



21 - 41 Canberra Avenue and 18 - 32 Holdsworth Avenue, St Leonards

Statement of Environmental Effects for a Detailed Development Application for
Sites 7 - 11

On behalf of
Top Spring Property & Development Services Pty Ltd
June 2021



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* This document is for discussion purposes only unless signed and dated by the persons identified. This document has been reviewed by the Project Director.

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General Information

This submission to Lane Cove Council (Council) relates to a Development Application (DA) under Part 4 of the *Environmental Planning and Assessment Act 1979* (EP&A Act) for the redevelopment of the site located within the St Leonards South Precinct comprising Sites 7, 8, 9, 10 and 11.

This Statement of Environmental Effects (SEE) report has been prepared on behalf of Top Spring Property & Development Services Pty Ltd (Top Spring) to support a detailed Development Application (DA) to Lane Cove Council (Council) for various sites along Canberra Avenue and Holdsworth Avenue, St Leonards (the site), which include 27-41 Canberra Avenue and 18-32 Holdsworth Avenue, St Leonards.

Planning Background

In March 2018, the State Government released the North District Plan which proposes a number of priorities and actions to achieve a productive and liveable District that is focused on planning a city for people and of great places as well as facilitating a diversity of housing choices and employment opportunities. It was guided by the aim of the Greater Regional Plan to establish a 30-minute city where people are located within 30 minutes of jobs and services. St Leonards is identified in the District Plan as a Strategic Centre and as a health and education precinct that is expected to experience significant jobs growth.

While the St Leonards Strategic Centre is earmarked for commercial and services growth, the North District Plan also outlines the need for additional housing in close proximity to centres and services. A housing supply target is set for the Lane Cove LGA and requires that an additional 1,900 dwellings be delivered between 2016 and 2021.

The St Leonards South Precinct is designated by the NSW Government as suitable for providing high density housing and contributing to meeting the housing supply target for Lane Cove. The precinct is to be redeveloped in accordance with the provisions set out in the gazetted LEP Amendment No. 25 introduced to the *Lane Cove Local Environmental Plan 2009* (LLEP 2009) on the 31 August 2020 following a comprehensive consultation period and after having been considered by the Independent Planning Commission.

The LEP amendment amends the zoning, floor space ratio (FSR), lot size and height of building development standards and includes incentives to facilitate the urban renewal of the area and the provision of up to 2,000 dwellings as well as public open space, pedestrian links and community facilities. The revised controls should be read in conjunction with the *St Leonards South Urban Design Guidelines* contained within the *Lane Cove Development Control Plan 2009* (LDCP 2009) and the *St Leonards South Landscape Master Plan* (LMP).

A key objective for the precinct as outlined by the *St Leonards South Urban Design Guidelines* is to create a transit-orientated precinct that integrates with St Leonards Station and supports residential development that exhibits design excellence.

The site occupies the south eastern portion to the St Leonards South Precinct which is bounded by the Pacific Highway, Greenwich Road, River Road and the railway line south of St Leonards Station. The proposed development has been prepared in direct response to the LLEP 2010 amendments and associated urban design guidelines for the St Leonards South Area. The development represents an opportunity to deliver on the aspirations of the applicable strategic and statutory planning framework. A key objective for Top Spring has been to develop the scheme in close consultation with Council and its Design Review Panel and through extensive design testing develop a built form outcome that delivers a higher standard of residential amenity than that permitted by the built form controls that apply to the site.

Subject Site

The site includes 27-41 Canberra Avenue and 18-32 Holdsworth Avenue, St Leonards. It is approximately 450m south from the St Leonards Centre and approximately 4.5km north from the Sydney CBD. The site is located within the St Leonards South Precinct; a leafy low-rise housing precinct subject to a recently gazetted R4 High Density Residential zoning.

Proposed Development

A summary of the proposed development is provided in the table below.

Table 1 – Summary of Proposed Development	
Item	Total
Site Area	12,653m ²
Floor Space Ratio	2.60:1
Gross Floor Area	32,898m ²
Height	• Building 7 – 24.9m • Building 8 – 36.8m • Building 9 – 24.5m • Building 10 – 30.9m • Building 11 – 30.96m
Storeys*	• Building 7 – 6 • Building 8 – 10 • Building 9 – 6 • Building 10 – 8 • Building 11 – 7
Unit Mix	• 72 x 1 bed (22%) • 179 x 2 bed (55%) • 68 x 3 bed (21%)

Table 1 – Summary of Proposed Development	
Item	Total
	• 10 x 3 bed townhouses (3%)
Dwellings	329 (including 66 adaptable)
Deep Soil Planting	1,969m ² (15%)
Visitable Dwellings	281
Communal Open Space	4,189m ² (33%)
Solar Access (SEPP 65 - 2 hrs)	• Building 7 – 100% • Building 8 – 90% • Building 9 – 47% • Building 10 – 93% • Building 11 – 47% • Total – 70.2%
Cross Ventilation	• Building 7 – 62% • Building 8 – 58% • Building 9 – 76% • Building 10 – 57% • Building 11 – 73% • Total – 66.6%
Car Parking	A total of 372 spaces including 66 adaptable spaces and 6 adaptable visitor spaces
Bicycle Parking	121

*Note – Storeys calculated in accordance with the definition in Section 7 Built Form of the LLDCP 2009.

Justification

The proposed development is largely consistent with the recently established planning framework, including the controls relating to:

- The height of buildings development standard;
- Floor space ratio development standard;
- The design criteria and design guidance of the Apartment Design Guide; and
- The St Leonards South LMP.

The proposal that forms the subject of this application has been refined following attendance at a series of meetings with Council and its Design Review Panel. As such, it has evolved to ensure the achievement of design excellence.

LEP Amendment No. 25 introduces an incentive scheme to permit additional height and FSR for the site where community benefits, comprising the provision of a through-site link, are provided. The proposal relies on this incentive scheme for the purpose of optimising the additional height and FSR made available under the new provisions. It proposes a fully compliant through-site link to improve connectivity across the precinct by connecting Holdsworth Avenue and Newlands Park. In addition, the proposal situates outdoor communal landscape space adjacent to Council's future Holdsworth Avenue Pocket Park to enhance the amenity of this open space area.

The proposal is largely consistent with the *St Leonards South Urban Design Guidelines*. Where variations occur, they are provided for the purpose of achieving an improved amenity and design outcome. A key variation relates to the adoption of an alternative massing strategy where the site interfaces with Canberra Avenue. In this location, the buildings provide a stepped and staggered built form. The stepped form presents as a series of open corners to Newlands Park and achieves a more outward expression than the more formal linear streetwall proposed by Council's controls.

No unreasonable environmental effects will arise as a result of the proposed development, which will contribute high quality housing that exhibits design excellence and achieves a superior standard of residential amenity to the locality.

1 Introduction

This Statement of Environmental Effects (SEE) has been prepared on behalf of Top Spring to support a Development Application (DA) to Lane Cove Council to support a residential development application for the site located within the St Leonards South Precinct.

In summary approval is sought for:

- Demolition and site preparation works;
- Stage construction and use of five (5) residential flat buildings (ranging in height from 6 to 10 storeys) that include:
 - A total of 319 residential apartments;
 - A total of 10 terraces fronting Canberra Avenue;
 - A 2,500m² communal garden and roof terraces;
 - A 4 storey split basement with a total of 372 car parks;
 - Vehicular access provided from Canberra Avenue via a single egress/ingress point;
- Tree removal and replacement planting; and
- Associated landscape works including the provision of a through-site link connecting Canberra Avenue and Holdsworth Avenue.

The SEE includes an assessment of the proposed works in terms of the matters for consideration as listed under Section 4.15(1) of the *Environmental Planning and Assessment Act 1979* (EP&A).

Pursuant to section 4.46 of the EP&A Act, the proposed development is considered Integrated Development as it constitutes an aquifer interface activity. It therefore requires concurrence from Natural Resources Access Regulatory (Water NSW) under section 91(3) of the *Water Management Act 2000*.

This report should be read in conjunction with information annexed to this report as outlined in the Table of Contents.

Specifically, the SEE includes the following information:

- Description of the site in its local and regional context;
- Identification of the proposed works;
- Assessment of the project against Council's controls and policies;
- Assessment of all environmental impacts of the project; and
- Identification of measures for managing the potential environmental impacts.

WT Partnership has calculated the cost of development for the proposal to be \$161,010,000 (incl. GST). Refer to **Appendix 1** for the Cost Estimate of the proposed.

This SEE is accompanied by the following reports:

Appendix 1 – QS Report

Appendix 2 – DRP Response Packages

Appendix 3 – Site Survey

Appendix 4 – Architectural Design Report and Plans

Appendix 5 – Landscape Plans

Appendix 6 – Operational Waste Management Plan

Appendix 7 – Arboricultural Impact Assessment

Appendix 8 – BASIX Certificates

Appendix 9 – Preliminary Contamination Report

Appendix 10 – LDCP 2009 Compliance Assessment

Appendix 11 – Traffic Impact Assessment

Appendix 12 – Sustainable Travel and Access Plan

Appendix 13 – Geotechnical Report

Appendix 14 – Acoustic Impact Assessment

Appendix 15 – Construction Waste Management Plan

Appendix 16 – ESD Report

Appendix 17 – Stormwater Engineering Drawings

Appendix 18 – Preliminary Public Art Strategy

Appendix 19 – CPTED Report

Appendix 20 – BCA Assessment Report

Appendix 21 – Accessibility Report

Under Separate Cover

Public Benefit Offer Letter

1.1 Proponent and Project Team

The Development Application and SEE Report have been prepared on behalf of the applicant, Top Spring.

The Project Team's details are provided in **Table 2**.

Table 2 – Project Team	
Item	Description
Proponent	Top Spring Property and Development Services Pty Ltd
Project Manager	PDS
Urban Planning	Mecone
Architectural Design	Bates Smart
BCA Assessment	Blackett Maguire + Goldsmith
Surveyor	Summit Geomatic
Landscape Design	Arcardia Landscape Architecture
Acoustic Assessment	Integrated Group Services
Quantity Surveyor	WT Partnership
Civil Engineering	Meinhardt
Erosion and Sediment	Meinhardt
Arborist	Australis Tree Management
Traffic Consultant	JMT Consulting
Waste Consultant	Elephants Foot
Geotechnical	Golder Associates
Public Art	Barbara Flynn Pty Ltd
Contamination	Golder Associates
Access / BCA	Blackett Maguire and Goldsmith
ESD	IGS

1.2 The Objectives of the Proposal

The fundamental planning and design objectives of the development are to:

- Respond to the site's constraints, including its sloping topography and south east facing orientation by providing an appropriate massing strategy;
- The proposal has been designed to comply with the *St Leonards South Urban Design Guidelines* and associated LLEP 2009 development standards;
- Facilitate a gradual transition away from the nearby residential areas and provide a pedestrian scale at street level;
- Contribute to meeting the dwellings target for the LGA and North District;
- Provide a highly articulated built form that provides visual interest in the streetscape;
- Provide a diversity of buildings which each have a shared visual language;
- Facilitate the provision of communal open space that will foster community interaction and a sense of place;
- Provide high quality public domain improvements that contribute to the revitalisation of the streetscape;
- Concentrate the proposal's greatest mass in the western portion of the site where denser development is envisaged;
- Protect the solar amenity of the nearby Newlands Park;
- Provide a fine-grained built form at street level that is sympathetic to the surrounding low scale residential area; and
- Provide units and townhouses with internal areas that exceeds the minimum ADG sizing requirements to address the demand for larger dwellings types in the Lane Cove LGA.

1.3 Consultation

The Applicant has engaged with Council since the proposal's inception. The Applicant and the project team attended a Design Review Panel (DRP) Meeting and Pre-DA Meeting with Council staff held at Council's Chambers on the 9 February 2021.

Council provided the Applicant with formal written advice detailing the feedback associated with the Pre-DA Meeting and Design Review Panel (DRP) on Friday 19 February 2021. A response to the feedback received was provided on 11 March 2021 and addressed the concerns raised by Council and the DRP. The responses are detailed in the Response to Request for Information Package included at **Appendix 2**.

Following the attendance at this DRP meeting, Council issued further written correspondence outlining the need to address a number of additional design related matters. A detailed response was submitted to Council on the 14 April 2021. The responses are also included at **Appendix 2**.

Council issued further written correspondence on the 4 May 2021 outlining the need to address a series of minor design matters prior to the lodgement of the Development Application (DA). The Landowner addressed Council's queries in a third Response to Request for Information Package issued to Council on the 27 May 2021 (refer to **Appendix 2**). On the 31 May 2021, Council issued formal email written correspondence confirming that the Applicant could proceed to lodge the application.

2 The Site

2.1 Site Location and Context

The site is located at 21 – 41 Canberra Avenue and 18 – 32 Holdsworth Avenue, St Leonards. It is situated on the eastern edge of the Lane Cove Local Government Area (LGA).

The site is located 400m south of the St Leonards Strategic Centre, 800m of the Royal North Shore Hospital and associated health and education precinct, and 4km to the south west of Chatswood Station.

The site has an eastern frontage to Canberra Avenue of approximately 226m, a southern frontage to River Road of 15m and a western frontage to Holdsworth Avenue of 137m.

Figure 1 and **Figure 2** illustrate the context and location of the site. A Survey Plan is included at **Appendix 3**.



Figure 1 – Site Context Map

Source: Mecone / Nearmap



Figure 2 – Site Aerial Map

Source: Mecone / Nearmap

2.2 Site Description and Ownership

Existing development within the site consists of 20 detached residential dwellings that range in height from one (1) to two (2) storeys. These dwellings orientate towards Holdsworth Avenue and Canberra Avenue.

Each dwelling is typically setback from the street, with landscaping accommodated in the front setbacks. At present, many dwellings are vacant and left in a dilapidated state. Each property is afforded vehicular and pedestrian access from the street frontages of Holdsworth Avenue and Canberra Avenue.

The existing development is illustrated in **Figures 3 – 6**.



Figure 3 – Dwellings Located Along Holdsworth Ave
Source: Mecone



Figure 4 – Dwellings Along Canberra Ave Looking North
Source: Mecone



Figure 5 – Dwellings Along Canberra Ave
Source: Mecone



Figure 6 – Dwellings Along Canberra Ave Looking South
Source: Mecone

Topography

The site is affected by a considerable level change falling over 8m west to east, and 18m north to south. Holdsworth Avenue, on the western boundary falls 4.7m while the longer Canberra Avenue frontage falls 8.5m.

Heritage and Archeology

The site is not a heritage listed item nor is it located within a heritage conservation area. Furthermore, the site is not in the immediate vicinity of a heritage item or heritage conservation area. It is not known to contain any archeological remnants,

Acid Sulfate Soils

The site is not identified as being within an area containing Acid Sulfate Soils (ASS) nor is it located in proximity to land classed as ASS.

Bushfire Hazard

The site is not identified as being bushfire prone.

Flooding

The site is not identified as being flood affected by the LLEP 2009 and LDCP 2009.

Public Transport

The site is well serviced by public transport. It is located a short 400m (5 minute walk) from St Leonards South Railway Station and 800m (12 minute walk) from Wollstonecraft Station which are positioned to the north and south of the site, respectively.

The site is serviced by a myriad of bus routes along the Pacific Highway which facilitate connections to the Sydney CBD, Manly, Epping Gore Hill and Lane Cove. The site is also serviced by a bus route (route 261) located to the immediate south on River Road which connects to the Sydney CBD.

The table below provides the legal description, and a brief summary of the site and surrounding context.

Table 3 – Site Description		
Item	Description	
Legal Description	Lot 34, DP 7259	Lot 30, DP 7259
	Lot 15 DP 7259	Lot A, DP 345135
	Lot 33 DP 7259	Lot 29, DP 7259
	Lot 2, DP 105732	Lot 20, DP 7259
	Lot 32 DP 7259	Lot 28, DP 7259
	Lot 17 DP 7259	Lot 21, DP 7259
	Lot 1 DP 105732	Lot 27, DP 7259

Table 3 – Site Description

	Lot 31 DP 7259 Lot 22, DP 7259 Lot B DP 345135 Lot 33, DP 7259 Lot 24, DP 7259 Lot B DP 41135 Lot A DP 411375 Lot A DP 411375
Street Frontage	• Approximately 180m to Canberra Avenue; • Approximately 140m to Holdsworth Avenue; and • Approximately 14m to River Road.
Site Description	The site has an area of 12,653m² and is irregular in its shape and has considerable level change falling west to east and north to south. The area has historically been used for residential purposes, and currently accommodates 20 residential dwellings comprising a mix of one and two storey dwellings.
Surrounding Context	The surrounding area of St Leonards south is generally suburban and features a mix of residential styles such as detached dwellings, attached dwellings, and residential flat buildings. The surrounding development can be characterised as follows: • North: Directly north of the site is low scale residential uses earmarked for high density redevelopment (part of which falls within the St Leonards South Precinct), and further north is St Leonards centre with St Leonards Rail station and future Crows Nest Metro station. • East: Directly east of the site is Canberra Avenue and Newlands Park. Beyond this along Duntroon Avenue, the development consists of medium density residential flat buildings. • South: Directly south of the site is River Road and low-rise residential dwellings. A general landscape buffer to these dwellings is located adjacent of the site. • West: Directly west of the site is low scale residential uses earmarked for high density redevelopment. These dwellings also fall within the St Leonards South Precinct.
Public Transport	The site is highly accessible by public transport services including: • St Leonards Station is located approximately 400m north of the site. • Wollstonecraft Station is located approximately 800m to the south of the site. • The anticipated Crows Nest Metro Station is also located approximately 450m east of the site.

Table 3 – Site Description

	The site is well serviced by buses with a bus stop directly south on River Road providing services to Sydney CBD, and various bus stops along Pacific Highway approximately 400m north providing various services to Central Station, Sydney Airport, Macquarie Park, Cherrybrook and Epping.
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2.3 Surrounding Development

The surrounding development relates to the broader residential suburb of Lane Cove and typically comprises low scale detached residential dwellings.

North

The development to the immediate north relates to two (2) residential dwellings located at 19 Canberra Avenue and 16 Holdsworth Avenue. The dwelling at 19 Canberra Avenue reaches one (1) storey and orientates towards the east away from the site. It is setback from the southern common boundary shared with the site. These dwellings fall within the bounds of the St Leonards South Precinct and will be redeveloped in the near future for medium to large scale residential flat buildings.

