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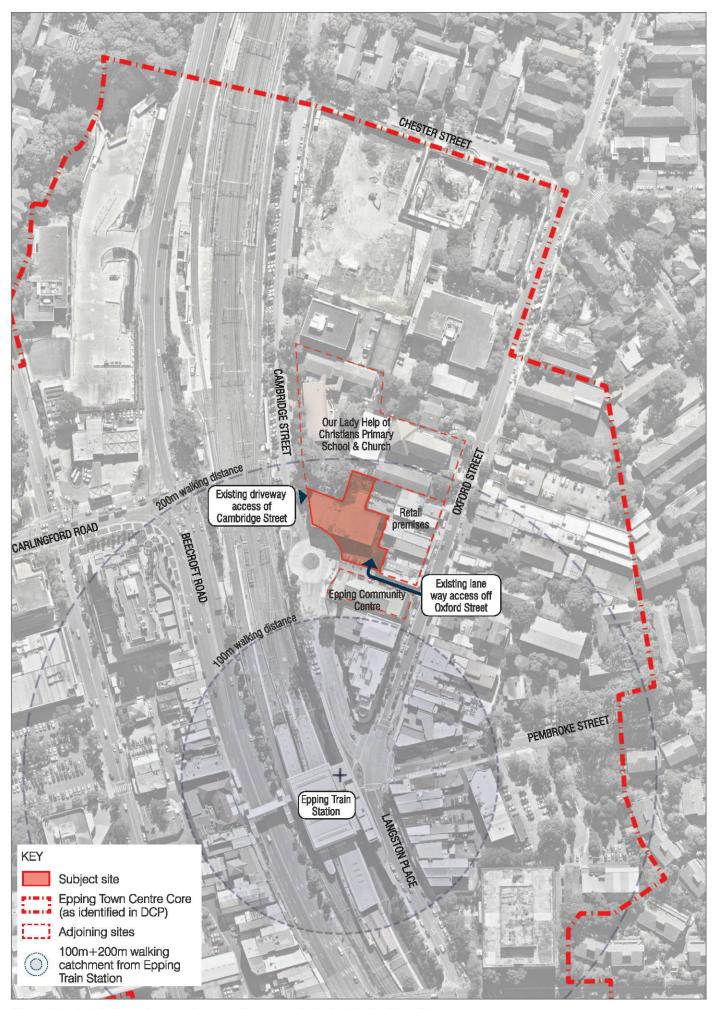
## 1.0 INTRODUCTION

#### 1.1 SITE LOCATION

The site is located at 2-4 Cambridge Street, Epping and has a site area of 1,785 sqm. It is situated within the Epping Town Centre and has excellent access to public transport being located only 100m north of Epping Train Station.

Existing uses immediately adjoining the site include:

- Our Lady Help of Christians Primary School and Church located to the
- Epping Community Centre located in the heritage listed building to the south; and
- A series of narrow, 1 and 2 storey retail premises fronting Oxford Street to the east.



Aerial photo of site and surrounding context including Epping Town Centre Figure 1:

#### 1.2 SITE DESCRIPTION

The property currently consists of a 3 storey office building which is occupied by the Seventh Day Adventis Church and includes a conference centre, bookshop and administration office. The building occupies most of the site with a small surface carpark located along the southern part adjacent to the existing lane way.

There are currently two vehicle access points to the site. The main vehicle access is via a driveway and roller door garage to underground parking off Cambridge Street. The second access is off Oxford Street via an adjacent lane way located to the south of the subject site and provides access to the surface parking area which adjoins Cambridge Street where there is an existing roundabout.

A brick wall approximately half a storey in height runs along this section of Cambridge Street with a timber fence above and screens the surface parking area. There is a narrow pedestrian connection in the form of a flight of stairs which connects the carpark through to Cambridge Street.



Figure 2: View of existing 3 storey office building on subject site from Cambridge Street



Figure 3: Existing lane way off Oxford Street provides vehicle access to surface parking on site



Existing stairs on Cambridge Street provides pedestrian connection from Oxford Street via surface carpark and lane way

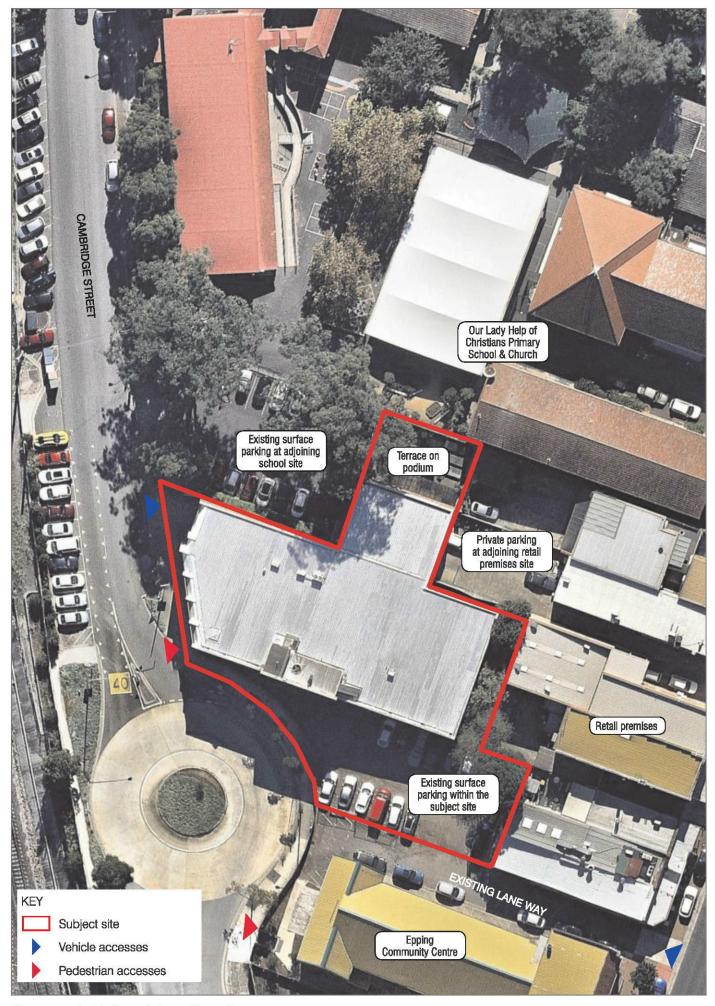


Figure 5: Aerial photo of site and immediate context

#### PLANNING CONTEXT 1.3

Planning guidance for Epping Town Centre is currently split across two localities being Hornsby Shire Council and City of Parramatta Council as indicated in "Figure 6: Epping Town Centre LGA Areas". The subject site is currently located within the Hornsby Shire Council area of Epping Town Centre.

However, on Thursday 12th May, **NSW Government announced Local** Government reforms including the transition of suburbs in Hornsby south of the M2, being Epping, Carlingford and parts of Beecroft, to the City of Parramatta. This amalgamation will mean that Epping Town Centre will be located within a single Local Government Area.

Already, planning for Epping Town Centre has been considered on a holistic basis ensuring guidance for each of the Councils is generally consistent. In 2013 an Urban Activation Precinct Structure Plan was prepared for the Town Centre as part of the North West Rail Link Station Precincts Investigations. The guidance contained within this structure plan informed the preparation of the Local Environment Plans (LEP) and Development Control Plans (DCP) for parts of Epping Town Centre located in both Hornsby Shire Council and City of Parramatta Council. In this context, the following planning guidance applies to the site:

- Hornsby Local Environmental Plan (HLEP) 2013:
  - land use zones:
  - floor space ratio (FSR);
  - height of buildings; and
  - heritage.
- Hornsby Development Control Plan (HDCP) 2013.

Additionally, the Apartment Design Guide - SEPP65 - is also applicable to residential development on the site.

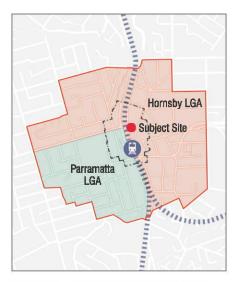
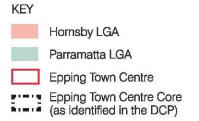


Figure 6: Epping Town Centre LGA Areas



#### **HORNSBY LEP 2013**

#### LAND USE ZONING

The current zoning of the site is B2 Local Centre. This allows for a range of uses including commercial, residential and community. The B2 Local Centre zoning applies to the majority of land contained within the core area of Epping Town Centre with the exception of the existing Telstra facility located to the south of the site which is zoned SP2 - Infrastructure and small pockets of R4 - High density residential.

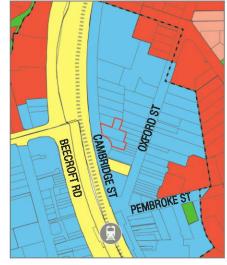


Figure 7: Epping Town Centre LEP Land Use Zoning

Land Use Zone				
	B2 - Local Centre			
	R2 - Low Density Residential			
	R4 - High Density Residential			
	RE1 - Public Recreation			
	SP2 - Infrastructure			
	Subject site			
	Epping Town Centre Core			

#### **FSR**

The maximum allowable FSR within the Town Centre Core ranges from 4.5:1 to 6:1. All land to the north of Pembroke Street is 4.5:1 including the subject site. Land to the south of Pembroke Street and immediately to the west of the station has an FSR of 6:1.

#### **BUILDING HEIGHTS**

Maximum allowable building height within the Town Centre Core ranges from 48m (15 storeys) to 72m (22 storeys). Land to the north-west of Oxford Street, including the subject site, is predominantly up to 72m. Two locations within this development block being the north-east corner and southern tip are 48m (15 storeys). Lands on the southern side of Oxford Street are also 48m (15 storeys).

#### **HERITAGE**

There are a number of existing heritage buildings within the Town Centre Core which are identified as of local significance. This includes an adjoining site located immediately to the south of the subject site. This is a 2 storey brick building currently used as the Epping Community Centre. There is also another heritage building to the north of the site being Our Lady Help of Christians Church on Oxford Street.

