Elsternwick Built Form Framework

Elsternwick, VIC

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1.0 Introduction

1.1 Purpose

The Built Form Framework (the Framework) sets out the preferred built form outcomes for the commercial area of the Elsternwick Activity Centre to ensure new development achieves the vision for this Major Activity Centre in a sustainable way, now and into the future. These built form outcomes include building heights, setbacks, interfaces with surrounding residential land and access/egress and are further supported by design principles guiding detailed design outcomes.

The Framework is supported by the Existing Context Report which summarises relevant policies and projects that impact on the future for Elsternwick including Council's climate emergency declaration. It is also informed by the following actions:

- Reviewing the extensive existing analysis, physical and policy context of the Activity Centre, including the 2018 Elsternwick Structure Plan.
- Proposing appropriate updates to the Centre's vision and objectives based on new and emerging policies and best practice urban development.
- Developing a set of design principles to achieve the objectives and realise the vision.
- Filling new and emerging gaps in analysis and testing of built form scenarios that align with the design principles to assess their impact on the Centre and surrounding area.
- Developing preferred building heights, setbacks, solar access protections, vehicle access and frontage requirements for development based on their ability to achieve the agreed principles.
- Providing additional design recommendations to ensure development realises the Centre's vision and objectives.

The Framework will form a key component of the updated Structure Plan being prepared by Council that also includes recommendations regarding public space, traffic and parking.

1.2 Context

The Framework applies to the commercial areas of the Elsternwick Activity Centre plus an area of residential growth zoned land to the northeast of the intersection of Nepean Highway and Glenhuntly Road and the former ABC and Police Station site, south of Rippon Lea Estate.

Elsternwick is well located on the Sandringham Train line and directly abutting Nepean Highway. It is approximately 8km from Melbourne's City Centre, two stops south east from the Carlisle Street (Balaclava) Major Activity Centre and less than 2km west of Elwood Beach.

Elsternwick is one of six Major Activity Centres in the City of Glen Eira along with Bentleigh, Carnegie, Caulfield Junction, Glen Huntly and Moorabbin Junction. Carnegie and Glen Huntly are easily accessible on Tram Line 67, which runs through Elsternwick on Glenhuntly Road and connects Glen Eira to Melbourne's CBD.

Elsternwick Plaza is the study area's main public open space, centrally located adjacent to the train station. Hopetoun Gardens are located adjacent to the eastern boundary. Rippon Lea Estate is not public but the gardens can be accessed for free by locals at controlled times.

Figure 01: Elsternwick Built Form Framework boundary.

2.0 The Vision for Elsternwick

2.1 Vision

Elsternwick will be a safe, connected, accessible and liveable centre that embraces its historic character and strong cultural and village feel.

The centre will be a destination for its longstanding cultural and entertainment offerings, business and employment opportunities, and a range of quality local retail outlets and community spaces, providing a socially, environmentally and economically sustainable future.

2.2 Objectives

The following objectives were developed through consultation undertaken over the years prior to the development of the 2018 Structure Plan. They are the more specific steps that will help achieve the vision, also developed in the same consultation period. Since then, both vision and objectives have been updated to reflect changes such as Council's climate emergency declaration.

Place-Making

- Enhance Elsternwick's reputation as a cultural and entertainment hub.
- Celebrate the historic character and village feel of the Glenhuntly Road retail strip and heritage buildings.
- Support a network of active streets and shared zones that easily connect the community to facilities and each other.
- Create a network of open spaces that allow people to meet, connect and enjoy nature with space for landscape and canopy trees.
- Encourage landscaping and greenery.
- Deliver high quality urban design and architecture.
- Support safe, accessible and friendly streets.

Sustainability

- Ensure new development meets high environmental standards.
- Deliver on Council's commitment of net zero carbon emissions by 2030.
- Grow the urban forest.
- Design for flood mitigation.
- Promote blue and green infrastructure to enhance liveability.

Development

- Recognise Elsternwick's role in accommodating a growing population.
- Protect and enhance the strong heritage character of Elsternwick's commercial strip.
- Encourage a range of housing typologies to cater for a diverse population.
- Ensure new development contributes to and enhances the character of Elsternwick through high quality urban design and architecture.

Economy

- Boost evening activity and support quality local shopping, dining and entertainment options.
- Encourage offices and employment opportunities.
- Support a diverse range of uses within the activity centre.

Transport

- Encourage walking, cycling and use of public transport.
- Manage parking in a way that provides convenience while recognising the central location of the train station and the viability of walking and cycling.
- Provide a clear street hierarchy and infrastructure that will support a 50:50 transport mode shift and safe streets for all.

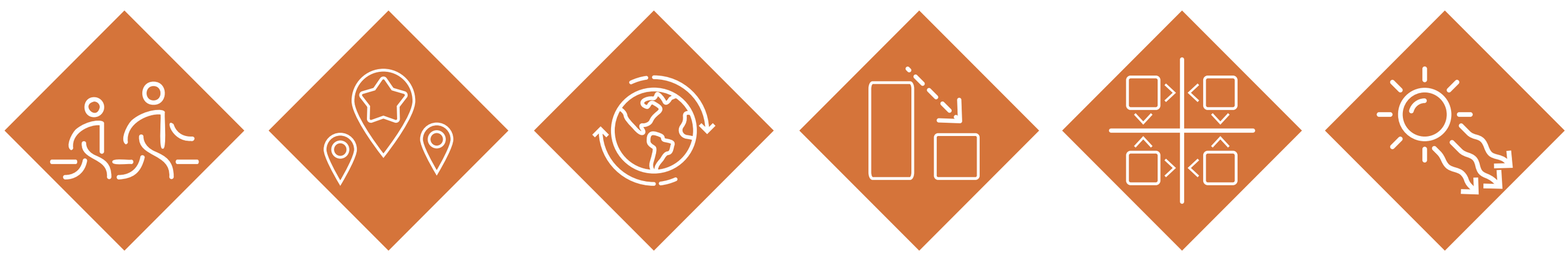
Elsternwick Plaza.

3.0 Design Principles

The following principles will provide guidance to achieve the objectives and realise the vision. Together they enhance Elsternwick's amenity, protect its established character and ensure it can perform its role as a major activity centre. They were developed as a best practice urban design response to the vision and objectives.

3.1 Elsternwick's built form design principles

Six design principles have been developed to guide the delivery of built form outcomes in Elsternwick, as identified below. Each principle is discussed in detail throughout this chapter.



Walkability & Accessibility

Heritage & Character

Environmentally Sustainable Design

Streetscapes, Interfaces & Transitions

Functionality & Legibility

Solar Access

3.1.1 Walkability & Accessibility

Ensuring a walkable and accessible Elsternwick for all is key to sustaining a connected, active and healthy community and ensuring its economic and environmental sustainability. This will allow Elsternwick to perform its role as a Major Activity Centre.

New development will respond to the valued human scale of existing buildings promoting pedestrian movement and maintaining the commercial focus of the area.

Built Form Drivers

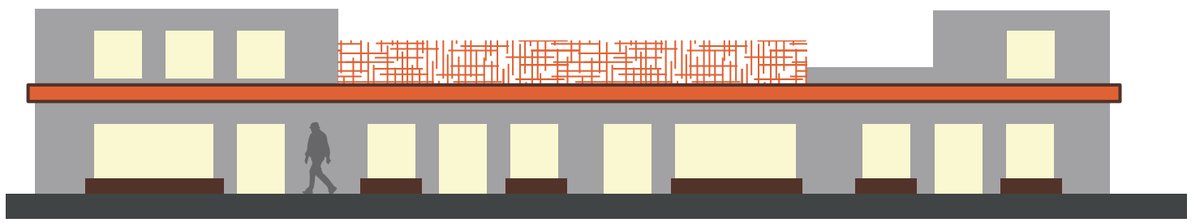
Fine Grain: This provides visual interest to the walking experience. It can be the result of the width of the street frontage and size of the lots, known as the subdivision pattern, where each lot has its own individual architecture, materials and/or use. The section of Glenhuntly Road between the train line and Orrong Road is a good example of a narrow subdivision pattern resulting in a fine grain streetscape.

It is recommended that new developments replicate this fine grain streetscape. Large tenancies are discouraged on Glenhuntly Road to maintain the village feel and historical fine-grain streetscape. Where larger floorplates are consolidated or large properties are proposed to be developed, a fine grain can be created through the use of vertical architectural elements that are repeated and break up large expanses of glazing and walls. Consolidation of shops can occur internally forming larger tenancies; however a narrow, vertical rhythm should be delivered on the façade, as shopfront consolidation is discouraged.

Active Frontages: These provide visual or physical engagement between the built form and the public realm, increasing activity and safety. This can be through operable windows, doors, balconies and other elements that allow interaction between the building and the street. Different uses will require specific design responses.

It is recommended that active frontages are provided to all public open spaces and streets. Where active frontages are not able to be achieved at ground level, such as in service lanes, they should be incorporated at the first and second levels at a minimum to provide passive surveillance over the streetscape and open spaces.

Main Entrance: These provide physical connections and engagement between the built form and the public realm, increasing activity and often contributing to wayfinding. Commercial uses provide engagement during business hours while residential uses extend activity beyond these hours. This is key to delivering a safe walkable environment.



Engaging streetscapes increase walkability.

It is recommended that the primary pedestrian entrance, to both residential and commercial buildings, is provided on the main street available to the property, in order of street hierarchy. Residential entrances in particular should be clearly distinguishable enhancing wayfinding and safety.

Main entrances must be at the same level as the footpath and meet accessibility requirements.

Where residential units interface with the public realm on the ground floor, these should have direct access from the street.

Awnings: These provide weather protection to ensure walking and spending time in the activity centre can be carried out during rain, high UV and strong winds.

It is recommended that awnings are provided on all main streets, according to designated street hierarchy, and main connections to the train station and other key community infrastructure. Awnings should provide continuous shelter along the streetscape and be of a consistent height, depth and form.

Signage: This provides visual interest and aids wayfinding. Both are key for enabling an enjoyable and efficient walking experience.

It is recommended that hanging signage under awnings mark the location of shops and services. Signs that cover shopfront windows are discouraged.

Limited Crossovers: Vehicle crossovers interrupt pedestrian flow, reduce accessibility and create hazards. From a transport safety perspective, crossovers create a point of conflict between vehicles and pedestrians, including confusing priorities for who has right of way depending on the design and function of a vehicle access point. Limiting crossovers is key to ensuring a safe and walkable environment.

It is recommended that crossovers are consolidated if possible, and that these are then separated as much as possible. Vehicles must be able to see pedestrians as they approach the property boundary when exiting the site. No new crossovers should be created on Glenhuntly Road or on other streets where retail frontage would be interrupted, with these properties relying on laneways and rear access where possible.

Glenhuntly Road is a good example of a fine grain streetscape, active frontages, canopies, multiple entries, signage and limited crossovers creating a highly walkable environment.

3.1.2 Heritage & Character

Protecting and enhancing existing character and developing the desired character in urban renewal areas are key to ensuring a sense of place and identity.

Built Form Drivers

Design Response to Heritage: Development must protect the integrity of recognised historical streetscapes and enhance the heritage character. This includes respecting the architectural form, style, rhythm and materiality and considering how new development can complement these elements. Mandatory interfaces for street wall heights and setbacks are recommended in heritage areas to protect the streetscape and architectural form.

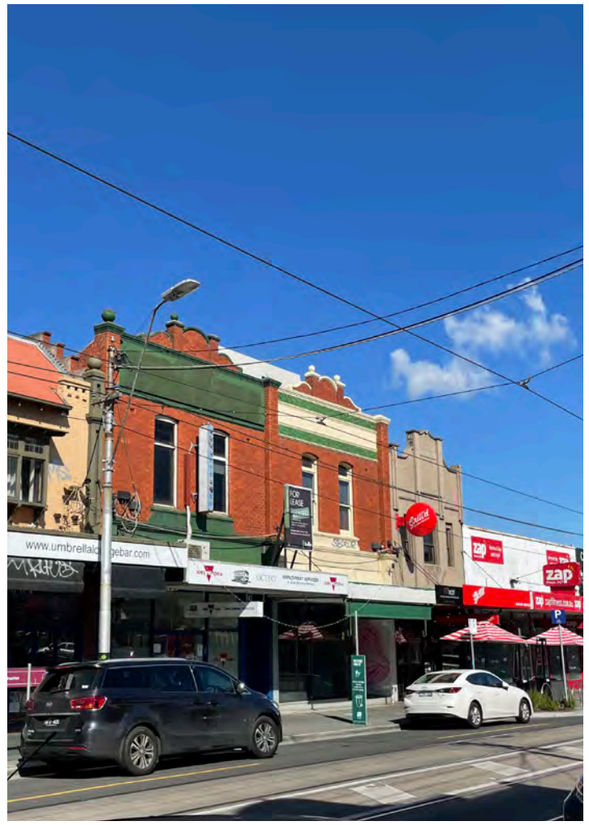
Existing and Preferred Character: New development must respect the existing or preferred character. Development proposals must identify the existing key features of the area and provide an appropriate design response. Where a new character is being developed (in urban renewal areas, for example) the desired character must be expressed and supported by new development. Recognised historical streetscapes and significant buildings must be respected and integrated into the new character, forming part of the identity of the area.

The character of the area is made up by multiple key features that may include the development pattern (such as street alignment, patterns of use, landscaping), the scale and characteristics of built form (such as building mass, setbacks, site coverage) and architectural styles (such as façade rhythm, architectural consistency and roof form). Many other notable features can contribute to the existing or preferred character. It is essential to focus on the interaction between features and characteristics, as not all features contribute to the character.

Building Services: These are required for the safe and efficient function of buildings. Inadequate design and placement can hinder their function and risk compromising the character or heritage of an area. Therefore, the design and material used for services should follow safety and operational requirements while softening their presence. Service cabinets should be located away from the street frontage where possible and be designed to integrate into the building. It is recommended that services are incorporated into the façade's design and use high quality materials.

Roof top services should be concealed from view, both from the street and from surrounding buildings as much as practicable, noting that some buildings may look down on the roof top services.

Heritage street wall forms.



Glenhuntly Road heritage architecture and character.

3.1.3 Environmentally Sustainable Design

Council has declared a climate emergency and joined the Eastern Alliance for Greenhouse Action in recognition of the impact climate change has on our planet. All new development should address and adopt both mitigation and adaptation strategies to reduce their impact and carbon emissions in line with Council policies.

The relative density and mix of uses in the Elsternwick MAC allow for the efficient delivery of services, energy savings and viable sustainable transport options.

Built Form Drivers

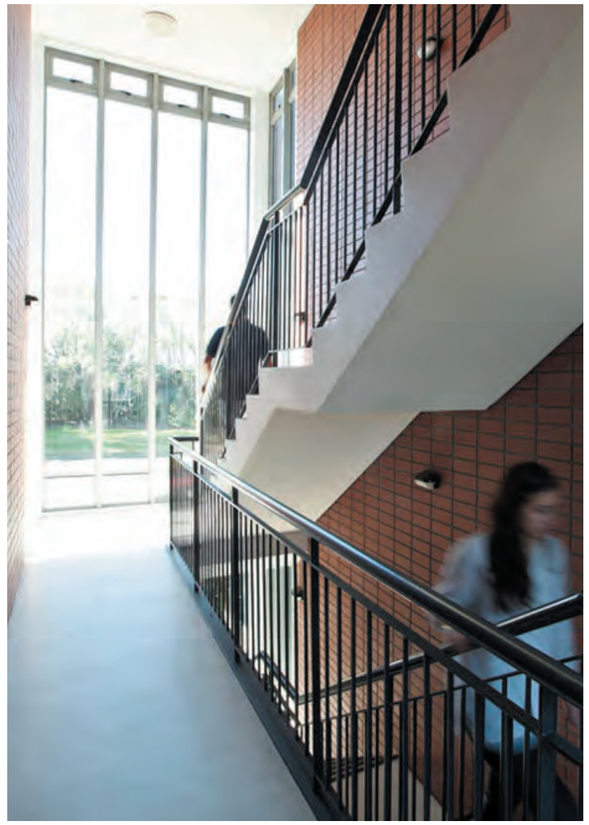
Building Orientation: Buildings should be oriented to make appropriate use of solar energy, reduce reliance on artificial heating and cooling and not unreasonably impact on the energy efficiency of existing dwellings. Locate living spaces and orientate floorplates appropriately to reduce solar impact in warmer months and maximise it in cooler months.

Environmentally Sustainable Design Measurement: All efforts to incorporate ESD are encouraged. Embed clear ESD principles, including energy performance, integrated water management, indoor environment quality, sustainable transport, waste management and urban ecology, in any building design and development. Where feasible, involve a specialist ESD consultant early in the design to ensure best practices are implemented and measureable. The Sustainable Building and Infrastructure Policy should be considered for all new development.

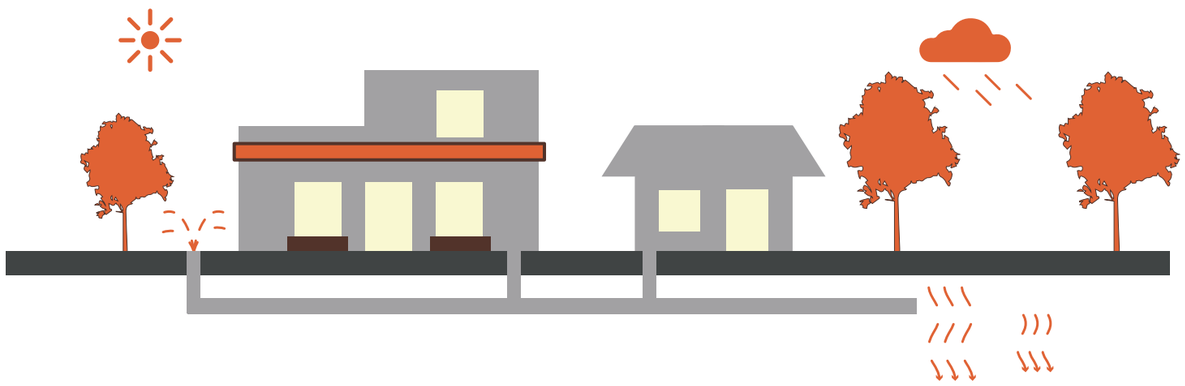
Greening Buildings: Buildings should incorporate opportunities for integrating landscape at all levels, including ground, roof tops, podiums and vertical walls. This landscape should include opportunities for increased flora diversity, species that support pollinating insects and birds and increased canopy coverage.