The dwelling at 16 Holdsworth Avenue relates to a single storey dwelling that is also setback from the common boundary with windows primarily orientated towards the street. Both properties are located within the St Leonards South Precinct and will form part of a future through-site link that traverses the site's northern boundary from east to west.

The development further northward relates to the St Leonards Centre. St Leonards is a strategically significant office precinct and incorporates St Leonards Railway Station.

South

The development to the direct south beyond River Road consists of single storey residential dwellings that are concealed by a generous landscape buffer. To the south east the development comprises a townhouse development that reaches three storeys.

East

The development to the east relates to Newlands Park. Newlands park is an open space area that incorporates play equipment and pedestrian paths of travel that link to Duntroon Avenue. It features natural landscaping comprising sparsely located canopy tree planting.

Beyond this lies Duntroon Avenue which supports a range of contemporary multi-storey residential flat buildings with a strong horizontal architectural expression.

West

The development to the west on the western side of Holdsworth Avenue consists of detached residential dwellings. These dwellings fall within the bounds of the St Leonards South Precinct and will be redeveloped in the near future for medium to large scale flat buildings.

The surrounding development is illustrated in the figures below.



Figure 7 – Newlands Park Viewed Looking South
 Source: Mecone



Figure 8 – Flat Building Along Duntroon Ave Looking North
 Source: Mecone



Figure 9 – River Road and Adjacent Dwellings Looking South
 Source: Mecone



Figure 10 – Contemporary Development to the North
 Source: Mecone

3 The Proposal

3.1 Development Summary

Bates Smart have provided the design for the proposed development. The Architectural Plans are included at **Appendix 4**.

The Development Application will seek consent for the following:

- Demolition and site preparation works;
- Staged construction and use of five (5) residential flat buildings (ranging in height from 6 to 10 storeys) that include:
 - A total of 319 residential apartments;
 - A total of 10 terraces fronting Canberra Avenue;
 - A 2,500m² communal garden and roof terraces;
 - A 4 storey split basement with a total of 372 car parks;
 - Vehicular access provided from Canberra Avenue via a single egress/ingress point;
- Tree removal and replacement planting; and
- Associated landscape works including the provision of a through-site link connecting Canberra Avenue and Holdsworth Avenue.

3.2 Numerical Overview

A numerical overview of the proposed development is provided below in **Table 4**. Architectural Plans are included at **Appendix 4**.

Table 4 – Site Description	
Component	Proposal
Site Area	12,653m ²
GFA	• Building 7 – 4,692m² • Building 8 – 7,291m² • Building 9 – 6,604m² • Building 10 – 4,474m² • Building 11 – 9,825m² • Total - 32,898m²
FSR	2.60:1
Total No. of Apartments	329
Total Unit Mix	• 72 x 1 bed (21.9%) • 179 x 2 bed (54.4%) • 68 x 3 bed (20.6%)

Table 4 – Site Description

	10 x 3 bed townhouse (3%)
Parking Spaces	Cars: 372 Visitor: 66 Residential Accessible: 66 Visitor Accessible: 6 Motorcycle: 25 Bicycle: 121
Total ADG Solar	70.2%
Total Cross Ventilation	66.6%
Building 7 - Site Area - Height - Street Wall - Storeys - GFA - Units	- 2,113m ² - 24.9m - 5 storeys - 6 storeys - 4,692m ² - 45
Building 8 - Site Area - Height - Street Wall - Storeys - GFA - Units	- 2,230m ² - 36.4m - 5 storeys - 10 storeys - 7,291m ² - 72
Building 9 - Site Area - Height - Street Wall - Storeys - GFA - Units	- 2,567m ² - 24.9m - 5 storeys - 6 storeys - 6,616m ² - 66
Building 10 - Site Area - Height - Street Wall - Storeys	- 1,654m ² - 30.9m - 5 storeys - 8 storeys

Table 4 – Site Description	
- GFA	- 4,474m ²
- Units	- 46
Building 11	
- Site Area	- 4,089m ²
- Height	- 30.96m
- Street Wall	- 5 storeys
- Storeys	- 7 storeys
- GFA	- 9,825m ²
- Units	- 100

3.3 Design Principles

An Architectural Design Report has been prepared by Bates Smart and is included at **Appendix 4**. The Design Report outlines the design approach and objectives for the proposal.

The planning and design objectives for the proposed development are summarised below.

- To achieve a consistent visual language across the site whilst ensuring each building exhibits its own distinctive identity through the use of changes in materiality and vertical and horizontal architectural expressions;
- Provide a highly articulated built form which integrates with the residential quality that characterises the area;
- Establish an appropriate streetscape to Canberra Avenue which provides a sense of human scale that minimises the perceived bulk and scale of the development;
- Express a two storey appearance on Canberra Avenue by setting back the upper levels and enhancing the legibility of the podium through the use of a sandstone base;
- Integrate landscaping with the design to soften the appearance of the built form and improve its integration with the surrounding landscape context and topography at the ground plane;
- Provide comprehensive landscaping across the site that is sympathetic to the surrounding natural environment and bushland context;
- Provide a series of high quality communal open space areas throughout the proposal's Green Spine;
- Use extensive design testing to establish an alternative but superior design response that achieves a standard of amenity that exceeds Council's planning controls; and
- To achieve a high level of consistency with the *St Leonards South Urban Design Guidelines*.

A photomontage of the proposal is illustrated at **Figure 11**.



Figure 11 – Photomontage of the Proposal Looking North Across the Green Spine

Source: Bates Smart

3.4 Design Description

The proposed development comprises the delivery of five (5) residential flat buildings located above a common carparking and services basement. Cumulatively, these buildings will provide 329 residential dwellings set within extensive communal open space areas.

A description of each building is provided below.

Building 8 and Building 10

Building 8 and Building 10 address Holdsworth Avenue and the internal Green Spine. Both buildings exhibit a juxtaposition of strong horizontal and vertical forms achieved through the use elongated balconies and strong vertical elements such as full height shading fins and vertical masonry clad panels.

Building 10 has eight levels inclusive of a five storey street wall and three upper levels. Building 8 has eleven residential levels (including 1 part storey) made up of the five-storey street wall and five upper levels, plus a lower ground level that orientates towards the Green Spine. Together both buildings exhibit a consistent street wall height. Building breaks are used to define the lobbies associated with each building.

Building 7

Building 7 is positioned in the north eastern corner of the site and orientates towards Canberra Avenue and the Green Spine. It represents a smaller building that is shorter in length and is provided with a central lift core. It exhibits a clearly defined five storey street wall to Canberra Avenue. The upper level is positioned away from the streetscape by a generous upper setback.

It features a similar materiality to Buildings 8 and 10, including a strong vertical expression. A sandstone base is provided at street level to complement the surrounding topography and natural characteristics of the site.

Building 11 and Building 9

Building 11 and Building 9 orientate towards Canberra Avenue and reach seven and six storeys, respectively. These buildings occupy the portion of the site which is affected by a significant cross fall and sloping topography.

The design has sought to harness the site's sloping topography to deliver a visually interesting built form. Specifically, the terraces incorporated at the lower levels fronting Canberra Avenue present as being buried into the topography. Each terrace features a sandstone façade which is sympathetic to site's natural attributes. Landscaping consisting of cascade planting and planting at the ground plane set amongst sandstone further assist in integrating the built form. The siting of the terraces combined with the sandstone façade and landscaping present as being a heavily planted sandstone plinth that contributes to a human scale at street level.

Residential levels are positioned above the sandstone plinth and are generously setback from the terraces to present as being a distinctive element. Consistent with the other buildings proposed for the site, they reflect a strong vertical expression.

The buildings adopt a staggered built form when viewed on plan and in section. Further, the upper most levels are setback behind the building's parapet. Combined this design approach assists in minimising the perceived scale of the development and enhances the articulation of the façade.

Further discussion regarding the proposed building design and its consistency with Council's vision for the site is included in **Section 5.1. Figures 12 – 13** below illustrates the proposed location and configuration of each building.

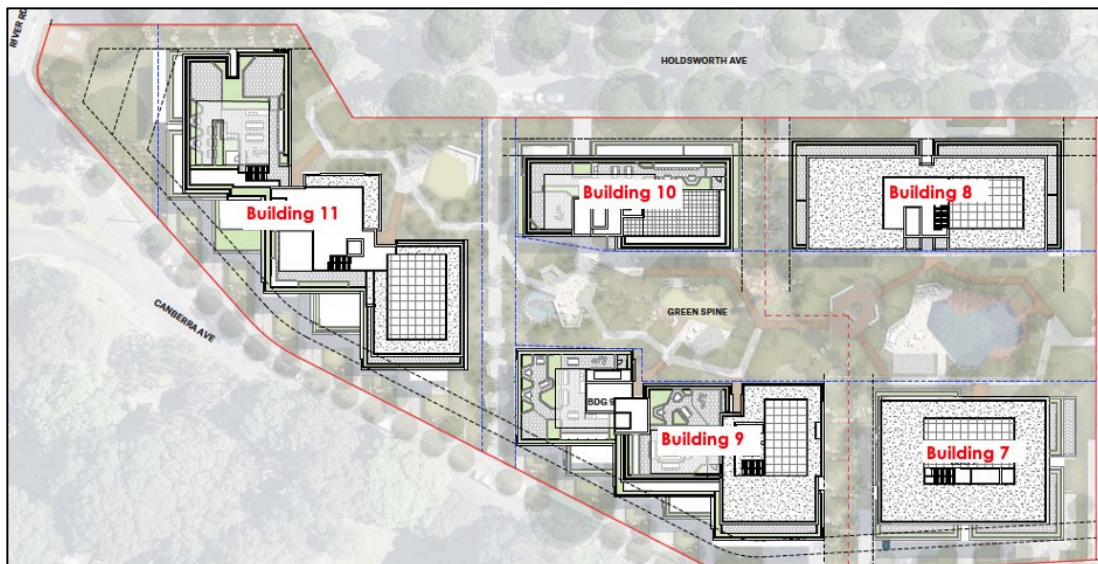


Figure 12 – Proposed Configurations and Locations of Each Building
Source: Bates Smart



Figure 13 – Overview of Built Form and Scale

Source: Bates Smart

3.5 External Materials and Finishes

The proposed development includes materials and finishes that have been selected to complement the future built environment, respond to the existing and local context and to also provide a positive addition to the aesthetics of the St Leonards South Precinct (refer to **Figure 14**).

To respond to the urban environment associated with the St Leonards Centre and the bushland quality in the immediate surrounds, the proposal incorporates a natural and earthy selection of materials and finishes.

The materials are detailed in the Architectural Report at **Appendix 4** and include the following:

- 1) Glazing;
- 2) Fluted glass;
- 3) Charcoal aluminum framing to doors, windows and balustrades;
- 4) Anodized aluminum in pale bronze finish;
- 5) Balcony soffits in white painted finish;
- 6) Façade column infills and charcoal rendered masonry;
- 7) Sandstone wall cladding;
- 8) Sandstone toned masonry; and
- 9) Timber decking to balconies.

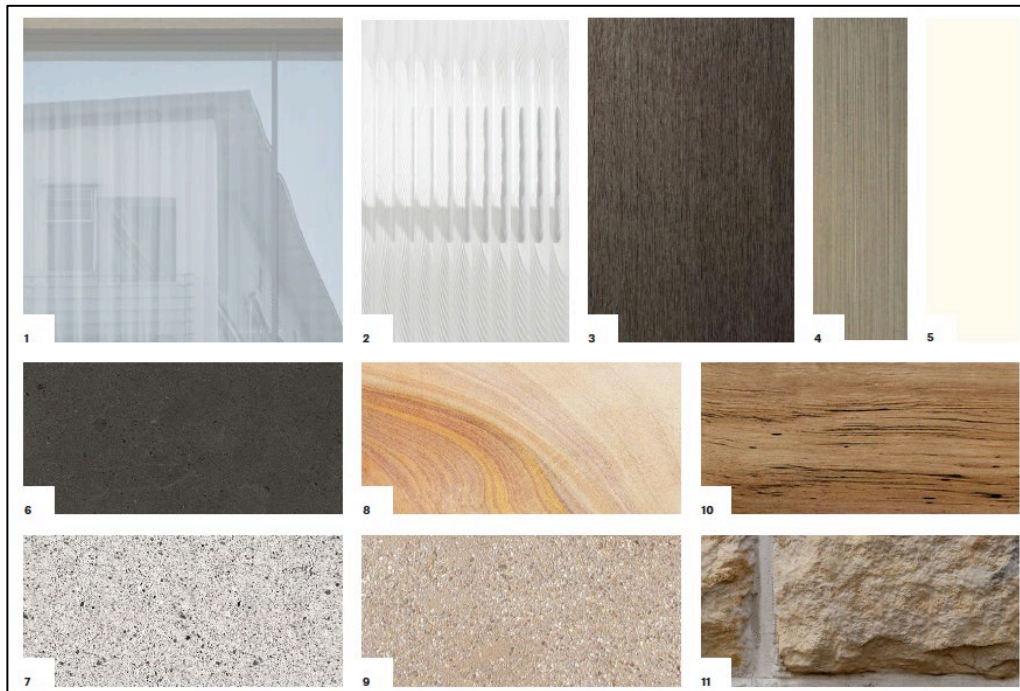


Figure 14 – Proposed Façade Materiality Pallet

Source: Bates Smart

3.6 Landscaping

Arcadia have prepared a landscape scheme for the site which is included at **Appendix 5** and illustrated in **Figure 15**. The landscaping scheme closely aligns with the *St Leonards South LMP*.

In addition, it has sought to reinterpret the contrasting conditions of the surrounding environment which is characterised by rocky fern gullies, sandstone and vertical eucalypt forests.



Figure 15 – Proposed Landscape Scheme

Source: Arcadia

It includes the construction of dry creek beds, river rocks, new tree planting consisting of ferns and low-lying planting (refer to **Figure 15**). An overview of the key landscape features is provided below.

Green Spine

In accordance with the LMP, the proposed landscaping is focused around a 'Green Spine' located centrally to the site which predominantly comprises deep soil and extends to the site's south western corner. It incorporates extensive landscaping. Pedestrian paths of travel are provided through-out and facilitate access to each building and the various landscaped components incorporated across the site.

Through-Site Link

The scheme incorporates a through-site link which traverses the site from east to west and facilitates a pedestrian connection between Canberra Avenue and the future Holdsworth Avenue Pocket Park. This through-site link will be dedicated to Council in accordance with Clause 7.5 of the LLEP 2009.

The through-site link has been provided in accordance with the St Leonards South LMP. It is proposed to be accommodated between Building 11 and Buildings 10 and 9 and will provide a linear path of travel.

Private Pool

The northern portion of the Green Spine incorporates a pool area surrounded by raised timber decking. Perimeter planting consisting of palms surrounds the pool to promote privacy for the adjacent dwellings to the north (refer to **Figure 16**). A complementary pool pavilion and a separate raised decking area are also provided to the south of the pool.



Figure 16 – Proposed Location of Suspended Walkways
Source: Arcadia

3.7 Communal Roof Terraces

The stepped built form provides an opportunity for communal roof terraces located on Building 9, 10 and 11 (refer to **Figure 17**).

Each building core has access to the roof terraces associated with this building. The roof terraces incorporate a range of amenities, including a barbeque area, lounges, dining tables and casual seating. Shade structures are included and will provide a mix of weather protection.



Figure 17 – Proposed Location of Rooftop Communal Areas

Source: Bates Smart

3.8 Dwelling Mix and Size

A total of 329 dwellings including 319 apartments and 10 townhouses are proposed. The proposed mix and size of the dwellings is detailed in **Table 5**.

Unit type	Quantity	Mix	Size Range
1 bed	72	21.9%	50 - 63m ²
2 bed	184	55.9%	73 - 110m ²
3 bed	63	19.2%	95 - 163m ²
3 bed townhouse	10	3%	139 – 186m ²
Total	329	100%	-
Adaptable Dwellings	66	20%	66
Visitable Dwellings	281	80%	281

3.9 Floor Space Ratio

The maximum permissible GFA across the site is set out in **Section 5.4** of this report. **Table 6** identifies the proposed schedule of GFA.

Table 6 – Site Description	
Location	GFA (Calculated as per LLEP 2009)
Building 7	4,692
Building 8	7,291
Building 9	6,616
Building 10	4,474
Building 11	9,825
Total GFA	32,898
Total FSR	2.60:1

3.10 Pedestrian Access

Building 9, Building 7 and Building 11

Pedestrian access for the townhouses contained within Building 9 and Building 11 is from Canberra Avenue via individual dedicated footpaths which connect each townhouse to the streetscape.

The residential units located above in Building 9, Building 7 and Building 11 will be accessible from their main lobbies located on Canberra Avenue. Each lobby contains a lift which will facilitate access to the upper levels. In addition, these buildings are accessible via internal pathways within the Green Spine.

In addition, Building 7 incorporates two apartments at street level which orientate towards Canberra Avenue. These apartments are afforded direct access from Canberra Avenue. Due to the change in level, these apartments are also accessible via an internal corridor. Entry to this corridor is permitted via the lobby area and lift core located at the level above.

Building 8 and Building 10

Building 8 and Building 10 interface with Holdsworth Avenue and the Green Spine. Each building's primary access point is facilitated from Holdsworth Avenue. For each building, this footpath provides entry to a lobby area containing a dual lift core which facilitates access to the upper levels.

Bicycle Parking Access

Separate access arrangements are provided for cyclists to promote safety and prevent potential conflicts with cars.

Building 11, Building 10 and Building 7 have dedicated bicycle parking areas directly accessible from Canberra Avenue. Access to the proposed dedicated bicycle areas for Building 8 and Building 10 are provided from footpaths that connect to Holdsworth Avenue.

3.11 Vehicular Access and Parking

3.11.1 Vehicular Access

The proposal accommodates a shared 4 level split basement that connects each building. This basement is accessible from a single egress / ingress point from Canberra Avenue. The provision of a single driveway access point aligns with best practice for transit-orientated development as it prioritises the movement of pedestrians and cyclists at street level and reduces the quantity of vehicle cross over points.

3.11.2 Car Parking

The proposed parking has been calculated in accordance with the LLDCP 2009 using the rates that apply to developments located within a 400m radius of St Leonards Railway Station.