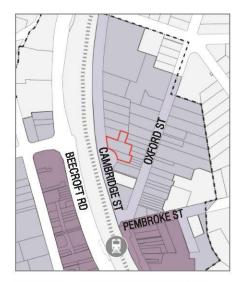


Figure 8: Epping Town Centre LEP Floor Space Ratio

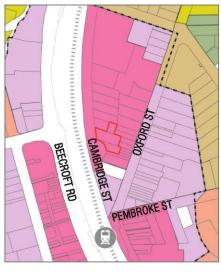


Figure 9: Epping Town Centre LEP Height of Buildings

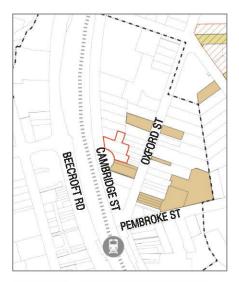


Figure 10: Epping Town Centre LEP Heritage

Maximum Allowable FSR			
	4.5		
	6		
	Subject site		
	Epping Town Centre Core		

Heigh	t (m)	Storeys (excluding basement car parking)	
	8.5	2 storeys	
	12	3 storeys	
	17.5	5 storeys	
	26.5	8 storeys	
	48	15 storeys	
	72	22 storeys	
	Subject site		
	Epping Town Centre Core		

Heritage Conservation area - General Heritage Item - General Heritage Item - Landscape Subject site **Epping Town Centre Core** 

#### HORNSBY DCP 2013

Detailed development guidance for the subject site is provided within the Hornsby DCP under section 4.6 Epping Town Centre. The Epping Town Centre is made up of two planning precincts being the east and west of which the subject site is located in the East Precinct. The following DCP built form guidance has been identified as applicable to the subject site.



Figure 11: Epping Town Centre Core - East Precinct: DCP Guidance (Source: HDCP 2013)

#### SITE REQUIREMENTS

- Development sites have a minimum lot width of 30 metres measured at the street frontage.
- Ensure a development proposal does not result in the creation of an adjoining isolated site.

#### MINIMUM BOUNDARY SETBACKS

#### Podium & Basement

Location	Min Building Setback (m)
Oxford Street	Om
Cambridge Street	0m
Side or rear boundary adjoining non-residential or mixed use development	0m
Side or rear boundary adjoining residential development	Minimum 6m
Tourse alone and about 0 to 0	alama.

#### Tower element above 2 to 3 storey (8-12m) podium

Oxford Street	12m
Cambridge Street	6m

#### **OVERALL BUILDING FORM &** MASSING

- Buildings are designed with external appearances that provide for a distinctive base, middle and
- Tower forms have a delineated top to visually terminate the building.
- Towers should taper towards the sky to appear thinnest at the top.
- Roof fixtures and lift overruns or service plants are incorporated into the design of the roof to minimise visual intrusiveness and support an integrated building design.
- A podium of 2-3 storeys in height.

#### **FLOORPLATES**

- Residential floorplates have a maximum dimension of 18m, measured perpendicular to the primary retail frontage. Balconies and terraces may project beyond this maximum.
- Commercial floorplates have a maximum dimension of 35m, measured perpendicular to the primary retail frontage.

### **ACTIVE FRONTAGES & AWNINGS**

- Semi active frontage to Cambridge Street - requires 30% of the frontage to be shop and office windows and building entrances at street level.
- Entrances to buildings are clear, well lit and well defined.
- Continuous awnings are provided to provide shelter for pedestrians. Awnings should be consistent with the general alignment of awnings in the street and the desired future character of the area.
- Driveways and service entries are not permitted on active frontages, unless it is demonstrated that there is no alternative.
- Buildings incorporate a podium
  - presents a human scale at the street frontage,
  - incorporates commercial floor space, and
  - has an active frontage to the public domain.

#### MATERIALS AND ARTICULATION

- A balance between horizontal and vertical elements are provided through careful placement of windows, colour patterns and building materials.
- Materials relate to the context of buildings within the precinct to achieve continuity and harmony.

Contrasting materials are used to provide diversity. However, material and colour does not dominate the streetscape.

#### COMMUNAL OPEN SPACE

- Provide a principal communal open. space area on podium with:
  - a minimum area of 50 sqm;
  - a minimum dimension of 6m;
  - receive at least 2 hours of sunlight during midwinter;
  - be located to provide direct sight lines and convenient access from the building lobby; and
  - be sited and designed to protect the amenity of adjacent dwellings.

## **SECURITY**

- Identify safe, clear and direct pedestrian and cyclist entrance to the building from the primary street frontage.
- Private open spaces, living room windows, commercial unit windows and lobbies are designed and oriented to overlook the street and communal open spaces on the site.
- Communal hallways, including access to entrance fovers, are limited in length and desirably provide windows, so that hallways may overlook the street or communal areas.
- Where a mix of land uses are proposed, separate, secure access are provided to lift lobbies, basements and communal storage areas.

#### ARCHEAOLOGICAL RELICS

 Investigate location of potential Barren Hills Sawmill relics on the eastern boundary of the site.

## **APARTMENT DESIGN GUIDE (SEPP65)**

In addition to the built form guidance outlined in the DCP, the requirements of SEPP65 are also applicable to the site. Of specific mention this includes:

- At least 70% of dwellings should receive 2 or more hours of unobstructed sunlight access to at least half of the dwellings principal living room windows and principal private open space area between 9am and 3pm on June 22.
- On 22 June, the active communal open space area should receive at least 2 hours sunlight between 9am and 3pm.
- At least 60 percent of dwellings should have dual aspect and natural cross ventilation.
- Building separation controls in conjunction with height and privacy are outlined in the table opposite.

### MINIMUM SEPARATION DISTANCES BETWEEN BUILDINGS

	Separation distance		
	Habitable	Habitable & non-habitable	Non-habitable
Up to 4 storeys / 12m	12m	9m	6m
5 to 8 storeys / 25m	18m	12m	9m
9 storeys and above / over 25m	24m	18m	12m

#### **KEY DIRECTIONS**

The key planning guidance applicable to the site from this review are as follows:

- Existing LEP guidance applicable to the site includes:
  - Zining: B2 Local Centre;
  - FSR: 4.5:1;
  - Height: 72m (22 storeys);
  - adjoins heritage site to the south.
- Setbacks:
  - 0m setbacks on all boundaries for commercial podium up to 2 stories;
  - 6m tower setback to Cambridge Street;
  - minimum 6m tower setback on other boundaries / maximum setback as per separation requirements outlined below.
- Building separation distances:
  - 12m between non-habitable rooms:
  - 18m between habitable and non-habitable rooms; and
  - 24m between habitable rooms.
- More detailed built form testing will be required to determine the final building envelope.

## 2.0 SITE CONTEXT ANALYSIS

In the context of the detailed precinct level planning that has been recently undertaken for the site, it is considered that the existing planning and built form controls for the site as identified in the LEP and DCP are deemed appropriate and therefore have been adopted in principle for the proposal.

This section of the report focuses on undertaking a detailed analysis of the specific conditions of the site and immediate surrounds to ensure the proposed development responds with the best design outcome. This analysis includes:

- Topography
- Views and Orientation
- Access and Movement
- Active Frontages and Pedestrian Access

#### 2.1 **TOPOGRAPHY**

Epping Town Centre is located on a high point in the surrounding topography. The Town Centre slopes gently away from the corner of Oxford Street and Pembroke Street at the train station in all directions.

There is an overall change in levels across the subject site of 6m from the high point on the eastern boundary to the low point on the northwestern corner of Cambridge Street. Currently, there is a retaining wall to the surface parking area along the boundary adjoining the roundabout on Cambridge Street which is approximately half a storey above the street level. The surface parking area and access laneway are sloped and generally follow the level of natural ground.





Figure 13: View from surface parking area towards laneway and Oxford Street

#### Legend

Subject site

**Epping Town Centre Core** 

Contour lines

**Existing buildings** 

Proposed development sites

Opportunity for active street frontages

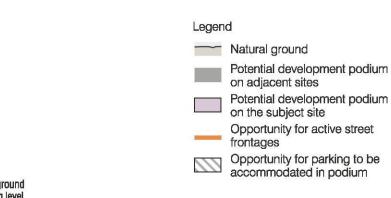
Opportunity for parking to be

accommodated in cut

High point

## **KEY INSIGHTS**

 The 6m height difference across the subject site enables provision of active uses within the podium form on Cambridge Street whilst accommodating parking and servicing cut into existing ground.



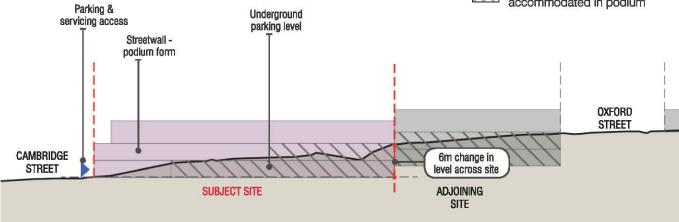
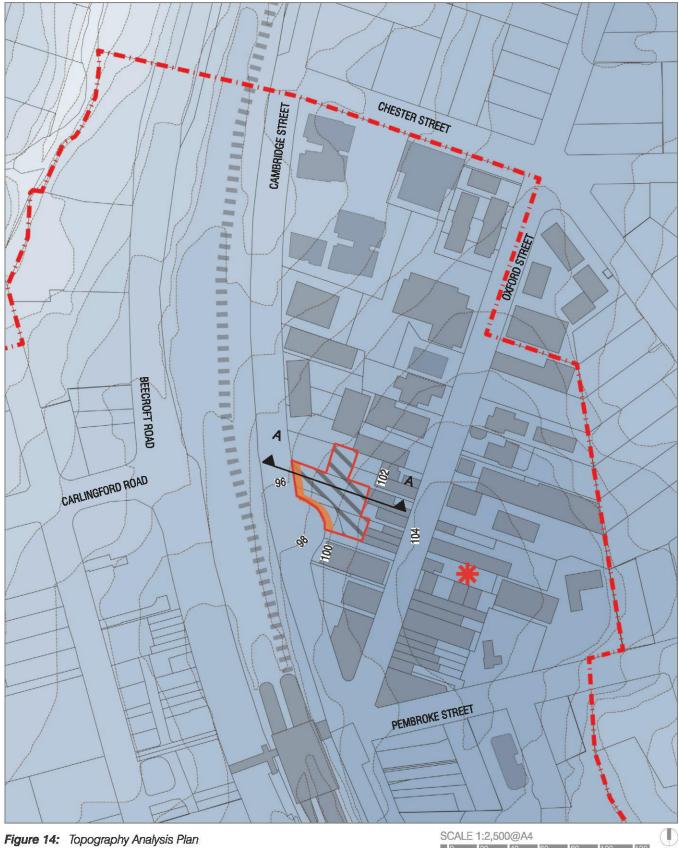


Figure 12: Indicative development section A-A



#### 2.2 VIEWS AND ORIENTATION

#### **VIEWS**

The high elevation of the site within the surrounding context affords future development the opportunity to capture long distance views to existing and emerging city skylines around Sydney including:

- Sydney CBD to the south-east;
- Sydney Olympic Park to the south; and
- Parramatta CBD in the south-west.

