 Buller Street could be amalgamated to be developed as one large residential apartment building. The change in level between Riddell Street and Buller Street would allow garage access off Buller Street and pedestrian access from Riddell Street. To maximise orientation and development potential it is assumed the side of the development faces Riddell Street with frontage off Buller Street.
- F** 1, 3, 5, 7, 9 and 11 Riddell Street are generally small sites (i.e. less than 200m²) although 1 and 11 Riddell Street are both larger. For the purposes of this scenario it is assumed that 1 Riddell Street (the largest) is amalgamated with adjoining sites (3 and 5 Ridedell Street) to create a site large enough for an apartment building.
- G** The remaining sites 7, 9 and 11 Riddell Street combined are an insufficient size for a residential apartment. It is assumed these sites are developed individually into larger detached dwellings.



Figure 12 Potential Development outcome for Scenario 1 - view from north-west looking south-east

Key Planning Controls

The building envelopes outlined in this scenario outline the maximum building capacity permissible under the existing LEP and DCP controls. It is assumed that the built form will be created within these envelopes to comply with ADG requirements.

In addition it is assumed that significant excavation and change to the natural landform, for development and vehicular access and basement parking, will occur to match that of those previously approved.

Front setbacks - The proposed building envelopes exceed the minimum requirements set by the Woollahra DCP 2015 and match that of the recent DA reviewed in Chapter 1. This is to ensure compliance with the objectives set within Part B3.2.2 (Front Setback) of the DCP 2015.

Rear Setbacks - The proposed building envelopes conform to the rear setback formula as set out by the DCP 2015, which is the result of the permissible front setback and building depth subtracted from the total site depth. A building depth is considered to be 60%

of the site depth for all residential apartments. For dwelling houses the building depth is determined by the sliding scale illustrated in Part B3.2.4 of the DCP.

FSR - The proposed building envelopes have an FSR of 0.75:1 for apartments. Dwelling-houses modelled do not have a maximum FSR as per the LEP. However, they conform to the maximum total floorplate area specified by the DCP 2015, which multiplies the buildable area by a factor of 1.65. The buildable area is the remainder of site identified once the front, rear and side setbacks have been established.

Landscape area - The proposed building envelopes assume a deep soil landscaped area of 50% of the site area outside the buildable area.

Parking - Parking for the apartment buildings is assumed to be located in a basement while for dwelling houses it is assumed that it is located in garages facing the street. Parking numbers for residential apartments are assumed to be 2 spaces per unit for a 3 bedroom apartment and 0.25 visitor spaces. 2 spaces have been assumed for all proposed dwelling houses.

3.2. Scenario 1 - Maintain Existing Zones



Figure 13 Potential Development outcome for Scenario 1 - plan view

Key Impacts

	Existing	Scenario 1
No. of dwellings	30	53 (approx).
Car parking	41 parking spaces (incl. visitor parking)	101 parking spaces (incl. visitor parking)

Tree canopy - Under this scenario there is a high chance that trees within the front setbacks of 15, 25 and 27 Riddell Street would be lost as the minimum front setback required is approximately 2- 4m (based on the recently approved DA). It is also possible that street trees in front of 15, 25 and 27 Riddell Street would be removed in order to incorporate driveways. The majority of trees at the rear of lots should be able to be retained due to the large rear setbacks. Where lots are amalgamated (for example on 15, 25 and 27 Riddell Street) trees and established landscaping between lots is likely to be lost.

Dwellings - In general, the size of apartments within the apartment developments is assumed to match that of recent DA's, i.e. large 3 bedroom apartments, the only exception to which is 154 Victoria Rd. There are 41 X 3-bedroom units, 1 X 4-bedroom unit, and 1 X 2-bedroom unit. Dwelling houses and dual occupancies (where relevant) have been designed to maximise the size of the dwelling.

Overshadowing - Under this scenario there is a high chance that overshadowing of neighbouring lots will be increased. Overshadowing of 12 Buller Street is particularly problematic.

Views - There is a chance that the height and scale of potential new development would impact the existing view corridors between buildings available from the public domain and access to views from the surrounding properties.



Figure 14 Potential Development outcome for Scenario 1 - view from east looking west

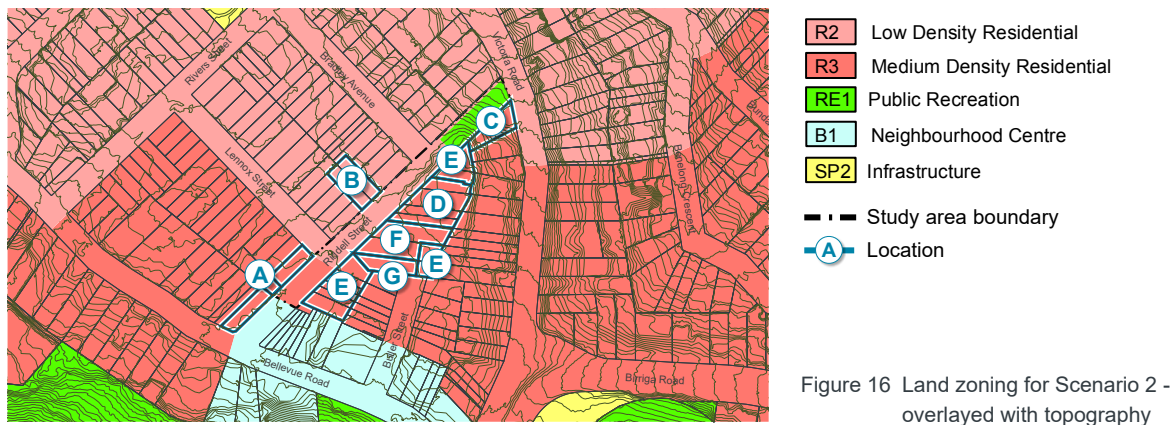


Figure 15 Overshadowing Diagram (Midday, 21 June)

Strengths	Weaknesses
<ul style="list-style-type: none"> Increased dwelling density in high amenity area and close to a strategic centre. Increased mix of housing types. Expected high amenity for new developments due to opportunity for views and proximity to neighbourhood amenities. 	<ul style="list-style-type: none"> Loss of existing streetscape character, including trees and change in scale of built form along the street. Potential for excavation and modification of natural landform. Loss of views from the existing dwellings. Increased traffic generation. Increased overshadowing of neighbouring properties especially 12 Buller Street. Likely reduction in street trees and trees in the front setback that are viewed from the public domain. High cost of amalgamating lots for the development of residential apartment buildings.