The shared basement makes provision for the following parking arrangements:

- Residential Parking – 372 spaces;
- Visitor Parking – 66 spaces; and
- Car Wash Bays – 5 spaces.

It is noted that 6 visitor spaces have the potential to be utilised as car share spaces.

3.11.3 Motorcycle Parking

A total of 25 motorcycle spaces are provided within the basement.

3.11.4 Bicycle Parking

A total of 121 bicycle spaces are provided within dedicated areas across the basement.

3.11.5 Loading Arrangements

Service vehicles and removalist trucks will be accommodated within the dedicated loading bay located centrally to the shared basement adjacent to the driveway. A 4.5m height clearance will be provided from the street driveway to the loading dock to permit the site to be serviced by a Medium Rigid Vehicle or a 9.5m garbage truck in accordance with Council's waste collection requirements.

A turntable will be provided within the loading dock to allow vehicles to enter and exit the site in a forward direction.

The proposed loading dock is illustrated in the figure below. A vehicle swept path analysis is provided in the Traffic Report at **Appendix 13**.

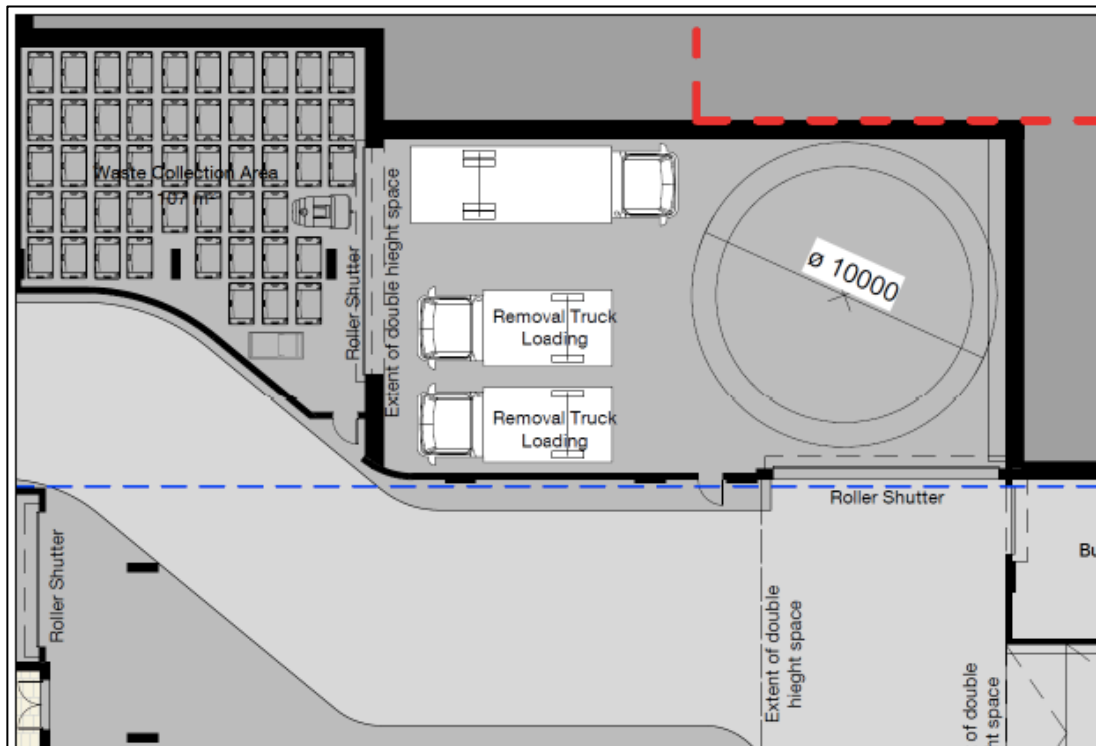


Figure 18 – Proposed Loading Dock Accessible from Canberra Avenue

Source: Bates Smart

3.12 Waste Management

An Operational Waste Management Plan prepared by Elephants Foot and is included at **Appendix 6**. The Plans outline the estimate waste to be generated by the development during its operational phase and the proposed waste collection and storage methods for both Stage 1 and Stage 2 of the proposal.

The plan identifies the primary sources of waste will consist of:

- Cardboard / paper recycling;
- Comingled recycling;
- Food organics recycling;
- Soft plastics; and
- General waste.

Disposal of Waste and Recycling

Each individual level will include a waste chute. Residents will be responsible for transporting their waste to this chute. Waste will discharge to a linear track system and will be compacted using a ceiling-mounted compactor.

Residents will be responsible for disposing their recycling via the chute system located on each level. The building caretaker will be responsible for transporting recycling

waste to the waste collection rooms via a lift and decanting it into the dedicated bins using a bin lifter.

Waste collection will occur on a regular basis using a Council waste collection vehicle. Further discussion is provided in **Section 5.13**

Bulky Waste

A bulky goods waste storage room with an area 30m² is proposed adjacent to the loading dock on Basement Level 2.

The location of the waste collection rooms and chutes are illustrated in the figure below.

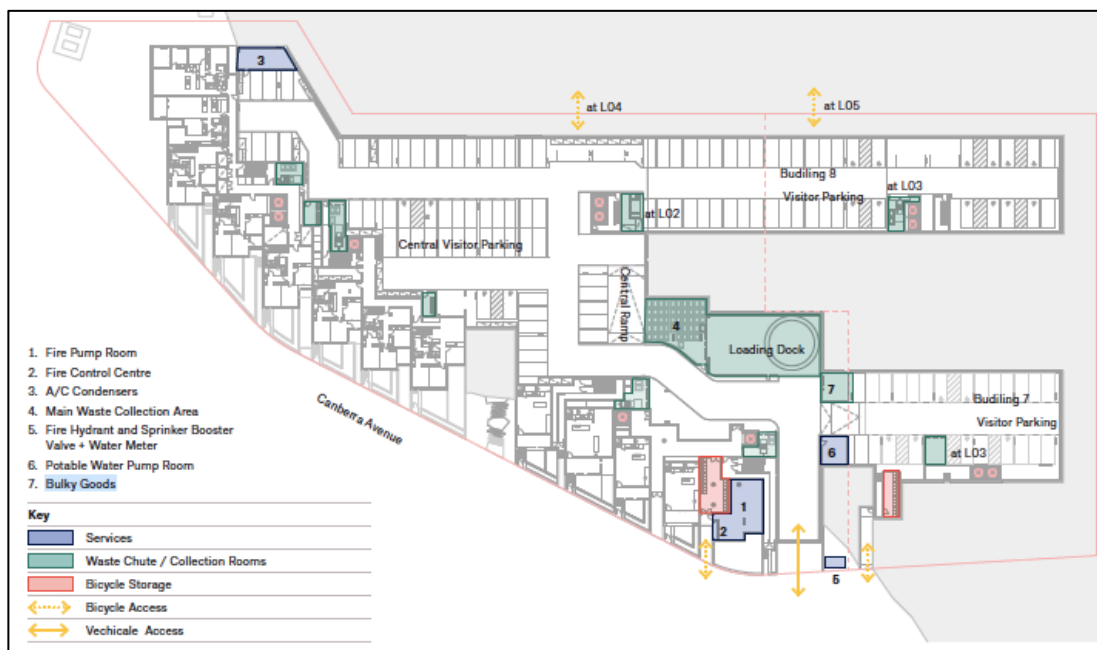


Figure 19 – Proposed Loading Dock and Waste Collection Rooms Accessible from Canberra Avenue

Source: Bates Smart

3.13 Demolition and Excavation

The following site preparation works are required to facilitate the proposal:

- Site clearing and the demolition of all existing buildings and landscaping on site;
- Excavation to a depth of 17m to facilitate the construction of the 3.5 storey basement;
- Implementation of erosion and sediment controls measures; and
- Associated earthworks.

A detailed Construction Management Plan will be prepared prior to the construction phase.

3.14 Staging

A Staging Strategy has been prepared for the site. At this point in time the proposal will be constructed over seven (7) stages. It is noted that this staging strategy is indicative only and may be subject to change depending on market demand and economic conditions.

The proposed staging is detailed as follows:

- Stage 1 – Building 11
- Stage 2 – Building 10
- Stage 3 – Building 9
- Stage 4 – Building 8
- Stage 5 – Building 7

It is sought that any development consent reflect the above phases in so far that separate Construction Certificates and Occupation Certificates are able to be issued following the completion of all works associated with the phases.

3.15 Tree Removal

An Arboricultural Impact Assessment is included at **Appendix 7**. It outlines that the proposal necessitates the removal of 73 trees. The trees are located across the site and are wholly contained within its boundaries.

A total of 20 trees are proposed for retention. In particular, a number of existing trees located along Holdsworth Avenue, River Road and within the Green Spine are proposed for retention. This includes a large indigenous *Eucalypt Saligna* tree adjacent to River Road. The footprint of Building 11 has been strategically designed to prevent conflicts with this tree.

A detailed justification for the tree removal is provided in **Section 5.12**.

3.16 Infrastructure and Services

All services within the existing dwellings contained within the site are proposed to be decommissioned, demolished and removed. As part of the proposed scope of works, these services will be replaced and augmented with existing surrounding infrastructure.

4 Environmental Planning Assessment

The following environmental planning assessment has been undertaken in accordance with the requirements of Section 4.15(1)(a) of the *Environmental Planning and Assessment Act 1979* (EP&A Act 1979). It should be read in conjunction with information annexed to this report as outlined in the Table of Content.

This section provides an assessment of the proposal's compliance with the relevant legislation, planning instruments and documents, including:

- NSW State Priorities (NSW 2021);
- A Metropolis of Three Cities;
- North District Plan;
- *Environmental Planning and Assessment Act 1979*;
- *State Environmental Planning Policy (Infrastructure) 2007*;
- *State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004*;
- *State Environmental Planning Policy No 55 – Remediation of Land*;
- *State Environmental Planning Policy (Vegetation in Non-Rural Areas 2017)*;
- *State Environmental Planning Policy No 65 – Design Quality of Residential Apartment Development*;
- *State Environmental Planning Policy No 64 – Advertising and Signage*;
- *State Environmental Planning Policy (Affordable Rental Housing) 2009*;
- *Lane Cove Local Environmental Plan 2009*;
- *Lane Cove Local Strategic Planning Statement*;
- *Draft Lane Cove Council Housing Strategy 2020*;
- Lane Cove DCP 2009.

4.1 Compliance with Strategic Plans and Policies

The table below provides an assessment of the proposal against the relevant State and local strategic plans.

Table 7 – Compliance with Strategic Plans	
Plan	Comment
NSW State Priorities (NSW 2021)	The NSW State Priorities are a series of reforms aimed at growing the economy, delivering infrastructure and improving health, education and other services across NSW. Whilst not directly related to the proposed development, the proposal will facilitate the achievement of a well-connected community and a strong economy by providing a high quality design with employment generating uses and an active public domain.

Table 7 – Compliance with Strategic Plans

Plan	Comment
A Metropolis of Three Cities	The Greater Sydney Region Plan – <i>A Metropolis of Three Cities</i> establishes a 40-year vision for Sydney and a 20-year plan to guide its growth. The site forms part of the Harbour CBD and is located within the Eastern Economic Corridor. The proposal is consistent with the plan for the following reasons: • The proposal aligns with investment in regional and district infrastructure, namely the CBD and South East Sydney Light Rail. • The proposed residential uses will facilitate the provision of housing in proximity to transport and will deliver on the vision to achieve a 30-minute city. • The proposal will increase investment in a centre earmarked for additional density and employment growth.
North District Plan	The District Plan sets out the priorities and actions for the growth and development of the Southern District. The proposal is entirely consistent with the key priorities of the plan, including: • The proposal seeks to provide a through-site link to improve connectivity across the site and will therefore facilitate the provision of social infrastructure (Priority N3); • The proposal is the outcome of extensive collaboration with Council to achieve the most optimal land use outcome for the site that aligns with the Government's vision for the Precinct (Priority N2). • The proposal will revitalise an underutilised site and replace the existing outdated building stock with a high quality residential development (Priority N6). • It will increase the provision of housing, providing greater choice and dwellings at varying price points within a locality well serviced by public transport (Priority N5); and • Will deliver on the aspiration to integrate land use and transport planning to achieve a 30-minute city by locating high density housing in a walkable distance of public transport (Priority N12). • The proposal will provide communal open space and links to surrounding public places with extensive canopy tree planting (Priority N19).
Lane Cove LSPS	The LSPS outlines the 20 year vision, planning priorities and actions for land use in the Lane Cove LGA. It translates the

Table 7 – Compliance with Strategic Plans

Plan	Comment
	visions and strategies expressed in the Community Strategic Plan and related actions in the Delivery Program into specific land use planning priorities and actions. The proposal is entirely consistent with the LSPS for the following reasons: • The proposal is the result of extensive community consultation with Council (Planning Priority 3); • Generous high quality communal areas are included and will foster the emergence of a socially connected community (Planning Priority 4); • The proposal will deliver a diversity of housing types comprising units and townhouses at varying price points (Planning Priority 5); • A range of public benefits will be delivered by the proposal including additional housing, streetscape upgrades, the revitalisation of an underutilized site and an appropriate dwellings mix that will contribute to meeting Council's housing targets (Planning Priority 5); • The proposal will enhance the urban tree canopy by retaining significant trees and proposing significant offset planting that is sympathetic to the surrounding landscape (Planning Priority 10); and • The proposal meets and exceeds a range of ESD targets (Planning Priority 11).
<i>Draft Lane Cove Council Housing Strategy 2020</i>	The <i>Draft Lane Cove Council Housing Strategy 2020</i> (Housing Strategy) provides a framework to inform residential development in the Lane Cove LGA over the next 20 years. The Housing Strategy highlights the importance of the St Leonards South Precinct for the LGA in addressing its demand for housing. It notes that the precinct will deliver up to 1,850 new dwellings by 2026. The proposal aligns with the Housing Strategy in that it will contribute to meeting the dwellings target for the precinct.

4.2 State Environmental Planning Policies

4.2.1 State Environmental Planning Policy (Infrastructure) 2007

State Environmental Planning Policy (Infrastructure) 2007 (ISEPP) aims to facilitate the effective delivery of infrastructure across the State and where relevant mandates consultation with relevant public authorities during the assessment process.

Clause 104 - Traffic Generating Development

Under the provisions of Schedule 3 of the ISEPP (Column 2), the proposal constitutes traffic generating development as it seeks consent for 329 dwellings and therefore trigger the 300 dwelling threshold. Pursuant to Clause 104, written notice must be given to TfNSW (formerly Roads and Maritime Services) and consideration given to any comments received within 21 days.

4.2.2 State Environmental Planning Policy (Building Sustainability Index: Basix) 2004

A BASIX Report and Certificate is provided at **Appendix 8**. The BASIX Certificate confirms that the proposal meets the BASIX targets. Further discussion is provided in **Section 5.14**.

4.2.3 State Environmental Planning Policy No. 55 – Remediation of Land (SEPP 55)

State Environmental Planning Policy No. 55 – Remediation of Land (SEPP 55) requires the consent authority to consider whether a site is contaminated and the methods necessary to facilitate its remediation prior to granting consent.

A Preliminary Contamination Report has been prepared by Golder and is included at **Appendix 9**. The report has been prepared for the purpose of identifying if the site is contaminated and suitable for the proposal. The report concludes that no significant sources of contamination affect the site and it is suitable for the proposed development. Further discussion is provided in **Section 5.17**.

4.2.4 State Environmental Planning Policy No. 65 – Design Quality of Residential Apartment Development

The proposal is consistent with the nine (9) design principles set out in Schedule 1 of the *State Environmental Planning Policy No.65 – Design Quality of Residential Flat Development* (SEPP 65) (refer to **Appendix 4**). A detailed assessment of the proposal's consistency with these principles and the associated *Apartment Design Guide* (ADG) is provided in **Section 5.8**.

4.2.5 State Environmental Planning Policy (Affordable Rental Housing) 2009

The *State Environmental Planning Policy (Affordable Rental Housing) 2009* (ARH SEPP) Part 3 includes provisions relating to the retention and removal of existing affordable housing. It requires that a consent authority assess whether there will be a reduction in affordable housing and if there is sufficient comparable accommodation to satisfy

demand for such accommodation. The proposal does not preclude the operations of the SEPP in that it will not result in a reduction of affordable housing.

4.3 Lane Cove Local Environmental Plan 2009

The *Lane Cove Local Environmental Plan 2009* is the principal environmental planning governing development in the Lane Cove LGA. The table below provides an assessment of the proposed development against the relevant standards and provisions.

Table 8 – Summary of Compliance with LLEP 2009		
Clause	Provision	Assessment
Clause 2.1 – Land Use Zones	R4 High Density Residential	Complies The proposal seeks consent for residential flat buildings which are permissible with consent.
	Permitted with Consent Bed and breakfast accommodation; Boarding houses; Centre-based child care facilities; Community facilities; Exhibition homes; Group homes; Home businesses; Home industries; Hotel or motel accommodation; Multi dwelling housing; Neighbourhood shops; Oyster aquaculture; Places of public worship; Recreation areas; Residential flat buildings ; Respite day care centres; Restaurants or cafes; Roads; Shop top housing; Signage. Prohibited Pond-based aquaculture; Tank-based aquaculture; Any other development not specified in item 2 or 3.	
Clause 4.1 – Minimum Lot Size	The size of any lot resulting from a subdivision of land to which this clause applies is not to be less than the minimum lot size in relation to the land.	Not Applicable The site is not subject to a minimum lot size.
Clause 4.3 – Height of Buildings	A maximum 'base' height of 9.5m.	Not Applicable The proposal relies on the incentive FSR provisions.
Clause 4.4 – Floor Space Ratio	Maximum 'base' FSR of 0.5:1	Not Applicable The proposal relies on the incentive FSR provisions.
Clause 5.6 – Architectural Roof Features	Development that includes an architectural roof feature that exceeds, or causes a building to exceed, the height	Not Applicable The proposal does not incorporate an

Table 8 – Summary of Compliance with LLEP 2009

Clause	Provision	Assessment
	limits set by clause 4.3 may be carried out, but only with development consent.	architectural roof feature which exceeds the height plane.
Clause 5.10 – Heritage Conservation	A consent authority may require the submission of a heritage assessment where the site is located in the vicinity of a heritage item or HCA to assess the extent to which the carrying out of the proposed development would affect the significance of the heritage item or HCA.	Not Applicable The site is not located in the immediate vicinity or a heritage conservation of heritage item. Accordingly, the submission of a Heritage Impact Assessment is not required.
Clause 6.1 – Acid Sulfate Soils	Development consent is required for the carrying out of works on land affected by Acid Sulfate Soils.	Not Applicable The site is not classed or in proximity to land identified as containing acid sulfate soils.
Clause 6.1A – Earthworks	Before granting development consent, a consent authority must be satisfied that the proposed earthworks will not have a detrimental impact on environmental functions or surrounding land.	Complies The proposal seeks consent for excavation up to a depth of 17m to facilitate the construction of the basement. Further discussion is provided in the Geotechnical Report included at Appendix 13 and Section 5.10 .
Clause 6.3 – Riparian Land	Development consent must not be granted for works that adversely impact Riparian Land.	Not Applicable The site is not identified as containing Riparian Land.
Clause 6.4 – Environmental Protection Land	Development consent must not be granted for works that adversely impact Environmental Protection Land.	Not Applicable The site is not classified as being Environmental Protection Land.