Sustainable transport: Developments should encourage people to make sustainable mode choices by providing infrastructure such as bicycle parking in line with or exceeding Better Apartment Design Standards and electric vehicle power stations within car parks and by ensuring safe and pleasant walking and cycling egress and access. Car share initiatives should be encouraged to reduce vehicle ownership and free up valuable space.

Effective sun shading for energy efficiency.



Sunlight and ventilation in common areas for energy efficiency.



Environmentally Sustainable Design.

3.1.4 Streetscapes, Interfaces & Transitions

Transitioning appropriately to sensitive uses and heritage is important to protect amenity and character. Visual bulk, solar access and overlooking must all be considered. Interfaces can be directly abutting a property, a street, laneway or public open space, and include the front, side and rear of the building. The street wall is a key component of the streetscape and character and is reinforced by recessive upper levels.

All new built form must avoid unreasonable impacts on existing and potential future neighbouring developments and allow for the equitable development of neighbouring properties. The appropriate separation between buildings will help protect internal amenity, provide access to light and airflow between buildings and create the desired character along the street.

Built Form Drivers

Interface Profiles: These can help manage the impact of visual bulk, overshadowing and overlooking.

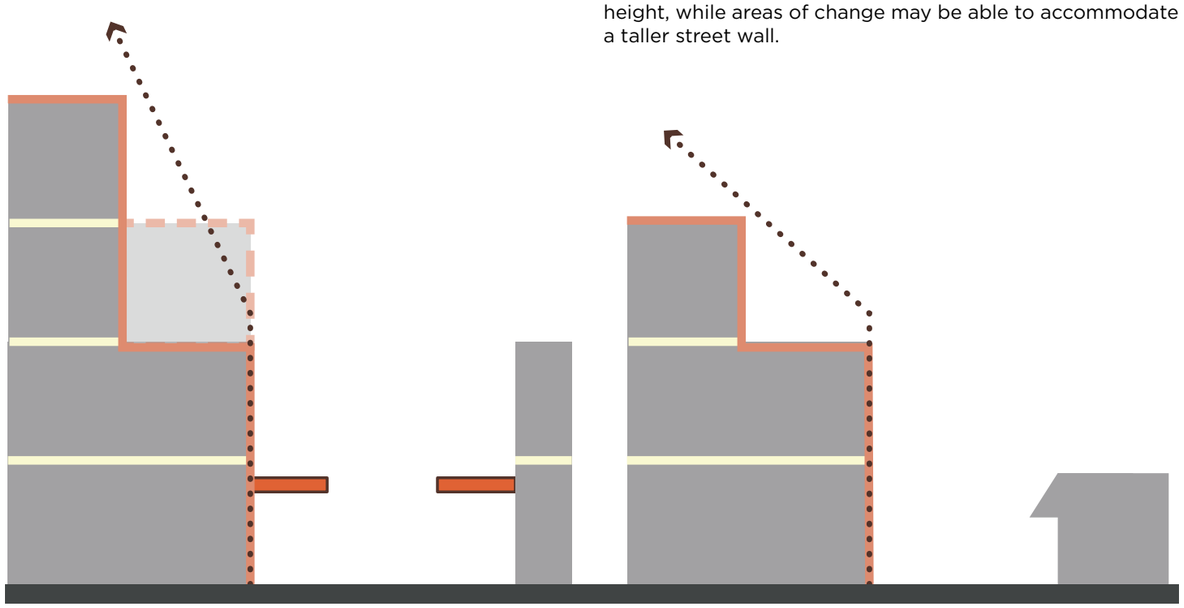
Ensure development responds to sensitive interfaces by:

- considering the overall scale and form of new buildings.
- providing a suitable transition to low scale residential areas.
- protecting these properties from an unreasonable loss of amenity through visual bulk, overlooking and overshadowing.

It is recommended that interface profiles are tailored to each interface in accordance with the preferred height, character of the street, heritage and landscape setbacks.

Streetscape Ratio: The street wall height provides a feeling of enclosure when compared to the street's width. The height must avoid overwhelming the street and should reinforce the existing street edge of the area. The height can be consistent or variable depending on the desired character.

It is recommended that the street wall height is tailored to each interface in accordance with the land use and the street's width, hierarchy and character. Streets where heritage prevails must maintain the existing street wall height, while areas of change may be able to accommodate a taller street wall.



Built form transitions to public realm and neighbouring properties must respond to the sensitivity of uses and heritage.

Awnings/overhangs: Weather protection awnings over the footpath play a role in creating a feeling of enclosure.

It is recommended that awnings are provided on all main streets, active frontage and at building entrances, as well as main connections to the train station and key community infrastructure. The height of the awning must be adequate to provide shelter and must match existing abutting overhangs for consistency.

Street Wall Setback: This plays a key role in the character of the area and the activation of the main street.

It is recommended that the street wall is consistently built to the boundary on the main streets and around corners to side streets to ensure street activation through active frontages and engagement. This also avoids the creation of concealment places, which reduce safety.

Upper Level Setbacks: These can help reduce the impact of wind, allow for balconies that create engagement with the street and obscure the upper levels behind the street wall. They also help reinforce the height of the street wall as the dominant architectural feature of the street.

It is recommended that the depth of upper level setbacks is tailored to each streetscape interface in accordance with the street wall height, character of the street and heritage.

Upper Level Materiality: This can help the street wall stand out and reduce attention to the upper levels.

It is recommended that visually recessive materials are used in upper levels, in contrast with the street wall and accounting for heritage considerations.

Existing transition on Gordon Street.

3.1.5 Functionality & Legibility

All new built form must enhance its context's coherent and imageable pattern and respond to activities and existing hierarchies. Developments must ensure the efficient function of their operations without hindering that of their neighbours.

Built Form Drivers

Entrances: Building entries must clearly define and assist in the legibility of the development along the streetscape. They must be clearly defined at street level, providing a sense of address and transitional space. They must reinforce and visually express the pattern of entries along the street frontage. Entries into retail, commercial, residential and community and cultural amenities must be architecturally articulated to reinforce the activity contained.

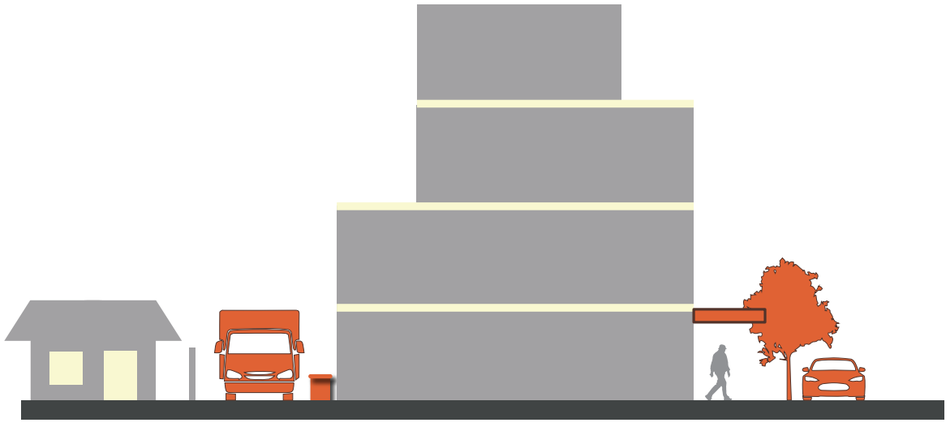
Vehicle Access/Egress: Its design and location must minimise crossovers and impact to traffic. It must be placed in a logical location, in accordance with the street hierarchy.

It is recommended that vehicle access/egress is provided via service lanes and secondary streets and that no vehicle access is allowed on the primary activation corridor along Glenhuntly Road. This will allow for pedestrian safety and activated frontages.

Services: Their design and location must reinforce the streetscape's pattern and be in accordance with their function and the street hierarchy.

Street Frontages: A fine grain of entries, vertical elements and windows along streets must be provided to reinforce the pattern and activation, movement in and out of buildings and passive surveillance.

Landmarks: Existing landmarks are points of reference and should be exalted and easily visible. Buildings at prominent sites, such as major intersections and both entrances to the activity centre on Glenhuntly Road, will become landmarks due to their visual prominence and location. The architectural response at prominent sites must be of a high quality and reinforce Elsternwick's character.

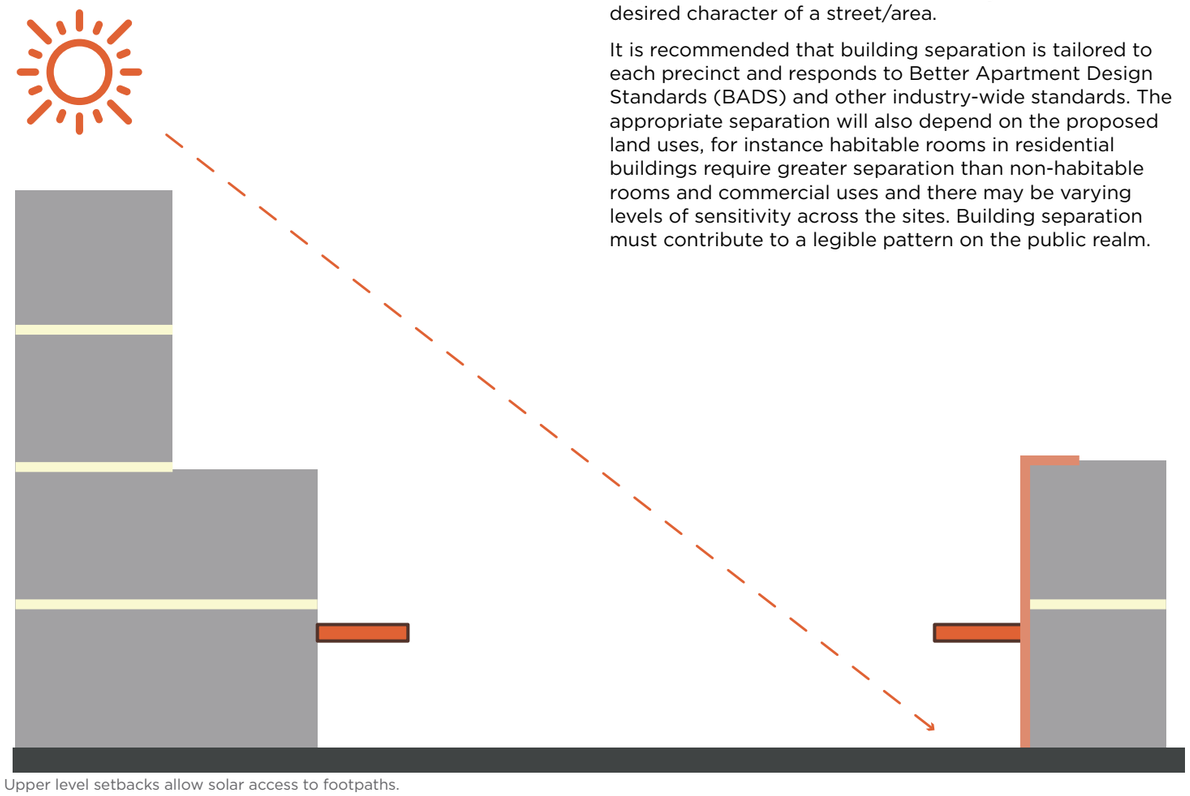


Vehicle access and deliveries via rear laneways ensure a safe and active pedestrian environment along main streets.

Services are to be accessed from secondary streets and service lanes.

3.1.6 Solar Access

Appropriate solar access to the public realm is key to foster activity and support healthy growth of vegetation. Sunlight provides warmth and light in the cooler, darker months and can enhance or hinder the walking or outdoor dining experience depending on the season. Different activities require different amounts of sunlight and shade. The purpose of the open space will dictate the required access to sunlight. Development must ensure appropriate solar access to neighbouring private open space and solar panels.



Upper level setbacks allow solar access to footpaths.

Built Form Drivers

Public Space Hierarchy: This provides categories for public spaces according to their differing purposes, the required levels of comfort, and levels of activity.

It is recommended that public spaces are categorised into two classes of solar protection: winter solstice and equinox controls, which will then impact on the built form controls surrounding the spaces.

Street Hierarchy: This provides categories for streets to ensure their comfort and activation, according to their purpose.

It is recommended that solar access to footpaths on main streets is protected for periods of time to encourage on-street activity and create a pleasant walking environment.

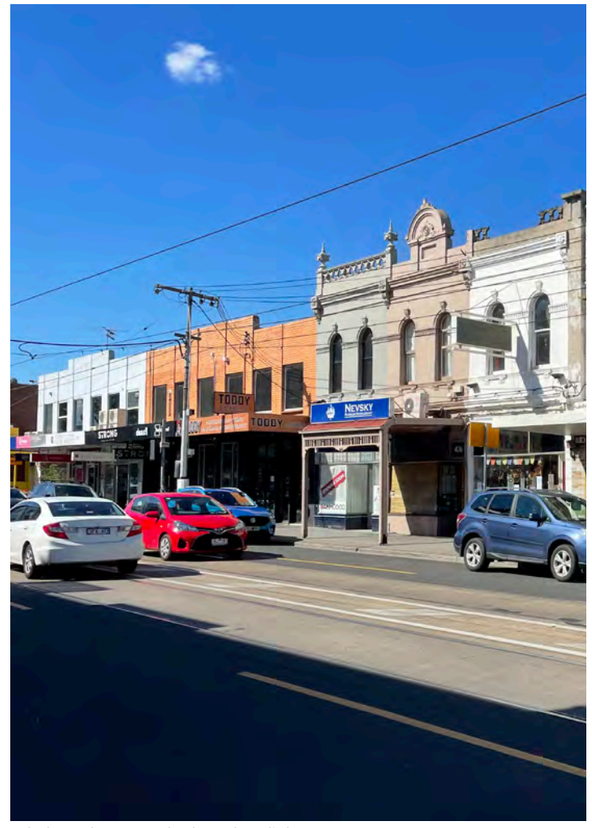
Building Separation: This can help manage the impact of overshadowing and overlooking in apartments, ensure equitable development, views to the sky and create the desired character of a street/area.

It is recommended that building separation is tailored to each precinct and responds to Better Apartment Design Standards (BADS) and other industry-wide standards. The appropriate separation will also depend on the proposed land uses, for instance habitable rooms in residential buildings require greater separation than non-habitable rooms and commercial uses and there may be varying levels of sensitivity across the sites. Building separation must contribute to a legible pattern on the public realm.

Along the heritage precinct, a 'tooth and gap' approach is encouraged on upper levels above the streetwall, allowing for building breaks and added setbacks that increase solar access and sky views, avoiding large expanses of built form.

Equitable Development: Principles of equitable development will allow sites within the Activity Centre to develop in accordance with the vision without preventing neighbouring sites from achieving similar outcomes. The assessment of equitable development should be undertaken on a site by site basis. However, the following general principles apply:

- development should not depend on borrowing amenity from neighbouring sites (amenity includes, air, daylight, sunlight, views)
- equitable does not mean equal and larger sites are generally considered to be able to provide a greater amount of amenity, such as setbacks, than smaller, neighbouring sites
- the assessment of equitable development should be forward looking and not rely on existing encroachments to justify continued encroachments
- where a development proposes construction on the side boundary, with the expectation that the boundary wall will be built against in the future, the boundary wall should be treated in a visually interesting way providing a reasonable appearance in the interim.

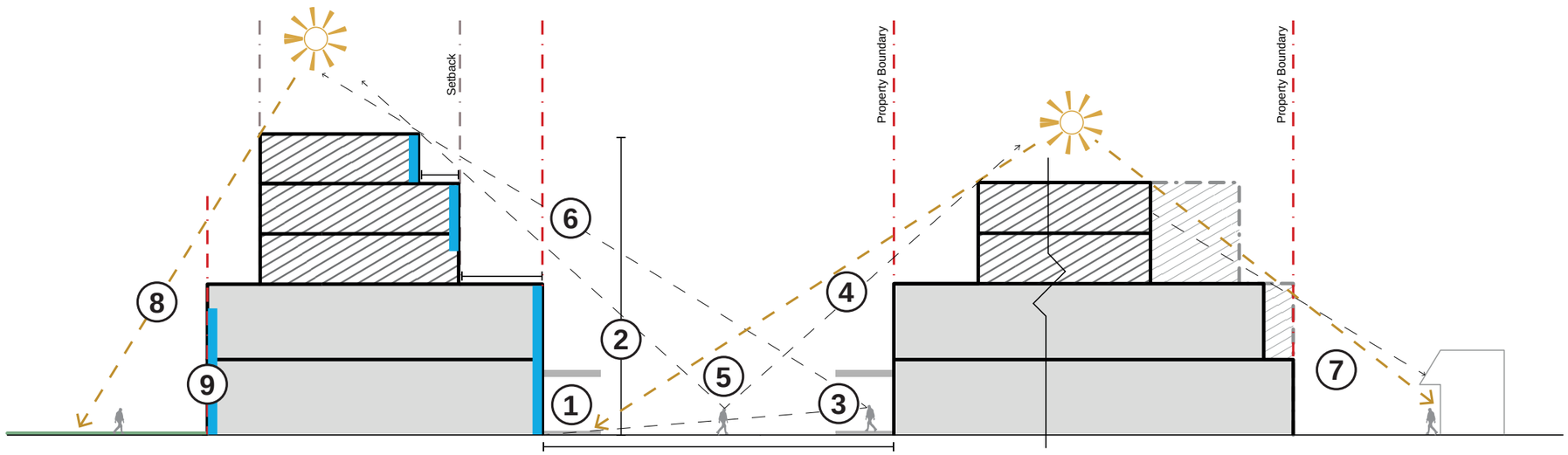


A balance between shade and sunlight.

4.0 Parameters & Influences

The following is a summary of the key factors that determine the preferred building envelopes. These respond directly to the Principles and include the analysis and testing of different scenarios. The results provide the recommended building envelope requirements for the Elsternwick Activity Centre to accommodate reasonable increased growth while retaining its valued character.

4.1 Summary of Key Factors



Built Form Testing

The following assumptions have been used to develop and test the built form massing.