It is acknowledged that some of the views from the site may be built out in the future.

#### SOLAR ACCESS

The site has a significant frontage to the north adjoining the existing school. It is unlikely that the school site will be redeveloped for future high rise forms. As a result, the likely nearest tall buildings to the north of the site could be 40m away ensuring a high degree of solar access will remain accessible to the site. Therefore the design of the site should consider the location of communal open space in the northernmost projection of the site.

In terms of overshadowing of any adjoining development to the south, this will be a passing shadow with the main building affected being the existing low-rise residential apartment development on the corner of Oxford and Cambridge streets. The shadow of any proposed building will predominantly cast shadows on Cambridge Street and the railway line in the morning and lunchtime.

#### **KEY INSIGHTS**

- Communal open space provision to be located to the northern part of the subject site.
- Building design to include windows and/or balconies to the south-east and south-west to capture long distant views to skylines.
- Windows and/or balconies on the northern side to be oriented to north to capture sunlight and minimise potential overlooking from adjacent future development.

## Legend

Subject site

Epping Town Centre Core

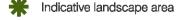
Existing buildings

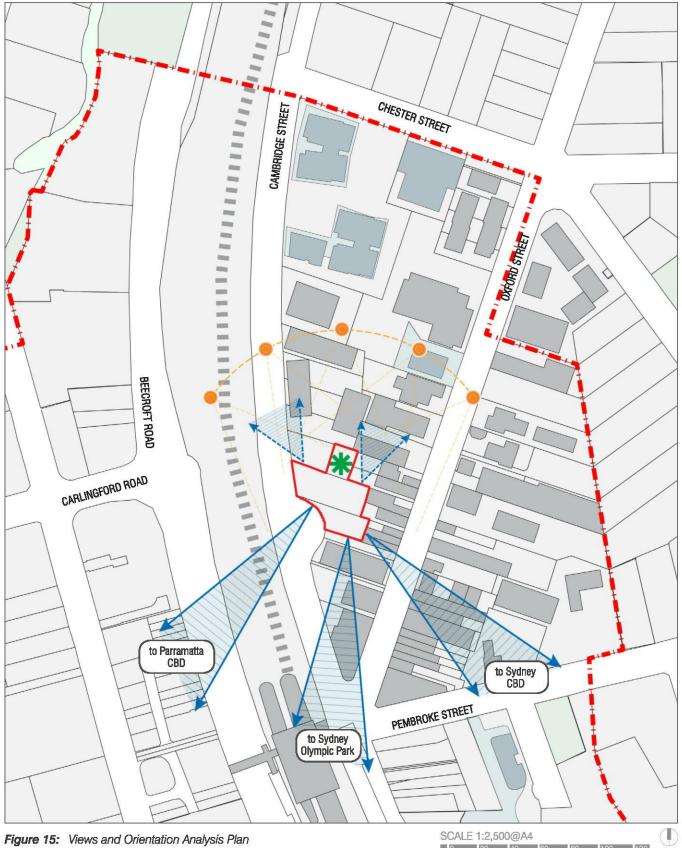
Proposed development sites

Solar access

Long distant view corridors

Possible long distant views past potential developments





#### 2.3 **ACCESS AND MOVEMENT**

#### VEHICLE ACCESS

Existing vehicle access to the site is via two locations:

- Access to underground parking off Cambridge Street into the current 3 storey office building for underground parking; and
- Access to surface parking via a shared laneway off Oxford Street and adjacent to the southern boundary of the subject site.

The DCP identifies a desire to establish Oxford Street as a 'Main Street' shopping environment and therefore minimising the number of vehicle cross-overs and access points off this street. There are already a number of driveway crossovers to adjoining sites off Oxford Street and there is an opportunity with redevelopment to reduce these by reorganising all vehicle access to the site to come off Cambridge Street. This will remove any vehicle access to the subject site via the existing laneway.

The existing access off Cambridge Street should be retained in its existing location as it presents to safest location due to the roundabout formation restricting sight lines. In addition, it is also possible to locate all parking and servicing for the site underground or within the podium form reducing the creation of blank walls to the street frontage.



Figure 16: View of existing driveway access from Cambridge Street



Figure 17: View along existing laneway from Oxford Street



Figure 18: View of surface parking on adjacent school site

#### **KEY INSIGHTS**

- Remove vehicle access to the site via the laneway off Oxford Street.
- Reorganise vehicle access to the site from Cambridge Street only and utilise existing location due to roundabout.
- Locate parking below ground or within podium behind active uses.

#### **LEGEND**

Subject site

Existing buildings

Existing surface parking

Main shopping street

Existing lane way drive to surface parking

Existing vehicle crossover

Existing vehicle access to be removed

Existing vehicle access to be retained

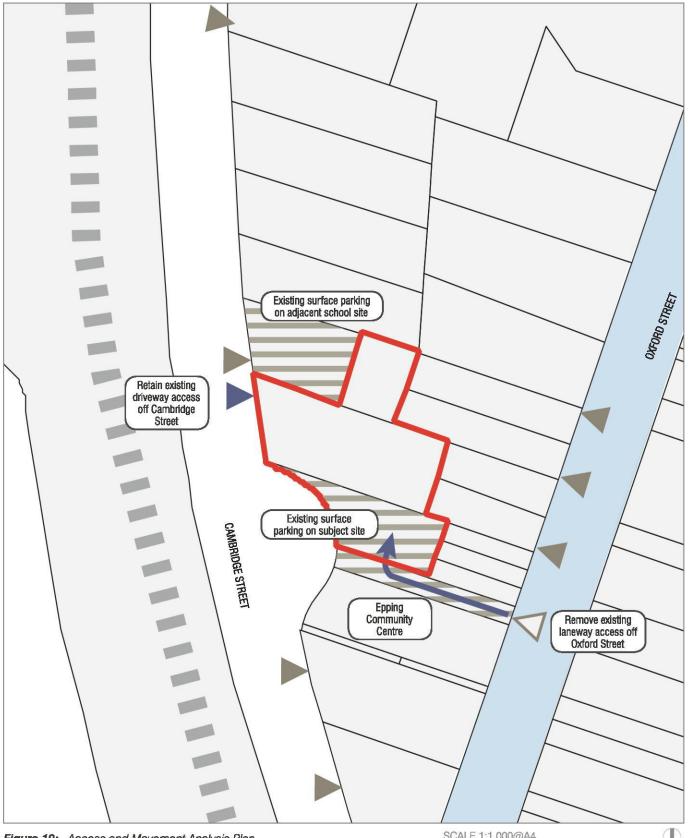


Figure 19: Access and Movement Analysis Plan

#### **ACTIVE FRONTAGES AND PEDESTRIAN ACCESS** 2.4

#### **ACTIVE FRONTAGES**

Hornsby DCP has identified both sides of Oxford Street and that part of Cambridge Street to the south of roundabout as locations for "active frontages" with the northern part of Cambridge Street requiring "semiactive frontages" (refer to inset plan).

For the subject site, the only street frontage is to Cambridge Street. While currently the existing building on the site provides some activation and pedestrian access through active uses such as the bookshop at ground level. for the portion of the site adjacent to the roundabout, the built form consists of a half storey high blank brick wall with timber fence above screening the surface car parking.

The remaining frontage on Cambridge street includes some vehicle access points. There is an opportunity through redevelopment to improve this frontage to Cambridge Street.

#### PEDESTRIAN CONNECTIVITY

There is an existing pedestrian connection between Cambridge Street and Oxford Street, adjacent to the southern boundary of the subject site via the laneway and then around the back of the community centre. The change in levels at the roundabout on Cambridge Street makes direct through access challenging.

There is also existing, informal access from the laneway through the surface parking area of the subject site to the northern side of the roundabout on Cambridge Street. This informal connection has the potential to present some CPTED concerns for both users and the property. Improvements to pedestrian connectivity in this location in conjunction with the proposed development could include:

- Retain access to the subject site from the laneway to maintain and increase usage and therefore natural surveillance; and
- Provide this as a secure access from the laneway onto the subject site to provide better distinction between public and private connections.

#### **KEY INSIGHTS**

- Retain pedestrian access to the site via the existing laneway at the southern site boundary.
- Provide a secure access point into the site from the laneway for tenants and residents.
- Provide active uses within the ground and podium levels along Cambridge Street.

**LEGEND** 

Subject site

Existing buildings

Main shopping street

Establish semi-active frontage and provide separate retail and residential access

Existing publicly accessible pedestrian link - to be retained as public use

Existing pedestrian link through private land

Establish secure access to site from lane way

### EXISTING BUILT FORM

Active frontages

Semi active frontages

Non-active: Service Facilities

Non-active: Blank Wall

Landscape setback/ fence wall

## PROPOSED BUILT FORM (HDCP)

Active frontages/mandatory awning (90% of the frontage consists of glazing or physical openings at street level) Semi active frontages/preferred

awning (30% of the frontage consists of glazing or physical openings at street level).