Table 8 – Summary of Compliance with LLEP 2009

Clause	Provision	Assessment
Part 7 – Additional Local Provisions – St Leonards South Area		
Clause 7.1 – Development on Land in St Leonards South Area	Clause 7.1 applies to development that involves the erection of 1 or more new buildings for the purposes of residential flat buildings on land within the St Leonards South Area.	The proposal relates to the delivery of five (5) residential flat buildings and therefore the clause applies.
- Clause 7.1(3)	Despite clauses 4.3 and 4.4, the consent authority may consent to development on land to which this clause applies that will result in a building with a height that does not exceed the height identified on the Incentive Height Buildings Map and an FSR on the Incentive Floor Space Ratio Map.	Complies When measured from existing ground level the proposal complies with the LEP height limits which apply as follows: • Area 11: 31m • Area 10: 31m • Area 9: 25m • Area 8: 37m • Area 7: 25m Further discussion is provided in Section 5.7 and Appendix 4. Cumulatively, the proposal has a GFA of 32,898m². Based on a site area of 12,653m², this equates to a compliant FSR of 2.60:1.
- Clause 7.1(4)	Development consent must not be granted under this clause unless the consent authority is satisfied that: a) At least 20% of the total number of dwellings (to the nearest whole number of dwellings) contained in the development will be studio or 1 bedroom dwellings, or both; and b) At least 20% of the total number of dwellings (to the nearest whole number of dwellings) contained in the development will be 2 bedroom dwellings; and	Complies When rounded to the nearest whole number, the proposal is entirely consistent with the minimum required dwelling mix. The proposal seeks consent for the follows: • 1 bed – 22% • 2 bed – 55% • 3 bed – 24%

Table 8 – Summary of Compliance with LLEP 2009

Clause	Provision	Assessment
	c) At least 20% of the total number of dwellings (to the nearest whole number of dwellings) contained in the development will be 3 or more bedroom dwellings; and d) The development will provide appropriate building setbacks to facilitate communal open space between buildings; and e) The development will comply with the requirements of clause 7.2 in relation to the minimum site area of the development, and f) The development will, if applicable, comply with the requirements of clause 7.5 in relation to the provision of pedestrian links and roads.	
Clause 7.2 – Minimum Site Area Requirements	The minimum site area is as follows: • Area 7 – 1,900sqm • Area 8 – 2,000sqm • Area 9 – 2,500sqm • Area 10 – 1,500sqm • Area 11 – 4,000sqm	Complies The proposal complies with both Council's preferred amalgamation pattern as set out by the St Leonards Urban Design Guideline and the minimum areas set out by the LEP.
Clause 7.5 – Requirements for Pedestrian Links and Roads	For Area 11, a 6m wide pedestrian link through the land to connect to Holdsworth Avenue and Canberra Avenue.	Complies The through-site link proposed between Building 11, 10 and 9 is 9m in width.
Clause 7.6 – Design Excellence	Development consent must not be granted for development to which this clause applies unless the consent authority considers that the development exhibits design excellence.	Complies A detailed assessment is provided in Section 4.3.1.

Conclusion

The above assessment demonstrates that the proposal is entirely consistent with the applicable development standards set out in the LLEP 2009. In particular, it complies with the incentive requirements set out under Clause 7.5 in that it proposes a

through-site link for Area 11 with a minimum width of 6m. Furthermore, it is entirely consistent with the maximum incentive height and FSR development standards set out under Clause 7.1(3).

4.3.1 Design Excellence

The proposed development will deliver the highest standard of architectural and urban design.

As permitted by the LLEP 2009, the proposal has the opportunity to optimise the Incentive height and FSR development standards that apply under Clause 7.1 where development is considered to exhibit design excellence. In considering whether the proposal exhibits design excellence, consistency with the matters prescribed under Clause 7.6 must be demonstrated.

Table 9 addresses the proposal's consistency with the identified matters and confirms that the proposal will exhibit design excellence.

It is important to highlight that the proposal has been the subject of an extensive design process and has been reviewed by the Design Review Panel who concluded that the proposal exhibits design excellence (refer to **Appendix 2**).

Table 9 – Compliance with LLEP 2009 Design Excellence Objectives	
Objective	Assessment
(a) Whether a high standard of architectural design, materials and detailing appropriate to the building the and location will be achieved.	The proposed design has been developed in close consultation with Council and its Design Review Panel. The proposed architectural expression, landscape design and building massing has been developed iteratively following the receipt of pre-DA feedback and comments from the DRP. As set out in the section below, the proposal achieves a high level of compliance with the <i>St Leonards South Urban Design Guidelines</i>. Where variations are proposed, they are provided for the purpose of achieving a superior design and amenity outcome, including improved solar access and architectural articulation. Due consideration has been given to the selection of building materials to ensure the proposal reflects a contemporary appearance with a residential quality that is sympathetic to the surrounds. Specifically, a natural, robust and earthly selection of materials and finishes are proposed in response to the surrounding bushland environment.
(b) Whether the form and external appearance of the development	The proposal is of high-quality design and is the outcome of iterative design testing. The facades are highly articulated and incorporate high quality

Table 9 – Compliance with LLEP 2009 Design Excellence Objectives

Objective	Assessment
will improve the quality and amenity of the public domain.	and durable materials which will enhance the appearance of the streetscape. Comprehensive landscaping and communal open space area are provided throughout the site. These spaces combined with the landscaping will enhance the urban tree canopy coverage and the general appearance of the area.
(c) Whether the development protects and enhances the natural topography and vegetation including trees or other significant natural features.	The proposal has sought to retain as many trees as possible including almost all street trees and the prominent <i>Eucalypt Saligna</i> located adjacent to Building 11. Whilst tree removal is proposed, comprehensive landscaping with significant tree canopy planting is proposed. Additionally, the landscape scheme for the site has sought to reflect and integrate with the natural environment in the surrounds. It incorporates creek beds, ferns, and low-lying planting which will complement the surrounding landscape.
(d) Whether the development detrimentally impacts on view corridors.	No significant view corridors exist on or adjoining the site. The proposal complies with the required setbacks necessitate by the St Leonards South Urban Design Guidelines. In consequence, the proposal will have no impact on view corridors beyond what is envisaged by the controls.
(e) Whether the development achieves transit-orientated design principles, including the need to ensure direct, efficient and safe pedestrian and cycle access to nearby transit nodes.	The proposal provides high density residential housing on a site located within walking distance of St Leonards Railway Station. As such, it fosters the principles of transit-orientated development. The proposal also complies with the minimum bicycle parking arrangements and incorporates a number of pedestrian paths that will improve connectivity to the surrounding area in accordance with the <i>St Leonards South Urban Design Guidelines</i>.
(f) The requirements of the Lane Cove DCP.	The proposal is largely compliant with the LDCP 2009 and the <i>St Leonards South Urban Design Guidelines</i>. Further discussion is provided in Section 5.1 and Appendix 10.

Table 9 – Compliance with LLEP 2009 Design Excellence Objectives

Objective		Assessment
How the development addresses the following matters:		
(i)	The suitability of the land for development,	The development proposes a high density residential use to which the site is specifically zoned for and is proposed in accordance with the <i>St Leonards South Urban Design Guidelines</i> .
(ii)	Existing and proposed uses and use mix,	The site contains 20 residential dwellings that are proposed to be demolished and replaced with 139 high quality residential dwellings that achieve a high standard of residential amenity. The mix of apartment sizes complies with the requirements of Clause 7.1 of the LLEP 2009 (refer to Section 4.3).
(iii)	Heritage issues and streetscape constraints,	The LLEP 2009 does not identify the site as a heritage item or being within a heritage conservation area. No heritage items are located in the vicinity of the site.
(iv)	The relationship of the development with other development on the same site or on neighbouring sites in terms of separation,	The proposal largely complies with the required setbacks prescribed by the <i>St Leonards South Urban Design Guidelines</i> . Minor variations are proposed to the southern setbacks associated with Buildings 11, 9 and 7 to facilitate the delivery of a staggered built form. However, the variations are minor and the massing concept transitions to confirm to the planned massing of adjacent sites.
(v)	Bulk, massing and modulation of buildings,	Buildings 11 and 9 vary the envelope configurations required by the <i>St Leonards South Urban Design Guidelines</i> to provide a staggered built form (both in plan and section) that minimises the perceived bulk of each. The alternative envelope configurations are considered to result in an improved design outcome that better achieves compliance with Council's design excellence requirements and objectives of the controls. Further discussion is provided in Section 5.1 .
(vi)	Street frontage heights,	The proposal largely complies with the required street frontage heights. However, instead of a five(5) storey street frontage, a two (2) storey edge is proposed with six (6) storeys above for the

Table 9 – Compliance with LLEP 2009 Design Excellence Objectives

Objective	Assessment
	purpose of providing a more human scale along Canberra Avenue.
(vii) Environmental impacts such as sustainable design, overshadowing, wind and reflectivity,	The proposal is considered to provide minimal environmental impacts. Further discussion is provided in Section 5.0 .
(viii) The achievement of the principles of ecologically sustainable development,	The proposal is entirely consistent with the principles of ESD for the reasons set out in the ESD Assessment Report at Appendix 16 . Specifically, the proposal will outperform the regulatory requirements pertaining to the NCC 2019 Section J, BASIX and NatHERS. It will achieve a minimum 6 star NatHers Rating in accordance with the <i>St Leonards South Urban Design Guidelines'</i> sustainability requirements.
(ix) Pedestrian, cycle, vehicular and service access, circulation and requirements,	The proposal complies with the bicycle parking requirements set out by the LLDCP 2009. Pedestrian access is provided in accordance with the <i>St Leonards South Urban Design Guidelines</i>. Vehicular access to the shared basement is proposed to be rationalised and located along the northern end of Canberra Avenue.
(x) The impact on, and any proposed improvements to the public domain,	The proposal will have a positive impact on the public domain. It replaces a number of dilapidated buildings with a high quality built form outcome that will improve the amenity of the streetscape.
(xi) The configuration and design of publicly accessible space and private spaces on the site.	The proposal complies with Council's LMP for the St Leonards South Precinct in that it delivers a centralised private communal open space area known as the 'Green Spine'. The Green Spine incorporates a variety of distinct spaces that will foster communal interaction. These spaces are interlinked by a series of pedestrian pathways and boardwalks which together provide a high degree of connectivity across the site.

4.4 Development Control Plans

4.4.1 Lane Cove Development Control Plan 2009

The LDCP 2009 is the principle DCP that applies to the site. **Appendix 10** provides an assessment of the application against the relevant provisions. A summary of the key areas of consideration are set out in the table below.

The built form controls that apply to the St Leonards South Precinct form part of the St Leonards South Urban Design Guidelines which are contained within *Part C – Residential Localities* of the LDCP 2009.

In accordance with Section 4.15(3A) of the EP&A Act, a consent authority is required to apply DCP provision flexibility and allow variations where appropriate. Alternative solutions to the provisions of the DCP are addressed in the following section.

Table 10 – Key LDCP 2009 Controls		
Section	Item	Compliance
Part B – General Controls	Safety and Security	Refer to Section 5.17 and Appendix 19 .
Part C – Residential Flat Buildings	Density	Refer to Section 5.8 and Appendix 4 .
	Building Width	
	Size and Mix of Dwellings	
	Private Open Space	
	Ceiling Heights	Refer to Appendix 4 .
	Solar Access	Refer to Appendix 4 and Section 5.8.3 .
	Natural Ventilation	Refer to Appendix 4 and Section 5.8.2 .
	Visual Privacy	Refer to Appendix 4 .
	Communal Open Space	Refer to Appendix 4 and Section 5.8 and Section 3.0 .
Part C – Residential Localities – St Leonards South Precinct	Overall Objectives	Refer to Appendix 10 .
	Structure Plan	Refer to Appendix 10 .
	Access	Refer to Appendix 10 .
	Infrastructure	Refer to Appendix 10 and Section 3.16 .
	Community Facilities	Refer to Appendix 10 and Section 3.0 .
	Built Form	Refer to Appendix 4 and Section 5.1 – 5.4 .

Table 10 – Key LDCP 2009 Controls

Section	Item	Compliance
	Incentives	Refer to Table 4 .
	Landscaping	Refer to Appendix 5 and Section 5.5 .
	Private Domain	Refer to Appendix 5 and Section 5.5 .
	ESD	Refer to Section 5.14 .
Part O – Stormwater Management	Refer to Appendix 17 and Section 5.15 .	
Part Q – Waste Management	Refer to Appendix 6 and Appendix 15 , and Section 5.13 .	

5 Environmental Assessment

The following sections provide an assessment of the likely impacts of the development, the suitability of the site for the proposal and the public benefits in accordance with Section 4.15(b), (c) and (d) of the EP&A Act.

Mecone has undertaken an assessment of the proposal against the relevant planning and environmental legislation and guidelines to identify potential impacts and mitigation measures. The potential environmental impacts and associated mitigation measures are discussed below.

5.1 Built Form and Massing

The built form is derived from the site specific planning controls established by the Urban Design Guideline for the St Leonards South Precinct. These controls establish a framework for the site's future development and dictate the amalgamation pattern, siting of the building envelopes and location of key open space areas.

Amalgamation Pattern

The proposal is entirely consistent with the required amalgamation pattern to prevent the isolation of lots and to deliver on Council's vision for the precinct (refer to **Figure 20**).

The proposal relates to Areas 7, 8, 9, 10 and 11 of the Urban Design Guidelines. Consistent with the urban design framework, the proposal provides one apartment building on each of the areas. Compliance with the amalgamation pattern allows for the provision of generous amounts of shared communal open space including a centralised Green Spine.

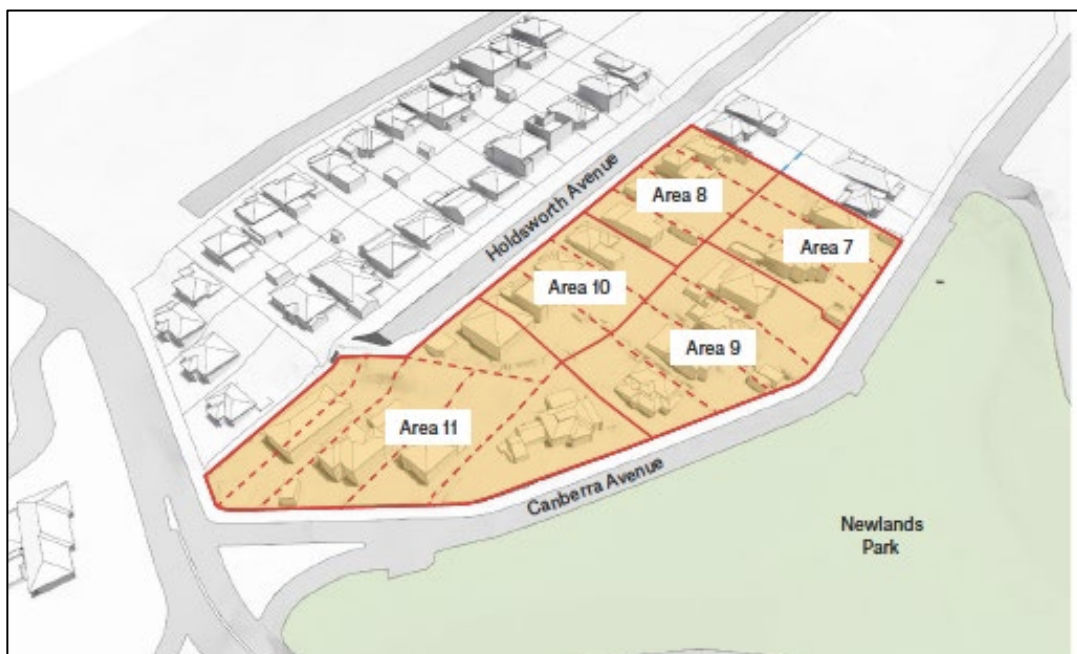


Figure 20 – Proposed Amalgamation Pattern and Location of Areas

Source: Bates Smart

Approach to Massing and Scale

To deliver on the aspirations of the *St Leonards South Urban Design Guidelines*, the greatest massing is concentrated in the northern portion of the site where the proposal interfaces with sites to the west of Holdsworth Avenue which also form part of the St Leonards South Precinct. The envelopes grade down in height towards the south and western edges where the site interfaces with Canberra Avenue and River Road respectively.

The massing decreases in scale towards Canberra Avenue and River Road through the adoption of a reduced height, the recessing of the upper levels away from the street frontage and the adoption of a reduced street wall height. Combined this design approach assists in achieving an appropriate transition in scale to the low scale residential uses and Newlands Park.

Envelope Configurations

The *St Leonards South Urban Design Guidelines* govern the envelope configuration of each building. The proposal is largely consistent with the nominated envelope configurations. In particular, it strictly adheres to the envelopes prescribed for Areas 7, 8 and 10.

Variations are proposed to the envelopes associated with Area 9 and Area 11. The proposed variations are a consequence of extensive iterative design testing. Through this testing it was determined that an improved outcome with respect to solar access, overshadowing to Newlands Park, visual impacts and perceived scale are attainable through the adoption of minor variations to the required envelope massing.

Alternative Massing Strategy

The *St Leonards South Urban Design Guidelines* govern require that the envelope for Building 9 align with the street frontage and provide a straight building alignment. Building 11 is required to adopt an orthogonal floor plate in response to the site's irregular configuration with the envelope also configured in a straight alignment.