3.3. Scenario 2 - Rezone to R2 Low Density

In this scenario all lots within the study area zoned R3 Medium Density Residential are rezoned to R2 Low Density Residential.



Key Assumptions

- A** There is no change to lots on the north-western side of Riddell Street, south of Lennox Street (29 Lennox Street and 29A, B, C Bellevue Road) as they have already been developed to their maximum development capacity under the R3 Medium Density Residential zone.
- B** Lots on the north-western side of Riddell Street, north of Lennox Street (4 and 6 Riddell Street) have already been developed under the existing R2 Low Density Residential zone. However, they could have larger modern dwellings constructed on each.
- C** The minimum lot size required for dual occupancy in an R2 zone under the Woollahra LEP 2014 is 460m². 154 Victoria Rd has the minimum lot size to support this type of development and could develop as a dual occupancy to capitalise on the surrounding views.
- D** No change is assumed on sites at 21, 23, 17 and 19 Riddell Street as two are currently under construction and the other two appear to have been recently constructed.
- E** 25 and 27 Riddell Street, and lots between 1 and 11 Riddell Street, and 15 Buller Street have insufficient lot sizes to construct dual occupancy houses but could develop into larger detached dwellings.
- F** 13 and 15 Riddell Street, are assumed to retain their current built form but could be further developed to include additions within their existing rear setbacks to reach their maximum development potential.
- G** Since the primary frontage for 14 Buller Street is on Buller Street, it is assumed that additional development is permitted within the side setbacks of the dwelling to reach its maximum development potential.



Figure 17 Potential Development outcome for Scenario 2 - view from north-west looking south-east

Key Planning Controls

The building envelopes outlined in this scenario outline the maximum building capacity permissible under the revised LEP and DCP controls. It is assumed that the built form will be created within these envelopes to comply with ADG requirements.

Front setbacks - The proposed building envelopes conform with the minimum front setback requirements set by the Woollahra DCP 2015 and are sited to match the orientation of adjacent dwellings.

Rear Setbacks - The proposed building envelopes conform to the rear setback formula as set out by the DCP 2015, which is the result of the permissible front setback and building depth subtracted from the total site depth. For all development within the R2 Low Density Zone, the building depth is determined by the sliding scale illustrated in Part B3.2.4 of the DCP.

FSR - The proposed building envelopes for dwelling-houses have a maximum total floorplate area as specified by the DCP 2015, which multiplies the buildable area by a factor of 1.65. The buildable area is the remainder of site identified once the front, rear and side setbacks have been established.

Height - The proposed building envelopes are well below the maximum height of 9.5m as set out by the LEP 2014.

Landscape area - The proposed building envelopes assume a deep soil landscaped area of 50% of the site area outside the buildable area.

Parking - Parking for the dwelling houses and dual occupancies is assumed to be located in garages facing the street. Parking numbers for all proposed development are assumed to be 2 spaces per dwelling.

3.3. Scenario 2 - Rezone to R2 Low Density



Figure 18 Potential Development outcome for Scenario 2 - plan view

Key Impacts

	Existing	Scenario 2
No. of dwellings	30	31 (approx).
Car parking	41 parking spaces (incl. visitor parking)	56 parking spaces (incl. visitor parking)

Tree canopy - Compared with Scenario 1, the extent of tree removal is significantly lower as no lots would be amalgamated. The impact of any new driveways is also considerably lower as existing driveways could potentially be retained, such as for 4, 6 and 27 Riddell Street. The majority of trees at the rear of lots should be able to be retained due to the large rear setbacks. Permissible additions made to 13 and 15 Riddell Street and 14 Buller Street are shown to have minimal impact on the surrounding trees.

Dwellings - Dwelling houses and dual occupancies (where relevant) have been designed to maximise the size of the dwelling. Most proposed dwellings in this scenario incorporate an additional storey.

Overshadowing - Given the likelihood of additional storeys within each dwelling, increased overshadowing of neighbouring lots is likely. However, the extent of overshadowing would be considerably lower than that shown in Scenario 1.

Views - There is a chance that the height and scale of larger dwellings shown in this scenario might impact on views from the surrounding properties. Since there are no lot amalgamations in this scenario, the impact on the public domain in terms of the loss of view corridors between buildings is significantly lower than that of Scenario 1.



Figure 19 Potential Development outcome for Scenario 2 - view from east looking west

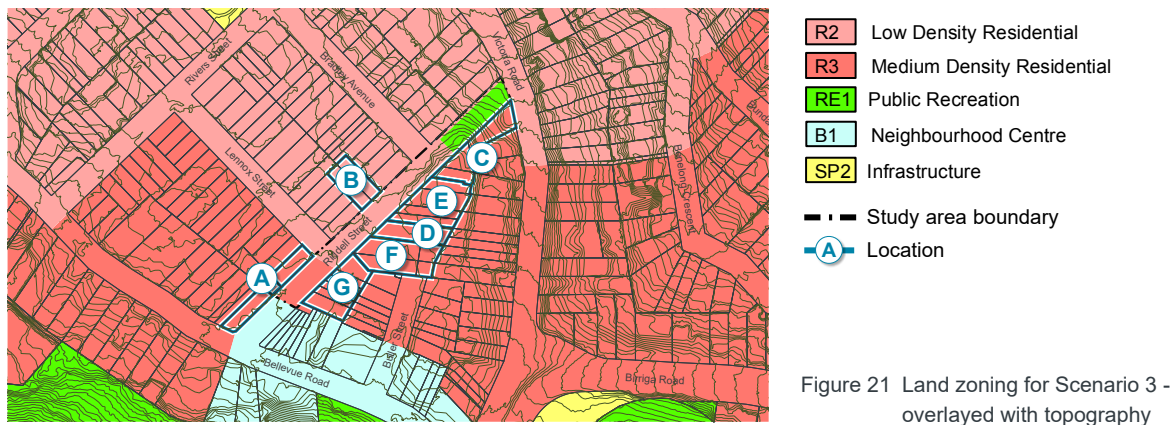


Figure 20 Overshadowing Diagram (Midday, 21 June)

Strengths	Weaknesses
<ul style="list-style-type: none"> Retention of the existing streetscape character, including trees and less change in scale of built form along the street. Limited excavation and modification of the natural landform. Minimal impact on the tree canopy cover of the area. View corridors from the public domain retained. Minimal impact on access to views from surrounding properties. 	<ul style="list-style-type: none"> Loss of an opportunity to increase dwelling density in a high amenity area, close to a strategic centre. Less diverse range of housing types and fewer smaller dwellings. Limited contribution to additional housing supply.