IIIIIIII Landscape setback



Figure 20: Existing pedestrian access and blank wall to surface carpark on Cambridge Street roundabout frontage



Figure 21: Existing bookshop frontage on Cambridge Street

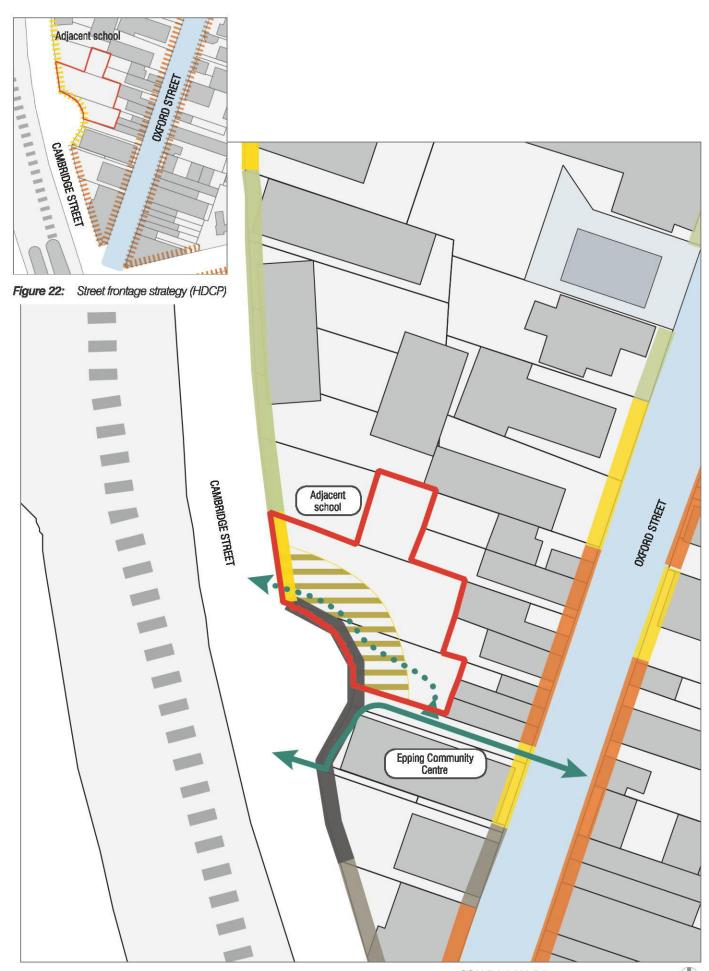


Figure 23: Active Frontage and Pedestrian Access Analysis Plan

#### 2.5 HERITAGE

There is an existing local heritage item located to the south of the subject site at 9 Oxford Street - the School of Arts building. This building, constructed 1916, has significance as a substantial two storey Federation period building with historical and social value to the community. There is an existing laneway that sits between the site and the heritage building which is 5m wide.

The School of Arts Building is a 2-storey brick building with terracotta tiled hipped and gabled roof which is currently used as the Epping Community Centre. This provides a visual and physical separation between the heritage item and the proposed new development. Any proposed development on the subject site will not result in any changes to the physical curtilage or presentation of the heritage item.

The plan form of the rectangular plan building is a an 'I' shaped building with the side facades of the building setback from the front and the end. The more detailed and considered design of the front facade to Oxford Street demonstrates the building was designed to 'front' Oxford Street. The plainer design of the secondary side and rear facades, including simple pilasters and windows with no other architectural features, demonstrates this building was not designed to be seen/appreciated 'in the round' at the rear. Any proposal on the subject site will not change the principal presentation of the heritage item as viewed from Oxford Street.

In terms of potential building response alongside the laneway and opposite the side (northern) facade of the 'School of Arts' building, there is an opportunity for future podium form of

any proposed building to be built to the boundary of the laneway up to a height of 1 storey. This is in keeping with the existing built form at 11 Oxford Street and will create a defined and continuous edge to the laneway.

Any opportunity to provide articulation, specifically in relation to any future pedestrian entrances along the laneway, will contribute to a better response than is provided by the existing carpark and fence and will contribute to additional activation in the laneway.

Future tower forms should be setback from the laneway and provide windows, balconies and openings to increase casual surveillance.

#### **KEY INSIGHTS**

- The 'School of Arts' building is not designed to be viewed 'in the round' as its side and rear facades are secondary to its principal front facade to Oxford Street.
- The laneway provides existing physical and visual separation which will not be altered by any proposed new development.
- Future building form on the subject site should assist in defining the laneway at the ground (podium) level and setback from the laneway at upper levels.
- Opportunities for activation and articulation adjoining the laneway should be incorporated into the design.



Figure 24: Aerial view of adjoining laneway, nearby 'School of Arts' heritage building and subject site.



Figure 25: Oxford Street elevation of 'School of Arts Building'



Figure 26: School of Arts building northern facade (adjoining laneway and facing subject site)



Figure 27: View of 'School of Arts' building at corner of Oxford Street and laneway.



Figure 28: 'School of Arts' building northern and western facade from Cambridge Street.



Figure 29: Existing built form adjoining laneway - 'School of Arts' on the left and 1 storey form at 11 Oxford Street on the right.



Figure 30: School of Arts building northern facade (adjoining laneway and facing subject site)

## 3.0 FUTURE BUILT FORM CONTEXT

#### 2.6 **FUTURE DEVELOPMENT POTENTIAL**

In order to understand the potential future context of the site it is necessary to understand the development potential of the adjoining sites. This future development potential has been identified through identification and analysis of key constraints and opportunities including:

- Heritage: There are five existing heritage sites within Epping Town Centre including one located adjoining the subject site to the south. It is assumed that redevelopment is not possible on all of these heritage sites.
- Community Uses: In additional to heritage buildings, community and infrastructure related uses are long term occupants of sites and while minor improvements may occur on site these often do not result in significant redevelopment.
- Strata Title Ownership: Strata title ownership of existing buildings often makes redevelopment of these sites costly and difficult. In this context, we have assumed redevelopment of strata title properties will not occur (in alignment with assumptions made in the Urban Activation Precinct Structure Planning study).
- Proposed Redevelopment Sites: Already there have been a number of proposal for redevelopment of sites in the Epping Town Centre. All of these are located in the urban block bound by Pembroke, Chester and Cambridge streets. Of these three proposals, two have been approved and one is pending a decision.

Potential Site Amalgamation: In addition, the Epping Town Centre DCP encourages amalgamation of lots, for those below 2,000 sgm and with a frontage of less than 40m, to ensure the full development potential of the precinct is realised. This could include future redevelopment of the school site to the north which is approximately 5,000 sgm in total and offers significant redevelopment potential.

In this context, it is considered that there are a number of potential redevelopment sites within the immediate vicinity of the subject site. There is however only one which is immediately adjacent to the site, which is located immediately to the east fronting Oxford Street. Consisting of 7 individual lots ranging from 120 sam to 450 sam, and bound by non-developable sites to both the north and the south it is considered that amalgamation of these into a single site would be required for redevelopment.

The subject site has a street frontage of 35m and site area of 1,785 sqm. The potential redevelopment site (amalgamated) located to the east has a street frontage of 55m and area of 1.895 sam. While both of these meet suggested minimum frontage as identified in the DCP it is worth understanding the built form outcomes and development potential of these two sites whether developed as two individual sites or a single larger site to ensure the most logical development outcome for the area.

#### **KEY INSIGHTS**

- As it is unlikely that any redevelopment can occur on the properties to the south of the subject site due to their existing uses. Therefore 2-4 Cambridge Street has the opportunity to form a gateway building to the Town Centre core.
- There is a need to understand built form and development potential of both the subject site and potential redevelopment site to the east to determine if there is any benefit in amalgamation of the two sites into a single larger development site.

#### LEGEND

Subject site

Epping Town Centre Core

Railway line & station

Proposed redevelopment sites

Potential development/ amalgamation sites

Strata title properties

Heritage sites

Epping community centre

Our Lady Help of Christians Parish Church

**Epping Floral Centre** 

Patisserie shop

Retail shops

Community use sites

Our Lady Help of Christians Primary School

Christ Evangelical Church

8 Arden Anglican School

Telstra facility

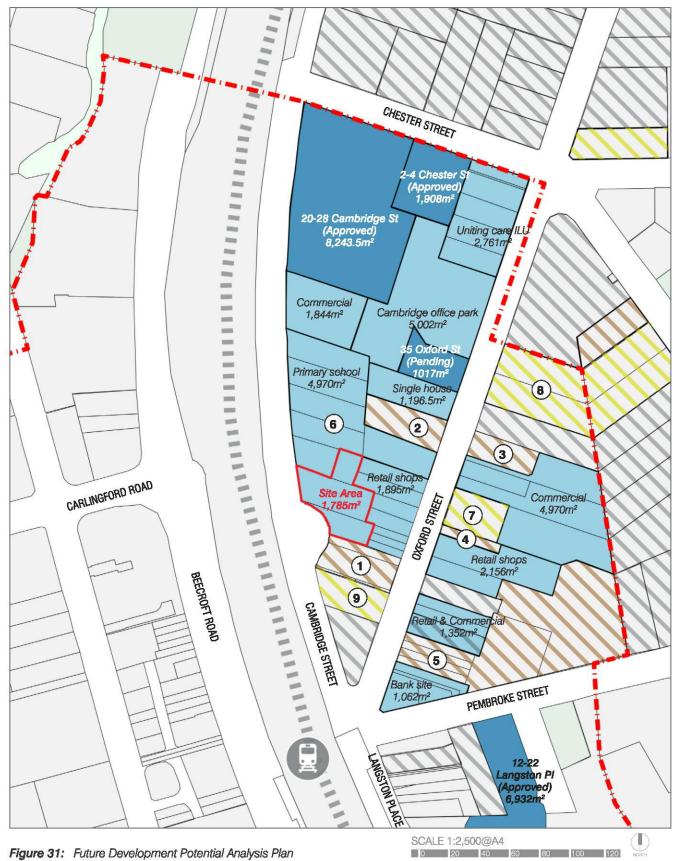


Figure 31: Future Development Potential Analysis Plan

#### 3.1 **FUTURE BUILDING HEIGHTS**

The Hornsby LEP 2013 identifies two different building height responses in the vicinity to the subject site being:

- Predominantly 22 storeys (72m) in the block bound by Chester, Oxford and Cambridge streets; and
- 15 storeys (48m) for properties within the town centre to the south of Oxford Street.

This building heights consists of a 2-4 storey podium at the lower levels for retail and commercial uses with residential tower forms above up to the total height.

POTENTIAL FUTURE SURROUNDING **BUILT FORM** 

In order to understand the potential future built form surrounding the subject site we have combined:

- Proposed built form and height of recent and current development proposals; and
- Applied minimum DCP setbacks and maximum LEP heights to identified future development sites (refer to previous page).

The plan opposite and corresponding 3D building massing model identifies the potential future built form context surrounding the site.

The massing study has made no specific assumptions with regards to redevelopment of the school site. However, the school is also zoned B2 Local Centre as and as such the same development potential and building massing and setbacks would apply.