The proposal provides an alternative solution characterised by a staggered built form. The staggered built form is achieved through the introduction of a terrace typology at the base which provides a two storey street wall. Residential levels are proposed above and are setback from the terraces and Canberra Avenue, with an additional increased setback provided at the upper levels. In consequence, both buildings provide a staggered built form when viewed both in plan and in section.

The alternative envelope configuration provides a range of benefits, including enhanced articulation, reduced overshadowing to Newlands Park and improved access to solar and views. The alternative approach is also effective in reducing the perceived massing and scale of the development.

A comparison between the compliant and proposed massing is provided in the figures below.

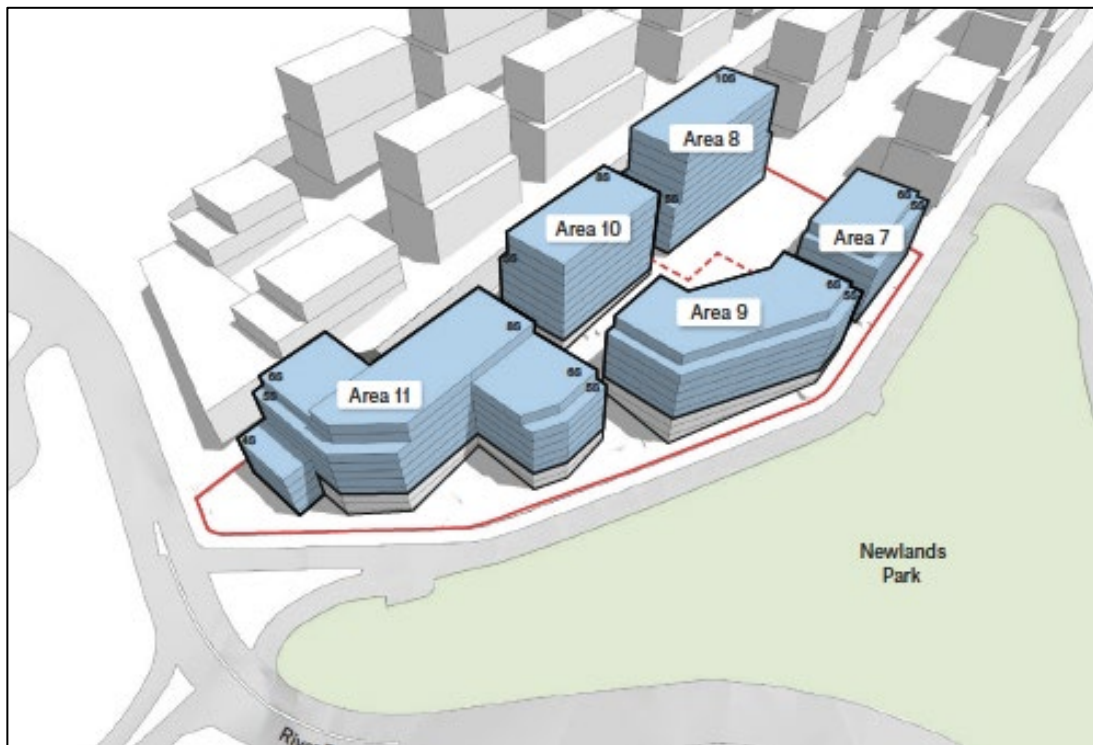


Figure 21 – DCP Urban Design Guidelines Required Massing for Area 9 and Area 11

Source: Bates Smart



Figure 22 – Proposed Massing Strategy for Area 9 and Area 11

Source: Bates Smart

Part C, Section 7 – Built Form identifies that for buildings fronting Canberra Avenue, a 4m street level setback and a 3m upper level setback at and above level 6 applies. The *St Leonards South Urban Design Guidelines* contained in the LDCP 2009 uses the word 'level' as opposed to 'storey'. For this reason, the upper level setback needs to apply from the bottom storey irrespective of whether it is partially underground.

The intent of the above control is expressed in the following two objectives nominated under Section 7 – Built Form:

- *Step the heights from tallest adjacent to the Railway Station, reducing with distance to the south and west (River Road and Park Road); and*
- *Provide transitional built form at edges of the precinct.*

While these objectives apply broadly to the built form controls across the precinct, with specific regard to the upper level setback control to Canberra Avenue, the intent is to break down the scale of the full height expressed to Canberra Avenue into distinct upper and lower components, to create a transition down to the significantly lower scale development on storeys expressed to Canberra Avenue, and the levels above, for the purpose of minimising the perceived scale of the street wall.

In light of this, the proposal adopts an alternative massing approach to the built form located along Canberra Avenue South which relates to Building 11 and Building 9 (refer to **Figures 23 – 24**). A two storey street wall is provided by the townhouses houses proposed at this interface which are defined by a sandstone plinth. A five storey building element is positioned above and setback from the townhouses by a 6.5m setback to the Canberra Avenue frontage. The upper level adopts a greater setback to provide a setback of 8.8m to the streetscape (refer to **Figure 24**).

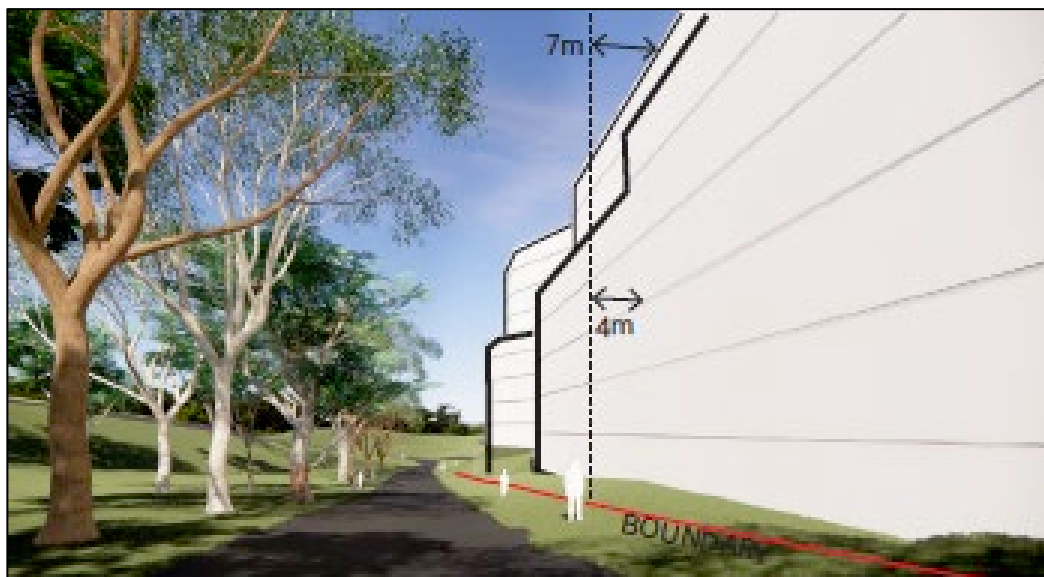


Figure 23 – LDCP 2009 Compliant Street Wall Approach to Canberra Avenue
Source: Bates Smart

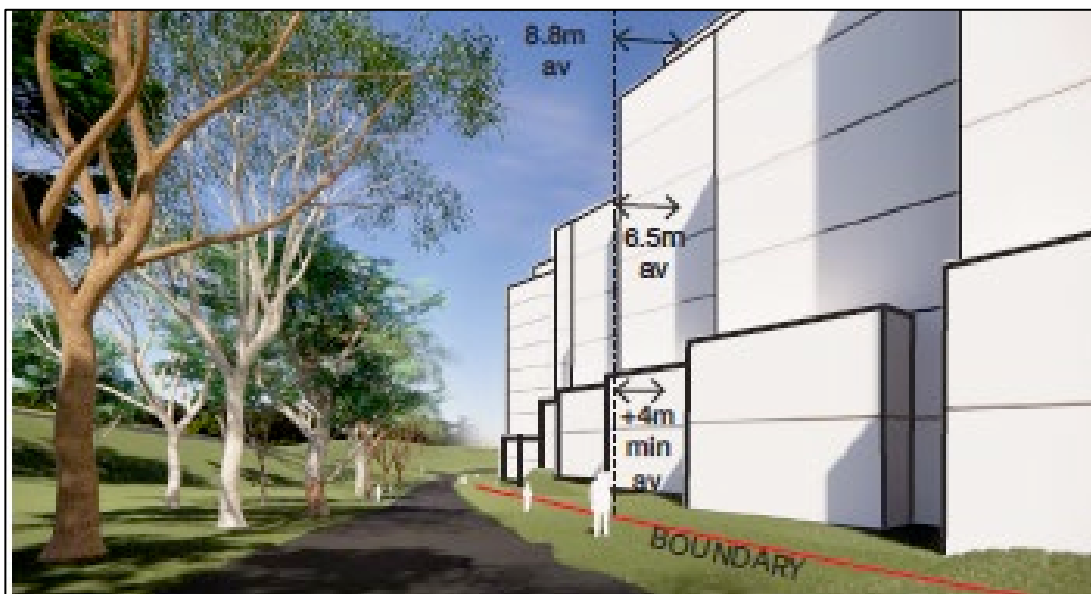


Figure 24 – Proposed Street Wall Approach to Canberra Avenue

Source: Bates Smart

5.2 Materiality and Architectural Expression

The setting of the site is characterised by mid to high density development to the west associated with the Leonards South Precinct and low scale residential to the east and south.

The proposed architectural expression has sought to respond with a duality / juxtaposition by providing suitably scaled podium elements and residential levels with appropriate upper level setbacks above. Specifically, the podiums typically include a natural sandstone materiality and the upper levels adopt a light weight contemporary materiality.

Each building reflects a distinct visual identity; however, the use of similar materials and colour palettes contributes to the achievement of a consistent visual language across the site.

Canberra Avenue (Building 9 and Building 11)

Fronting Canberra Avenue, the scheme proposes a two storey townhouse typology. The townhouses align with the street edge and are expressed as distinct elements at the ground plane due to the setting back of the residential apartment buildings above.

The terrace houses incorporate a sandstone materiality which create the impression of a distinct sandstone plinth which contribute to a human scale at the ground plane. Each is set amongst heavy planting at the ground plane. Cascade planting is also provided along the parapets of each terrace to create the impression of being buried into the hillside and inset with the topography.

In accordance with the *St Leonard's South Precinct's Urban Design Guidelines*, the apartment buildings provide a high degree of articulation achieved through the inclusion of elongated balconies which exhibit a strong horizontal expression. The

upper levels are setback and expressed using dark metal cladding which further assists in minimising each building's bulk.

The massing of Building 11 where it interfaces with River Road is articulated by a series of modulated forms, including a part four and two storey street wall with a sandstone materiality. The upper level and roof plant are setback from the building's parapet and have minimal visibility.

The massing strategy for Building 9 and Building 11 is illustrated in the figures below.



Figure 25 – Proposed Architectural Expression for Buildings 9 and 11

Source: Bates Smart



Figure 26 – Proposed Architectural Expression for Buildings 9 and 11

Source: Bates Smart

Holdsworth Avenue (Building 8 and Building 10)

Building 8 and Building 10 orientate towards Holdsworth Avenue and the Green Spine. The two buildings are demarcated by a full height façade break and provide a five storey street wall (refer to **Figure 30**).

The buildings reflect two distinct components including a clearly defined podium and upper tower element. The podium has a five storey street wall and a strong vertical expression. Conversely the upper façade reflects a strong horizontal expression. The materiality incorporates light grey rendered masonry edges, glazing and charcoal aluminum framing.



Figure 27 – Proposed Architectural Expression for Buildings 8

Source: Bates Smart

Canberra Avenue (Building 7)

Building 7 fronts Canberra Avenue and the Green Spine. It reaches eight storeys and incorporates a five storey street wall. It consists of three distinct elements comprising a sandstone base at the first floor; a middle component with a strong horizontal articulation; and an upper component that features a darker materiality and vertical expression.

The sandstone base is sympathetic to the sandstone terraces associated with Building 8 and Building 10 located further southward along Canberra Avenue (refer to **Figure 31**). The translucent glazing at the upper levels combined with the dark grey rendered masonry materiality assist in minimising the appearance of the upper levels.



Figure 28 – Proposed Sandstone Plinth at the Base of Building 11

Source: Bates Smart

5.3 Building Height

The LLEP 2009 establishes the maximum building heights for the site. Reduced heights are required for the edges of the precinct to “provide a transitional built form at the edges of the precinct”.

To achieve this objective, due consideration has been given to ensuring the proposal complies with the applicable maximum height limits.

The figure below illustrates the LEP height limits that apply to each area.

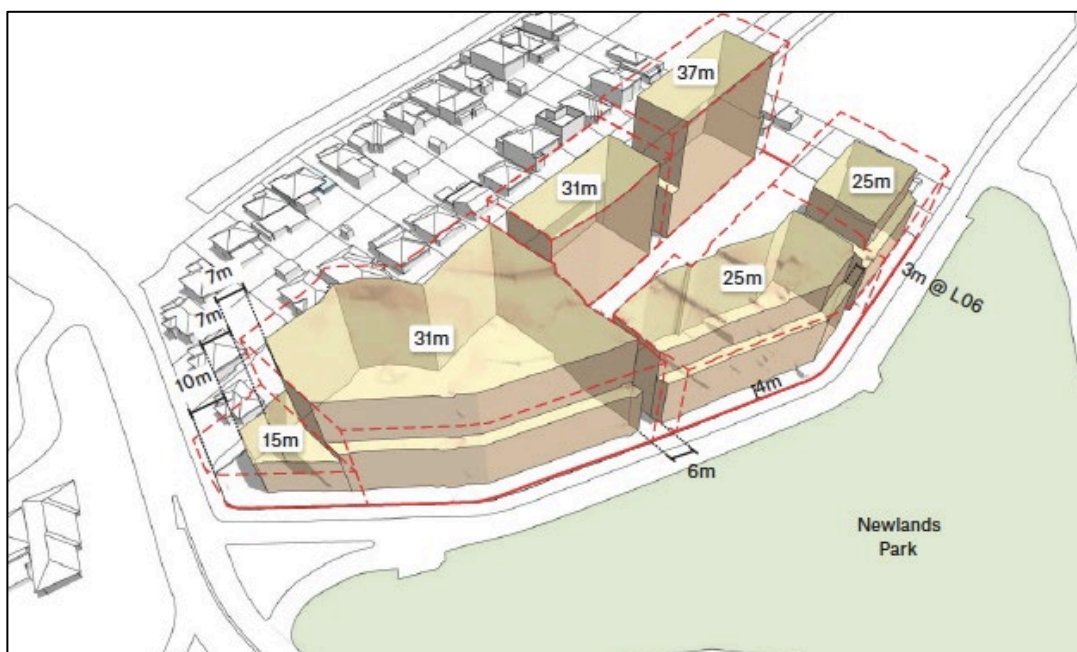


Figure 29 – Applicable LEP Height Limits

Source: Bates Smart

Each building envelope is located wholly within the height limit. The proposal's compliance with the applicable height controls is detailed in **Table 10**.

Area	Max LEP Height	Proposed	Max Storey Height*	Proposed	Complies
7	25m	24.9m	6	6	✓
8	37m	36.4m	10	10	✓
9	25m	25m	6	6	✓
10	31m	30.9m	8	8	✓
11	31m	30.96m	4, 6 and 8	Part 1 / 7	✓

*Note: LDCP 2009 stipulates that park storeys resulting from excavation of steep slopes or semi basement parking will not count as a storey.

The *St Leonards South Precinct's Urban Design Guidelines* contained within the LDCP 2009 establish maximum storey heights for each building envelope. The maximum storey height corresponds with the maximum LEP height.

The proposal is entirely consistent with the maximum storey height control (refer to **Table 10**). It is noted that the LDCP 2009 requires that:

Part storeys resulting from excavation of steep slopes or semi basement parking will not count as a storey'.

The bottom two storeys relating to the terraces do not satisfy the above definition because:

- The storeys present as being partial storeys when interpreted in section view. When viewed from Canberra Avenue, they are full height storeys.
- The storeys in question relate to residential uses as opposed to semi basement parking. The basement structures are setback behind and are not visible from the streetscape and thus do not present as being part storeys.

The figure below illustrates the storeys that are to be excluded from the storey height calculation (refer to **Figure 26**).

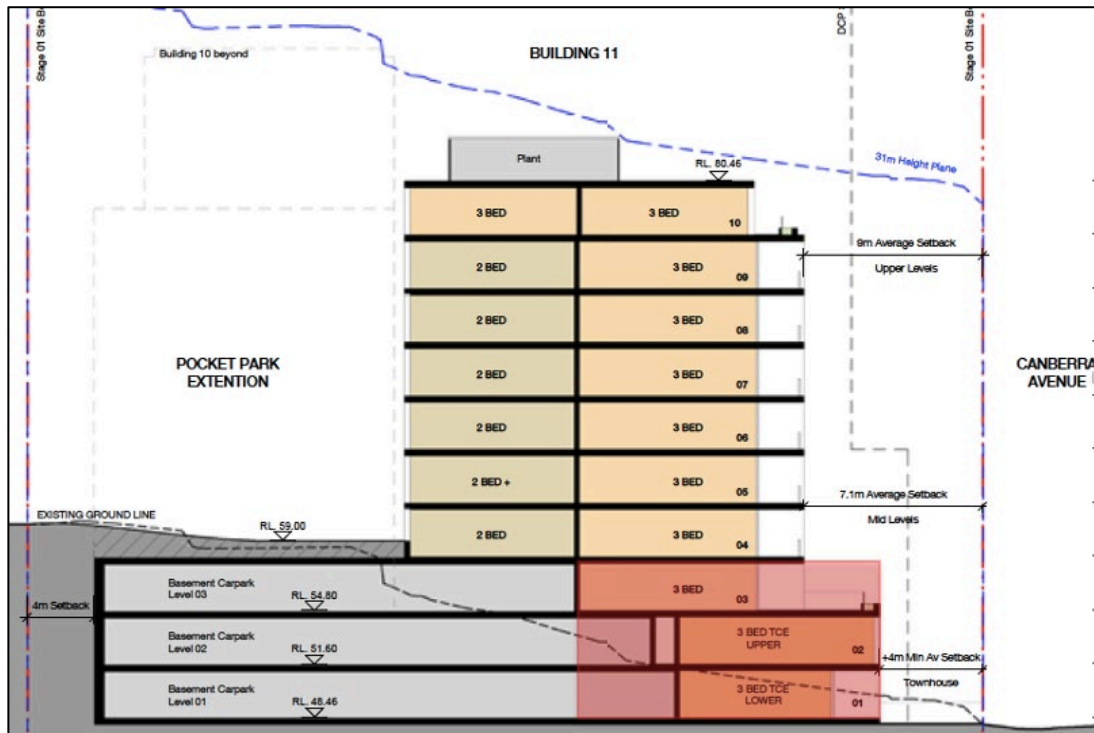


Figure 30 – Storey Height Calculation for Building 11 with Part Storeys Shown in Red

Source: Bates Smart

5.4 Floor Space Ratio

The site is subject to the incentive FSR provisions nominated under Clause 7.1 (3) of the LLEP 2009. The clause applies a maximum FSR of 2.60:1.