3.4. Scenario 3 - Rezone sites less likely to develop

In this scenario, the sites within the study area that are less likely to develop are retained as R3 Medium Density Residential while others are down zoned to R2 Low Density Residential.



Key Assumptions

- A** Lots on the north-western side of Riddell Street, south of Lennox Street (29 Lennox Street and 29A, B, C Bellevue Road) retain current zoning as these sites have been developed to their maximum development capacity under the R3 Medium Density Residential Zone.
- B** Lots on the north-western side of Riddell Street, north of Lennox Street (4 and 6 Riddell Street) are not up zoned to R3 Medium Density as they are surrounded by low density housing. These sites are too small to be developed as dual occupancies but a larger modern dwelling could be constructed on each.
- C** 154 Victoria Rd, 25 and 27 Riddell Street could be rezoned as the sites are too small for the development of residential apartments.
- D** The minimum lot size required for residential apartments in an R3 zone under the Woollahra LEP 2014 is 700m². 15 Riddell Street has sufficient size to support the development of a residential flat building and hence would retain its existing zoning.
- E** No change is assumed on sites at 21, 23, 17 and 19 Riddell Street as two are currently under construction and the other two appear to have been recently constructed.
- F** The amalgamation of 13 Riddell Street, 14 and 15 Buller Street offers the greatest development potential for a large residential apartment. The zoning for these lots has been retained as R3 Medium Density Residential. The change in level between Riddell Street and Buller Street would allow garage access off Buller Street and pedestrian access from Riddell Street. The orientation is designed to maximise views in all directions. To maintain the streetscape character of Riddell Street, it is assumed the primary frontage of the development faces Riddell Street with secondary access off Buller Street.
- G** Lots between 1 and 11 Riddell Street are to be down zoned to R2 Low Density Residential to retain the finer grain nature of existing development. The lots are generally small (i.e. less than 200m²) and it is assumed these sites will be developed into larger detached dwellings.



Figure 22 Potential Development outcome for Scenario 3 - view from north-west looking south-east

Key Planning Controls

The building envelopes outlined in this scenario outline the maximum building capacity permissible under the existing LEP and DCP controls. It is assumed that the built form will be created within these envelopes to comply with ADG requirements.

Excavation and change to the natural landform for vehicular access and basement parking on 15 Riddell Street is assumed.

Front setbacks - The proposed building envelopes of residential flat buildings exceed the minimum requirements set by the Woollahra DCP 2015 and match that of the recent DA reviewed in Chapter 1. This is to ensure compliance with the objectives set within Part B3.2.2 (Front Setback) of the DCP 2015. The building envelopes for detached dwellings are sited to match the orientation of adjacent dwellings.

Rear Setbacks - The proposed building envelopes conform to the rear setback formula as set out by the DCP 2015, which is the result of the permissible front setback and building depth subtracted from the total site depth. A building depth is considered to be 60% of the site depth for all residential

apartments. For dwelling houses the building depth is determined by the sliding scale illustrated in Part B3.2.4 of the DCP. For 13 Riddell Street, 14 and 15 Buller Street, the large depth of the amalgamated lots necessitates the provision of a large rear setback to comply with the controls.

FSR - The proposed building envelopes have an FSR of 0.75:1 for apartments. Dwelling-houses modelled conform to the maximum total floorplate area specified by the DCP 2015, which multiplies the buildable area by a factor of 1.65. The buildable area is the remainder of site identified once the front, rear and side setbacks have been established.

Landscape area - The proposed building envelopes assumes to have a deep soil landscaped area of 50% of the site area outside the buildable area.

Parking - Parking for apartment buildings is assumed to be located in a basement while for dwelling houses it is assumed that it is located in garages facing the street. Parking numbers for residential apartments are assumed to be 2 spaces per unit for a 3 bedroom apartment and 0.25 visitor spaces. 2 spaces have been assumed for all proposed dwelling houses and dual occupancy.

3.4. Scenario 3 - Rezone sites less likely to develop



Figure 23 Potential Development outcome for Scenario 3 - plan view

Key Impacts

	Existing	Scenario 3
No. of dwellings	30	48 (approx).
Car parking	41 parking spaces (incl. visitor parking)	90 parking spaces (incl. visitor parking)

Tree canopy - Similar to Scenario 2, the extent of tree removal in this scenario is significantly lower than Scenario 1 due to the smaller number of lots to be amalgamated. Development of 13 Riddell Street, 14 and 15 Buller Street will result in the loss of trees within the site. It is also possible that street trees and the large tree in the front setback of 15 Riddell Street would be removed in order to incorporate driveways. The majority of trees at the rear of lots should be able to be retained due to the large rear setbacks.

Dwellings - The size of the apartments within the developments are assumed to match that of recent DA's, i.e. large 3 bedroom apartments. Dwelling houses and dual occupancies (where relevant) have been designed to maximise the size of the dwelling. Most proposed dwellings in this scenario incorporate an additional storey.

Overshadowing - The extent of overshadowing would be similar to Scenario 2. However, the extent of overshadowing of 12 Buller Street due to the development of 13 and 15 Riddell Street and 14 Buller Street is similar to that in Scenario 1 and is likely to be problematic.

Views - The amalgamation of 13 and 15 Riddell Street and 14 Buller Street would impact the existing view corridor from the public domain. There is also a chance that the height and scale of larger detached dwellings shown in this scenario would reduce views from the surrounding properties.