Were future redevelopment of the school site to occur as a commercial venture, due to economic viability and the need to provide parking, this would be assumed to result in the same zero lot line podium form. This treatment of podium forms to ensure future redevelopment potential is maintained is usual in business zones.

#### **KEY INSIGHTS**

 The subject site and the potential redevelopment site to the east will form gateway built form as visible from the train station / corner of Pembroke, Oxford and Cambridge streets. In particular, the southern facades will be the most visible components.



Figure 32: View of potential built form at cm. of Pembroke, Oxford & Cambridge St.

Legend Subject site **Epping Town Centre Core** Key facade as precinct gateway Gateway view from train station **Building Heights** 8.5m (2 storeys) 12m (3 storeys) 17.5m (5 storeys) 26.5m (8 storeys) 48m (15 storeys) 72m (22 storeys)



Figure 34: Future building height in Epping Town Centre Core

#### 3.2 **FUTURE SHADOW ANALYSIS**

Analysis of the potential future building envelopes surrounding the site allows us to understand the shadow impacts of both:

- The potential built form to the north of the site and its impact on the site: and
- The shadow impacts of the proposed development on the subject site and potential development on the adjacent site on properties to the south.

Analysis of sun shading at the winter solstice (21st June) for 1 hour intervals reveals the following:

- The combined shadow of the subject site and potential development of adjoining site ensure a minimum of 2 hours of sunlight for existing residential apartments on the corner of Oxford and Cambridge streets; and
- Minimal overshadowing onto the proposed development from proposed and potential future development to the north.

## **KEY INSIGHTS**

- Minimum solar access to the subject site is achieved at winter solstice for northern facade of tower and northern part of podium for communal recreation areas.
- The southern facade of the tower form will have limited exposure to sulight access and should accommodate key circulation and servicing requirements.
- Minimum solar access to both adiacent site and existing apartment development on the conrer of Oxford and Cambridge streets is achievable in winter solstice.



Figure 35: 3D massing study for potential built form

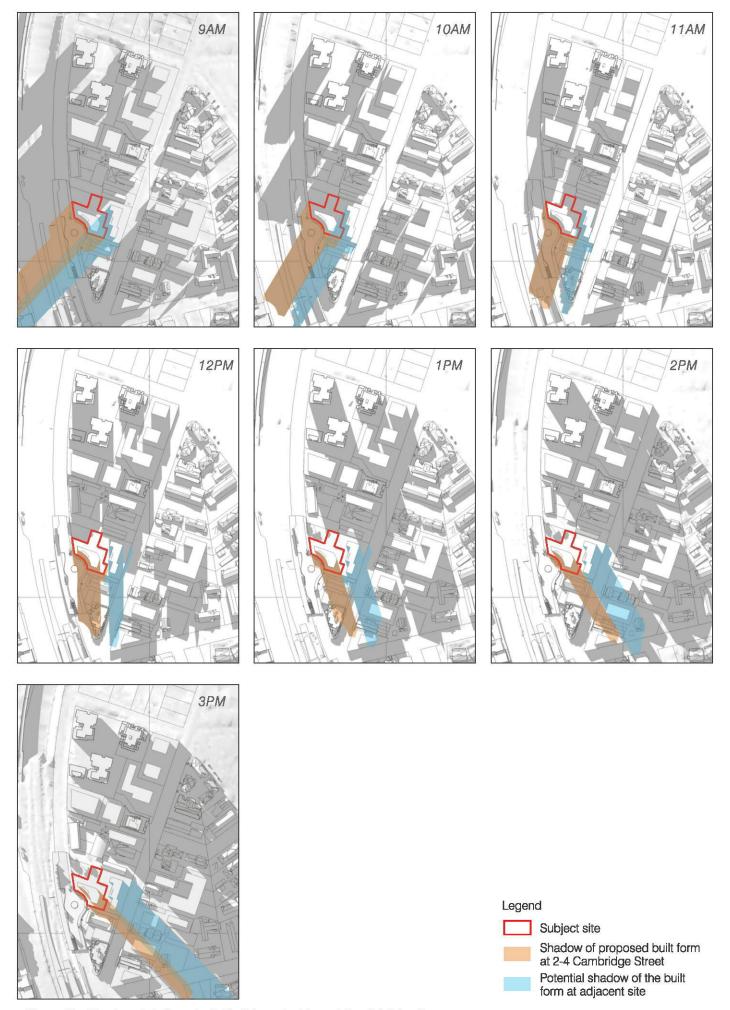


Figure 36: Shadow study for potential built form at winter solstice (21st June)

## 4.0 BUILDING ENVELOPE ANALYSIS

#### 4.1 BUILDING ENVELOPE OPTIONS IDENTIFICATION

The previous chapter site analysis identified that land to the north and south of the subject site does not have redevelopment potential due to existing uses, heritage overlays or infrastructure. As a result the subject site and land immediately located to the west (7 sites) are isolated in terms of surrounding development potential.

In order to ensure the development potential of both the subject and adjoining sites is realised, a study was undertaken to test the potential built form and development yield outcomes possible on the site in the context of the DCP guidance on site amalgamation. This building envelope testing considered two options being:

- OPT 1: Development as two individual sites (both being just under 2,000 sqm);
- OPT 2: Development as a single amalgamated site.

## **BUILT FORM GUIDANCE**

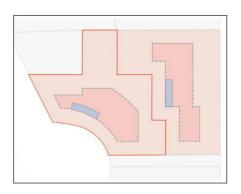
This testing takes into account both the minimum boundary and street setbacks for tower and podium forms as set out on the HDCP as wall as the separation distances, solar access and other requirements for buildings as set out in SEPP65. These are summarised below:

DCP SITE SETBACKS		
Street Setback	Cambridge Street	Oxford Street
- Podium / basement	0m	0m
- Tower element / upper floor	6m	12m
Side setback	6m	
Rear setback	6m	
Residential floorplates maximum dimension (perpendicular to the primary retail frontage)	18m	

## **BUILDING SEPARATION CONTROLS - SEPP65**

Minimum separation distances	Between habitable rooms/balconies	Between habitable and non-habitable rooms	Between non-habitable rooms
Up to 4 storeys	12m	9m	6m
5-8 storeys	18m	12m	9m
9 storeys & above	24m	18m	12m

**OPT 1: Two Individual Development Sites** 



**OPT 2: Single Amalgamated Development Site** 

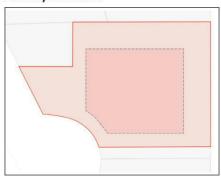


Figure 37: Identification of two options for site amalgamation testing

#### 4.2 **BUILDING ENVELOPE ADDITIONAL CONSIDERATIONS**

Hornsby Shire Council currently has draft Housekeeping Amendments for the 2013 DCP on exhibition (from 27th June until 5th August). The amendments propose the following changes to current controls in Epping Town Centre. In the context of these proposed amendments, these have been taken into consideration in the building envelope testing for the options on the following pages.

### **Existing Controls**

#### Residential floorplates have a maximum dimension of 18m, measured perpendicular to the primary retail frontage. Balconies and terraces may project beyond this maximum.

- Commercial floorplates have a maximum dimension of 35m, measured perpendicular to the primary retail frontage.
- 12m front setback control for upper levels addressing Oxford Street.

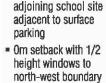
## **Proposed Amendment**

- A maximum floorspace control of 700m² for residential development, and balconies and terrace may project from this maximum.
- A maximum floorspace control of 1.200m² for commercial offices.
- Permit a 9m setback for up to 1/3 of the building width to avoid a continuous wall of development.
- Removal of the minimum lot width requirement of 30m at the street frontage.

#### 4.3 **EXISTING BUILDING ENVELOPE CONDITIONS**

The existing 3 storey office building on the subject site has the following built form setbacks and facade treatments to its street frontage and side and rear boundaries:

LOCATION	SETBACK AND FACADE TREATMENT
Street Frontage - Cambridge Street:	<ul> <li>Om setback with semi-active frontage including windows, glass facade and openings</li> </ul>
Street Frontage - Cambridge Street roundabout:	<ul> <li>half height brick wall with timber fence on top</li> </ul>
Southern boundary adjoining laneway:	<ul> <li>15m setback to blank wall with surface carpark and fence in between</li> </ul>
Northern boundary adjoining school:	Om setback with a blank wall facing the adjoining school site.



existing terrace on podium

Eastern boundary (rear) adjoining retail tenancies:

= 3m rear setback with blank wall facade?



Figure 38: View of existing building blank wall from south of the subject site on Cambridge Street



Figure 39: View of existing building blank wall from west of subject site on Cambridge Street

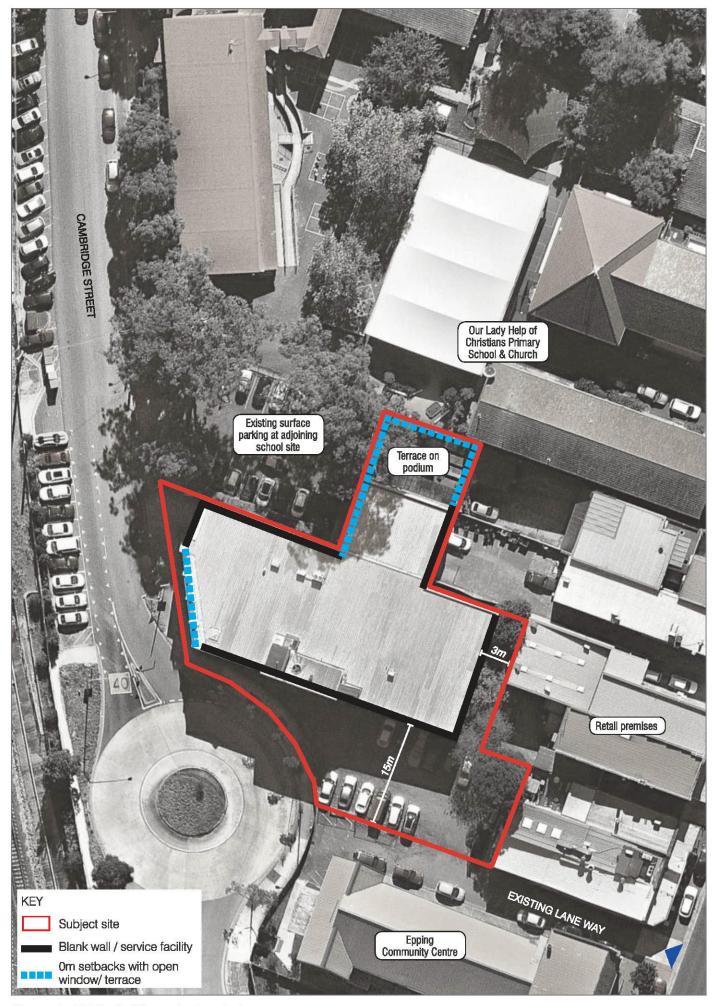


Figure 40: Existing building setback analysis

#### **OPTION 1: TWO INDIVIDUAL DEVELOPMENT SITES** 4.4

Option 1 considers the development of the two sites as individual developments. A summary of this option is described in the table below.