The proposal has a GFA of 32,898m². Based on a site area of 12,653m², this equates to a compliant FSR of 2.60:1.

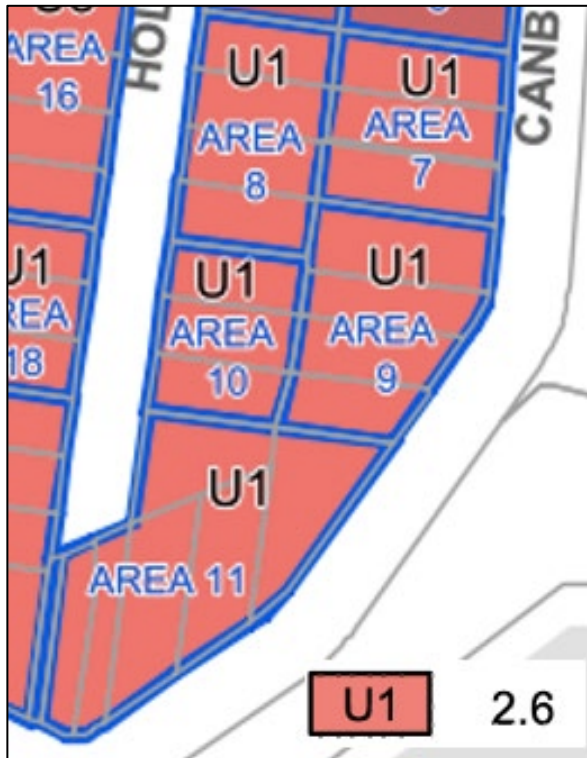


Figure 31 – Maximum FSR Development Standard

Source: LLEP 2009

5.5 Landscaping

Arcadia have prepared the landscape scheme for the site which is included at **Appendix 5**. The proposed design has been prepared in accordance with Council's LMP for the St Leonards South Precinct. The LMP nominates a range of design principles and an overall landscape master plan.

The proposal is entirely consistent with the master plan and overarching design principles set out in the LMP. Specifically:

- A 6m wide publicly accessible through site link is proposed to the north of Building 11 to connect Holdsworth Avenue to Newlands Park and consists of paving that is lined with trees and accent planting;
- The proposal incorporates a multi-functional Green Spine in accordance with the LMP which is proposed to be embellished with a range of facilities including decking, open lawn, a pool and seating areas;
- The landscape design is in keeping with the existing native and informal character of the area and includes features such as fern tree planting, creek beds and the like which are sympathetic to the area;
- The proposal seeks to enhance the future Holdsworth Avenue Pocket Park by locating communal outdoor space adjacent and providing a larger landscaped zone.
- The proposal largely complies with the setback requirements set out by the *St Leonards South Urban Design Guidelines* and uses the space within these

setbacks to accommodate deep soil planting and landscaping to promote privacy; and

- A range of pedestrian connections are included throughout the Green Spine to improve accessibility across the Precinct.

Figure 32 illustrates the proposed master plan included within Council's LMP. The proposed open space strategy is illustrated in **Figure 33**.



Figure 32 – LDCP 2012's St Leonards South Master Plan

Source: LDCP 2009



Figure 33 – Proposed Open Space Strategy

Source: Bates Smart

5.6 Setbacks

The proposed development is largely compliant with the setbacks prescribed by the *Urban Design Guidelines for the St Leonards South Precinct*. The setback requirements are detailed in the table below.

Table 12 - Compliance with LDCP 2009 Setback Requirements		
Location	Setback Requirement	Compliance
West (Holdsworth Avenue)	4m at street level +3m at and above Level 6	✓
East (Canberra Avenue)	4m at street level +3m at and above Level 6	Alternative Solution (See Section 5.2)
North	10m at street level +7m at and above Level 4 +7m at and above Level 6	✓
South (River Road)	6m at park level +3m at and above Level 5	✓

The proposal provides a minor variation to the required setbacks to Canberra Avenue in the location of Building 9 and Building 11. The variation is due to the alternative envelope configuration consisting of a more finely stepped built form.

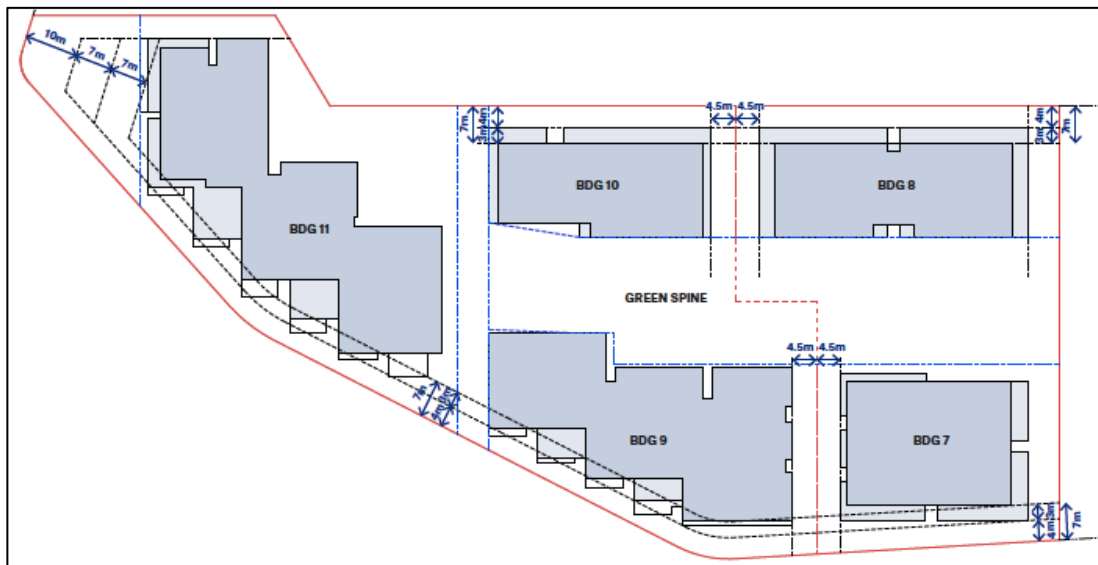


Figure 34 – Proposed Setback Arrangement

Source: Bates Smart

A minimum 4m setback to the centre line of the townhouses is provided at street level to Holdsworth Avenue. In limited locations along the Canberra Avenue frontage, the envelopes encroach into the required front setback. The mid level setback generally increases to average 6.5m above the townhouses and 8.8m at the upper levels. However, as shown in **Figures 34 - 35**, the encroachments are minor and offset by increased setbacks resulting from the staggering of the envelope which exceed the minimum 7m requirement. When averaged, the envelope complies with the minimum 7m setback requirement (refer to **Figure 33**).

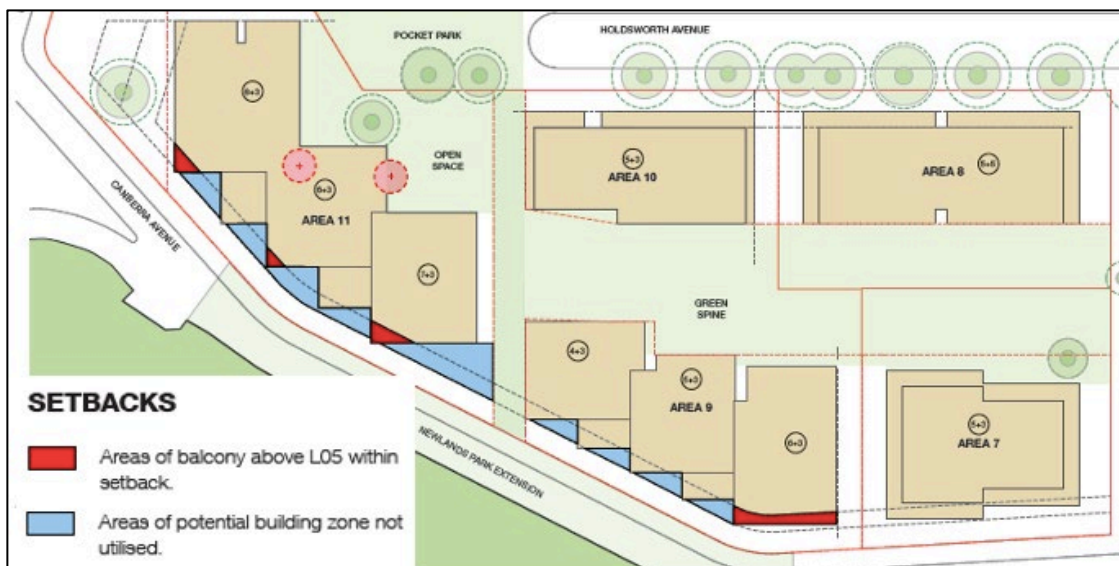


Figure 35 – Proposed Setback Arrangement When Averaged

Source: Bates Smart

5.7 Building Length

Clause 6.2.5 of the *St Leonards South Urban Design Guidelines* specify that buildings are to be limited to 35m in length. The provision is predicated on the need to optimise solar access to buildings and open space and to minimise visual impacts.

Notwithstanding, the guidelines specify that buildings may be greater than 35m where they are strongly articulated. The proposed building lengths exceed the minimum requirement.

The following building lengths are proposed:

- Building 8 – 24m + 24m
- Building 9 – 21m + 4 x 9m
- Building 10 – 11m + 28m
- Building 11 – Variable and no greater than 19.5m

Typically building breaks with a 3m depth are introduced to create reduced façade lengths. A staggered massing, both in plan and section view, has been introduced to the buildings that occupy the site's south eastern aspect which result in a highly articulated form that breaks down the visual bulk of the development. While the upper level of Building 10 is proposed to have a length of 38m (refer to Figure 34), this only marginally exceed the 35m control.

Whilst the proposal varies the building lengths it is important to acknowledge that the envelopes are sited in accordance with the *St Leonard South Urban Design Guidelines* and comply with the minimum setback requirements and building separation requirements set out in the ADG.

The proposed maximum buildings lengths are listed below and illustrated in **Figures 36 - 37**.

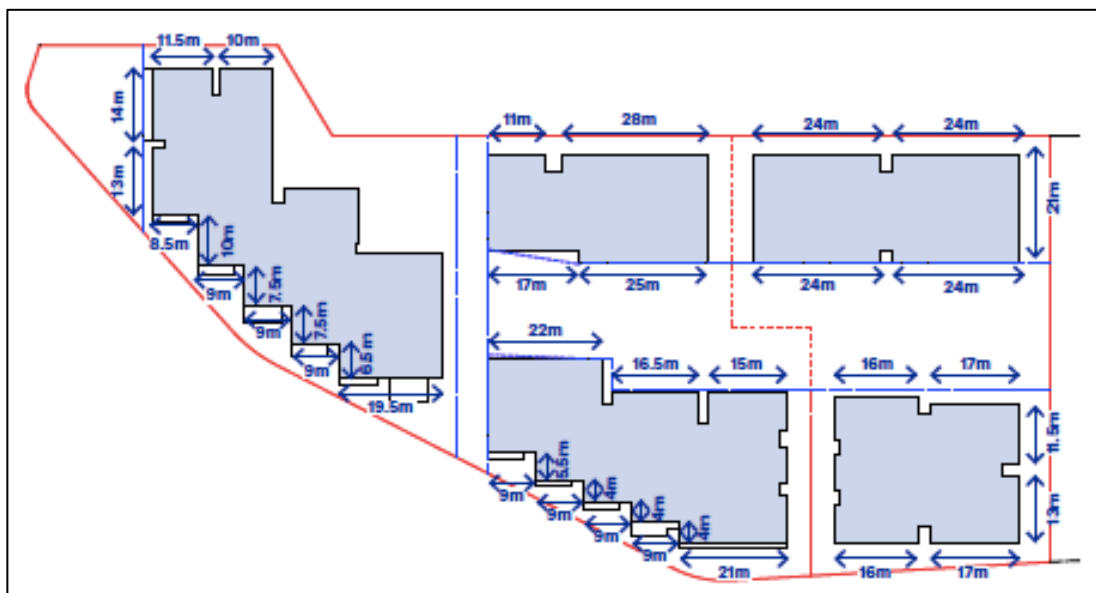


Figure 36 – Proposed Building Lengths (Typical Plan)

Source: Bates Smart

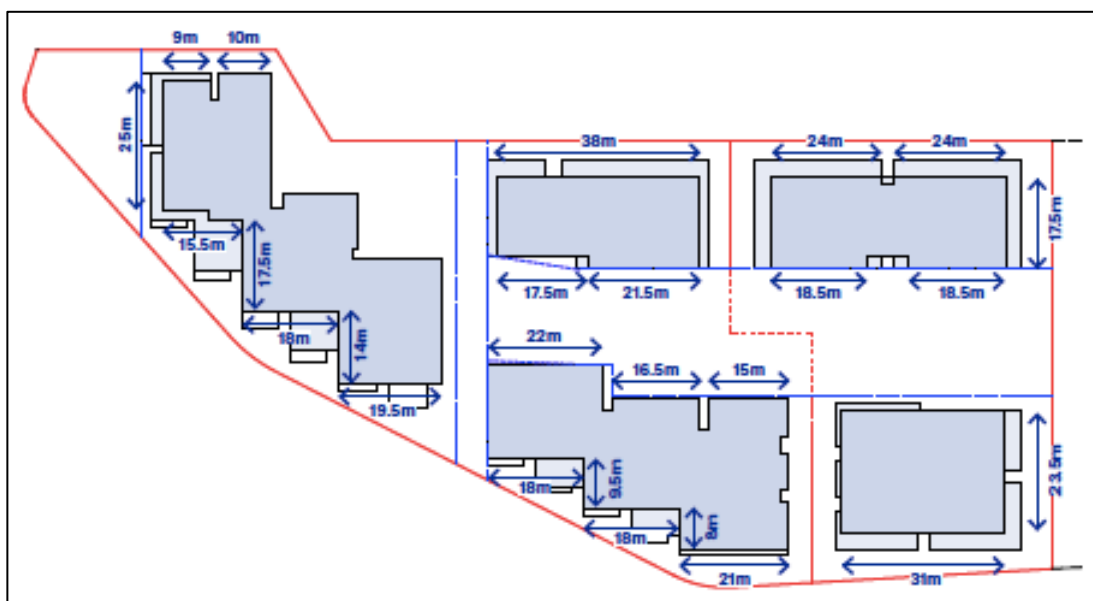


Figure 37 – Proposed Building Lengths (Upper Levels)

Source: Bates Smarts

5.8 Residential Amenity

The proposal is generally consistent with the objectives and design criteria nominated by SEPP 65 and the associated ADG. **Table 12** provides an assessment of the proposal against the relevant objectives, Design Criteria and where necessary the additional Design Guidance.

Where alternative solutions to the Design Criteria are addressed in further detail table. A detailed assessment has also been prepared by Bates Smart and is included at **Appendix 4**.

Table 13 - ADG Compliance Assessment - Objectives and Design Criteria	
Part 3 Sitting of the Development	Compliance
3D Communal and Public Open Space	
Objective An adequate area of communal open space is provided to enhance residential amenity and to provide opportunities for landscaping.	✓
Design Criteria Communal Open Space has a minimum area equal to 25% of the site.	✓ (33% of the site)
Developments achieve a minimum 50% direct sunlight to the principal useable part of the communal open space for a minimum of 2 hours between 9am and 3pm on 21 June (mid-winter)	✓
3E Deep Soil Zones	
Objective	✓

Table 13 - ADG Compliance Assessment - Objectives and Design Criteria

Deep soil zones provide areas on the site that allow for and support healthy plant and tree growth. They improve residential amenity and promote management of water and air quality.													
<i>Design Criteria</i> Deep soil zones are to meet the following minimum requirements: Where sites are greater than 1,500sqm, the minimum deep soil requirement is 15% of the site.	✓ 15% of the site comprises deep soil with a depth greater than 6m. This amount increases to 25% when accounting for the front setbacks which provide a depth of 4m												
3F Visual Privacy													
<i>Objective</i> Adequate building separation distances are shared equitably between neighbouring sites, to achieve reasonable levels of external and internal visual privacy.	✓ (Refer to Section 4.6.5 of Appendix 4)												
<i>Design Criteria</i> Separation between windows and balconies is provided to ensure visual privacy is achieved. Minimum required separation distances from buildings to the side and rear boundaries are as follows: <table><tr><th>Building Height</th><th>Habitable Rooms and Balconies</th><th>Non-habitable rooms</th></tr><tr><td>Up to 12m (4 storeys)</td><td>6m</td><td>3m</td></tr><tr><td>Up to 25m (5-8 storeys)</td><td>9m</td><td>4.5m</td></tr><tr><td>Over 25m (9+ storeys)</td><td>12m</td><td>6m</td></tr></table>	Building Height	Habitable Rooms and Balconies	Non-habitable rooms	Up to 12m (4 storeys)	6m	3m	Up to 25m (5-8 storeys)	9m	4.5m	Over 25m (9+ storeys)	12m	6m	
Building Height	Habitable Rooms and Balconies	Non-habitable rooms											
Up to 12m (4 storeys)	6m	3m											
Up to 25m (5-8 storeys)	9m	4.5m											
Over 25m (9+ storeys)	12m	6m											
3J Bicycle and Car Parking													
<i>Objective</i> Car Parking is provided based on proximity to public transport in metropolitan Sydney and centres in regional areas.	✓												
<i>Design Criteria</i> For development in the following locations: - On sites that are within 800m of a railway station or light rail stop in the Sydney Metropolitan Area; or - On land zoned, and sites within 400m of land zoned, B3 Commercial Core, B4 Mixed Use or equivalent in a nominated regional centre.	The proposal's parking has been assessed against the rates prescribed by the LDCP 2009. Refer to Section 5.9.												