Figure 24 Potential Development outcome for Scenario 3- view from east looking west

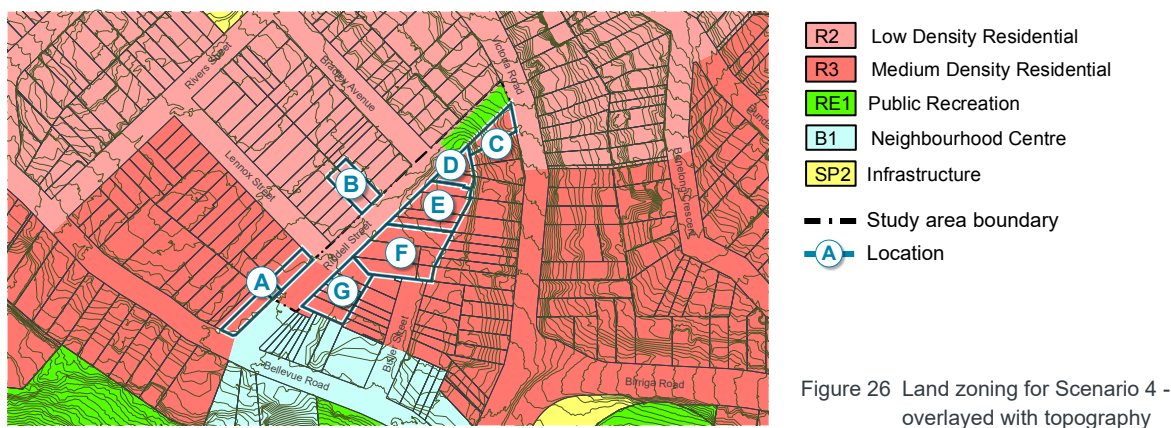


Figure 25 Overshadowing Diagram (Midday, 21 June)

Strengths	Weaknesses
<ul style="list-style-type: none"> • Retains some of the existing streetscape character, including trees and the existing scale of built form in the street. • Increases the mix of housing types in the area. • Reduced impact on tree canopy cover (compared to Scenario 1). • Minimal excavation and modification of natural landform. • Expected high amenity for new developments due to opportunity for views and proximity to neighbourhood amenities. 	<ul style="list-style-type: none"> • The development of residential apartments on the large sites in the centre of the study area has a significant visual impact on the streetscape.

3.5. Scenario 4 - Rezone sites more likely to develop

In order to help develop the recommendations, an additional option was explored which involves down zoning the sites within the study area that are more likely to develop, to R2 Low Density Residential. This scenario aims to minimise the impact of any new development on the character of Riddell Street. Remaining sites are retained as R3 Medium Density Residential zone.



Key Assumptions

- A** Lots on the north-western side of Riddell Street, south of Lennox Street (29 Lennox Street and 29A, B, C Bellevue Road) retain current zoning as these sites have been developed to their maximum development capacity under the R3 Medium Density Residential Zone.
- B** Lots on the north-western side of Riddell Street, north of Lennox Street (4 and 6 Riddell Street) are not up zoned to R3 Medium Density as they are surrounded by low density housing. These sites are too small to be developed as dual occupancies but a larger modern dwelling could be constructed on each.
- C** 154 Victoria Rd is retained as R3 Medium Density Residential Zone, to match its adjacent sites which are also accessed off Victoria Road and located on sloping sites. It could further develop as a dual occupancy to capitalise on the surrounding views.
- D** 25 and 27 Riddell Street could be rezoned as the sites are too small for the development of residential apartments. However, these houses could develop into larger detached dwellings.
- E** No change is assumed on sites at 21, 23, 17 and 19 Riddell Street as two are currently under construction and the other two appear to have been recently constructed. However, these lots could be down zoned to R2 Low Density Residential to minimise further development.
- F** 13 and 15 Riddell Street, 14 and 15 Buller Street are the sites that are most likely to develop within the study area. In this Scenario it is assumed that these sites are rezoned to R2 Low Density Residential. They are assumed to retain their current built form but could be further developed to include additions within their existing rear setbacks to reach their maximum development potential under the R2 Low Density Residential zone.
- G** Given the insufficient size of 1, 3, 5, 9 and 11 Riddell Street, apartment development on these sites is unlikely. However, for the purposes of this scenario it is assumed that 1 Riddell Street (the largest) is amalgamated with adjoining sites 3 and 5 Riddell Street to create one site large enough to be developed as an apartment building.



Figure 27 Potential Development outcome for Scenario 4 - view from north-west looking south-east

Key Planning Controls

The building envelopes outlined in this scenario outline the maximum building capacity permissible under the existing LEP and DCP controls. It is assumed that the built form will be created within these envelopes to comply with ADG requirements.

Excavation and change to the natural landform for vehicular access and basement parking for the residential flat building on 1, 3 and 5 Riddell Street is assumed.

Front setbacks - The proposed building envelope of the residential flat building on 1, 3 and 5 Riddell Street exceeds the minimum requirements set by the WDCP 2015 and matches that of the recent DA reviewed in Chapter 1. This is to ensure compliance with the objectives set within Part B3.2.2 (Front Setback) of the WDCP 2015. The building envelopes for detached dwellings are sited to match the orientation of adjacent dwellings.

Rear Setbacks - The proposed building envelope conforms to the rear setback formula as set out by the WDCP 2015, which is the result of the permissible front setback and building depth subtracted from the

total site depth. A building depth is considered to be 60% of the site depth for all residential apartments. For dwelling houses the building depth is determined by the sliding scale illustrated in Part B3.2.4 of the WDCP 2015.

FSR - The proposed building envelopes have an FSR of 0.75:1 for apartments. Dwelling-houses modelled conform to the maximum total floorplate area specified by the WDCP 2015, which multiplies the buildable area by a factor of 1.65. The buildable area is the remainder of site identified once the front, rear and side setbacks have been established.

Landscape area - The proposed building envelopes assume a deep soil landscaped area of 50% of the site area outside the buildable area.