- Minimum floor to floor heights:
  - Residential: 3.2m
  - Commercial: 4.2m on ground floor and 3.8m above
  - Additional height provided for architectural elements on street wall for a total of 9m over 2 storeys.
- Floor plate dimensions:
  - The width of residential floor plates ranges from 14m to 22m for double-loaded buildings without a light court. Light courts are a minimum width of 6m. No single-loaded buildings were considered. All floorplates are planned for compliance with the updated Better Apartment Design Standards (BADS) which includes a maximum habitable room depth.
  - Commercial floor plates are to have a maximum of 15m from a natural light source to the centre of the plan or core.
- Preferred minimum building separation:
  - 0m – where joining the neighbours
  - 6m – where secondary outlooks face each other
  - 12m – for buildings up to 8 storeys
  - 18m – for buildings above 8 storeys

1. Heritage & Character
2. Streetscape Ratio
3. View Cone along Glenhuntly Road
4. Solar Access along Glenhuntly Road
5. Sky View Factor on Glenhuntly Road
6. Visual Bulk along Glenhuntly Road
7. Transitions to Sensitive Interfaces
8. Solar Access on Open Spaces
9. Active Frontages, Safety & Preferred Access

4.2 Key Factors

Heritage & Character

As one of the Design Principles integral to achieving the vision for Elsternwick, protecting and enhancing the heritage and character of the area is a key factor influencing the required built form controls. A large extent of the study area is within a heritage overlay (Elsternwick Commercial and Public Precinct) as is much of the adjacent land to the north (Elsternwick North). The area to the south is currently within a neighbourhood character overlay (Victorian & Edwardian Significant Character Area).

New built form must respond to the recognised heritage value of the contributory buildings and in particular their interface to Glenhuntly Road including the streetwall heights, zero setbacks to the retail street, small lots sizes, and rich materiality.

Recommendations to protect and enhance the heritage and character of Glenhuntly Road include the following:

- Ensure the street wall for new developments along Glenhuntly Road be no higher than the highest abutting neighbour and no lower than the lowest abutting neighbour. (The street wall height for new developments includes architectural details such as parapets, railings and balustrades).
- All new built form streetwalls must be built to the boundary on Glenhuntly Road to retain the 'main street' character.
- Setbacks above the streetwall are to be a minimum of 5m to retain the strong visual prominence of the low rise heritage streetscape. Smaller setbacks risk blurring the desired strong distinction between the low rise heritage and the new built form.

Heights can impact on heritage and character and have been tested in this chapter for their combined impact on visual bulk, solar access, sky views and view cones. The resulting height that achieves the required outcomes is recommended to be discretionary within the heritage overlay, with a mandatory interface on Glenhuntly Road that hides any levels above the preferred height. This will ensure retention of heritage and character values without reducing the capacity of the area to perform its role as a major activity centre.

Outside the proposed heritage boundaries new development should be able to accommodate greater heights, consistent with the role of an activity centre. Street wall and overall heights in these areas will be based on the desired character and surrounding context.

Elsternwick North (red)
Elsternwick Commercial & Public Precinct (yellow)
(Source: Nearmap, August 2019)

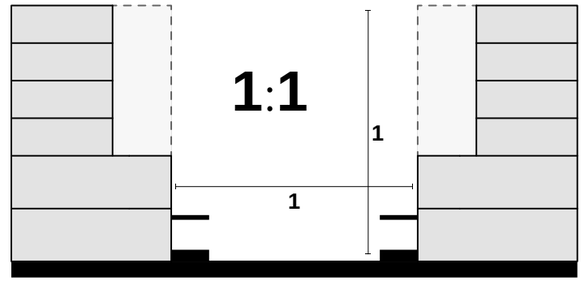
Figure 02: Heritage Protection Recommendation (Glen Eira Heritage Review [2018]).

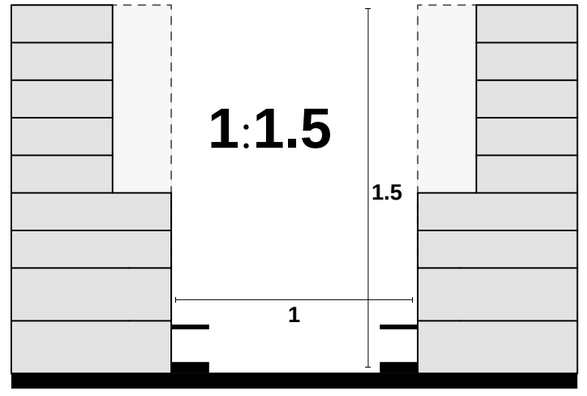
Streetscape Ratio

The pedestrian experience and character of an area is influenced by the sense of enclosure or openness of a street. A city street feels very different from a suburban street and this is partly attributed to the width of the road reserve compared to the height of the surrounding buildings. In places where density and the variety of land uses is expected to be higher, a good feeling of enclosure can be achieved when the building heights are at least the same dimension as the street's width (a 1:1 ratio). In these higher density areas, a sense of being near to activity with ample opportunities for passive surveillance can be produced while still retaining views up to the sky and good levels of daylight. This would mean that if the road and footpath were 21m wide, the buildings would be 21 metres high, or around 6 storeys. This ratio can increase, for example to 1:1.5+, creating a more 'urban' character without adversely impacting on the quality of the street if elements such as upper-level setbacks, building separation and good design details are also introduced.

Where streets have a defined heritage and character that is to be protected, such as the less enclosed and low to mid-rise nature of Glenhuntly Road, the preferred streetscape ratio should be between 1:1 and 1:1.3.

In other areas, a streetscape ratio above 1:1.5 is preferred to accommodate higher densities and increase pedestrian amenity through a feeling of enclosure and increased passive surveillance.





Solar Access along Glenhuntly Road

Solar access to footpaths impacts on the amenity of the footpaths and how they are likely to be used. In Melbourne, a sunny footpath is highly valued for on-street dining during the milder months (autumn, winter, spring) with cafes and restaurants taking advantage of locals' love of the café culture. For a vibrant retail strip such as Glenhuntly Road to be resilient, solar access to the southern footpath should be protected. This will allow said footpath to provide on-street dining opportunities and will retain foot traffic during the colder months.

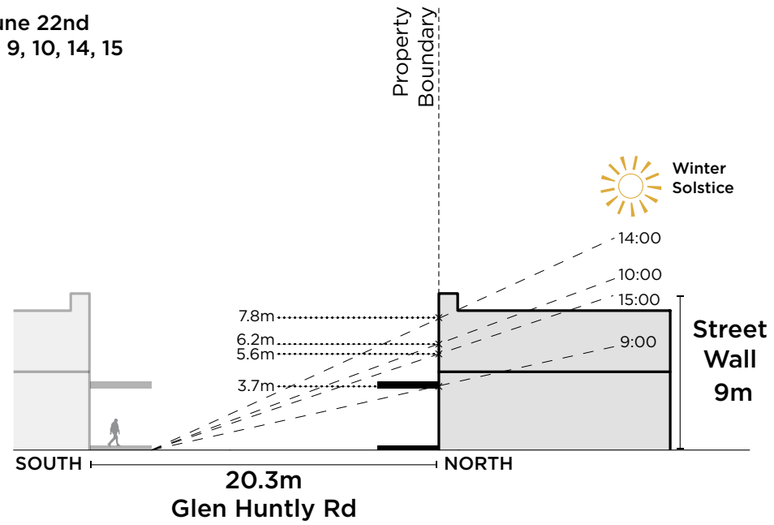
Due to the east-west orientation of Glenhuntly Road, sunlight access to the southern footpath was tested from 9am to 3pm at both the equinox (September 22nd) and winter solstice (June 22nd). The following analysis aims to find the impact of built form to the north of Glenhuntly Road on the southern footpath. The starting condition is a 5m setback above the streetwall, given the Heritage & Character recommendation (see page 18). The width of the southern footpath has been defined as 3.5m from the property boundary.

The analysis shows that, during the winter solstice, sunlight does not reach the entirety of the footpath in many cases under existing conditions anyway (see top-left diagram). Introducing controls to allow for sunlight access on June 22nd would limit development unreasonably, given there would be no added benefit.

Further analysis shows that 6 storeys can be accommodated without overshadowing the southern footpath between 10am and 2pm at the equinox. Any extra height would require larger setbacks. (see bottom-right diagram). The diagrams also show that for sunlight to reach the southern footpath on the equinox at 9am and 3pm, built form would need to be capped at 3 and 4 storeys, respectively. This is not a reasonable restriction considering the increased development that Elsternwick is expected to accommodate as a major activity centre.

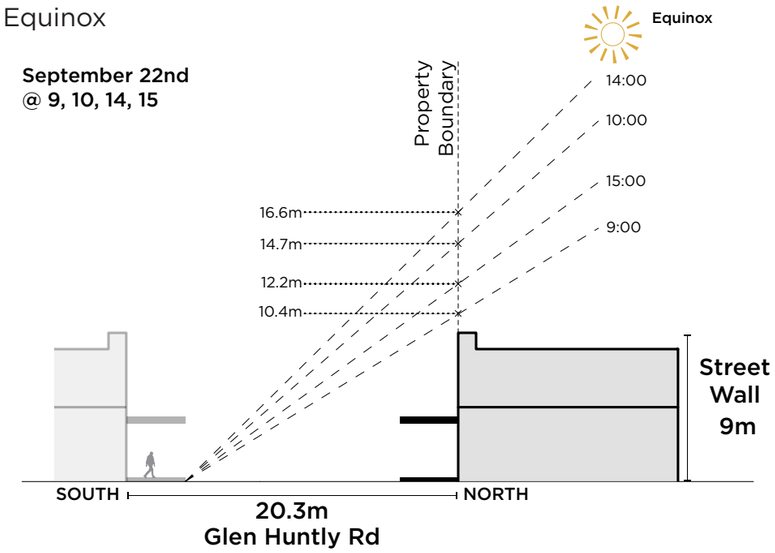
Winter Solstice

June 22nd
@ 9, 10, 14, 15

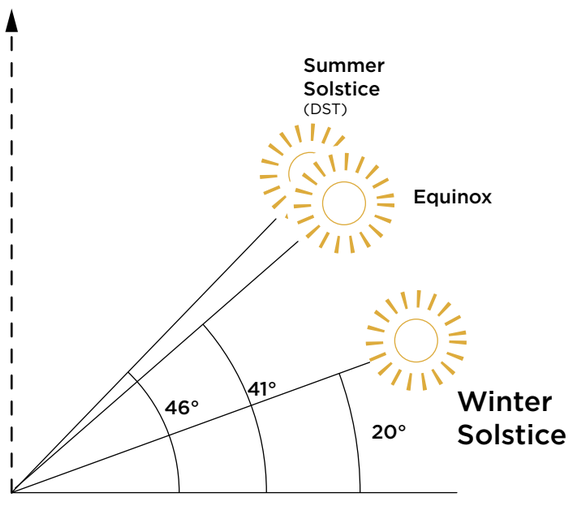


Equinox

September 22nd
@ 9, 10, 14, 15



Sun Altitude
@ 10:00 AM



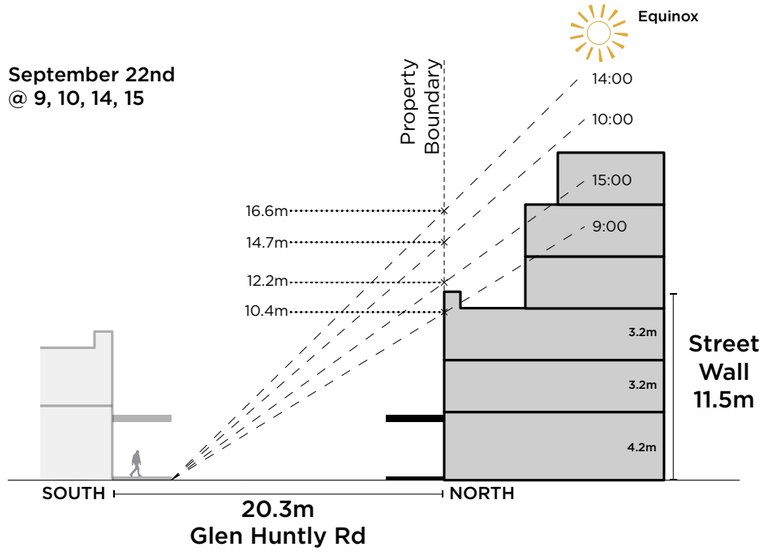
Sun Position
Equinox - Melbourne

Time	Azimuth (°)	Altitude (°)
9:00	62°	31.5°
10:00	46.7°	41.1°
11:00	28.1°	48.3°
12:00	5.2°	51.8°
13:00	341.3°	50.4°
14:00	320.7°	44.6°
15:00	304.6°	35.9°

Sun Position
Winter Solstice - Melbourne

Time	Azimuth (°)	Altitude (°)
9:00	46.5°	12.6°
10:00	34.6°	20.3°
11:00	20.9°	25.8°
12:00	5.7°	28.6°
13:00	350.1°	28.1°
14:00	335.3°	24.6°
15:00	322.1°	18.5°

September 22nd
@ 9, 10, 14, 15



Scenarios	Sky View	Upper Floor	Street Wall
Existing*	50.8%	0%	49.2%
Scenario A	20.9%	43.5%	35.6%
Scenario B	35.6%	28.8%	35.6%
Scenario C	41.8%	22.5%	35.6%
Scenario D	30.2%	34.2%	35.6%

**Varies along the street. Assumes 11.5m streetwall and no upper levels. See appendix.*

View Cone along Glenhuntly Road

The following analysis relates to sections of Glenhuntly Road that are currently covered by HO72.

The view cone analysis quantifies the amount of streetwall, upper levels and sky visible from the opposite side of the street from a pedestrian point of view. To ensure that the heritage streetwall remains visually dominant in the streetscape, it is recommended for the visible streetwall to occupy a larger percentage of the view than the visible portion of upper levels. The visual dominance of the streetwall will also depend on the architectural detail, materiality and colours of it, in contrast with those of the upper levels. To protect the sense of enclosure of Glenhuntly Road, it is recommended that at least around a third of the total view is of the sky. In the limited cases where there is a 3 storey streetwall, upper levels should remain consistent in height with the rest of the street, increasing the percentage of visible streetwall as is the current case with the sky as backdrop.

Scenario A tests a maximum 2 storey (plus parapet) streetwall with storeys 3, 4 and 5 set back 5m (for heritage purposes – see page 18), storey 6 set back a further 2m, and storeys 7 and 8 set back another 2m. This scenario would effectively overshadow the southern footpath during the equinox (see appendix, page 63). It shows the view is composed of just under 21% sky, with the streetwall almost doubling the upper levels. The reduction of almost 60% of the existing skyview is an unacceptable outcome as it risks drastically changing the character of the area.

Scenario B tests a maximum 2 storey (plus parapet) streetwall with storeys 3, 4 and 5 set back 5m (for heritage purposes – see page 18), storey 6 set back 2m, and storeys 7 and 8 set back enough to be hidden from sight.

In scenario C, storeys 6-8 are hidden from sight (as seen by a 1.8m tall person standing 2m from the opposite property boundary). Both scenarios show a reduction in sky views of less than 30%. A sky view factor analysis was necessary to understand the implications of each scenario in more detail (see next page).

Scenario D is similar to scenario B but with the 6th storey in line with storeys 3, 4 and 5.

Scenarios B, C and D have a streetwall view percentage larger than that of the upper floors. Scenario A is the only one in which the percentage of skyview is too low to be supported, in addition to the upper levels occupying a larger percentage of the view than the streetwall. Scenario C is too restrictive of development for a MAC, with setbacks the size of a bedroom with built-in robes above the 5th storey. The 6th storey on scenario D would overshadow the southern footpath for some time between 10am and 11am so it must be implemented alongside overshadowing controls (see page 19).

Sense of Enclosure

Enclosure refers to the extent to which buildings, walls, trees and other vertical items frame a street and public space. Public spaces that are framed by vertical elements in relative proportion to the width of the space between the elements have a room-like quality that is comfortable for people.