SUMMARY TABLE - OPTION 1	SUBJECT SITE	ADJOINING SITE
Total Site Area	1,785 sqm	1,897 sqm
Tower Floorplate Size	392 sqm	491 sqm

Overall building envelope massing has been identified by first considering the minimum building setbacks as outlined in the Hornsby DCP 2013. Key insights include:

- Setbacks for the tower forms are 12m on Oxford Street with 1/3 of the building width at 9m, and 6m from side boundary and Cambridge Street.
- Podium level up to 3 storeys for each option which means there is a difference in levels across the two sites.
- There are a number of parts of the site where the building setbacks result in a building form that is too skinny for development being:
  - The northern projected part of subject site; and
  - South-eastern projected part of subject site.

- There are also a number of locations where removal of built form on each site will allow for development to meet SEPP65 building separation and solar access requirements being:
  - The most western projection of the adjoining site; and
  - The north-eastern corner of the subject site.

### **KEY INSIGHTS**

 Development as two separate sites results in the creation of efficient building floorplates, facilitates good solar access to apartments and communal recreation areas and creates slender tower forms.



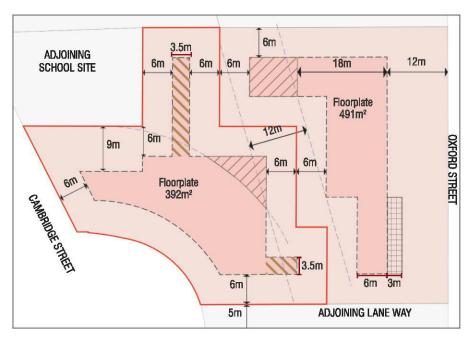


Figure 41: Building envelope setback analysis

Key design responses of this option are:

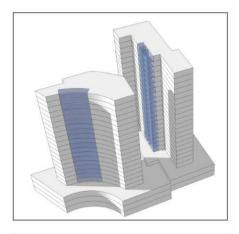
## SUBJECT SITE

### Locate lift and stairs service space at southern side of tower to maximise solar access from north of building.

- Windows to habitable rooms on Cambridge Street creates active facade.
- Screened windows to habitable rooms on southern boundary adjoining laneway incorporates 5m wide laneway allowing for minimum 6m setback
- Windows to habitable rooms with screening to rear (east) boundary allows for 18m separation.
- Blank facade where tower form is closest (5)to adjoining site allows for 6m setback / 12m separation.
- Windows to habitable rooms on northern (6)side of tower captures northern sunlight.
- Windows to habitable rooms with screening to north boundary adjoining school allows for 9m setback / 18m separation.

#### ADJOINING SITE

- Locate lift and stairs service space at (8) western side of tower to maximise solar access from eastern side of building.
- Incorporate reduced 9m setback on (9) Oxford Street as per DCP proposed amendments
- Standard 12m setback on Oxford Street (10)
- Blank facade to northern boundary to (11)maximise developable footprint allows for 6m setback.
- Windows to habitable rooms with (12)screening to rear (west) boundary due to no adjoining development. Setback allows for sunlight penetration and provision of communal open space.



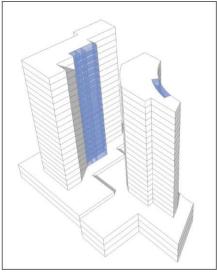


Figure 43: Building massing 3D study

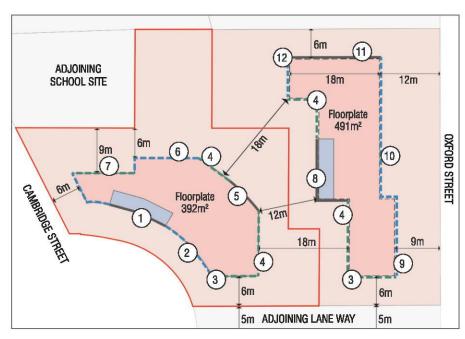


Figure 42: Building envelope facade treatment analysis

## Legend Subject site Podium/basement setback Tower setback Frontages to habitable rooms Screened frontages or to nonhabitable rooms Frontages to non-habitable rooms

**Building setbacks** 

m

#### OPTION 2: SINGLE CONSOLIDATED DEVELOPMENT SITE 4.5

Option 2 considers the development as a single consolidated development site. The total site area will be 3,702 sgm. Tn this option three potential building envelopes are explored on the site beiing:

- Option 2a: A single building to the minimum setbacks
- Option 2b: Two separate buildings
- Option 2c: A single building in a 'L' shape.

Overall building envelope massing has been identified by first considering the minimum building setbacks as outlined in the Hornsby DCP 2013. Key insights include:

- Setbacks for the tower form are 12m on Oxford Street and 6m from side boundaries and Cambridge Street.
- Podium level will range from 3 storeys on Cambridge Street to 2 storeys on Oxford Street due to the change in levels across the site.

Key design responses of this option are:

#### OPTION 2a

- Windows to habitable rooms on northern side maximise solar access and requires a 12m setback.
- Windows to habitable rooms on Oxford Street creates active facade.
- Screened windows to habitable rooms on southern boundary adjoining laneway incorporates 5m wide laneway allowing for minimum 6m setback.
- Windows to habitable rooms on Cambridge Street creates active facade.
- Screened windows to habitable rooms on western boundary adjoining school allows for 9m setback.
- Maximum floor plate dimensions / area exceeds HDCP guidance.

#### OPTION 2b

- Blank facade to northern boundary allows for minimum 6m setback
- Lift cores located on southern and western facades.
- Blank wall on eastern facade of western tower allows for minimum 6m separation.

#### OPTION 2c

Blank facade to western boundary allows for minimum 6m setback

## **KEY INSIGHTS**

- Option 2a results in a large bulky tower form that would be highly visible from the train station and exceeds maximum dimensions / floor plate as outlined in the DCP.
- Option 2b results in one good size tower and one significantly smaller one which results in inefficient development and potential cost implications.
- Option 2a results in significant overshadowing of any communal areas.

## Legend Amalgamation site Podium/basement setback Tower setback Lift & stairs Potential extended space Frontages to habitable rooms Screened frontages or to nonhabitable rooms Frontages to non-habitable rooms → Building setbacks

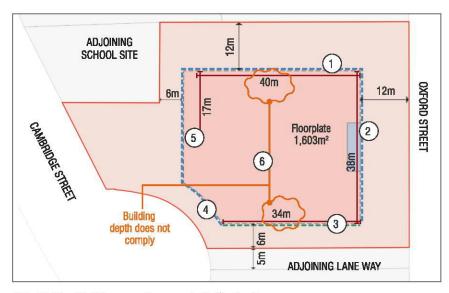
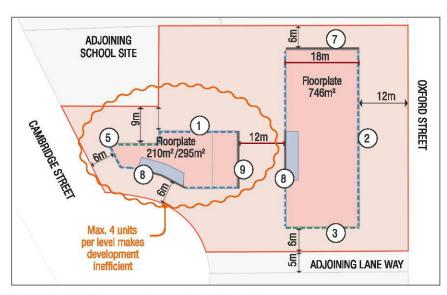


Figure 44: Building envelope analysis Option 2a



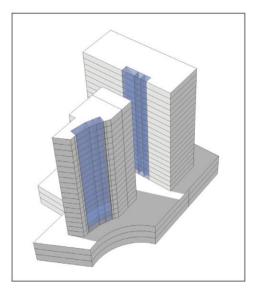
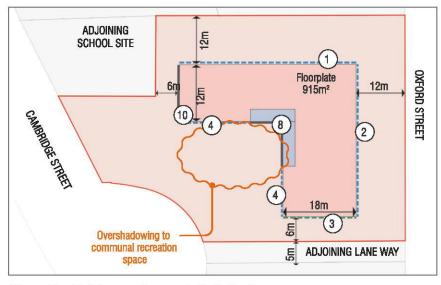


Figure 45: Building envelope analysis Option 2b



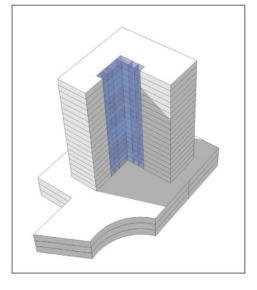


Figure 46: Building envelope analysis Option 2c

## 5.0 DESIGN RESPONSE

This section of the report provides an overview of how the proposed development responds to the requirements of the planning guidance and site context.

#### 5.1 **BUILDING MASSING**

The overall massing of the proposed development consists of a two storey podium form, a slender tower that is broken up into three vertical elements through articulation and a one-storey roof form. The tower uses a simple material palette and adopts a curvy building envelope in response to the curved frontage of Cambridge Street alongside the roundabout. Curved balconies to the Cambridge Street frontage repeating on all floors with curved podium create continuity of an overall expression. The central circulation core creates a focal element from the street and completes the massing in a focus at the top of the building.