Parking - Parking for the apartment building on 1, 3 and 5 Riddell Street is assumed to be located in a basement while for dwelling houses it is assumed that it is located in garages facing the street. Parking numbers for the residential apartment are assumed to be 2 spaces per unit for a 3 bedroom apartment and 0.25 visitor spaces. 2 spaces have been assumed for all proposed dwelling houses and dual occupancy developments.

3.5. Scenario 4 - Rezone sites more likely to develop



Figure 28 Potential Development outcome for Scenario 4 - plan view

Key Impacts

	Existing	Scenario 4
No. of dwellings	30	34 (approx).
Car parking	41 parking spaces (incl. visitor parking)	64 parking spaces (incl. visitor parking)

Tree canopy - The extent of tree removal in this scenario is significantly lower than Scenario 1 and 3 due to the smaller number of lots to be amalgamated. Development of 1, 3 and 5 Riddell Street will result in the loss of trees within the site. It is also possible that street trees and the large tree in the front setback of 1 Riddell Street would be removed in order to incorporate driveways. The majority of trees at the rear of lots should be able to be retained due to the large rear setbacks. Permissible additions made to 13 and 15 Riddell Street and 14 Buller Street are shown to have minimal impact on the surrounding trees.

Dwellings - The size of the apartment building on 1, 3 and 5 Riddell Street is assumed to match that of recent DA's, i.e. large 3 bedroom apartments. Dwelling houses and dual occupancies (where relevant) have been designed to maximise the size of the dwelling. Most proposed dwellings in this scenario incorporate an additional storey.

Overshadowing - The extent of overshadowing would be similar to Scenario 2 and lower than Scenario 1 and 3. Given the likelihood of additional storeys within each dwelling, increased overshadowing of neighbouring lots is likely.

Views - The amalgamation of 1, 3 and 5 Riddell Street would impact the existing view corridor from the public domain. There is also a chance that the height and scale of larger detached dwellings shown in this scenario would reduce views from the surrounding properties.



Figure 29 Potential Development outcome for Scenario 4- view from east looking west



Figure 30 Overshadowing Diagram (Midday, 21 June)

Strengths	Weaknesses
<ul style="list-style-type: none"> • Retains most of the existing streetscape character by maintaining the existing scale of built form on the large sites in the centre of the study area and ensuring minimal visual impact of new development. • Increases the mix of housing types in the area. • Reduced impact on tree canopy cover (compared to Scenario 1 and 3). • Minimal excavation and modification of natural landform. • Expected high amenity for new developments due to opportunity for views and proximity to neighbourhood amenities. 	<ul style="list-style-type: none"> • The potential development of residential apartments on 1, 3 and 5 Riddell Street would have a visual impact on the streetscape as it forms the gateway to Riddell Street.



4. Recommendations

4.1. Findings

4.2. Recommendations

4.3. Impacts & Next Steps

4.1. Findings

Context and Local Character

The character of the study area is diverse, inconsistent, and influenced by dramatic changes in topography and a wide range of lot sizes, shapes and orientation. Riddell Street is located close to the eastern edge of a natural plateau which falls steeply to Victoria Road. This means that lots on the north-eastern side of Riddell Street, while sharing the same orientation as adjoining lots along Victoria Road, are visually strongly linked to Riddell Street.

Riddell Street is extensively landscaped with well established trees and these trees play an important role in establishing the street character. The street trees are more prevalent in front of wider blocks and where access to parking is more discrete. Well established trees are also located within the front setbacks of larger dwellings, along the rear boundary of properties on the north-eastern side of Riddell Street and occasionally between lots.

The wide variety of lot size and shape creates a diversity of dwelling size, a diverse street frontage and inconsistent front setbacks. The majority of lots are too small to be developed individually as apartments and so lot amalgamations are required to achieve the minimum lot size. Although the area is zoned for R3 Medium Density Residential the majority of dwellings are small or large detached houses with a few attached dwellings.

Recent development

A recent development at 21 and 23 Riddell Street demolished two dwellings to create 6 apartments (all large luxury 3 bedroom units) with basement parking for 12 vehicles. Six trees (both on the property and the street reserve) were removed with four new trees proposed in the landscape plans.

Key findings

Riddell Street is close to the eastern edge of a natural plateau which falls steeply to Victoria Road. The topography means lots fronting Victoria Road are much lower than lots fronting Riddell Street (see Figure 31) and development along Riddell Street appears taller and overlooks the rear of properties along Victoria Street.

Riddell Street has well established trees and these trees play an important role in the street character.

Although the area is zoned R3 Medium Density Residential the majority of current dwellings are small or large detached houses.

The wide variety of lot size and shape creates a diversity of dwelling size, a diverse street frontage and irregular front setbacks.

Development of large sites within the study boundary is likely to change the character and create larger built forms with smaller front setbacks, fewer trees and increased vehicles.



Figure 31 Section showing impact of topography on development and the character of the street

4.1. Findings

Scenario testing

Four Scenarios were tested to explore the potential impact of development under the current LEP and DCP controls to determine the impact of varying these controls. All scenarios assumed development would be similar to recent approvals and would seek to maximise FSR and/or site coverage. Each scenario also considered impacts on tree canopy, landscape area, parking, overshadowing and the character of the place.

Scenario 1 assumed no changes to the existing controls with development occurring to the full potential allowable under the R3 Medium Density Residential zone and other applicable controls.

Scenario 2 assumed all medium density lots were down zoned to a R2 Low Density Residential zone.

Scenario 3 retained the R3 Medium Density Residential zone on lots that were most likely to develop as apartments and down zoned sites less likely to develop as apartments to a R2 Low Density Residential zone.

Scenario 4 rezoned lots within the study area that were most likely to develop as apartments to R2 Low Density Residential and retained the remaining sites as R3 Medium Density Residential.



Figure 32 Scenario 1 (Overshadowing at Midday, 21 June)

Scenario 1 assumes no changes to existing controls. This scenario generated an increase of 24 dwellings however this relied on site amalgamations of up to three sites which may not be possible. Scenario 1 also generated 60 additional car spaces. Some of the additional spaces resulted from an increase in parking provision for dwelling houses. This scenario had the highest parking numbers and greatest impact on tree canopy, landscape area, overshadowing and the character of the place.