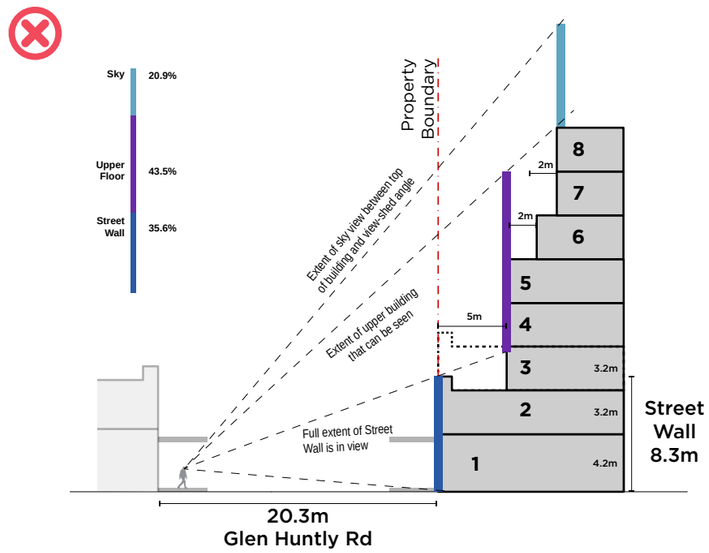
Pape, G., 2022. Getting enclosure right: creating a comfortable public room. [online] MSU Extension. Available at: www.canr.msu.edu/news

Unacceptable

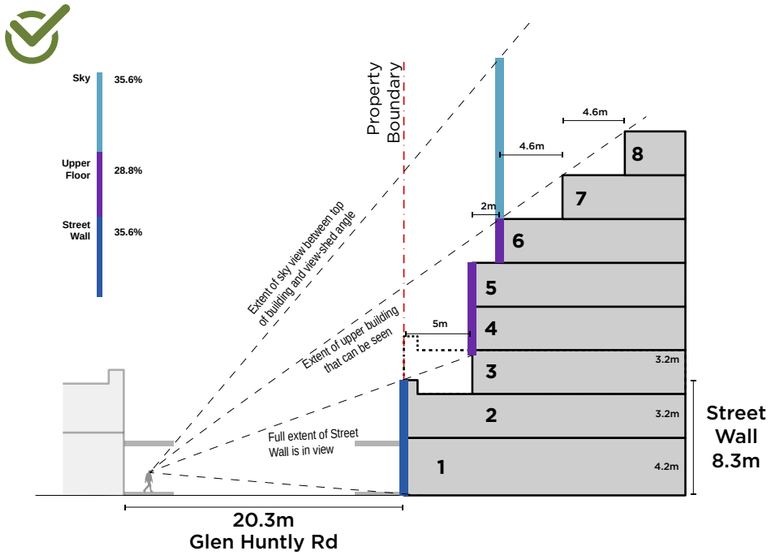
Disfavoured

Preferred

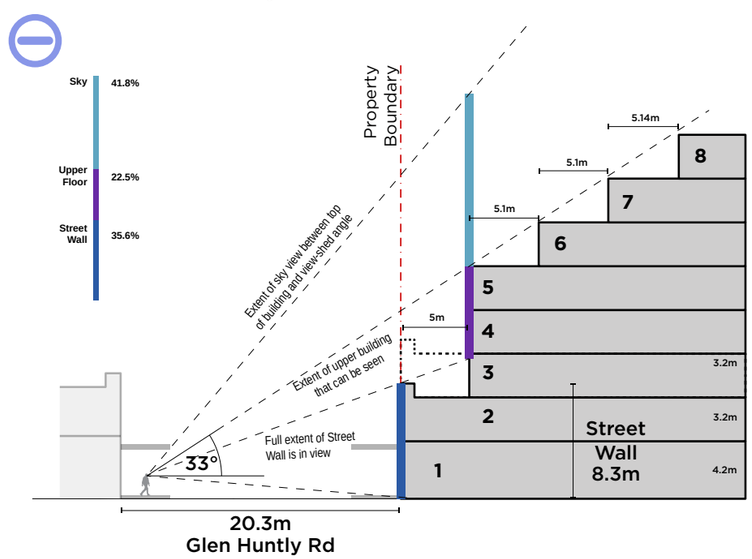
Scenario A - 8 Storeys with 2m upper level setbacks



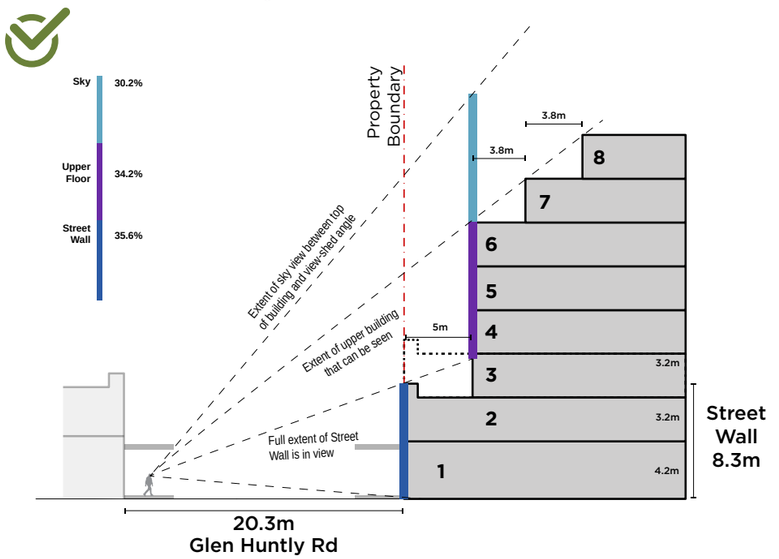
Scenario B - 8 Storeys with hidden 7+ (6th storey setback)



Scenario C - 8 Storeys with hidden 6+



Scenario D - 8 Storeys with hidden 7+



** The height and setback measurement parameters remain the same for each scenario in the following analysis*

Scenarios	Sky View Factor	Reduction
Existing*	49.6%	-
Scenario B	47.9%	-3.4%
Scenario C	48.5%	-2.2%
Scenario D	45.7%	-7.9%

**See appendix.*

Sky View Factor on Glenhuntly Road

The previous solar access and view cone analyses point towards scenarios B and D as being the most appropriate, with scenario C requiring large setbacks that would hinder development at a MAC scale. A more detailed sky view factor analysis was conducted to compare the difference between the three scenarios. The analysis utilises three dimensional modelling to calculate the amount of sky visible from the middle of the street in all directions above ground, in contrast with the section approach of the view cone analysis.

As shown in the diagrams to the right, scenarios B, C and D result in minor reductions of the percentage of visible sky. This small percentage is acceptable as it will have no negative impacts on the character of the streetscape in relation to views to the sky and openness. The tables below allow a comparison between the skyview reduction and the total upper-level setbacks from the property boundary for each scenario. Considering that rear setbacks are required and a large proportion of properties along Glenhuntly Road are about 30m deep, scenario C becomes unfeasible.

Both scenarios B and D are appropriate from a View Cone and Skyview perspective. However, the difference in their setbacks grows from the 6th storey, where it is about the size of a balcony, to the 8th storey, where it grows to be the size of a bedroom with built-in robes. More than allowing for increased density, scenario D allows for a lot more flexibility in the architectural response to the site. It also allows for the breathing space required to protect internal and external amenity, such as overshadowing controls on Glenhuntly Road, southern neighbours or internal lightcourts. It is recommended that scenario D be implemented, along with overshadowing controls protecting the southern footpath of Glenhuntly Road between 10am and 2pm at the equinox.

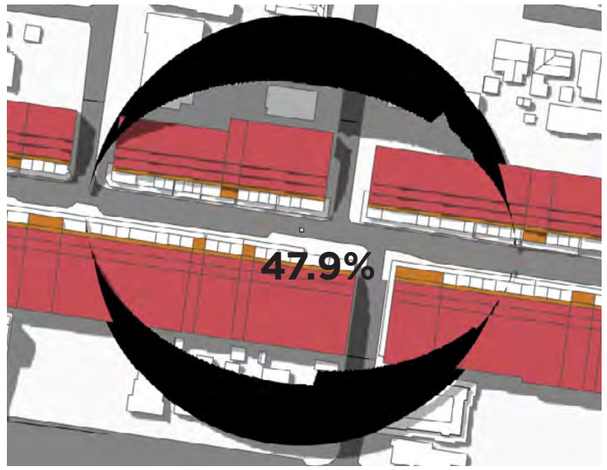
Upper-level setbacks from property boundary:

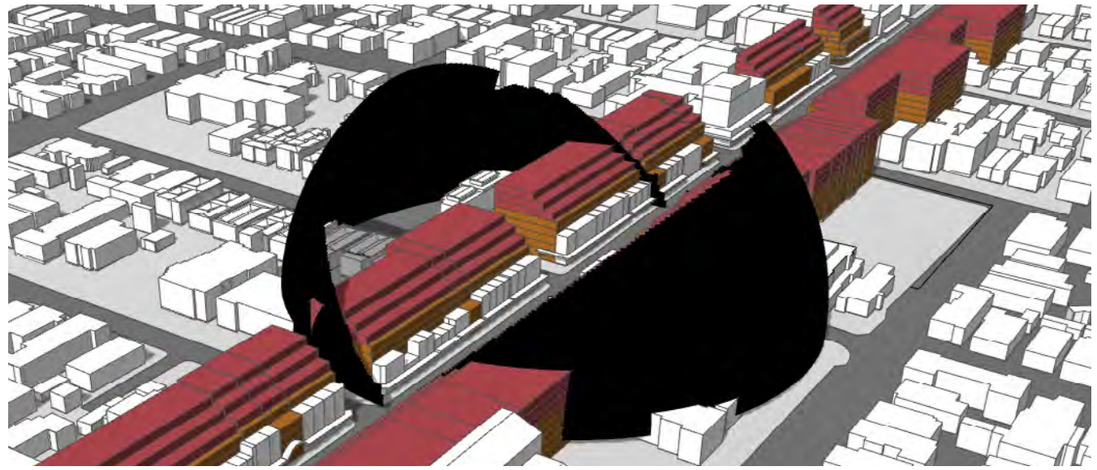
Scenarios	6th Storey	7th Storey	8th Storey
Scenario B	7.0m	11.6m	16.2m
Scenario C	10.1m	15.2m	20.3m
Scenario D	5.0m	8.8m	12.6m

* *The height and setback measurement parameters remain the same for each scenario in the following analysis*

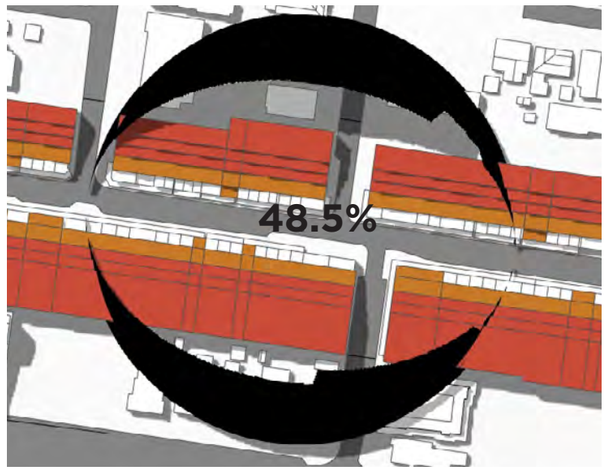
Sky View Analysis

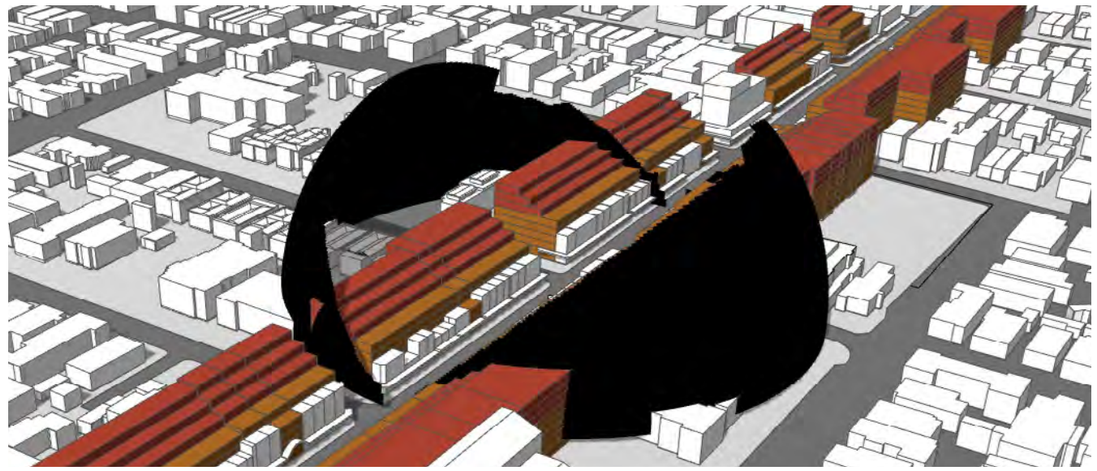
These images are extracted from the sky view analysis.



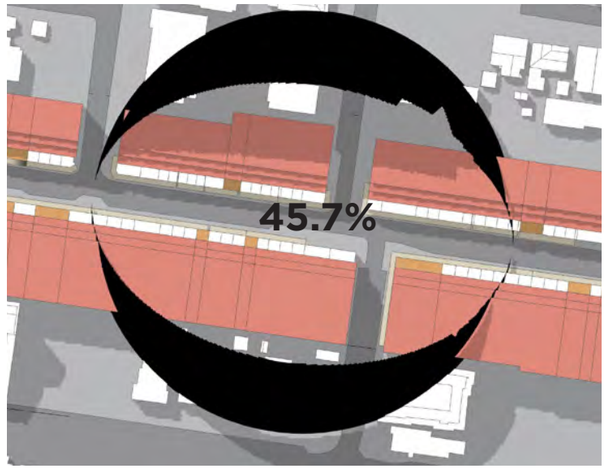


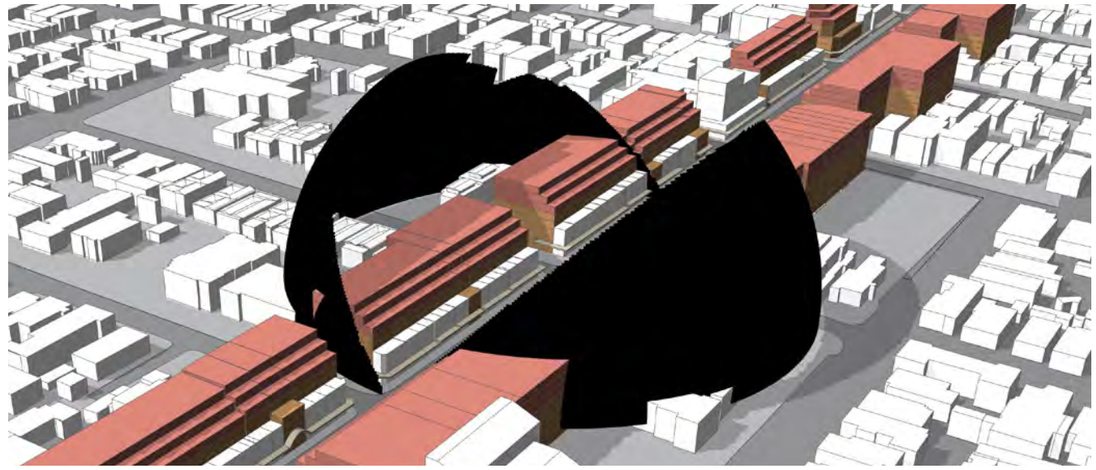
Scenario B - 8 Storeys with hidden 7+ (6th storey setback)





Scenario C - 8 Storeys with hidden 6+





Scenario D - 8 Storeys with hidden 7+

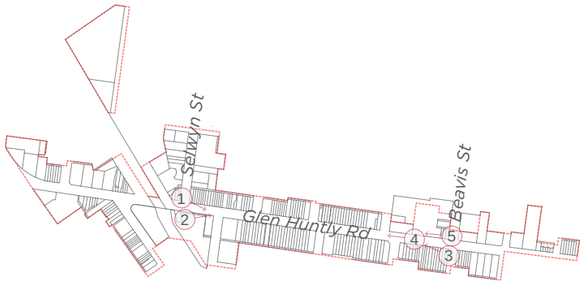
Visual Bulk along Glenhuntly Road

The following visual bulk analysis examines the impact of building heights and upper level setbacks on the valued low-rise existing streetwall, qualities identified in the heritage overlay and sense of enclosure of the street. Scenarios B, C and D were tested to understand the impact of development above the streetwall, the difference between a visible, a partially-visible and a hidden 6th storey and the impact of upper levels as seen from an angle (as opposed to a viewline perpendicular to the street – see previous analyses).

The analysis shows various degrees of change and visual impact, showing that all three scenarios are acceptable in this regard. However, scenario C is the least ideal as it will not allow for the area to fulfil its role as a MAC. The setbacks required to hide the upper levels increase from a bedroom in the 6th level to an apartment and a half in the 8th storey, drastically reducing the viability of accommodating a growing population.

Clauses 11.03-1R and 11.03-1S of the Glen Eira Planning Scheme identify the role of Activity Centres as '*Being able to accommodate significant growth for a broad range of land uses'* and '*Encourage a diversity of housing types at higher densities in and around activity centres'* respectively. At the same time, development above 6 storeys along Glenhuntly Road should be hidden from sight to protect sky views, a well-proportioned view cone and solar access to the southern footpath.

Scenario D is the recommended interface for the Glenhuntly Road section that is covered by the heritage control. For the properties to the north, this is recommended to be applied in combination with a solar control protecting solar access to the southern footpath (measured as 3.5m from the property boundary) between 10am and 2pm on September 22nd (equinox).



Key plan indicating the locations of the views alongside

* *The height and setback measurement parameters remain the same for each scenario in the following analysis*

Unacceptable

Disfavoured

Preferred

1. Scenario B - 8 Storeys with hidden 7+ (6th storey setback)

2.

Scenario C - 8 Storeys with hidden 6+

Scenario D - 8 Storeys with hidden 7+

Unacceptable

Disfavoured

Preferred

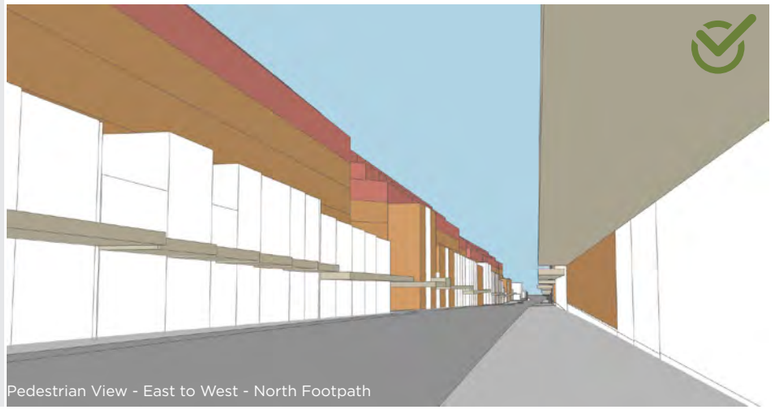
3. Scenario B - 8 Storeys with hidden 7+ (6th storey setback)

Scenario C - 8 Storeys with hidden 6+

Scenario D - 8 Storeys with hidden 7+

4.

5.



Transitions to Sensitive Interfaces

It is important to provide an appropriate transition between taller built form and the existing low-density residential surrounding the study area. This will balance the role of the activity centre to provide higher densities with the potential amenity impacts on neighbouring dwellings. The transitions will vary slightly depending on the potential adverse amenity impacts, which include overshadowing and overlooking of private open space, and excessive visual bulk.

Some interfaces can be classified as being more sensitive than others. A residential use and heritage status make an interface more sensitive. The urban morphology also plays a role, for example laneways can provide buffers and the orientation of properties can allow for solar access from different angles. Therefore, it can be determined that the impact of development can be greater on some interfaces than others. The aim of the analysis is to find appropriate controls for both sensitive and very sensitive interfaces, to be applied across the study area accordingly.

The following analysis measures the intrusion of potential built form on an abutting property. In 'Cities for People', Jan Gehl argues that there are different levels of contact between a tower and the sidewalk.[1] Based on distance, different thresholds dictate the level of interaction that is possible between a subject on the sidewalk and a subject on the tower. The first is an important threshold of 6.5m, where conversation is possible and faces are easily identifiable. Privacy issues arise within this threshold. The second is at 13.5m, where people can be recognised by their clothes but not their faces and only simple conversations can be shouted across.