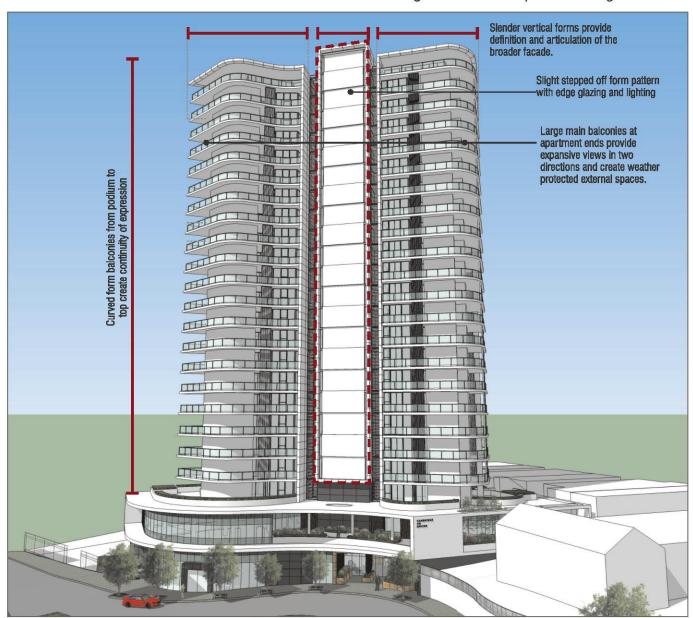


Figure 47: View of concept design from southwest

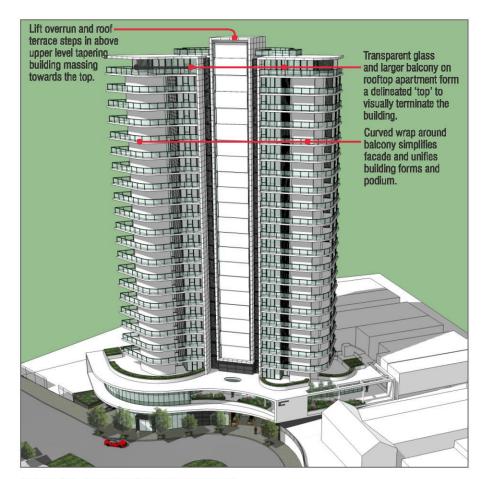


Figure 48: Birdseye view from southwest

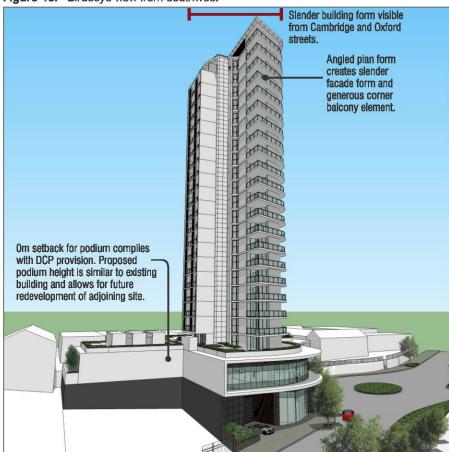


Figure 49: Perspective elevation view from northwest

#### 5.2 COMMUNAL **RECREATION AREA**

The major communal recreation area of the project is located to north to receive high levels of sunlight during mid winter. In addition, it also provides local short views from the tower. Landscape edges have been introduced on the top of podium communal open space to prevent overlooking to the school playground. It is noted that the Catholic school may be redeveloped and a change of use could occur.

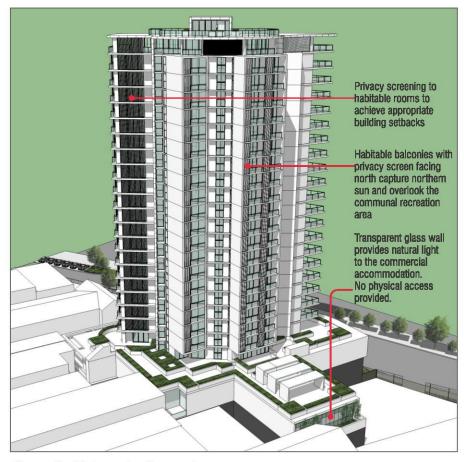


Figure 50: Birdseye view from northeast



Figure 51: Cambridge Street frontage interface

Covered entry way from laneway to main commercial access and residential lobby at upper ground level

Generous entry volume with high ceilings defined by planter box and a green wall separate commercial and residential access.

#### 5.3 RESPONSE TO HERITAGE **BUILDING AND LANEWAY**

The proposed new development will have no physical impact and minimal visual impact on the neighbouring heritage item ('School of Arts') located at 9 Oxford Street, Epping for the following reasons:

- The proposed works will have no physical impact on the adjacent heritage item or its curtilage. The existing curtilage and immediate setting of the heritage item is wholly retained by the proposed works without impact.
- There is already a visual and physical separation (laneway) between the heritage item and the site of the proposed new development. Further, it is recognised that the existing context of the rear of the heritage item has already been modified due to the laneway and roundabout.
- The heritage item is recessed from the laneway and fronts Oxford Street. The rear of this building was not designed to be seen/appreciated 'in the round' from the rear.
- The side facades of the heritage item have simple pilasters and windows and no other architectural features. The principal presentation of the heritage item as viewed from Oxford Street will be entirely retained.
- The proposed new building is designed with a podium base and an articulated façade to the laneway. This will be a better architectural response than the existing building on the subject site and will create greater visual prominence to the heritage item.
- The construction of the proposed new building is within an area that has an approved maximum building height of up to 72m (22 storeys). The potential visual impact that multi-storey developments in the immediate area may have on heritage items in the vicinity has been both recognised and accepted by the planning process and relevant controls.
- Although it is acknowledged that the new building will be visible in the vicinity of the heritage item, the visual impacts associated with this are considered to be reasonable and acceptable when considered within the wider context of future larger scale development of the area in Epping Town Centre and in the vicinity of Epping Railway Station.

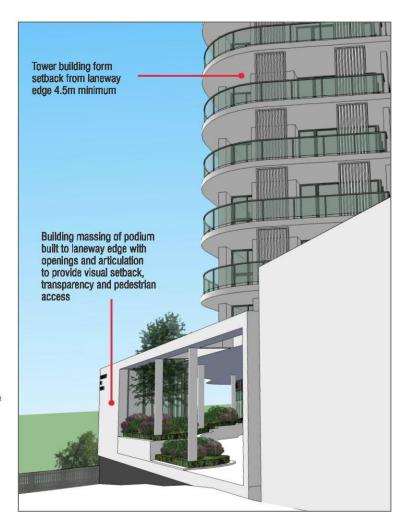


Figure 52: Massing response to laneway and heritage building opposite

Colonnade podium edge with punched openings to the roof and open landscape open up the vista through the covered entry way to the upper residential lobby and main commercial entry, which allows better activation and surveillance to the laneway.



Figure 53: Laneway interface

#### 5.4 **BUILDING HEIGHT**

The proposed building is a maximum of 72m high above natural ground for the main massing form. The lift core projects slightly beyond this (by an additional 600mm) forming a visual focus and 'top' to the building. The total number of storeys is 23 storeys as read from Cambridge Street and 22 storeys from the laneway and adjoining level.

#### PROPOSED DESIGN SUMMARY **TABLE**

Building height	72.6m
	23 storeys
Total GFA	7991.4m <sup>2</sup>
Site area	1,785m²
FSR	4.5:1

# Legend \_\_\_ Subject site boundary 72m max height Natural ground line Retail space Commercial uses Residential uses **Facilities** Basement parking