Table 13 - ADG Compliance Assessment - Objectives and Design Criteria

The minimum car parking requirement for residents and visitors is set out in the Guide to Traffic Generating Developments, or the car parking requirement prescribed by the relevant council, whichever is less. The car parking needs for a development must be provided off street.									
Part 4 – Designing the Buildings									
4A Solar and Daylight Access									
<i>Objective</i> To optimise the number of apartments receiving sunlight to habitable rooms, primary windows and private open space.	✓								
<i>Design Criteria</i> Living rooms and private open spaces of at least 70% of apartments in a building receive a minimum of 2 hours direct sunlight between 9am and 3pm at mid-winter in the Sydney Metropolitan Area.	✓ 70.2% of units receive the required solar								
A maximum of 15% of apartments in a building receive no direct sunlight between 9am and 3pm at mid-winter.	✓ 8.2% of units receive no direct sunlight.								
B4 Natural Ventilation									
<i>Objective</i> The number of apartments with natural cross ventilation is maximised to create a comfortable indoor environment for residents.	✓								
<i>Design Criteria</i> At least 60% of apartments are naturally cross ventilated in the first nine storeys of the building. Apartments at 10 storeys or greater are deemed to be cross ventilated only if any enclosure of the balconies at these levels allows adequate natural ventilation and cannot be fully enclosed.	✓ 66.6% of units are naturally cross ventilated								
Overall depth of a cross-over or cross-through apartment does not exceed 18m, measured glass line to glass line.	✓								
C4 Ceiling Height									
<i>Objective</i> Ceiling height achieves sufficient natural ventilation and daylight access.	✓								
<i>Design Criteria</i> Measured from finished floor level to finished ceiling level, minimum ceiling heights are: <table border="1"> <thead> <tr> <th colspan="2">Minimum Ceiling Height</th></tr> </thead> <tbody> <tr> <td>Habitable Rooms</td><td>2.7m</td></tr> <tr> <td>Non-habitable</td><td>2.4m</td></tr> <tr> <td>For 2 storey apartments</td><td> 2.7m for main living area floor 2.4m for second floor, where its area does not exceed 50% of the apartment area. </td></tr> </tbody> </table>	Minimum Ceiling Height		Habitable Rooms	2.7m	Non-habitable	2.4m	For 2 storey apartments	2.7m for main living area floor 2.4m for second floor, where its area does not exceed 50% of the apartment area.	✓ The minimum floor to floor heights are 3.2m for each residential level (i.e. > 2.7 floor to ceiling)
Minimum Ceiling Height									
Habitable Rooms	2.7m								
Non-habitable	2.4m								
For 2 storey apartments	2.7m for main living area floor 2.4m for second floor, where its area does not exceed 50% of the apartment area.								

Table 13 - ADG Compliance Assessment - Objectives and Design Criteria

Attic Spaces	1.8m at edge of rooms with a 30 degree minimum ceiling slope.											
Mixed use areas	3.3m for ground and first floor to promote future flexibility of use.											
These minimums do not preclude higher ceilings if desired.												
4D Apartment Size and Layout												
Objective The layout of rooms within an apartment is functional, well organised and provides a high standard of density.		✓										
Design Criteria Apartments are required to have the following minimum internal areas:		✓										
<table><tr><th>Apartment Type</th><th>Minimum Area</th></tr><tr><td>Studio</td><td>35m²</td></tr><tr><td>1 Bedroom</td><td>50m²</td></tr><tr><td>2 Bedroom</td><td>70m²</td></tr><tr><td>3 Bedroom</td><td>90m²</td></tr></table>			Apartment Type	Minimum Area	Studio	35m ²	1 Bedroom	50m ²	2 Bedroom	70m ²	3 Bedroom	90m ²
Apartment Type	Minimum Area											
Studio	35m ²											
1 Bedroom	50m ²											
2 Bedroom	70m ²											
3 Bedroom	90m ²											
The minimum internal areas include only one bathroom. Additional bathrooms increase the minimum internal area by 5sqm each.												
A fourth bedroom and further additional bedrooms increase the minimum internal areas by 12sqm each.												
Every habitable room must have an external wall with a total minimum glass area of not less than 10% of the floor area of the room. Daylight and air may not be borrowed from other rooms.		✓										
Objective Environmental performance of the apartment is maximised.		✓										
Design Criteria Habitable rooms depths are limited to a maximum of 2.5 x the ceiling height.		✓										
In open plan layouts (where the living, dining and kitchen are combined) the maximum habitable room depth is 8m from a window.		✓										
Objective Apartment layouts are designed to accommodate a variety of household activities and needs.		✓										
Design Criteria Master bedrooms have a minimum area of 10sqm and other bedrooms 9sqm (excluding wardrobe space).		Generally Compliant (Only one unit provides a variation. The variation relates to Unit B506 where one of its bedrooms is 8m ²										

Table 13 - ADG Compliance Assessment - Objectives and Design Criteria

	excluding the wardrobe)															
Bedrooms have a minimum dimension of 3m (excluding wardrobe space).	Generally Compliant (Only one unit provides a variation. The variation relates to Unit B506 where one bedroom is 2.5m x 3.2m excluding wardrobes)															
Living rooms or combined living/dining rooms have a minimum width of: - 3.6m for studio and 1 bedroom apartments - 4m for 2 and 3 bedroom apartments.	✓															
The width of cross-over or cross-through apartments are at least 4m internally to avoid deep narrow apartment layouts.	✓															
4E Private Open Space and Balconies																
Objectives Apartments provide appropriately sized private open space and balconies to enhance residential amenity.	✓															
Design Criteria All apartments are required to have primary balconies as follows: <table><tr><th>Dwelling Type</th><th>Minimum Area</th><th>Min Depth</th></tr><tr><td>Studio Apartment</td><td>4m²</td><td>-</td></tr><tr><td>1 Bedroom Apartment</td><td>8m²</td><td>2m²</td></tr><tr><td>2 bedroom Apartment</td><td>10 m²</td><td>2m²</td></tr><tr><td>3 Bedroom Apartment</td><td>12m²</td><td>2.4m²</td></tr></table>	Dwelling Type	Minimum Area	Min Depth	Studio Apartment	4m ²	-	1 Bedroom Apartment	8m ²	2m ²	2 bedroom Apartment	10 m ²	2m ²	3 Bedroom Apartment	12m ²	2.4m ²	✓
Dwelling Type	Minimum Area	Min Depth														
Studio Apartment	4m ²	-														
1 Bedroom Apartment	8m ²	2m ²														
2 bedroom Apartment	10 m ²	2m ²														
3 Bedroom Apartment	12m ²	2.4m ²														
The minimum balcony dept to be counted as contributing to the balcony area is 1m.																
For apartments at ground level or on a podium or similar structure, a private open space is provided instead of a balcony. It must have a minimum area of 15sqm and a minimum depth of 3m.	✓															
4F Common Circulation Spaces																
Objective Common circulation spaces achieve good amenity and property service the number of apartments.	✓															
Design Criteria The maximum number of apartments off a circulation core on a single level is eight.	Generally Compliant (Building 8 accommodates															

Table 13 - ADG Compliance Assessment - Objectives and Design Criteria

	10 units of a single core). Refer to Section 5.8.1 .										
For buildings of 10 storeys and over, the maximum number of apartments sharing a single lift is 40.	Generally Compliant (Building 10 and 8 vary the minimum requirement). Refer to Section 5.8.1 .										
4G Storage											
<i>Objective</i> Adequate, well designed storage is provided in each apartment.	✓										
<i>Design Criteria</i> In addition to storage in kitchens, bathrooms and bedrooms, the following storage is provided:											
<table><tr><th>Dwelling Type</th><th>Minimum Area</th></tr><tr><td>Studio Apartment</td><td>4m²</td></tr><tr><td>1 Bedroom Apartment</td><td>6m²</td></tr><tr><td>2 Bedroom Apartment</td><td>8m²</td></tr><tr><td>3 + Bedroom Apartment</td><td>10m²</td></tr></table>		Dwelling Type	Minimum Area	Studio Apartment	4m ²	1 Bedroom Apartment	6m ²	2 Bedroom Apartment	8m ²	3 + Bedroom Apartment	10m ²
Dwelling Type		Minimum Area									
Studio Apartment		4m ²									
1 Bedroom Apartment	6m ²										
2 Bedroom Apartment	8m ²										
3 + Bedroom Apartment	10m ²										
At least 50% of the required storage is to be located within the apartment.											

5.8.1 Common Circulation

Objective 4F-1 of the ADG requires that residential flat buildings provided common circulation spaces that achieve good amenity and properly service the number of apartments. To achieve this objective, it establishes the following design criteria:

- Common circulation spaces achieve good amenity and properly service the number of apartments.
- For buildings of 10 storeys and over, the maximum number of apartments sharing a single lift is 40.

The associated Design Guidance identifies that where the design criteria cannot be achieved additional apartments off a circulation core may be permitted where:

- No more than 12 apartments should be provided off a circulation core on a single level;
- A high level of amenity for common lobbies, corridors and apartments should be demonstrated; and

- *Windows are provided in common circulation spaces and are adjacent to the stair or lift core at the ends of the corridor.*

Building 8

Levels 3 – 6 of Building 8 provide 10 units off a circulation corridor which represents a minor non-compliance with the numerical requirements of the ADG.

Notwithstanding, the proposal is entirely consistent with the design guidance. The maximum number of units off a circulation core does not exceed 10 and is therefore well below the 12 unit threshold.

The circulation corridor will be provided with a high level of amenity. It adopts an 'T' shaped configuration and the width of the corridor widens in the location of the lift core. A window is provided along the eastern elevation of this corridor adjacent to the lift core and will permit sunlight into the circulation space.

Building 11

Building 11 contravenes the requirement for a maximum of 40 units to be accommodated off a single lift core in a building over 10 storeys. The southern core of Building 11 has 2 lifts which service 48 apartments and 3 townhouses.

The design of the circulation corridor is consistent with the design guidance. As shown at **Appendix 4**, the common circulation core associated with Building 11 is provided with windows which will permit sunlight to access the corridor and will provide opportunities for views. Consequently, it will achieve good amenity.

5.8.2 Cross Ventilation

Bates Smart have identified the proportion of units across the development that will receive natural cross ventilation (refer to Section 4.4.2 of **Appendix 4**). The calculations have been prepared in accordance with the requirements set out under 4B – 3 *Natural Ventilation* of the ADG.

The ADG nominates the following objective:

The number of apartments with natural cross ventilation is maximized to create a comfortable indoor environment for residents.

To achieve this objective, at least 60% of apartments are to be naturally cross ventilated in the first nine (9) storeys of the building. Cumulatively, 66.6% of units across all buildings are naturally cross ventilated.

When calculated individually the majority of buildings comply with the minimum requirement. The calculations per building are detailed in the table below. As shown Buildings 7, 9 and 11 greatly exceed the minimum 60% requirement. Across Building 8 and Building 10, a total of 58% and 57% units are naturally cross ventilated, respectively. This represents a minor non-compliance with the minimum 60% requirement.

Table 14 - Cross Ventilation Per Building		
Location	Units Naturally Cross Ventilated	Cross Ventilation Percentage
Building 7	28 / 45	62%
Building 8	42 / 72	58%
Building 9	50 / 66	76%
Building 10	26 / 46	57%
Building 11	73 / 100	73%
Total	219 / 329	66.6%

The ADG permits variations to the minimum requirement where the proposal is able to achieve consistency with the associated design criteria. Noting that the proposal does not include cross-through and cross-over apartments, the design guidance of relevance to the proposal is as follows:

- *Buildings include dual aspect apartments, cross through apartments and corner apartments and limit apartments depths;*
- *Apartments are designed to minimise the number of corners, doors and rooms that might obstruct airflow; and*
- *Apartment depths, combined with appropriate ceiling heights, maximise cross ventilation and airflow.*

The proposal is entirely consistent with the design guidance. Dual aspect units are accommodated on each corner of the building to maximise the number of units that are naturally cross ventilated. The units also comply with the minimum depth requirements set out under *Section 4D-3 – Apartment Layouts* and the minimum ceiling height requirements established by *Section 4C – Ceiling Heights* of the ADG which will assist in maximising airflow.

In addition to the above, Building 8 and Building 10 receive ample access to solar, with 90% and 93% of units receiving a compliant amount of solar access during the Winter Solstice (refer to Section 4.4.1 of **Appendix 4**).

5.8.3 Solar Access

Objective 4A-1 of the ADG establishes that residential developments should optimise the number of apartments receiving sunlight to habitable rooms, primary windows and private open space.

In support of this objective, the associated Design Criteria requires that at least 70% of living rooms and private open spaces receive a minimum of 2 hours direct sunlight between 9am and 3pm at mid-winter.

A total of 8.2% of all dwellings do not receive sunlight during the Winter Solstice which is less than the maximum 15% nominated by the design criteria.

The Design Guidance recognises that strict compliance with the numerical requirement may not be achievable in some instances due to site specific constraints and site orientation. In light of this, the site is considered to be constrained due to its steeply sloping south eastern orientation, which affects Buildings 11, 9 and 7.

Table 15 - Solar Access For Compliant and Proposed Scheme			
Location	DCP Compliant Scheme (%)	Proposed Scheme (No. Units)	Proposed Scheme (%)
Building 7	69%	45	100%
Building 8	76%	65	90%
Building 9	30%	31	47%
Building 10	52%	43	93%
Building 11	25%	47	47%
Total	49%	231	70.2%

The lower three levels of Building 9 and Building 11 benefit only from a southern orientation. In consequence, the dwellings in this location are unable to receive solar access.

Through extensive design testing the proposal has sought to maximise the proportion of units that comply with the solar access requirements. This design testing has resulted in the adoption of a staggered building footprint which maximises the amount of solar received to the southern façade of each building.

Relative to a complying scheme design in accordance with the *St Leonards South Urban Design Guidelines*. A comparison between the envelopes is provided in the figures below.

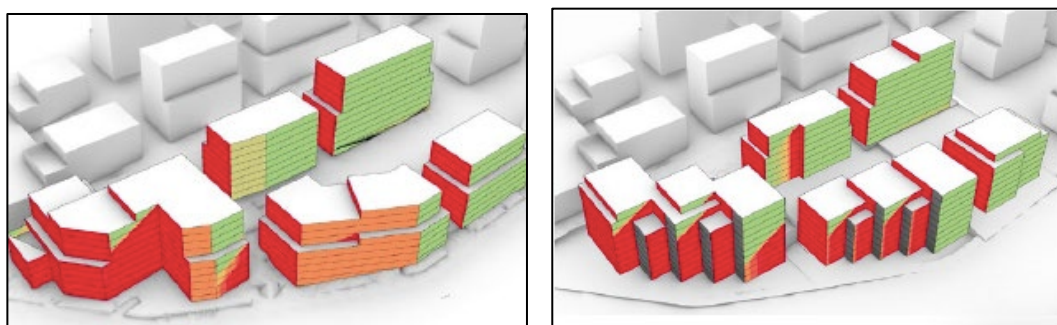


Figure 38 – Solar to DCP Compliant Scheme (Right) and Proposed Scheme (Left)

Source: Bates Smart

In addition to the above, the internal floor planning has been strategically designed to maximise solar access. Specifically:

- Primary living areas are positioned along the building's far southern and eastern aspects to optimise access to sunlight;
- Units are provided with large full height windows;
- The proposal's unique staggered footprint increases the number of dual aspect apartments; and
- Two storey apartments are provided, particularly at the lower levels where solar access is more limited.

For the reasons listed above, it is considered that the proposal has been strategically designed to respond to the site's constraints and increase the quantity of units that receive access to solar to the greatest extent possible. The proposal is therefore considered to accord with the intent of *Objective 4A-1*. In light of this, cumulatively 70.2% of dwellings across the development receive the minimum required solar access. Accordingly, the development as a whole complies with the ADG solar access provisions.

5.8.4 Overshadowing

An Overshadowing Analysis has been prepared by Bates Smart and is included within the Architectural Plans at **Appendix 4**. The analysis demonstrates that the proposal will have minimal overshadowing impacts during the Winter Solstice (21st June) and are reasonable in the context of the maximum density permitted for the site.

As identified in **Section 5.8.4**, the development proposes an alternative massing strategy for Building 11 and Building 9 which consists of a staggered built form. The alternative massing strategy will have a positive impact on the shadow cast from the proposed development.

As shown in the figures below, the proposal will overshadow Newlands Park between 12pm and 3pm. Due to the alternative massing, the shadow cast by the proposal is less than the shadow associated with a scheme that complied with the setback and envelope requirements nominated by the *St Leonards South Urban Design Guidelines*. In this regard the proposal provides acceptable overshadowing impacts to Newlands Park.

The proposal will overshadow the land to the north which relates to Area 20 and Area 28 of the St Leonards South Precinct. The overshadowing affects this land for a limited duration between the hours of 9am and 10am. As illustrated below, the shadow cast is less than the shadow produced from a complying envelope.



Figure 39 – Solar to DCP Compliant Scheme (Right) and Proposed Scheme (Left)

Source: Bates Smart

Overall, it is concluded that the shadow impacts resulting from the proposal are less than a scheme that complied with the setback and envelope requirements. In addition, it is important to note that the proposal complies with the maximum height and FSR controls. Accordingly, the overshadowing impacts can reasonably be anticipated from a scheme of the proposed density which is permissible under the planning controls.

5.9 Traffic and Transport Assessment

A Traffic Impact Assessment has been prepared by JMT Consulting and is included at **Appendix 13**. It outlines the traffic related implications of the proposal and addresses the proposal's compliance with the statutory parking controls.

5.9.1 Operational Traffic Generation

JMT Consulting have provided an assessment of the traffic generation associated with the proposal. The traffic generation has been calculated in accordance with the traffic generation rates nominated by TfNSW. The rates were adopted in the detailed traffic modelling undertaken by Council to support the rezoning of the precinct. The rates are as follows:

- 0.14 Vehicle trips per dwelling in the AM peak hour period (8am – 9am); and
- 0.07 vehicle trips per dwelling in the PM peak hour (5pm – 6pm).