The analysis identifies what percentage of the field of vision of a subject located 5m away from the property boundary is made up by sky views or built form and within which threshold. Although highly desirable for interfaces with the public realm, for transitions to sensitive interfaces it is preferred for the built form to be seen outside of the thresholds, particularly the 6.5m threshold. This will reduce overlooking, privacy and visual bulk issues.

Scenario 1 tests the requirements of ResCode Standard B17 as a benchmark for comparison. The top diagrams test the visual bulk within the different thresholds of potential built form while the bottom diagrams test the solar access to the neighbouring properties. The diagrams on the left test situations were the neighbouring property abuts the test site while the ones on the right have a 3m-wide laneway in between, as is common in Elsternwick.

The test shows that B17 results in low visual bulk and privacy concerns, and high solar access to adjacent properties. However, it highly constraints the capacity of the activity centre to provide higher density and passive surveillance to the laneways.

The following analysis will test scenarios that allow for higher density while achieving similar amenity outcomes to B17.

1. Gehl, J., 2010. *Cities for people*. Washington, DC: Island Press, pp.36-43.

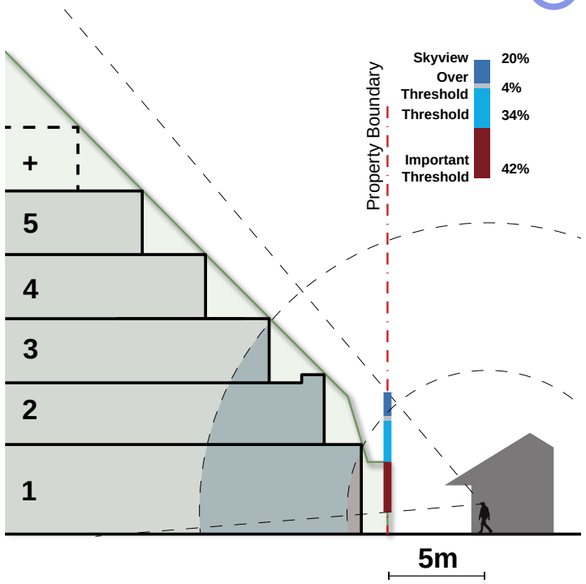
* *The height and setback measurement parameters remain the same for each scenario in the following analysis*

Unacceptable

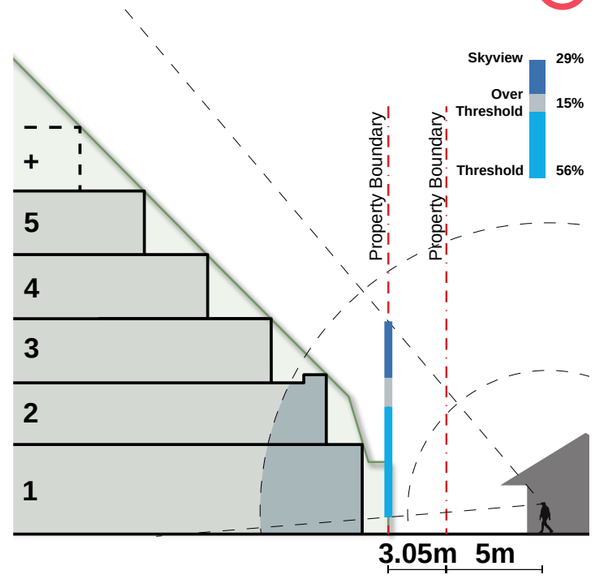
Disfavoured

Preferred

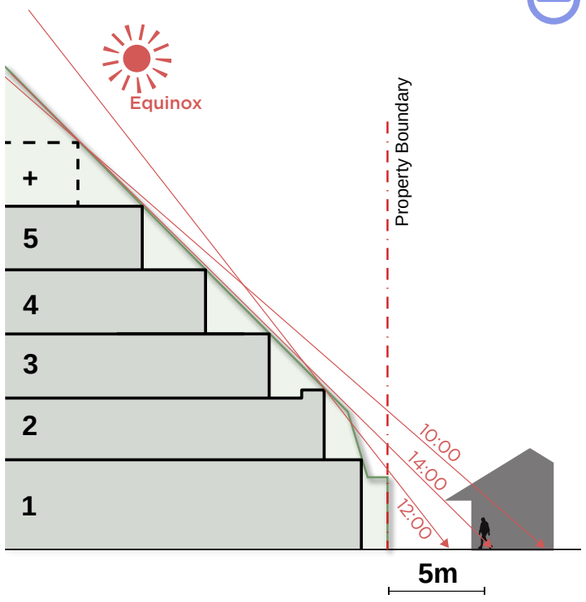
SCENARIO 1 - B17



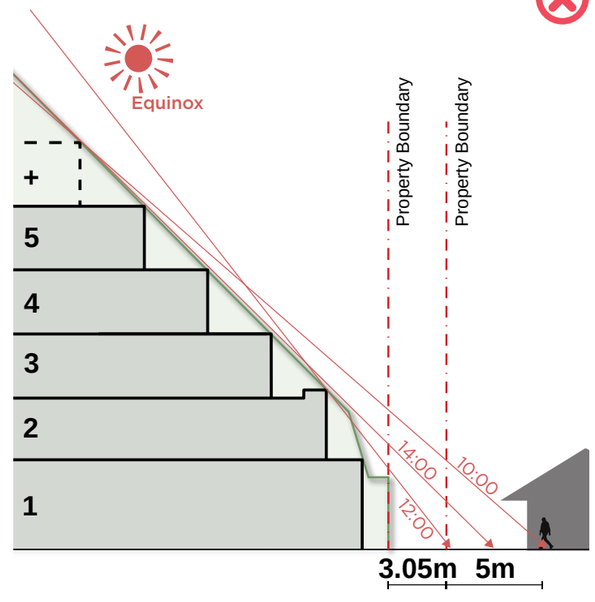
SCENARIO 1 - B17 with existing laneway



SCENARIO 1



SCENARIO 1 - B17 with existing laneway



Unacceptable

Disfavoured

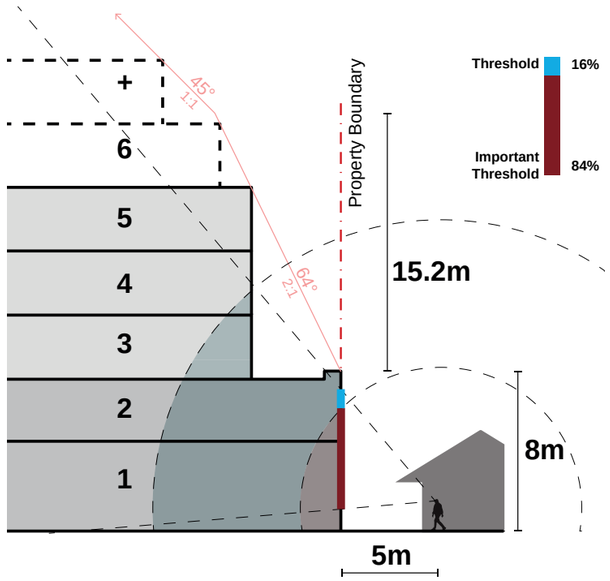
Preferred

Scenario 2 tests a two storey (8m) boundary/street wall. Upper level setbacks increase according to height at a rate of 2:1 (vertical to horizontal, 64°) for the next 15.2m in height (4 commercial storeys at 3.8m). Above, setbacks increase at 1:1 (45°).

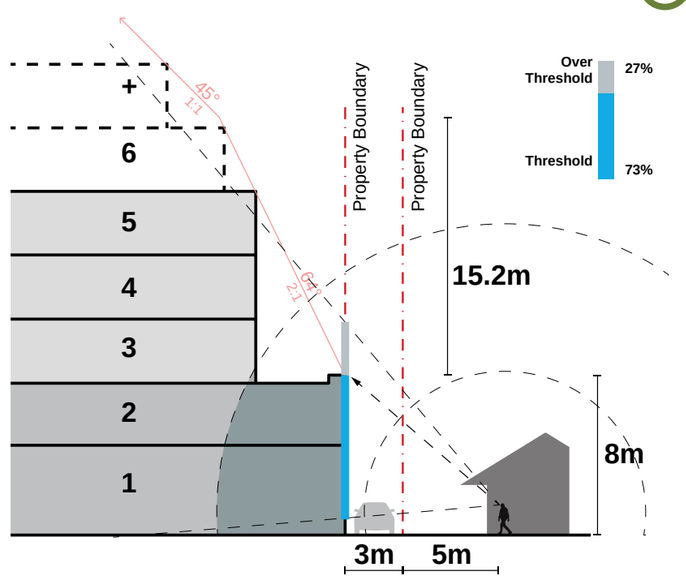
This scenario is a preferred outcome where there is a laneway in between, as all the built form is located outside of the important threshold. However, it is disfavoured where the site directly abuts the sensitive interface, as the percentage of built form within the important threshold is doubled in comparison with B17.

The solar access diagrams show that scenario 2 should be avoided in situations where the neighbouring property is more vulnerable to overshadowing, such as when it is located directly south of the proposed interface.

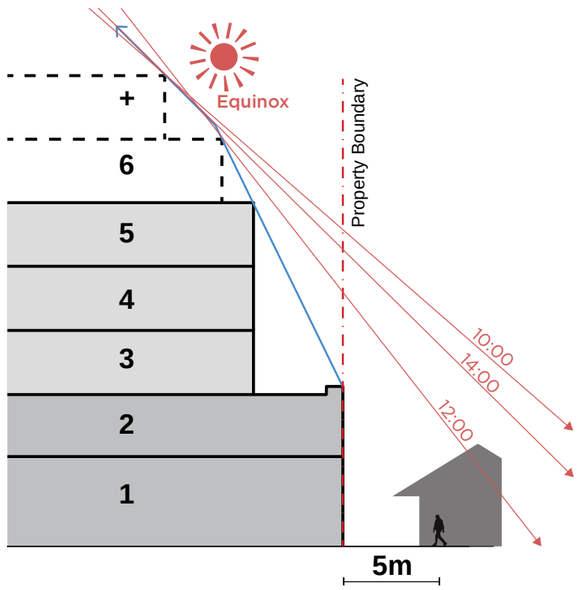
SCENARIO 2



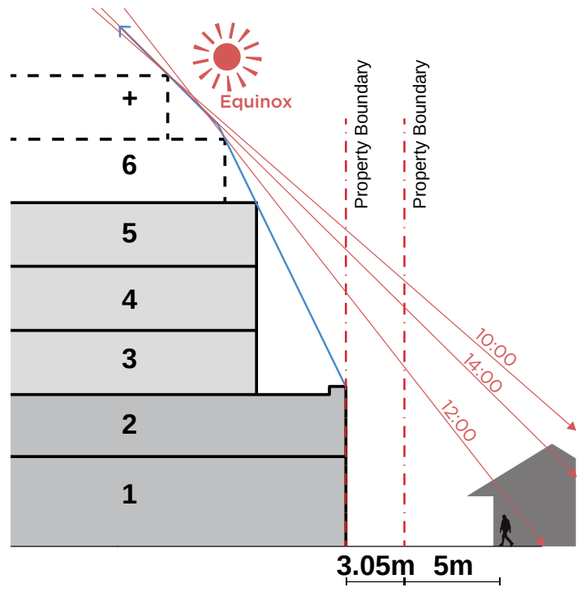
SCENARIO 2 - with existing laneway



SCENARIO 2



SCENARIO 2 - with existing laneway



** The height and setback measurement parameters remain the same for each scenario in the following analysis*

Unacceptable

Disfavoured

Preferred

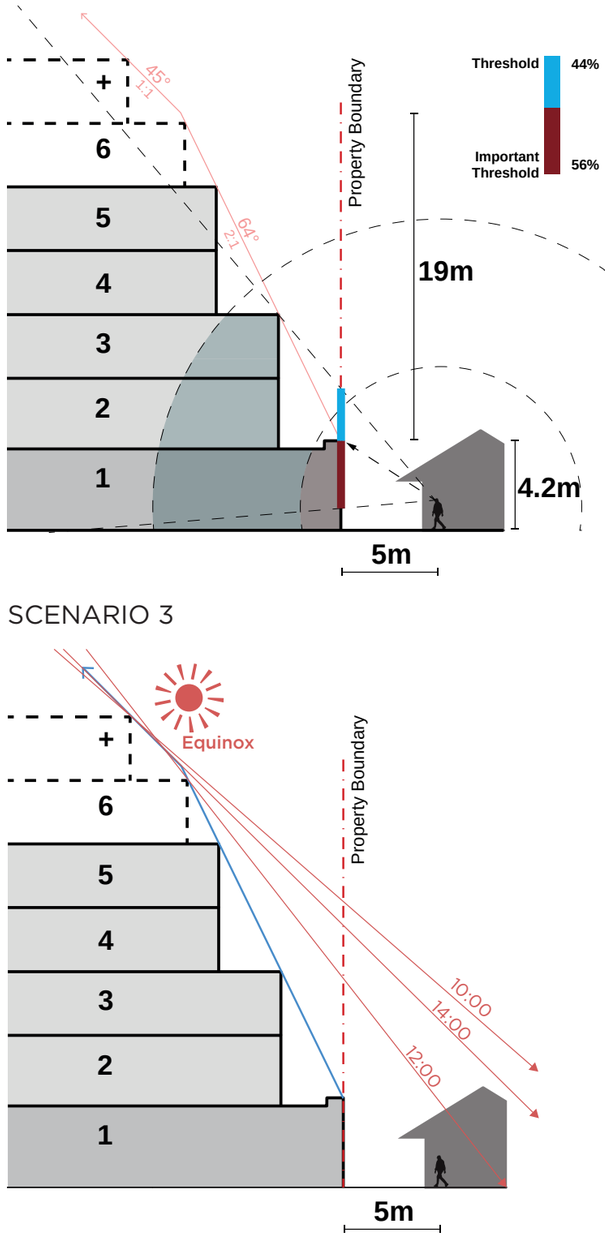
Scenario 3 tests a one storey (4.2m) boundary/street wall. Upper level setbacks increase according to height at a rate of 2:1 (vertical to horizontal, 64°) for the next 19m in height (5 commercial storeys at 3.8m). Above, setbacks increase at 1:1 (45°).

This scenario is a preferred outcome where the site directly abuts the sensitive interface as there is only a minor increase of built form within the important threshold in comparison with B17. This increase is the minimum possible to allow a 4.2m high ground floor commercial storey. Where there is a laneway in between, scenario 3 is disfavoured as it results in a similar visual bulk outcome to scenario 2 but with a lower capacity to provide passive surveillance to the laneway.

The solar access diagrams show that scenario 3 should be avoided in situations where the neighbouring property is more vulnerable to overshadowing, such as when it is located directly south of the proposed interface.

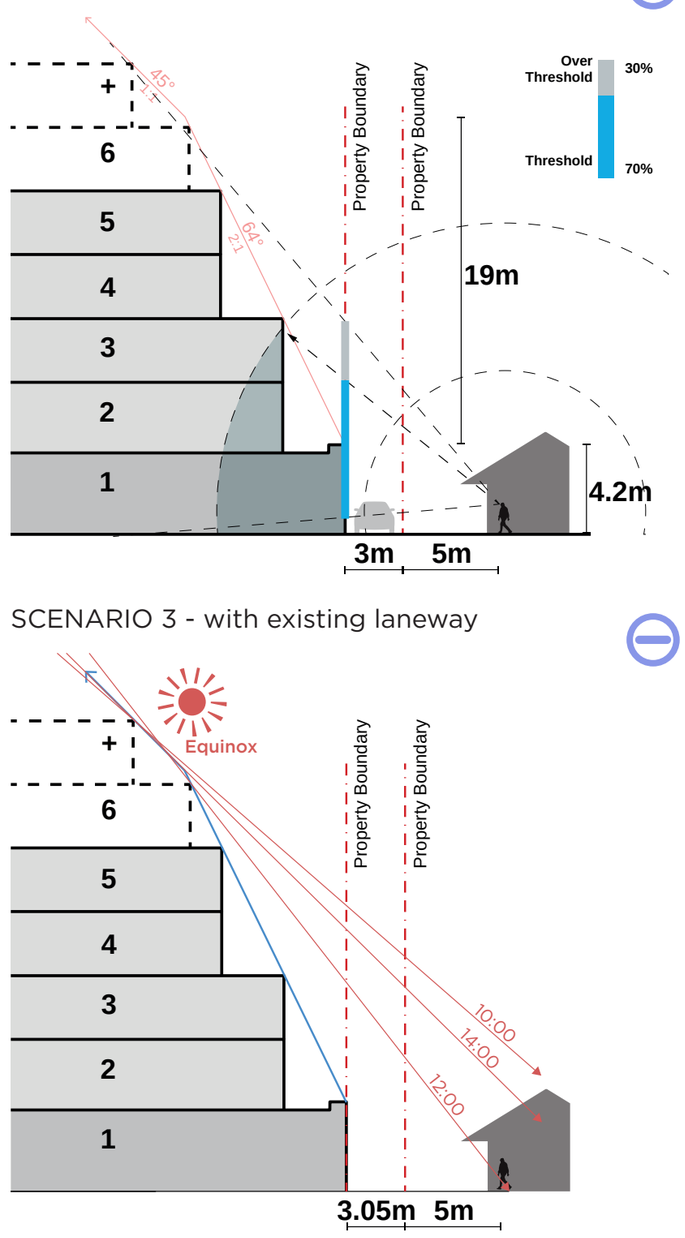
* *The height and setback measurement parameters remain the same for each scenario in the following analysis*

SCENARIO 3



SCENARIO 3

SCENARIO 3 - with existing laneway



SCENARIO 3 - with existing laneway

Unacceptable

Disfavoured

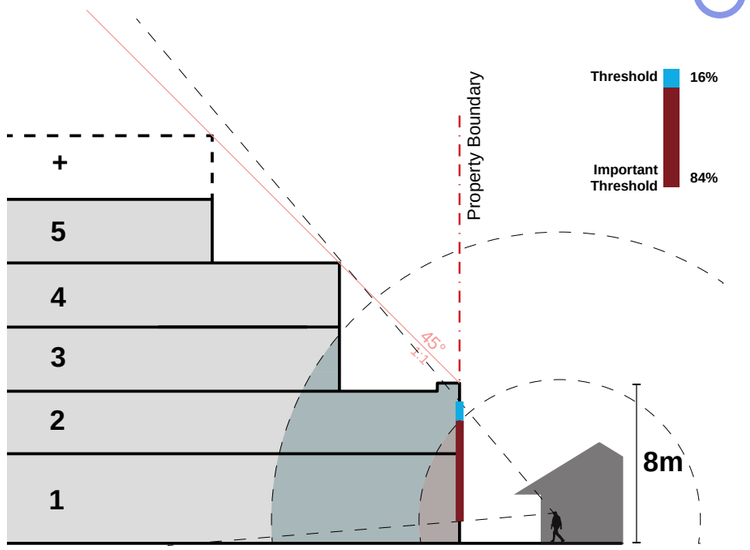
Preferred

Scenario 4 tests a two storey (8m) boundary/street wall. Above, upper level setbacks increase according to height at a rate of 1:1 (vertical to horizontal, 45°).