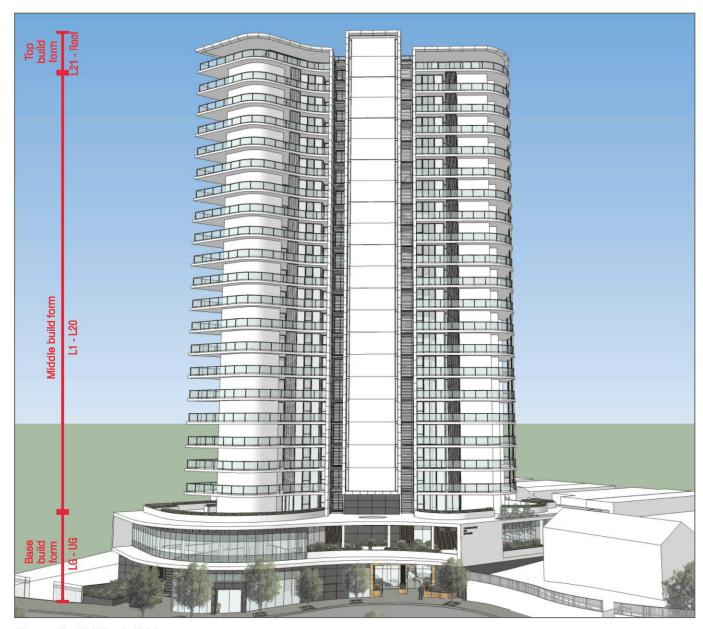


Figure 54: Building height

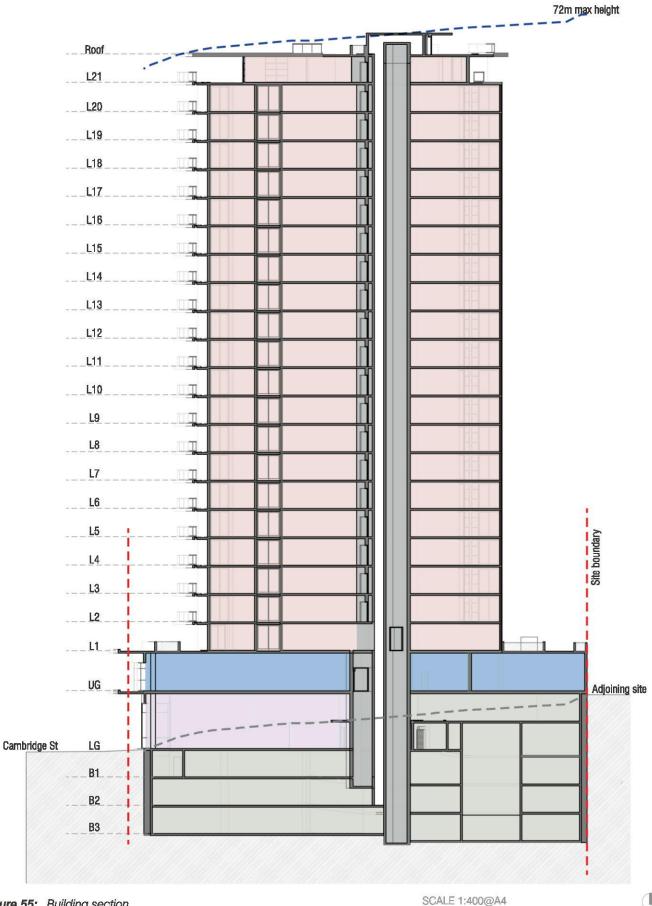


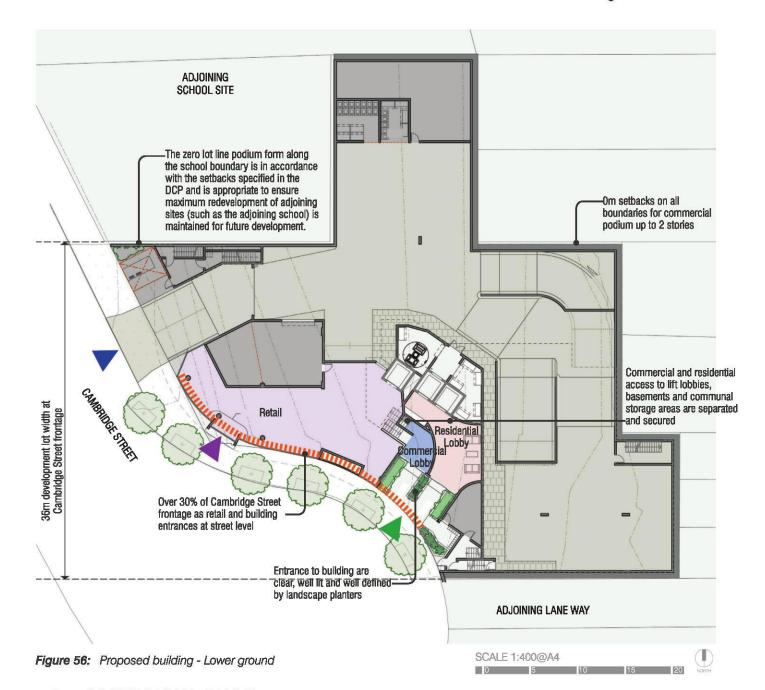
Figure 55: Building section

#### 5.5 **FLOOR PLANS**

The following pages provide an more detailed discussion on the indicative floor plans and demonstrate responses to design guidance contained with the Hornsby DCP 2013 and SEPP 65.

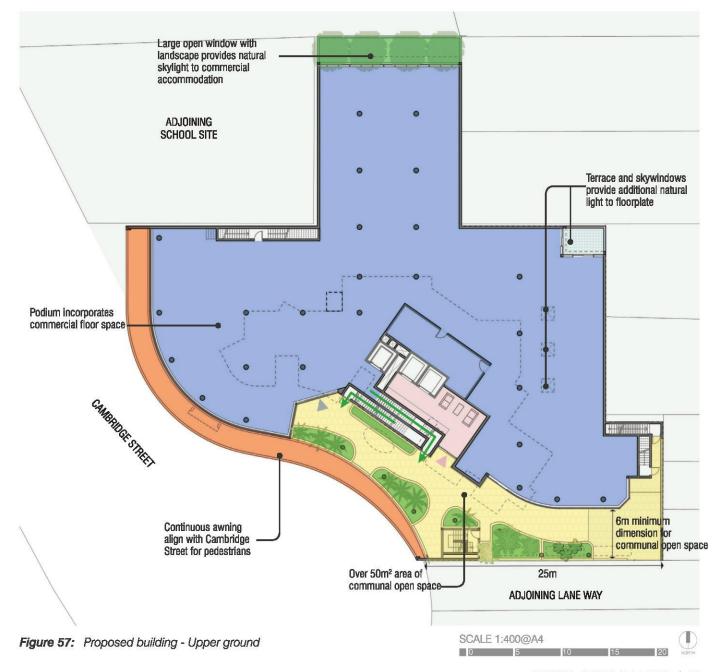
Retail GFA	174.31m <sup>2</sup>
Commercial GFA	12m²
Residential GFA	42.08m <sup>2</sup>
Applied storeys	1
Subtotal GFA	228.39m <sup>2</sup>
Total GFA to this level	228.39m <sup>2</sup>





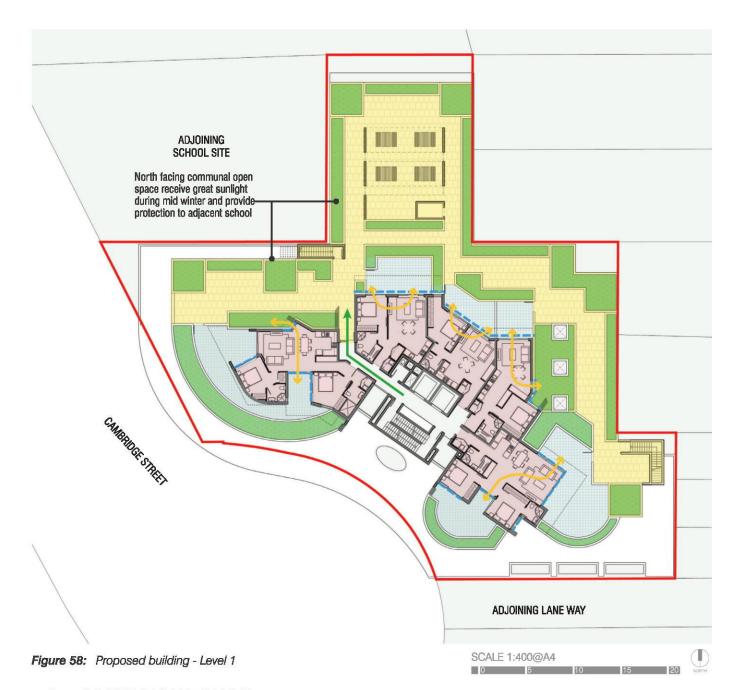
# Legend Subject site Commercial uses Residential uses Landscape planter Communal recreation area Awning below Balconies/terraces Commercial main access Residential access Communal open space access from the building lobby

Commercial GFA	1174.36m <sup>2</sup>
	39.82m <sup>2</sup>
Residential GFA	32.83m <sup>2</sup>
Applied storeys	1
Subtotal GFA	1247.01m <sup>2</sup>
Total GFA to this level	1475.40m <sup>2</sup>



# Legend Subject site Residential uses Landscape planter Communal recreation area Balconies/ terraces Natural cross ventilation Communal open space access from the residential lobby Living room windows overlook communal open space

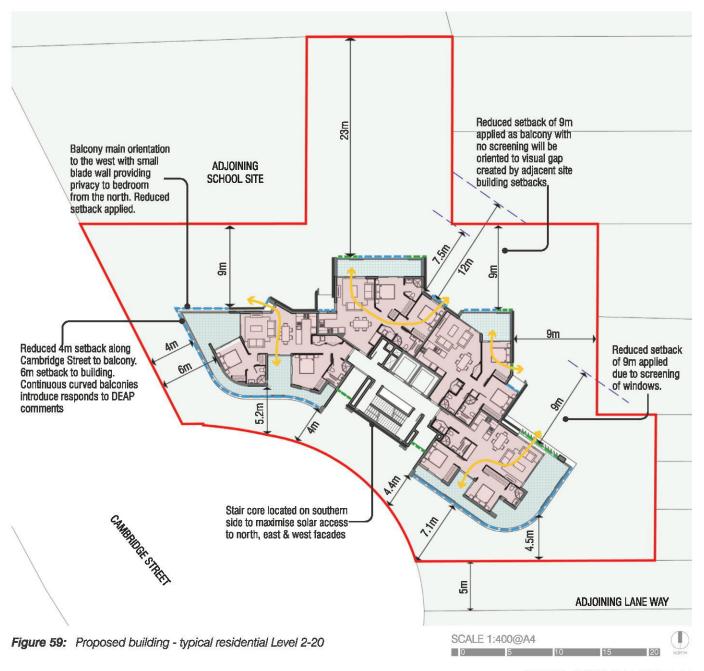
Floorplate GFA	324.40m²
Applied storeys	1
Subtotal GFA	324.40m <sup>2</sup>
Total GFA to this level	1799.80m <sup>2</sup>



# Legend Subject site Balconies/terraces Residential uses Natural cross ventilation Frontages to habitable rooms Screened frontages or to non-

habitable rooms Solid walls

Floorplate GFA	315.95m <sup>2</sup>
Applied storeys	19
Subtotal GFA	6003.05m <sup>2</sup>
Total GFA to this level	7802.85m <sup>2</sup>



## Legend

Subject site

Balconies/terraces

Residential uses

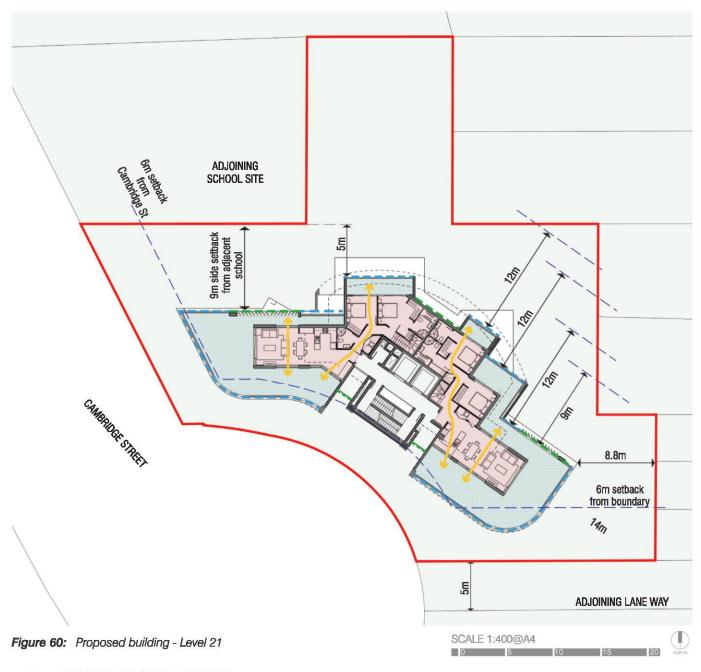
Natural cross ventilation

Frontages to habitable rooms

Screened frontages or to non-habitable rooms

Solid walls

Floorplate GFA	188.55m²
Applied storeys	1
Subtotal GFA	188.55m²
Total GFA to this level	7991.40m <sup>2</sup>



# Legend Subject site Balconies/terraces Landscape planter



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