The assessment confirms that the proposal will produce minor additional traffic generation. The existing development contained within the site is estimated to generate between 15 – 20 net vehicle movements during peak hours. When accounting for the existing level of traffic generation, the proposal will result in 30 vehicles or less during the morning peak hour and 10 vehicles or less during the afternoon peak hour. JMT Consulting confirm that the anticipated traffic generation is minor and will not impact the surrounding local road network.

It is noted that the traffic generation does not account for any potential closure of Canberra Avenue. Council is still contemplating the closure of this road. If this is to occur, further traffic modelling would need to be undertaken.

5.9.2 Aimsun Traffic Modelling

It is important to highlight that the traffic generation associated with the proposal is significantly less than what was originally projected at the time of the site's rezoning. The former Planning Proposal for the St Leonards South precinct relied on Aimsun traffic modelling that was based on a significantly higher dwelling rate. Specifically, the modelling assumed a higher FSR for the precinct which allowed for up to 2,400 dwellings. Of this amount, the subject site was initially assigned a dwelling yield of 472 dwellings.

However, the proposal provides a significantly lower yield of only 329 dwellings, representing a 30% decrease from what was assumed in the Aimsun traffic modelling. In turn, the traffic generation resulting from the proposal is significantly less than originally forecast.

5.9.3 Statutory Parking Assessment

The Traffic and Parking Assessment has reviewed the proposed parking arrangements against the parking controls prescribed by the *RMS Guidelines to Traffic Generating Development*.

The proposal adopts the minimum parking rates nominated by the LDCP for sites located within a 400m radius of St Leonards Railway Station. The proposal's compliance with the minimum rates is set out in the table below,

Table 16 - Minimum LDCP Parking Requirement for Residential Developments

Type	No. Units	Rate	Required Spaces	Proposed
• 1 bedroom	72	0.5 / unit	36	372
• 2 bedroom	179	0.9 / unit	161	
• 3 bedroom	78	1.4 / unit	109	
Visitors	329	1 / 5 unit	66	
Total	329		372	
Car Wash Bay	329	1 / 5 units	6	5
Total			378	377
Adaptable Spaces	1 space per adaptable apartment		66	66
Visitor Spaces	1 per 10 visitor		6	6

As demonstrated in the table above, the proposal is required to provide a minimum of 372 residential vehicle spaces. The proposal complies with this requirement with 372 spaces accommodated within the shared basement.

The proposal provides a shortfall of one (1) car wash parking bay. This minor non-compliance is considered by JMT Consulting to be minor.

The proposal will foster sustainable modes of travel through the adoption of the measures set out in the Sustainable Travel and Access Plan (refer to **Appendix 12**).

5.9.4 Motorcycle and Bicycle Parking

The LDCP requires that motorcycle parking and bicycle parking be provided in accordance with the rates detailed below. The proposal complies with and exceeds the requirements.

Table 17 - Minimum Bicycle and Motorcycle

Type	DCP Parking Rate	Required Spaces	Proposed
Motorcycle	1 per 15 spaces	22	25
Total Motorcycle		25	25
Residential Bicycle	1 per 4 units	82	87
Visitor Bicycle	1 + 1 / 10 units	34	34

Table 17 - Minimum Bicycle and Motorcycle

Type	DCP Parking Rate	Required Spaces	Proposed
Total Bicycle		116	121

5.9.5 Loading

JMT Consulting confirm that the proposal complies with the loading and servicing requirements set out the LDCP. The LDCP requires that one service vehicle be provided for every 100 units. The proposal includes the following loading facilities:

- One (1) Council waste collection vehicle sized in accordance with the LDCP 2009; and
- Two (2) small rigid vehicles for general waste deliveries.

A Swept Path analysis is included at **Appendix 11** and confirms that service vehicles can adequately maneuver within the basement and enter and exit the site in a forward direction.

5.9.6 Sustainable Travel

A Sustainable Travel and Access Plan has been prepared by JMT Consulting and is included at **Appendix 12**. The objective of the Plan is to reduce the development's reliance on private vehicles and foster the use of sustainable modes of travel. It nominates the following mode share targets:

- Private vehicles - 15%
- Car Passenger – 1%
- Train /Metro - 56%
- Bus - 6%
- Walking - 19%
- Bicycle / Other - 3%

Measures to foster the use of sustainable transport include the provision of car share spaces, cycling facilities, and a travel access guide along with general marking and promotion such as e-flyers and the display of information in communal areas.

5.10 Geotechnical

A Geotechnical Report has been prepared by Golder and is included at **Appendix 13**, respectively. The reports detail the findings of a geotechnical investigation undertaken to assess the subsurface soil and groundwater conditions. The investigation was undertaken across two phases comprising:

- Stage 1 - Area A - relating to the southern portion of the site covering Buildings 9, 10 and 11.

- Stage 2 - Area B – relating to the northern portion of the site covering Buildings 7 and 8.

The methodology employed to prepare the assessment relied on a desktop review and field work investigations using borehole testing.

Douglas Partners identify that the subsurface conditions of the site consist of fill to a dept of 0.5m; residual soil to a depth of 0.8m, weathered sandstone to a depth of 2.2m and competent sandstone to a dept of 4.3m.

Groundwater monitoring was conducted via the testing of six (6) separate bore holes across both stage and encountered to maximum depths of RL 60.9m AHD.

Based on the findings of the testing, the report provides a number of recommendations. In particular, it is noted that the proposed excavation across Area A will likely encounter fill, residual soil and weathered sandstone. The report recommends the use of retaining structures, unsupported cuts, anchors to facilitate the excavation process.

During the proposed excavation of Area B it is likely that fill, residual soil and weathered sandstone will be encountered. Excavation can be carried out using a conventional hydraulic excavator.

The Geotechnical Report identifies that the excavation of the basement will likely drawn down the groundwater level in the surrounding area. The impact of this will need to be addressed during subsequent stages of design development.

5.11 Acoustic

An Acoustic Impact Assessment has been prepared by IGS and is included at **Appendix 14**. It identifies that the following impact assessments have been undertaken:

- Internal Noise Intrusion Assessment; and
- Noise Emission Assessment.

5.11.1 Internal Noise Intrusion Assessment

The Internal Noise Intrusion Assessment has evaluated the anticipated internal noise levels for the proposed residential apartments. The assessment has relied on the criteria prescribed by the Australian Standard *AS2107:2000 Acoustics – Recommended Design Sound Levels and Reverberation Times for Building Interiors*. The assessment notes that the primary source of noise emissions affecting the development will be nearby roadways and aircraft. The report confirms that subject to the adoption of the glazing recommendations detailed in *Table 4* of the report, the development will not be impacted by traffic noise emissions. Furthermore, the report recommends that any plasterboard be constructed with a minimum acoustic performance of Rw 50.

5.11.2 Noise Emissions Assessment

IGS have provided an assessment of the noise impacts likely to emanate from the proposal. The assessment has relied on the noise criteria nominated by the NSW Environmental Protection Authority's (EPA) Noise Policy for industry (NPI). Their report

notes that noise from plant rooms and mechanical plant are likely to be the key sources of noise emissions. The report concludes that the mechanical plant can be acoustically treated at the Construction Phase.

5.12 Tree Removal

The proposed development will necessitate the removal of 73 trees, as detailed in the Arboricultural Impact Assessment prepared by Australias Tree Management included at **Appendix 7**. The removal of the trees is required to accommodate the proposed building layout and is due to conflicts with the building footprint, driveway cross over and basement. The trees are wholly contained within the bounds of the site and are distributed across the full extent of the site.

These trees are identified to be in moderate to good health and are either indigenous, exotic or native species. The majority are protected by Council and their removal requires consent.

A total of 20 trees are proposed for retention and will be protected during the construction phase. This includes the Eucalyptus Saligna located adjacent to River Road to the south of Building 11. Other trees include the nature strip trees located along Holdsworth Avenue and the edge of River Road.

The Arboricultural Impact Assessment provides a methodology for the removal of trees and proposes measures to ensure that the 20 trees proposed for retention are protected during the construction phase. Key measures include the installation of geotextile permeable membranes where appropriate and the use of raised platforms and scaffolding to protect the TPZ of trees proposed for retention.

5.13 Operational Waste Management

An Operational Waste Management Plan has been prepared by Elephants Foot and is included at **Appendix 6**. To ensure that the waste generated by the proposed development is appropriately managed the Waste Management Plan outlines the ambitions and management systems for the proposed development and aims to support best practice waste management.

Elephants Foot have identified the estimated waste and recycling volumes to be generated by the development, as set out in the table below.

Table 18 - Estimated Waste and Recycling Volumes			
Location		Compacted Waste (L/week)	Commingled Recycling Generation Rate (L/week)
Stage 1	9	2,640	1,584
	10	3,800	2,280
	11	4,000	2,400
Stage 2	7	1800	1080

Table 18 - Estimated Waste and Recycling Volumes

Location		Compacted Waste (L/week)	Commingled Recycling Generation Rate (L/week)
	8	2880	1728
Total		15,120L	9,072L

The estimated waste will necessitate the need for the following general waste and recycling waste bins across both stages:

Stage 1:

- General Waste: 15 x 660L MGBs collected 1 x weekly;
- Paper / Carboard Recycling: 10 x 660L MGBs collected 1 x weekly; and
- Commingled Recyclables: 10 x 660L MGBs collected 1 x weekly.

Stage 2:

- General Waste: 8 x 660L MGBs collected 1 x weekly;
- Paper / Carboard Recycling: 5 x 660L MGBs collected 1 x weekly; and
- Commingled Recyclables: 5 x 660L MGBs collected 1 x weekly.

Each residential building will include a centrally located waste chute within each level where residents will be responsible for disposing of their waste. The waste chute will deliver waste to the basement where it will be compacted. Waste will be collected by Council on a weekly basis. Each building's caretaker will be responsible for transporting recycling waste to the designated bins within the basement.

5.13.1.1 Construction Waste

Elephants Foot have prepared a Construction Waste Management Plan which is included at **Appendix 15**. It identifies the likely waste streams and possible volume of each waste stream during construction. Furthermore, it specifies the construction waste targets for the development, including a 75% target for waste to be diverted to landfill. A detailed Construction Waste Management Plan will be developed in the future as part of a detailed CEMP. The contractor will be required to achieve compliance with the EPA Guidelines.

5.14 Environmentally Sustainable Development

The proposal complies with the sustainability requirements of the *State Environmental Planning Policy BASIX* which applies to all residential development. Basix Certificates are included at **Appendix 8** and confirm that the proposal will meet the relevant sustainability targets for water, thermal comfort and energy.

An ESD Report has been prepared by IGS and is included at **Appendix 16**. It identifies that the proposal will integrate the following best practice sustainability measures:

- Compliance with the minimum natural ventilation requirement;

- Compliance with the minimum solar access requirements during the Winter Solstice;
- Landscaping elements at the ground plane and at the upper levels that will provide shade and reduce the heat island effect;
- Apartments are orientated so as to maximise access to solar;
- Facades incorporate materials that have been carefully selected to minimise heat gain and creation of hot microclimates;
- A solar PV system will be installed across the development to reduce lighting energy consumption
- 5 x EV charging points will be installed within the basement;
- The development will achieve a 40% water reduction target by using water efficient fixtures and the like; and
- The site incorporates an on-site rainwater tank that facilitates water re-use.

The report confirms that the proposal will meet and outperform the following regulatory sustainability requirements

- NCC 2019 Section J (Energy Efficiency);
- BASIX – Energy, Water and Thermal Comfort; and
- NatHERs – Minimum 6 Star NatHERS rating in compliance with St Leonards South Precinct sustainability requirements.

5.15 Stormwater Management

Meinhardt have prepared a stormwater management system for the site which is detailed in the Stormwater Engineering Drawings included at **Appendix 17**. The drawings define the requirements for the control, treatment and discharge of stormwater from the development site.

Stormwater from the development area will be captured and conveyed through a typical pit and type system to an on-site detention (OSD) tank located along the northern boundary below ground level. The OSD tank will discharge to the south of the site towards River Road via an outlet pipe.

Meinhardt have prepared an Erosion and Sediment Control Plan for the site during its construction phase. It details that measures such as silt fencing, sediment fences and hoarding will be used to maintain the quality of the stormwater discharge during the construction phase.

5.16 Public Art

A Preliminary Public Art Strategy prepared by Barbara Flynn is included at **Appendix 18**. It has been prepared in accordance with Council's Guidelines for Public Art. Consideration has also been given to the LMP. The strategy outlines the vision for delivering public art across the site which includes integrating public art with both the proposed architecture and landscape design.

The Strategy identifies that from a shortlist of six artists, a preferred artist has been selected. The Strategy specifies that the Applicant will continue to work with Lane Cove Council and their Public Art Advisory Committee to finalise the commissioning and the delivery of public art across the site.

5.17 Contamination

A Preliminary Contamination Assessment is included at **Appendix 9**. The report provides a preliminary assessment of potential sources of contamination and assesses whether the site is suitable for the proposed development.

The report notes that the site is underlain by Triassic Hawkesbury Sandstone described as medium to coarse grained quartz and sandstone with minor shale and laminate lenses. Additionally, the site's historical use has consisted of residential housing and therefore no significant sources of contamination have been identified.

The findings of the report derive from field work investigations which entailed the drilling of nine (9) boreholes across the site and a desktop review.

The soil samples collected confirm that potential sources of contamination are below the relevant criteria. Furthermore, the groundwater investigations associated with the boreholes confirm that contaminant concentrations were also below the relevant criteria with the exception of nickel and zinc which exceed the drinking water guidelines.

The report confirms that no significant sources of contamination were identified and the site is suitable for the proposed development.

5.18 Crime Prevention Through Environmental Design

A Crime Prevention Through Environmental Design Report has been prepared by Mecone and is included at **Appendix 19**. The report addresses whether the principles of Crime Prevention Through Environmental Design (CPTED) have been incorporated into the design.

The report concludes that the proposed development will significantly improve compliance with the principles and will enhance the general safety of the area by delivering a vibrant high-quality residential development that is activated all times of the day. The proposed development is designed to allow for clear lines of sight and passive surveillance. In particular, the surrounding street network and the internal Green Spine will benefit from a high level of surveillance. The report makes a number of recommendations pertaining to access control, landscaping, maintenance and lighting to further enhance safety during the occupation phase.

5.19 Building Code Compliance

Blackett Maguire and Goldsmith have prepared an BCA Assessment Report which is included at **Appendix 20**. The report has reviewed the Architectural Drawings associated with the proposal and confirms that the proposed design can readily meet the requirements of the Building Code of Australia (incorporating Amendment 1) (BCA) subject to the adoption of performance solutions at the construction phase.

5.20 Access

Blackett Maguire and Goldsmith have prepared an Accessibility Report which is included at **Appendix 21**. The report confirms that the proposal can achieve full compliance with the BCA and the DDA provisions of the Premises Standards.

5.21 Site Suitability

Having regard to the characteristics of the site and its surrounding environmental context, the proposed development is considered suitable in that:

- The site is not affected by contaminants which would preclude the delivery of the proposal;
- The site located in walking distance of public transport comprising the planned Crows Nest Metro and St Leonards Railway Station;
- The site has historically accommodated residential uses which makes it suitable for the proposed use;
- The proposed residential density is consistent with the St Leonards South Precinct which is designated by strategic and statutory planning frameworks as suitable for supporting high density residential development;
- The proposal will contribute to the revitalisation of the area by redeveloping a series of underutilised site's that contain outdated building stock;
- The proposal has been designed in a manner that minimises impacts on surrounding developments;
- The environmental impacts associated with the development can be appropriately managed and mitigated;
- The proposal provides a contemporary built form outcome that is sympathetic to the surrounding environmental context in that it incorporates a natural materiality and colour pallet and provides landscaping that accords with the surrounding bushland character; and
- Is permissible with consent in the zone and complies with the development standards and controls that govern its bulk and scale.

5.22 Public Interest

The proposed development is in the public interest given that it will:

- Provides a new pedestrian through-site link that improves connectivity within the St Leonards South Precinct;
- Provides a mix of housing typologies at a range of sizes and price points that are capable of meeting the diverse household needs of the community;
- Exhibits design excellence and provides a high standard of amenity given the development as a whole scores well on a number of amenity standards;
- Complements the low scale residential development in the surrounds by providing an appropriately scaled form that reduces in bulk towards the Precinct's edges;

- Support sustainable modes of transport by providing bicycle facilities, car share facilities and a range of new pedestrian connections which will foster sustainable modes of public transport;
- Provides an improved amenity outcome by adopting an alternative massing which permits the scheme to exceed Council's minimum standards with respect to solar access and overshadowing; and
- Revitalises an underutilised site and will positively contribute to the visual amenity of the area.

6 Conclusion

This SEE has been prepared on behalf of Top Spring to support a development application to Lane Cove Council for a proposed mixed use residential development on the site valued at \$161,010,000 (incl. GST).

This statement describes the proposed works in the context of relevant planning controls and policies applicable to the form of the development proposed. In addition, the statement provides an assessment of those relevant heads of consideration pursuant to section 4.15(1) of the EP&A Act.

An environmental assessment has been undertaken in **Section 5.0** of this report, supported by additional consultant studies as per the requirements of Council. The environmental assessment found the associated impacts of the proposal are considered to be minimal and manageable. Hence, the outcomes of the proposal:

- Is a suitable development for the subject site;
- The proposal satisfies the requirements of Clause 7.1 to Clause 7.5 of the LLEP 2009 with regards to:
 - Compliance with the incentive height and FSR development standards;
 - minimum site area requirements;
 - pedestrian linkages;
 - design excellence;
- Provides an array of communal areas and landscaped spaces that will contribute to a high standard of residential amenity;
- Will redevelop a site that is in clear need to upgrading and is currently underutilised;
- Is largely consistent with Council's vision for the site as prescribed by the LDGP 2009 and the associated *St Leonards South Urban Design Guidelines*;
- Provides for contemporary modern design, which responds to the desired future character of the area;
- Provides adequate visual and acoustic privacy;
- Includes best practice ESD measures to reduce water and energy consumption;
- Has obtained BASIX certification;
- Ensures traffic impacts are within acceptable levels;
- Provides comprehensive landscaping that will enhance the visual character and amenity of the site; and
- Provides for housing diversity and affordability in accordance with the prevailing market demand.

Therefore, we request that Council recommend that the proposed development be granted development approval.



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