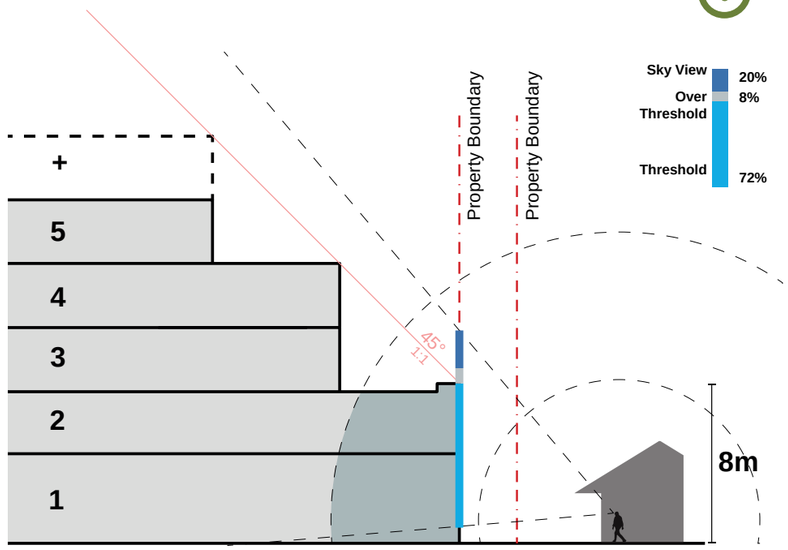
This scenario is a preferred outcome where there is a laneway in between, as all the built form is located outside of the important threshold. However, it is disfavoured where the site directly abuts the sensitive interface, as the percentage of built form within the important threshold is doubled in comparison with B17.

The solar access diagrams show that scenario 4 retains appropriate solar access to properties that are more vulnerable to overshadowing, where there is a laneway in between. Without the laneway, this scenario is disfavoured.

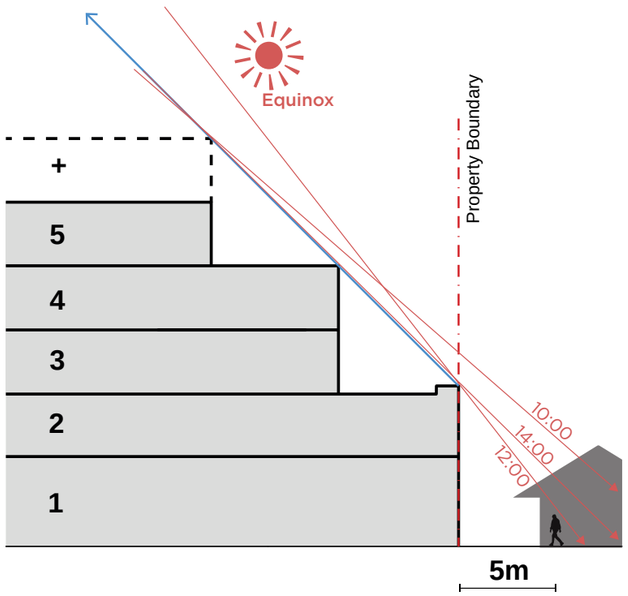
SCENARIO 4



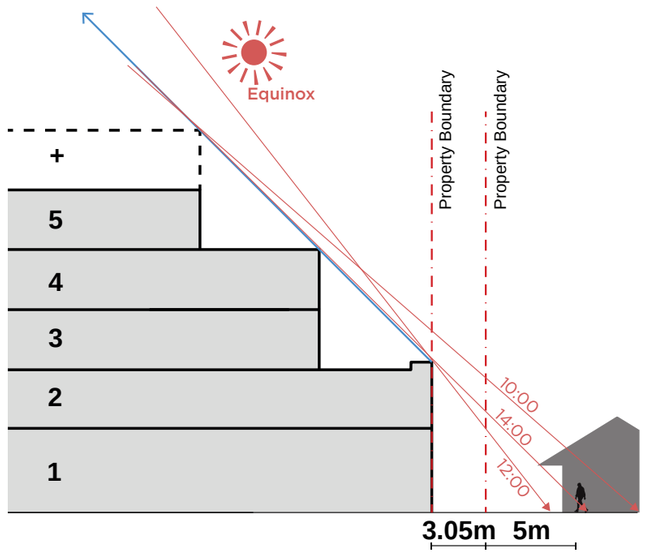
SCENARIO 4 - with existing laneway



SCENARIO 4



SCENARIO 4 - with existing laneway



** The height and setback measurement parameters remain the same for each scenario in the following analysis*

Unacceptable

Disfavoured

Preferred

Scenario 5 tests a one storey (4.2m) boundary/street wall. Upper level setbacks increase according to height at a rate of 2:1 (vertical to horizontal, 64°) for the next 7.6m in height (2 commercial storeys at 3.8m). Above, setbacks increase at 1:1 (45°).

This scenario is a preferred outcome where the site directly abuts the sensitive interface as there is only a minor increase of built form within the important threshold in comparison with B17. This increase is the minimum possible to allow a 4.2m high ground floor commercial storey. Where there is a laneway in between, scenario 5 is disfavoured as it results in the same visual bulk outcome to scenario 4 but with a lower capacity to provide passive surveillance to the laneway.

The solar access diagrams show that scenario 5 retains appropriate solar access to properties that are more vulnerable to overshadowing. Where there is a laneway in between, this scenario is disfavoured due to the restrictions on passive surveillance and development.

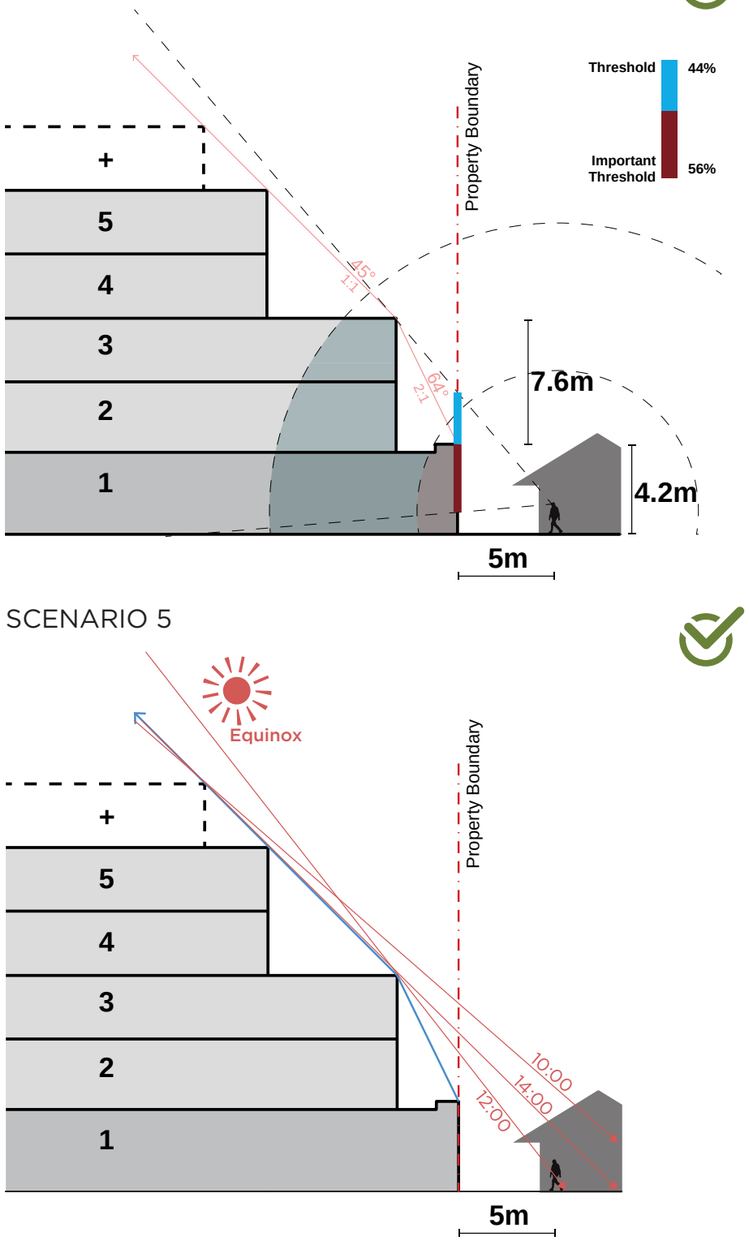
For all interfaces, it is strongly encouraged that stepping of the built form be minimised, to avoid a 'wedding cake' result.

Further detail of the interfaces and their location is provided in Chapter 5.

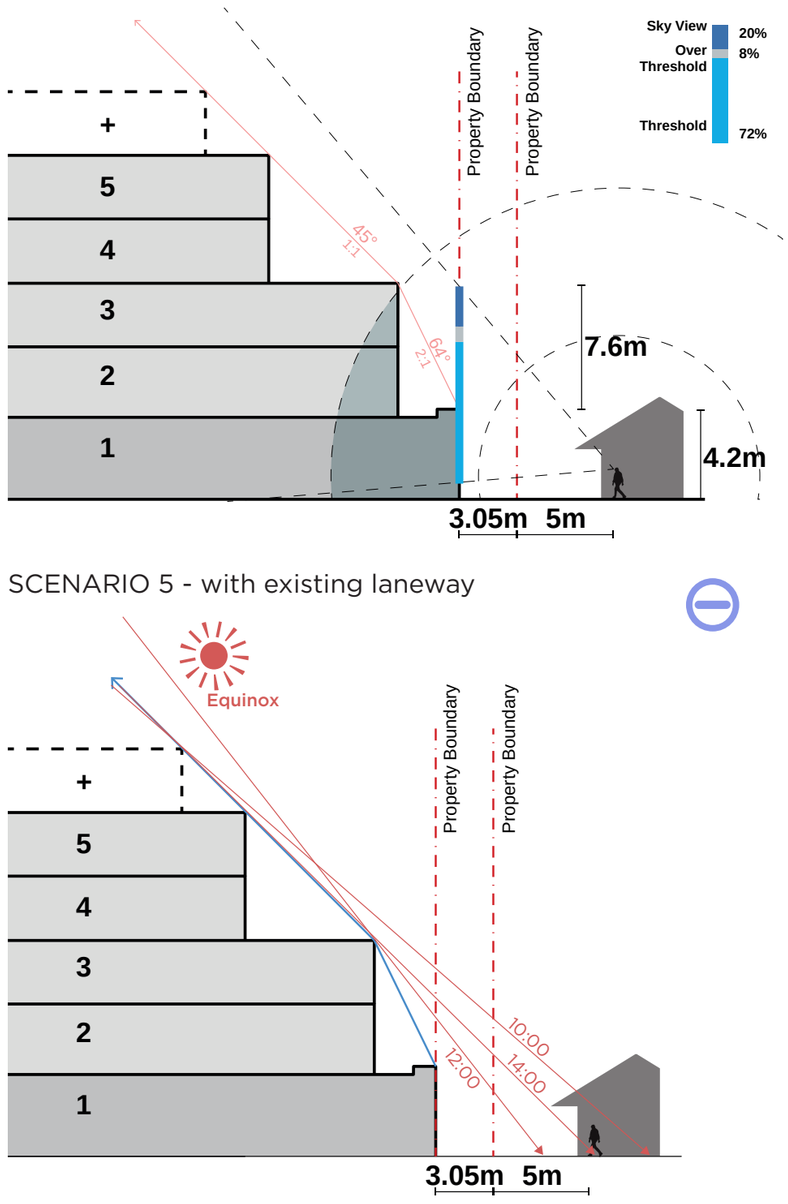
	Not vulnerable to Overshadowing		Vulnerable to Overshadowing	
Scenarios	**Direct**	**Laneway**	**Direct**	**Laneway**
Scenario 1*	⊖	⊗	⊖	⊗
Scenario 2	⊖	✓	⊗	⊖
Scenario 3	✓	⊖	⊗	⊖
Scenario 4	⊖	⊗	⊖	✓
Scenario 5	⊖	⊗	✓	⊖

**ResCode Standard B17. Benchmark scenario for comparison.*

SCENARIO 5



SCENARIO 5 - with existing laneway

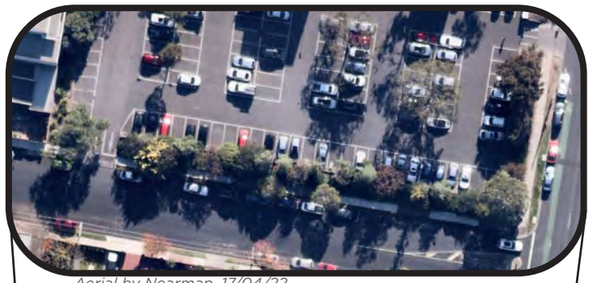


Site Boundary
Building Line
Recommended Ground Setback
2m Setback Grid

Ground Setback
0-2m
2-4m
4-6m
6-8m
8-10m
10m+

Aerial by Nearmap, 17/04/22.

Google Streetview



Aerial by Nearmap, 17/04/22.

Stanley Street Character

Most of Stanley Street is recognised in Neighbourhood Character Overlay Schedule 4 (NCO4) as a Victorian and Edwardian Significant Character Area. The study area is not covered by NCO4 but will have a great impact on the streetscape character. Stanley Street's character will be determined by any potential development on both the east and west Public Use Zones, currently Council at-grade car parks. Both sites feature landscaped frontages to Stanley Street and Orrong Road, consistent with NCO4's key streetscape characteristics. These tree-lined frontages form part of the current and preferred character of the streetscape and should be protected.

The images and aerials on the right show the leafy streetscape composed of mature trees and well established front gardens. The map displays the existing setbacks, ranging from built-to-boundary on the side of corner properties to over 10m on property fronts. Front setbacks within the study area should provide a transition between the large landscaped setbacks within NCO4 and the more dense urban setting of recent developments. The ground setback on Orrong Road should be smaller, enhancing the pattern of the surroundings and responding to the smaller setback across the road (about 3m on 66 Orrong Road).

The sites should also provide a ground setback that allows for enough deep soil to plant new trees. Facing Stanley Street, the setback should allow for the planting of new medium-sized canopy trees (min. 8m diameter at maturity). Facing Orrong Road, the setback should allow for the planting of new small-sized canopy trees (min. 4m diameter at maturity). This will ensure the protection of the streetscape character in the area and of existing healthy vegetation, without diminishing the capacity of the activity centre to provide increased density.

According to clause 58.03-5 of Glen Eira's planning scheme, medium-sized canopy trees (type B) require a minimum deep soil dimension of 4.5m. Small-sized canopy trees (type A) require a minimum deep soil dimension of 2.5m.

On Stanley Street, a 4.5m ground setback is recommended to allow for new medium-sized canopy trees. This will also provide a transition from the 9-10m front setbacks within NCO4 and the built-to-boundary developments. On Orrong Road, a 2.5m setback is recommended to allow for new small-sized canopy trees.

Aerial by Nearmap, 17/04/22.

Google Streetview

Google Streetview

Solar Access on Open Spaces

Council's Open Space Strategy demonstrates the limited number of open spaces in the study area and the importance of protecting the amenity of existing and potential new open spaces. As density increases the pressure on open spaces will increase and they will be required to serve more people, over a longer period and for more diverse uses. Successful public spaces require an appropriate mix of direct sunlight and shade to ensure they can be enjoyed throughout the year.

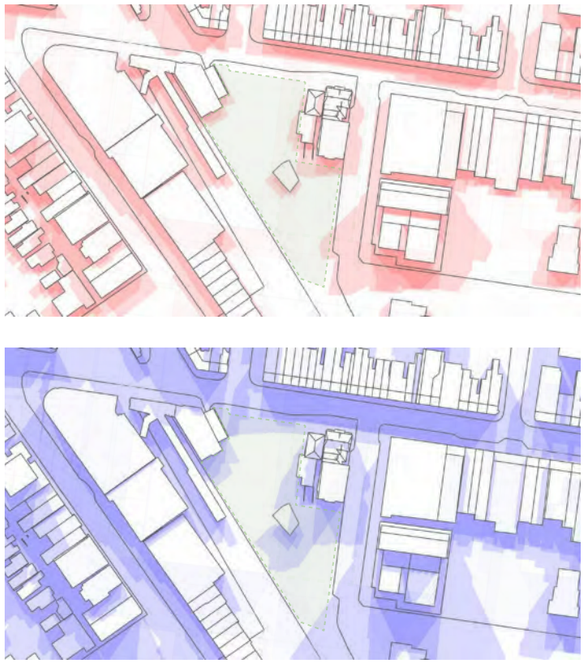
A balance is required between the protection of solar access to open spaces and the activity centre's role of delivering higher density. It is also acknowledged that different spaces may have different solar requirements driven by their size, location and orientation.

The location of all existing and potential open spaces, as shown in the map, allows for stricter winter solstice controls. Elsternwick Plaza and Hopetoun Gardens are located just south of roads which provide a buffer from shadows cast by development to the north. Two potential public open spaces are located south of protected spaces or in areas of restricted development: the former ABC/ police site (Gordon Street) and the Elsternwick Library location. The Stanley Street/Orrong Road location would need protection to the north if Council decides that this will become a new open space.