Figure 33 Scenario 2 (Overshadowing at Midday, 21 June)

Scenario 2 assumed all lots within the study area currently zoned R3 Medium Density Residential are rezoned to R2 Low Density Residential. This scenario generates an increase of 1 dwelling. Scenario 2 also generated 15 additional car spaces from increased parking provision for dwelling houses. This scenario had the highest parking numbers and the lowest impact on tree canopy, landscape area, overshadowing and the character of the place.

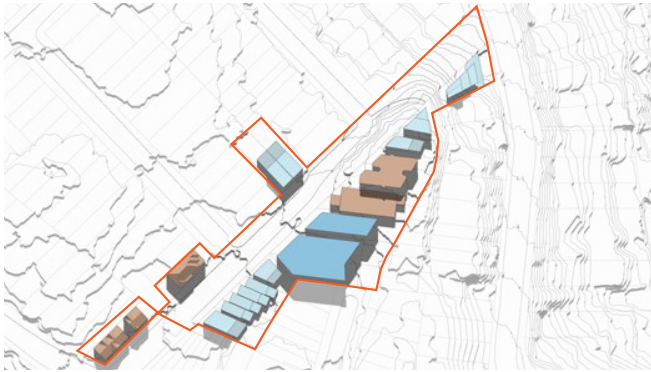


Figure 34 Scenario 3 (Overshadowing at Midday, 21 June)

Scenario 3 retained the R3 Medium Density Residential zone on lots that were most likely to develop. This scenario generates an increase of 18 dwellings although has a site amalgamation of three sites which is likely to be challenging. Scenario 3 also generates 49 additional car spaces although some additional spaces result from an increase in parking provision for dwelling houses. This scenario had the second highest parking numbers and greatest impact on tree canopy, landscape area, overshadowing and the character of the place.



Figure 35 Scenario 3 (Overshadowing at Midday, 21 June)

Scenario 4 rezoned lots within the study area that were most likely to develop as apartments to R2 Low Density Residential. This scenario generated an increase of 4 dwellings. Scenario 4 also generates 23 additional car spaces, the majority as a result from an increase in the parking provision for dwelling houses. This scenario had the highest parking numbers and the lowest impact on tree canopy, landscape area, overshadowing and the character of the place.

Key Findings

The wide variety of lot size and shape creates a diversity of dwelling size and dwelling type. This diversity remains regardless of the zone.

Although the area is zoned R3 Medium Density Residential the majority of current dwellings are small or large detached houses. The study area has two apartment buildings (one currently under construction) and a number of duplexes and small dwellings.

Many of the sites currently zoned to allow Medium Density housing are too small to be developed individually as an apartment building. All sites except 13 and 15 Riddell Street would need to amalgamate with at least one other site to develop as an apartment building. A number are so small they would need to amalgamate with at least two adjoining sites.

15 Riddell Street could also be amalgamated with 14 and 15 Buller Street to create a larger development site. Due to the unusual triangular lot shape an apartment building in this location would overshadow the rear gardens of 12 Buller Street and 11 Riddell Street.

The triangular shaped front gardens of 13 and 15 Riddell Street and the rear garden of 14 Buller Street, combined with trees in the street reserve, provide a green landscape setting along this section of Riddell Street. Apartment development on these sites, similar to the one recently approved at 21-23 Riddell Street, would substantially change the streetscape character.

Retaining the existing lot pattern and front setbacks provides the greatest opportunity for retaining as much of the existing trees canopy cover as possible

All scenarios generate more parking as this is highly desirable in this neighbourhood however apartment buildings, as they generate more dwellings result in the highest increase in car parking provision.

4.2. Recommendations

General Comments

Sites in the local area are being developed for apartments, dual occupancies, as well as residential alterations and additions and rebuilds. It is an attractive and desirable place to live and so change is inevitable. Recent development occurring in and around the study area is larger than older style development, with fewer trees (both within property boundaries and along the street frontage) and often includes increased parking provisions. While new detached and attached dwellings are modifying the character, apartment buildings, with a higher FSR and increased built form, are having a greater impact on the scale and character of the existing streetscape.

From a strategic perspective the study area is in a high amenity, well located area and the current zoning encourages a variety and choice of housing types for the local area. From an urban design perspective the urban character of the study area is much closer to the low density housing character of Bradley Avenue, Lennox Street and Rivers Street than the high density character of apartments along Victoria Road. This is partly due to the generally smaller lot size but it is also a result of the underlying topography and the steep fall between Riddell Street and Victoria Road. The topography also means that development on some sites is visually prominent as they are located at a local high point. It is also noted that the wide variety of lot size, lot frontage and lot shape has already created a diversity of dwelling size and there is a range of dwelling types in the study area.

Matters for consideration

With a study of this nature it is necessary to ask if any change, ie a rezoning, is needed and what would be the impact of the change. This study has taken the approach that changes should only be recommended when the change is likely to make a significant difference to the character and amenity of the area.

It has also considered the zoning of surrounding sites to avoid incompatibility with adjoining land uses. For example, while typically the same zone is recommended on adjacent sites, the steep topography makes it possible for lots fronting Riddell Street to have a lower density than lots fronting Victoria Road but still have a built form that is taller and unlikely to be overlooked or overshadowed. Similarly the unusual lot shape of 14 Buller Street means that development of 11 Riddell Street overlooks a narrow section of the triangular shaped rear garden of 14 Buller Street.

When considering the impact of a rezoning it is also necessary to consider how critical these sites are in the provision of existing and future housing needs and how likely it is that the sites affected would be developed? Within the study area most sites are highly unlikely to become apartment developments due to the size and/or shape of lots. While amalgamations can and do occur these become less likely when more than one adjoining site is required. For example while Scenario 1 appears to generate an additional 24 dwellings this relies on site amalgamations of up to three sites, which is unlikely.

It is also noted that the study area is a very small part of a much larger area that is zoned R3 Medium Density Residential and many of the sites within the study area are much smaller and narrower than most of the sites in the wider medium density area.