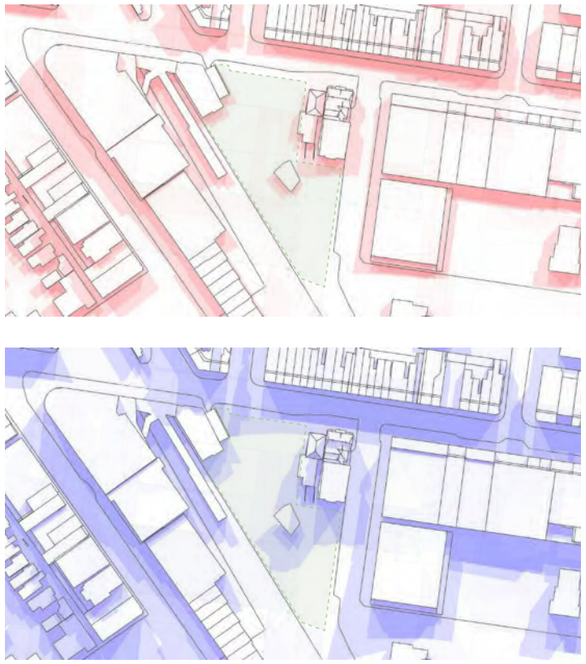
Figure 03: Existing and potential open spaces for protection.

An analysis of the solar access on existing and potential open spaces was conducted (shown in this and in the following page). For each existing and proposed open space, the shadows cast by existing built form and the proposed maximum street wall were modelled at 10am and 2pm on both the equinox and winter solstice. The following diagrams show the existing shadows and the shadows cast by the addition of the proposed maximum street wall and the existing built form.

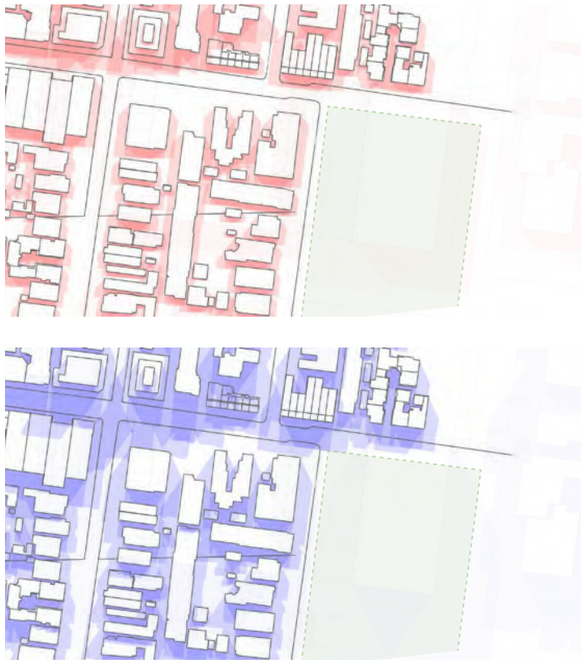
Elsternwick Plaza - Existing



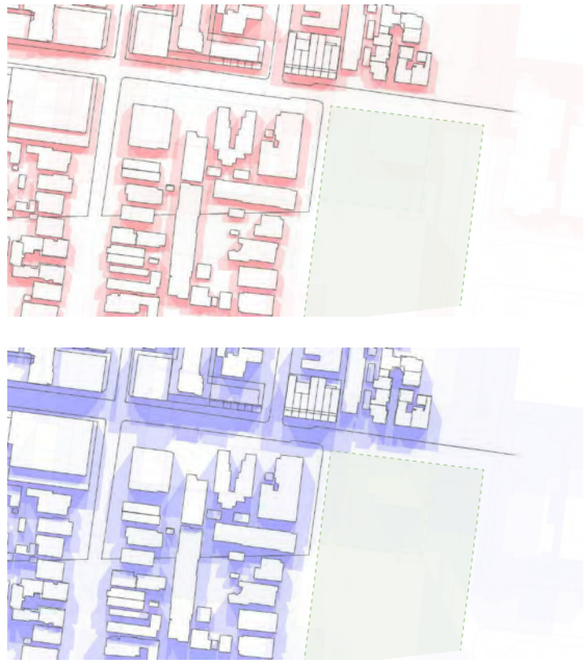
Elsternwick Plaza - Existing+Max Streetwall



Hopetoun Gardens - Existing



Hopetoun Gardens - Existing+Max Streetwall



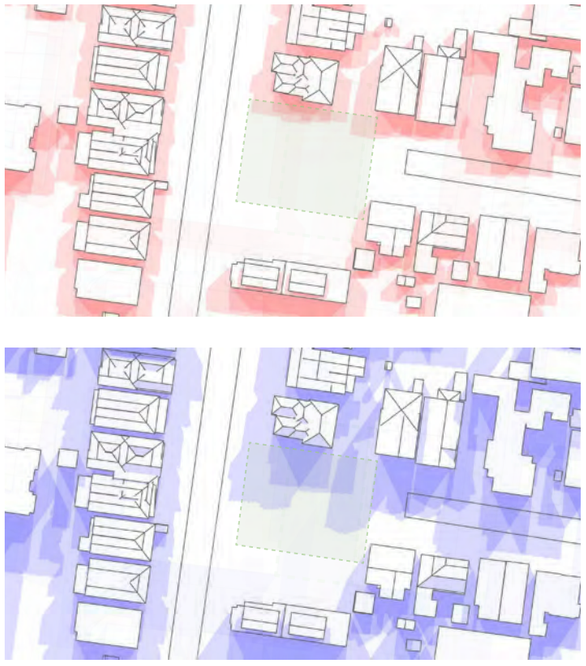
Elsternwick Plaza.

Hopetoun Gardens.

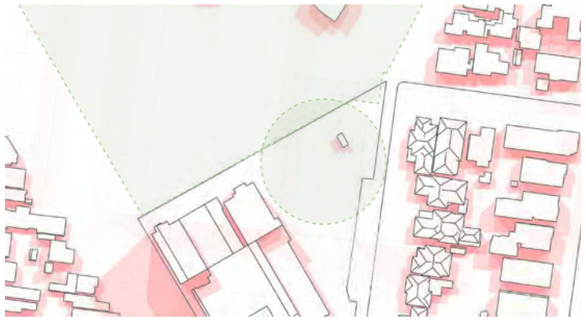
The following diagrams show the existing shadows for potential future public open spaces. The maximum streetwall shadows have been ommitted as these will depend on the boundaries of each potential future space.

Open Space
Winter Solstice 10am, 12pm & 2pm Cumulative Shadow (Jun.22nd)
Equinox 10am, 12pm & 2pm Cumulative Shadow (Sept.22nd)

Staniland Gv - Existing



Former ABC Site - Existing



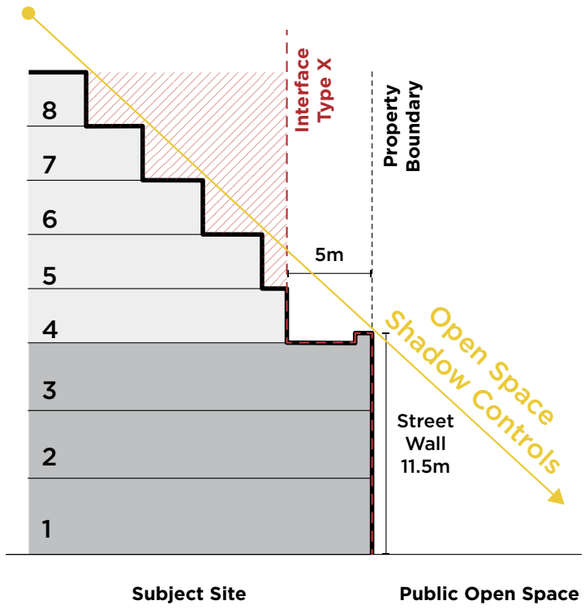
Existing car park on Staniland Gv.

Existing building on former ABC site.

Overall Shadows & Control Operation

The sections below show how solar access controls (mandatory) work in addition to an assigned interface type (discretionary). This approach ensures that all situations are covered, as opposed with potential gaps that could occur if all interfaces were tailored. Furthermore, it ensures that the reasoning behind each control is clear and adaptable.

The plan on the right shows the potential shadows cast by the maximum building envelopes, not the actual built form but the three-dimensional limits imposed by the controls. Shadows are shown for the equinox at 9am (red), 12pm (purple) and 3pm (blue). Actual shadows cast will be much smaller as buildings allow for breaks, tower separation, inhabitable and constructable floorplates and compliance with guidelines in chapter 6.



Active Frontages, Safety & Preferred Access

The interfaces of buildings with the public realm helps define the character of the streetscape and is often heavily influenced by the use and design details of the building at that interface. For instance, streets lined with active frontages with operable doors and windows, balconies at the upper levels and high levels of visibility into buildings will differ in feel from a laneway dominated by rear garage entries, no windows and limited balconies at upper levels to provide passive surveillance.

The defined hierarchy of the streets and open spaces will require different built form controls to make sure the character and safety of the streets are appropriately managed. The following map and below notations show the location of existing and proposed open spaces and the street hierarchy and the type of interface that is appropriate.

Main Retail Street

As the main retail street, Glenhuntly Road should require active frontages at the ground level, balconies and windows at the upper levels to provide opportunities for passive surveillance and prohibit new vehicle crossovers over the pedestrian priority footpath.

Open Spaces Pedestrian Priority Streets

Open spaces and pedestrian priority streets should require active frontages at the ground level and balconies and windows at the upper levels to provide opportunities for passive surveillance.

Path

Paths should require balconies and windows at the upper levels to provide passive surveillance.

Shared Lanes

Shared lanes should encourage active frontages and vehicle access, and windows and balconies at the upper levels to provide passive surveillance.

Service Lanes

Service lanes should encourage vehicle access with windows and balconies at the upper levels to provide passive surveillance.

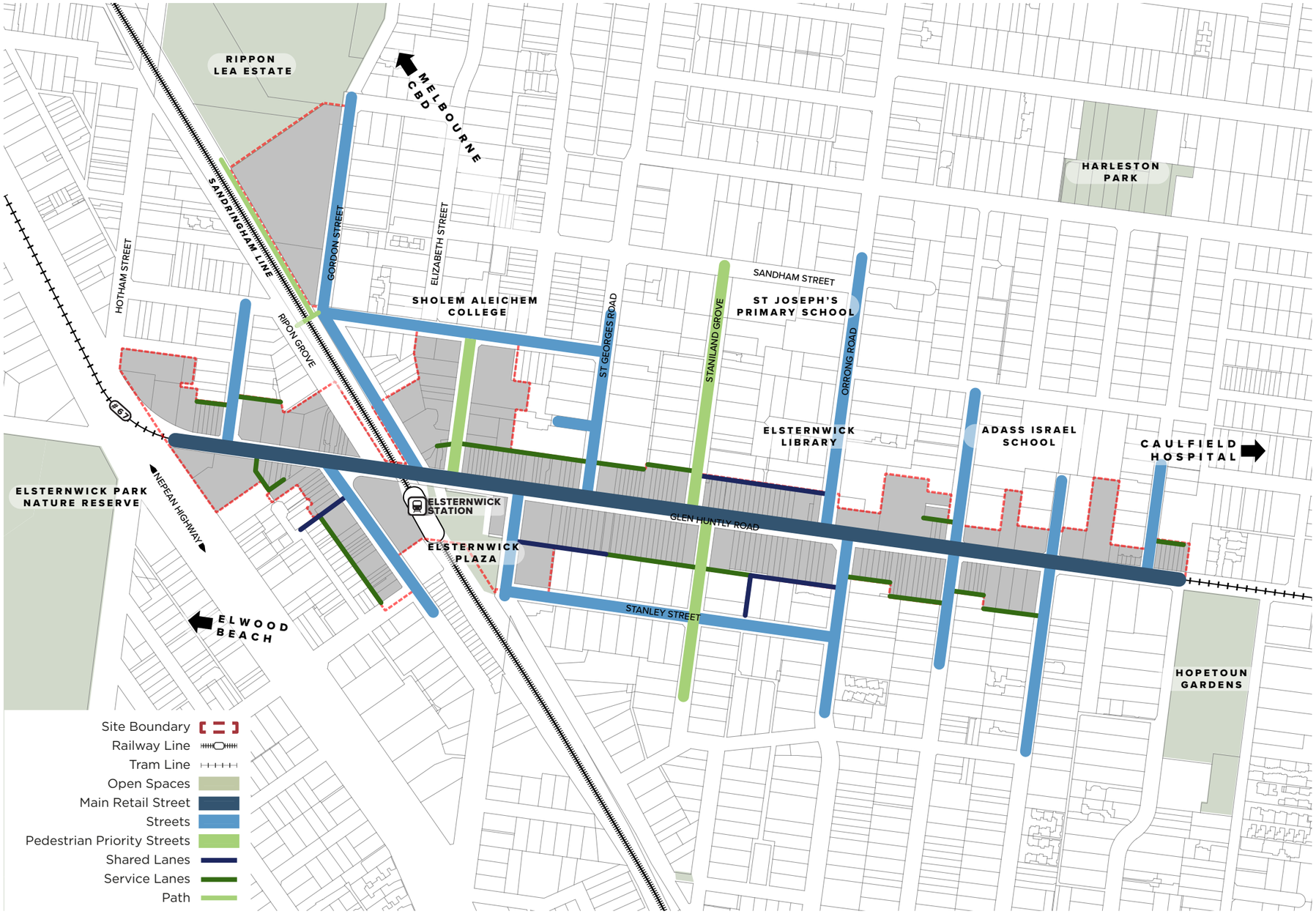


Figure 04: Street network hierarchy

5.0 Built Form Requirements

5.1 Vision

Elsternwick will be a safe, connected, accessible and liveable centre that embraces its historic character and strong cultural and village feel.

The centre will be a destination for its longstanding cultural and entertainment offerings, business and employment opportunities, and a range of quality local retail outlets and community spaces, providing a socially, environmentally and economically sustainable future.

Figure 05: Maximum building envelopes

5.2 Precincts

Cultural Precinct

This precinct is the 'heart' of Elsternwick. As its main meeting place, the Cultural Precinct attracts locals and visitors to its multicultural offering, centred around the Jewish Cultural Centre and the Classic Cinema. It includes Elsternwick Plaza, the area's main civic open space and the potential redevelopment of Selwyn Street into a pedestrian-friendly space. It is well connected to the wider area by trams and Elsternwick Station. New development will allow for the expansion of cultural offerings, with built form up to 8 storeys that enhances heritage and protects solar access to Elsternwick Plaza and the southern footpath of Glenhuntly Road.

Main Retail Precinct

This precinct is centred around the Glenhuntly Road retail core and its surroundings, east of the railway line. It is characterised by its retail offering, pedestrian activity and traditional 1-3 storey shops, most of which are contributory to the Heritage Overlay. New development will protect and enhance the heritage and character, allowing for setback upper levels above the streetwall. Shared lanes will become safer for pedestrians and rear lanes will continue to serve as the only vehicle access to most properties. Council-owned off-street car parking in this precinct presents an opportunity for expanded uses that could incorporate affordable housing, public open space or community uses. Hopetoun Gardens to the east serve as the gateway to the centre's core.

Urban Renewal Precinct

This precinct encompasses the land west of the railway and the former ABC and police station site. The lower level in the topography allow it to accommodate taller built form as it becomes less visible from the heritage-protected east. It will mark the west gateway at the corners of Nepean Highway, with taller built form due to its large width and a prominent showcase of the gothic church. A contemporary urban character will be established with particular consideration of existing individual heritage listings, transitions to sensitive interfaces and public realm amenity. Building design will contribute positively to the amenity of the ground plane and be of a high quality design when viewed from all angles. As the precinct that will experience most change, it presents a significant opportunity to deliver environmentally sustainable design.

The urban morphology of the residential growth zone between Nepean Highway and Ross Street is likely to be incremental and constrained by the small lots along Ross Street and the restricted road space. Ensuring development along the south west edge of Horne Street responds to these limitations as well as to the small cluster of heritage properties at 216-228 Glen Huntly Road will result in a cohesive urban form that maximises the opportunities presented by the proximity of the train station and the activity centre while responding to existing and future expected built form outcomes.

Figure 06: Elsternwick centre precincts.

5.3 Building Envelopes

The following plan identifies the maximum building heights, interface types (see following page for diagrams) and solar access requirements for open spaces.

Floor to Floor Heights

For new development, commercial ground floors should be a minimum of 4.2m floor to floor. All other levels above should be a minimum of 3.8m floor to floor.

For residential uses, all levels should be a minimum of 3.2m floor to floor.

Solar Access to Public Spaces

No additional shadows must be cast beyond the existing shadow (from existing buildings and infrastructure) or the shadow that would be cast by a street wall built to the nominated street wall height in the planning scheme, from 10am to 2pm on June 22nd. This applies to existing and proposed future public open spaces.

No additional shadows must be cast beyond the existing shadow (from existing buildings and infrastructure) or the shadow that would be cast by a street wall built to the nominated street wall height in the planning scheme, from 10am to 2pm on September 22nd, on the southern footpath of Glenhuntly Road between the railway line and Hopetoun Gardens (Cultural and Main Retail precincts).

These solar access controls are recommended as mandatory to protect the amenity and activity of open spaces. This includes the southern footpath of Glenhuntly Road which, as density increases, will play an even more important role as a public space in Elsternwick.

Figure 07: Elsternwick building envelopes.

5.4 Interface Types

The following diagrams represent the interface types identified on the previous page.

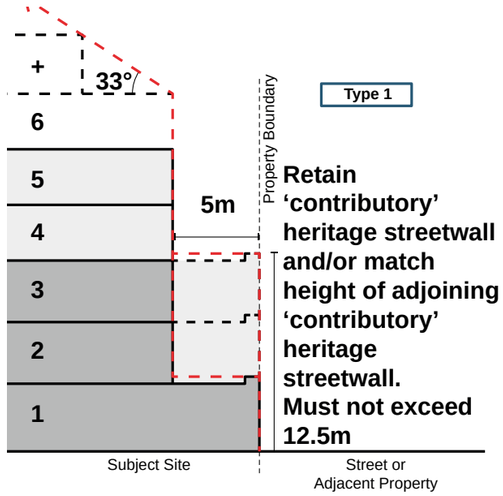
Where the interface is represented as an angle, such as in types 1, 3 and 5, the design response is strongly encouraged to avoid a 'wedding cake' style. This can be achieved by applying the same setback to a group of storeys.