Figure 36 Study area in context of area zoned R3 Medium Density Residential

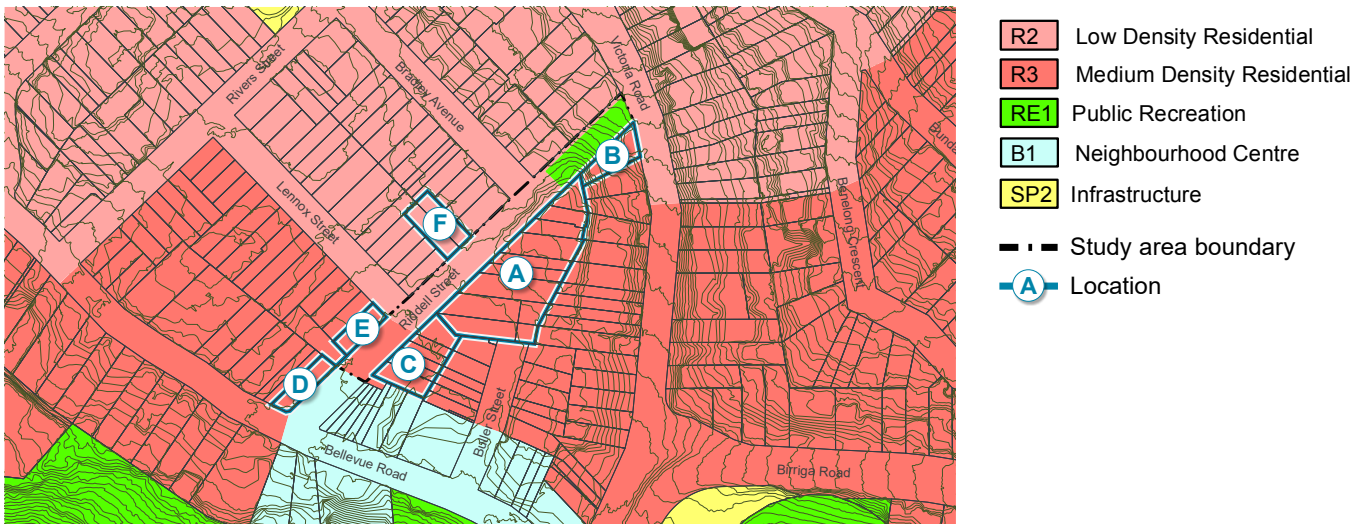


Figure 37 Land zoning for recommended scenario- overlaid with topography

Land Zone

It is recommended that the central part of the study area is rezoned from R3 Medium Density Residential to R2 Low Density Residential. These sites are located on a ridge and have a local character similar to Bradley Avenue and Lennox Street which are accessed off Riddell Street and form a gateway to these adjoining lower density areas. Apartment development on these sites would change the landscape character of the study area. This includes the following sites;

- A** • Detached dwellings at 25 and 27 Riddell St.
- A recently approved apartment building at 21-23 Riddell Street. This apartment building once completed would rely on existing use rights for any future applications.
- Attached dwelling at 17 and 19 Riddell Street.
- Detached dwellings at 13 and 15 Riddell Street.
- Detached dwellings at 14 and 15 Buller Street. These sites wrap around 13 Riddell Street and could create interface incompatibility issues.

It is recommended that the following sites retain their current land zone:

- B** 154 Victoria Road is located on Victoria Road and is much lower than properties on Riddell Street. While the site is too small to be an apartment development it could be amalgamated with the adjoining site.

- C** 1, 3, 5, 9 and 11 Riddell Street are small narrow frontage sites close to the local shops. While their small size makes them unlikely to be suitable for apartment development they are a higher density of development for the local area.
- D** 29 A,B & C Bellevue Road have recent dual occupancies and detached dwellings on this corner site. These sites have been developed to their maximum development capacity under the R3 Medium Density Residential zoning and so changes are unlikely. These sites are also surrounded by R3 Medium Density Residential.
- E** 29 Lennox Street is a small apartment building with 4 dwellings. These apartments have been developed to a maximum development capacity under the R3 Medium Density Residential zoning. This site is also surrounded by R3 Medium Density Residential sites.
- F** 4 & 6 Riddell Street are two sites facing Riddell Street. These sites are currently R2 Low Density Residential and are surrounded by sites zoned R2 Low Density Residential. These sites are too small to be developed as dual occupancies but a larger modern dwelling could be constructed.

4.3. Impacts & Next Steps

Housing Targets

The recommended changes to the zone of 10 sites within the study area could reduce the theoretical potential yield by approximately 20 dwellings. This is a small reduction, partly because it only affects a few sites and also partly because a number of these sites do not have much development potential, either because they have recently developed or because the site is too small to be developed as an apartment site.

It is also noted that, due to the desirability of the location, apartment developments are typically large luxury apartments that are a minimum of 3 bedrooms in size. While popular, large apartments play a small role in increasing the diversity of housing supply and do little to provide a more affordable option for smaller households.

It is suggested that the real loss of dwellings will not be as high as 20 as this theoretical yield assumes amalgamation of several sites will be possible and financially viable. A realistic loss is probably closer to half i.e 10 dwellings.

Jobs Targets

The study area is zoned for residential development and the changes proposed retain this residential zoning. The changes should have no impact on jobs targets.

Parking

The recommended changes would require the provision for 23 car spaces, inclusive of visitor parking. This is 37 car parking spaces less than the numbers that would be required for Scenario 1 (retain the current controls).

Low Rise Housing Diversity Code

Under this code, the sites currently zoned R3 Medium Density Residential could be developed into dual occupancy, manor house or multi dwelling housing (terraces). However, by rezoning the 10 sites to R2 Low Density Residential zone, that type of development would not be permitted.

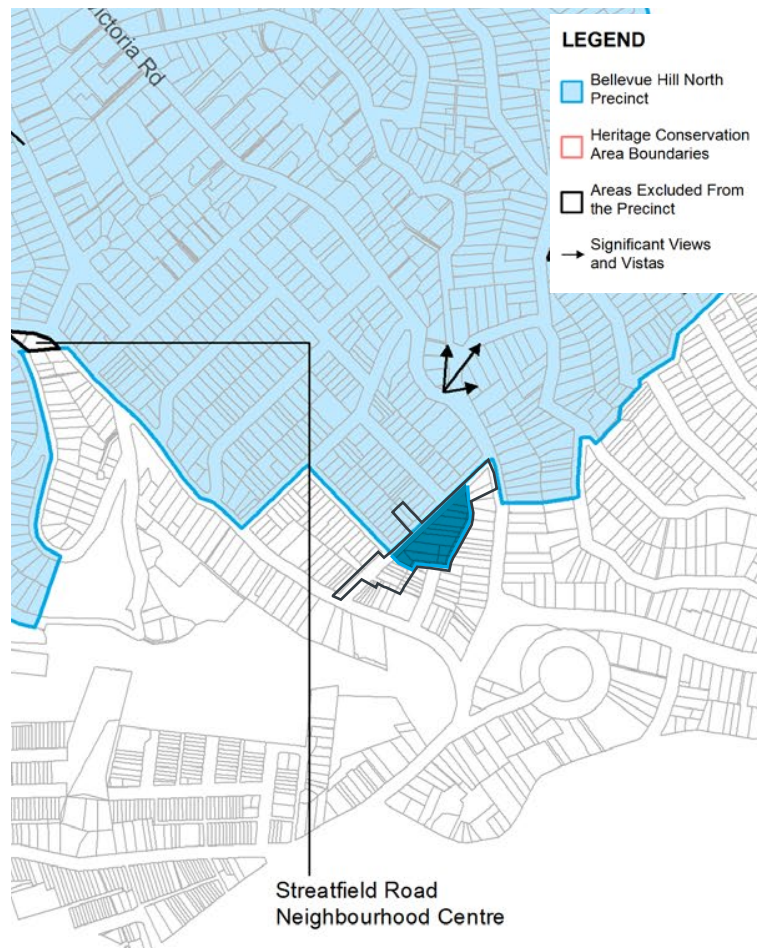


Figure 38 Diagram showing the suggested extension to the Bellevue Hill North character precinct

DCP amendments

Precinct Character

The study area is located on the edge of two character precincts, Bellevue Hill North and South Precinct. One outcome of these rezoning recommendations would be that the boundary of these two character areas is redrawn. Bellevue Hill North should be expanded to include the south-eastern side of Riddell Street which, as identified earlier, is clearly part of this plateau. The Figure 38 shows where this extension would occur. Bellevue Hill South would similarly need to be revised to remove the section identified.

Front setbacks

During the preparation of this report it has been observed that a key challenge at the north-eastern side of Riddell Street has been the unusual lot design and they way that the front setback control has been written and interpreted. The lot boundaries are not at a right angle to the street which traditionally has resulted in triangular shaped front gardens. On large sites these gardens are large and contribute to the landscaped character of the street. With recent development the DCP front setback control has been interpreted to allow development parallel with the front boundary (see Figure 39) and much closer to the front boundary which is resulting in a loss of landscape character.

Regardless of Council's decision to submit or not submit a planning proposal to rezone the land it is strongly recommended that Council include an additional control for front setbacks where the front boundary is not at right angles to the side boundaries and where the current characteristic front setback is not consistent across the front of the site. A suggested control could be something like:

Front setbacks are to be consistent with the predominant building line and streetscape character established by adjoining and nearby houses. Where the front setback is at an angle to the side boundaries, a stepped or varied front setback may be appropriate (see Figure 40).

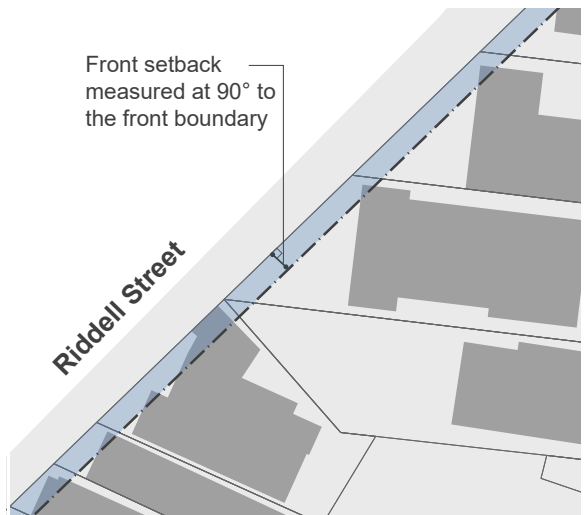


Figure 39 Diagram showing the existing DCP controls for Front Setbacks

Actions for Council

If Council chooses to accept the recommendation to rezone 10 sites within the study area to R2 Low Density Residential the next step will be to prepare a planing proposal for these sites. The planning proposal would need to identify that the change was of minor significance and also provide consideration of the change on the variety and choice of housing types and impact on the environment. The planning proposal would also have to identify the required changes to the LEP and DCP.

It is strongly recommended that Council undertake discussions with land owners affected by this change as it could have both negative and positive impacts. If the owners are intending to retain a detached or attached dwelling on the site the change would ensure that neighbouring sites along Riddell Street could not become an apartment development. If the owners have an aspiration to develop their site as an apartment development then the rezoning would make this impossible.

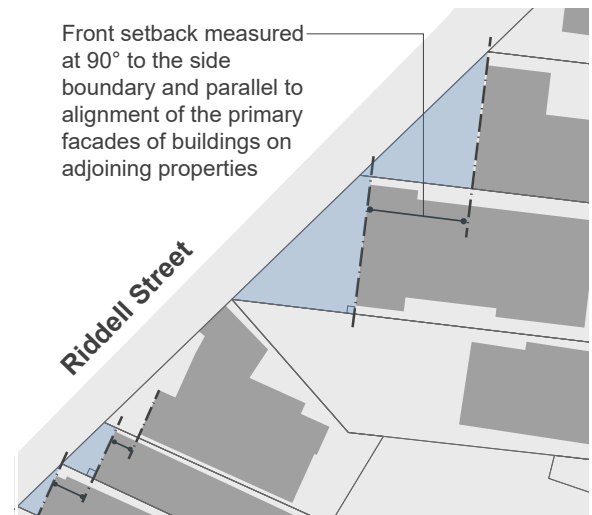


Figure 40 Diagram showing the recommended DCP controls for Front Setbacks