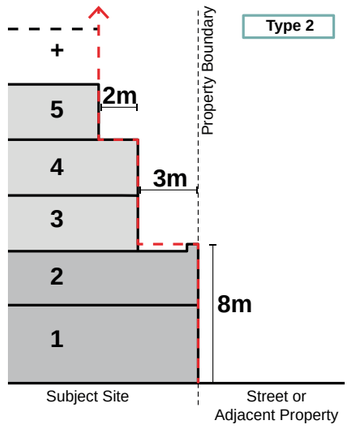
Type 1 is recommended as a mandatory control to ensure the protection of the heritage streetscape and character of Glenhuntly Road.

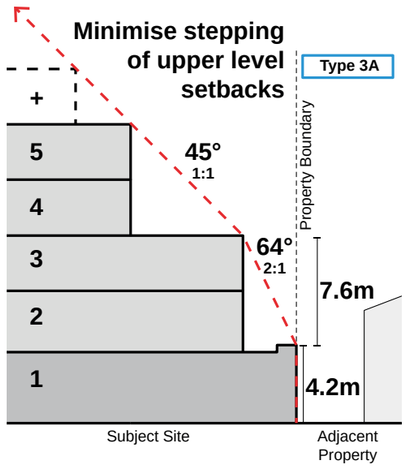
All other interface types are recommended as discretionary to ensure the flexibility necessary to respond to a variety of situations within the study area. Development proposals should comply with the discretionary interface controls and, where they don't, must demonstrate the protection of sunlight access and amenity in neighbouring residential properties.

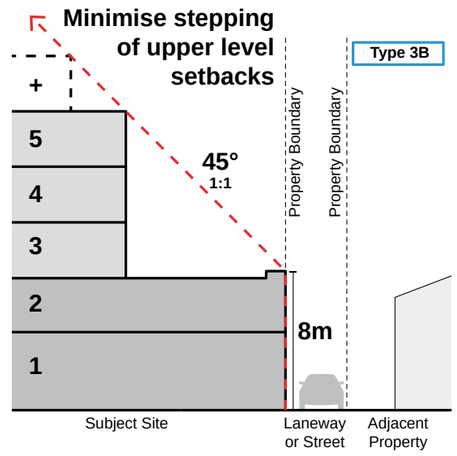
The approach focuses on this mix of a mandatory and discretionary interface controls instead of mandatory heights. All heights are recommended to be discretionary as the controls respond to the experience of pedestrians on Glenhuntly Road and neighbouring residential properties. Discretionary heights will ensure the flexibility necessary to respond to a variety of situations within the study area. Development proposals should comply with the discretionary height controls and, where they don't, must demonstrate the protection of sunlight access and amenity in neighbouring residential properties.

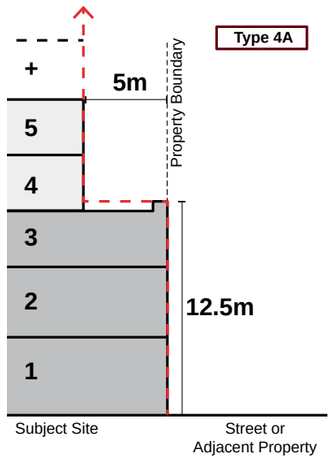
Upper level setbacks and podium definition in all interfaces will avoid the potential wind down draughts and tunnels that sheer vertical faces can generate. All development should ensure reduced wind impacts on the public realm by also avoiding long rows of relatively smooth facades.

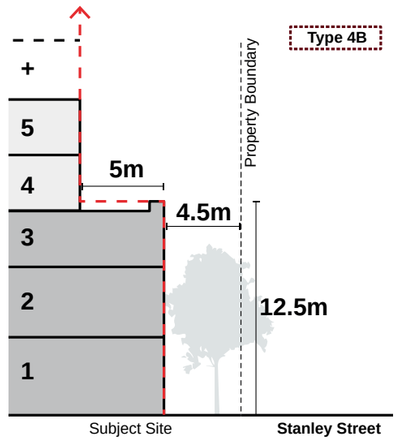


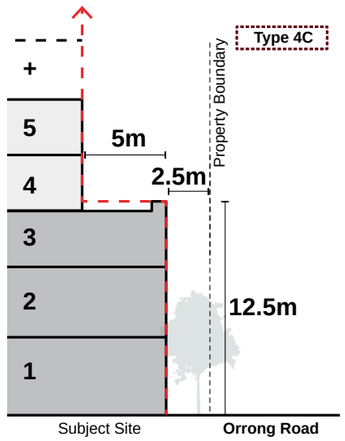


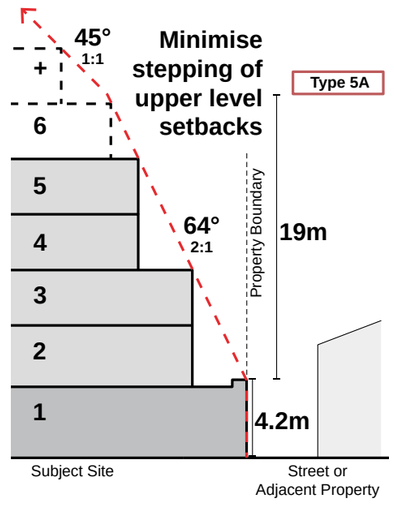


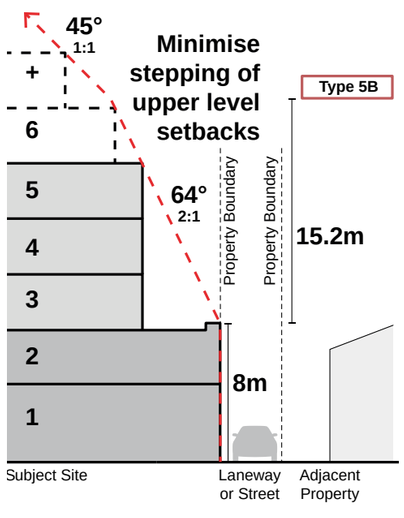


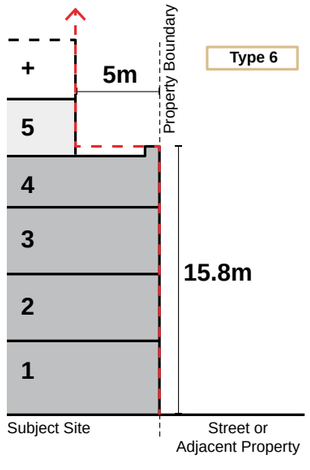


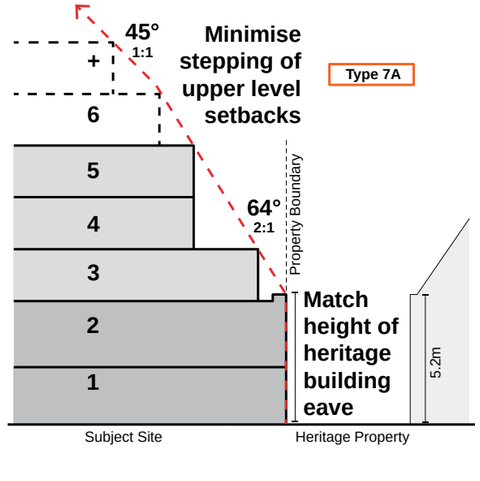


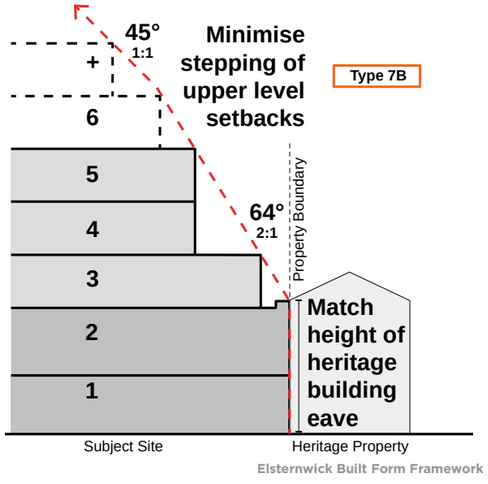












5.5 Frontages & Access

The following plan identifies the active frontage, canopy and access requirements.

Frontages marked as an 'active frontage' must comply with guideline '6.1.11 Active Frontages' in chapter 6. All other frontages are strongly encouraged to comply.

Where overhangs/awnings are identified, an awning must be provided in accordance with guideline '6.1.12 Awnings & Signage' in chapter 6. The reinstatement of awnings missing from contributory heritage buildings is encouraged in accordance with Clause 22.01 of the planning scheme, which encourages the retention, restoration or reconstruction of original shopfronts and verandas. There are limited instances of contributory heritage buildings that did not have an awning, this recommendation does not apply in these cases.

Awnings and overhangs add to the protection of pedestrians by reducing wind down draughts and providing cover from sunlight and rain.

All interfaces to the public realm must comply with guideline '6.1.7 Safety' in chapter 6.

Vehicle access must be located in accordance with the plan and should follow guideline '6.1.17 Garage Doors' in chapter 6.

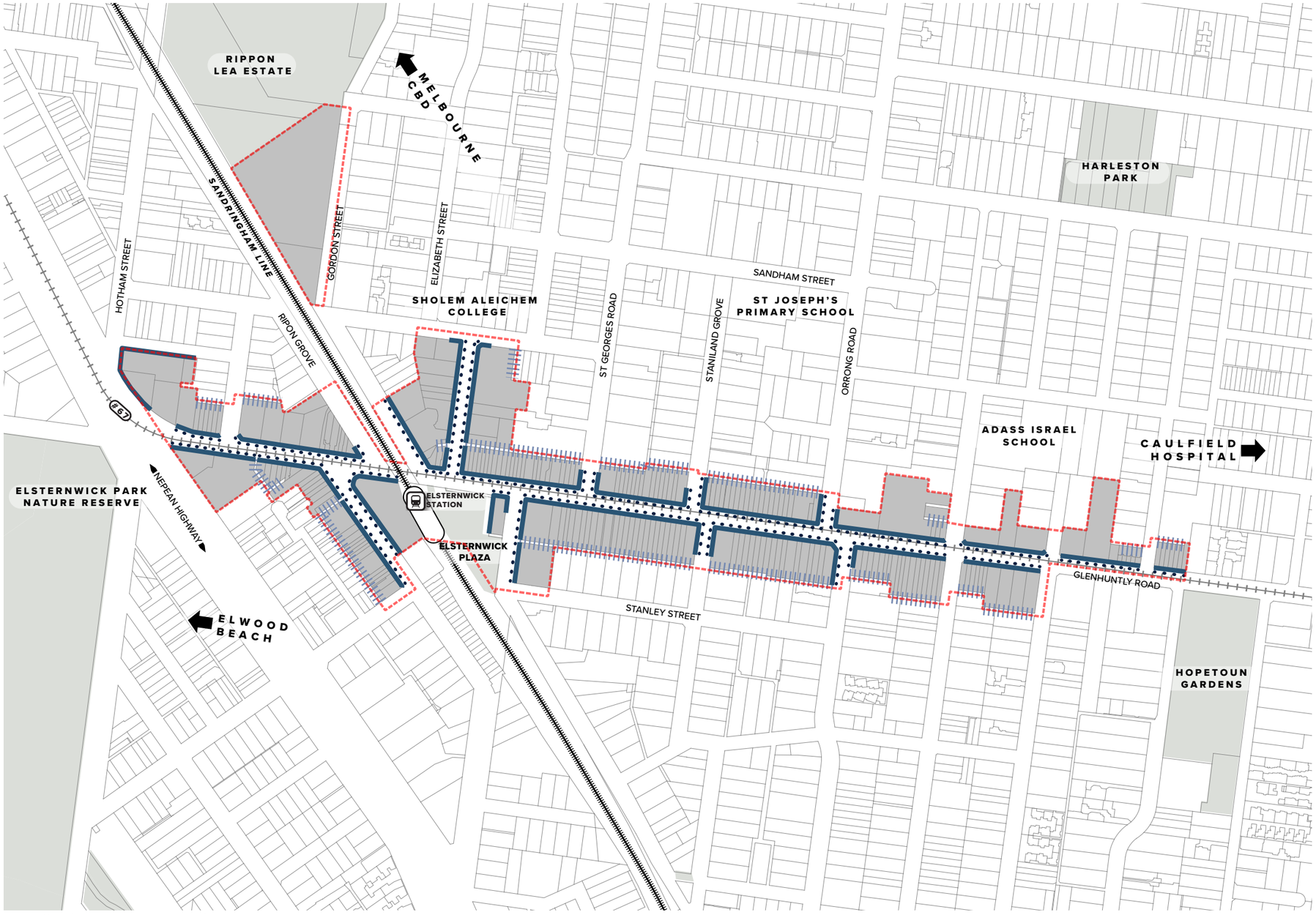


Figure 08: Elsternwick frontages and access.

5.6 Cross-sections

The following cross-sections show the maximum building envelopes that result from the application of the built form controls and are not architectural floorplates.

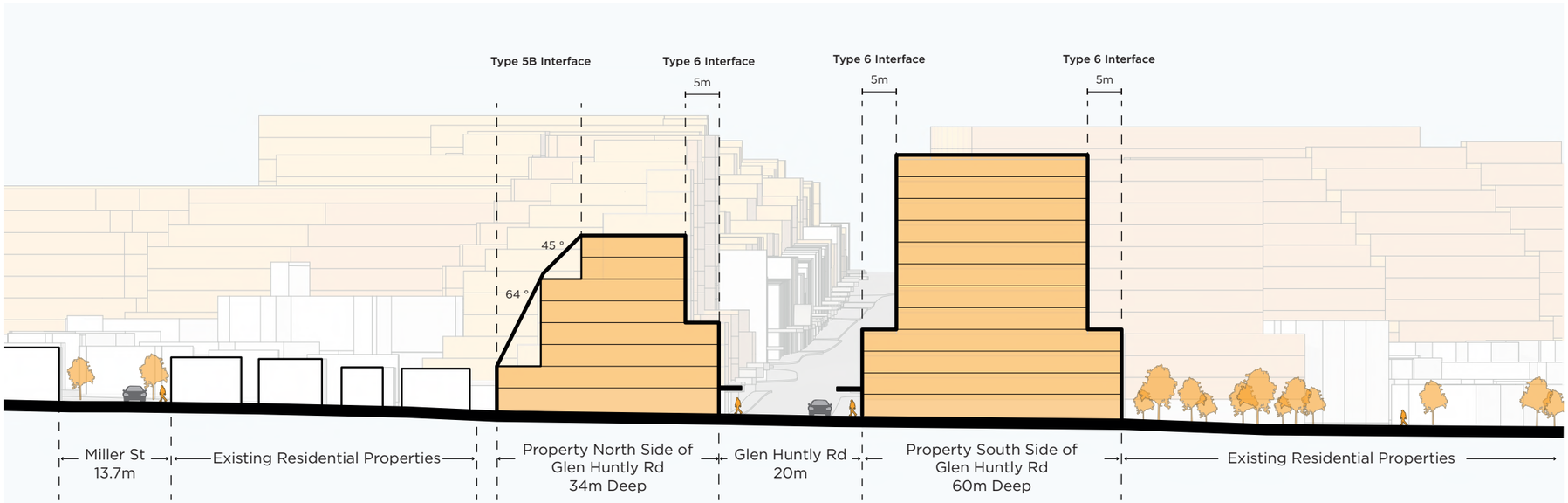


Figure 09: Section A

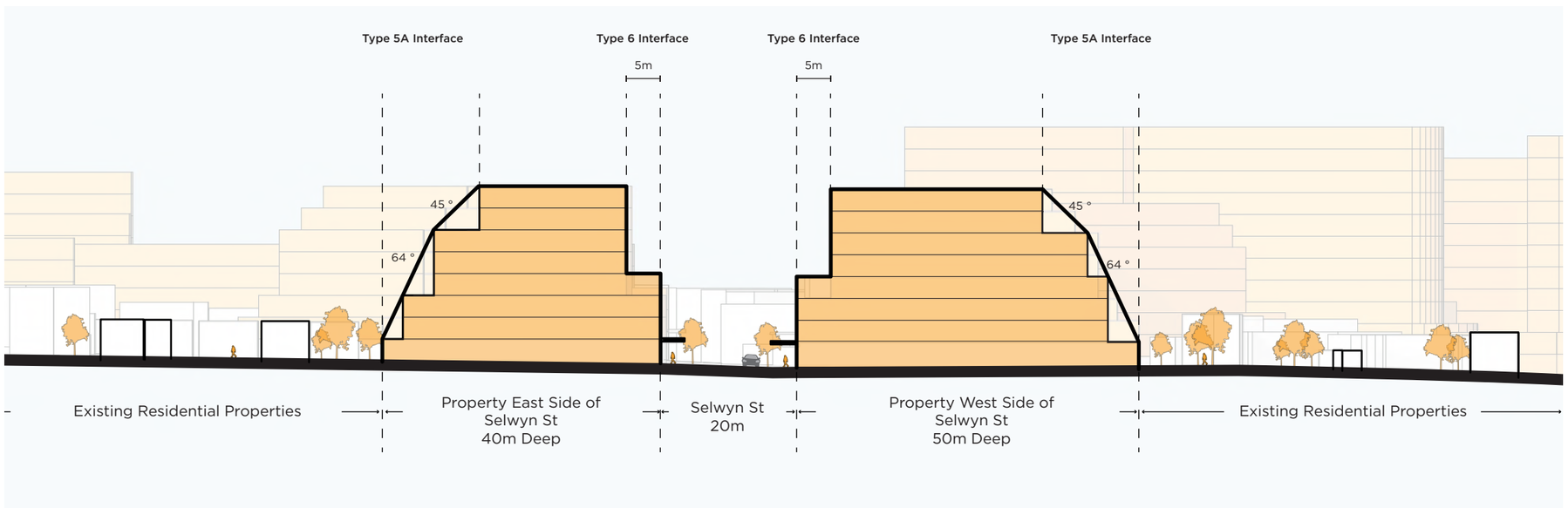


Figure 10: Section B

The following cross-sections show the maximum building envelopes that result from the application of the built form controls and are not architectural floorplates.

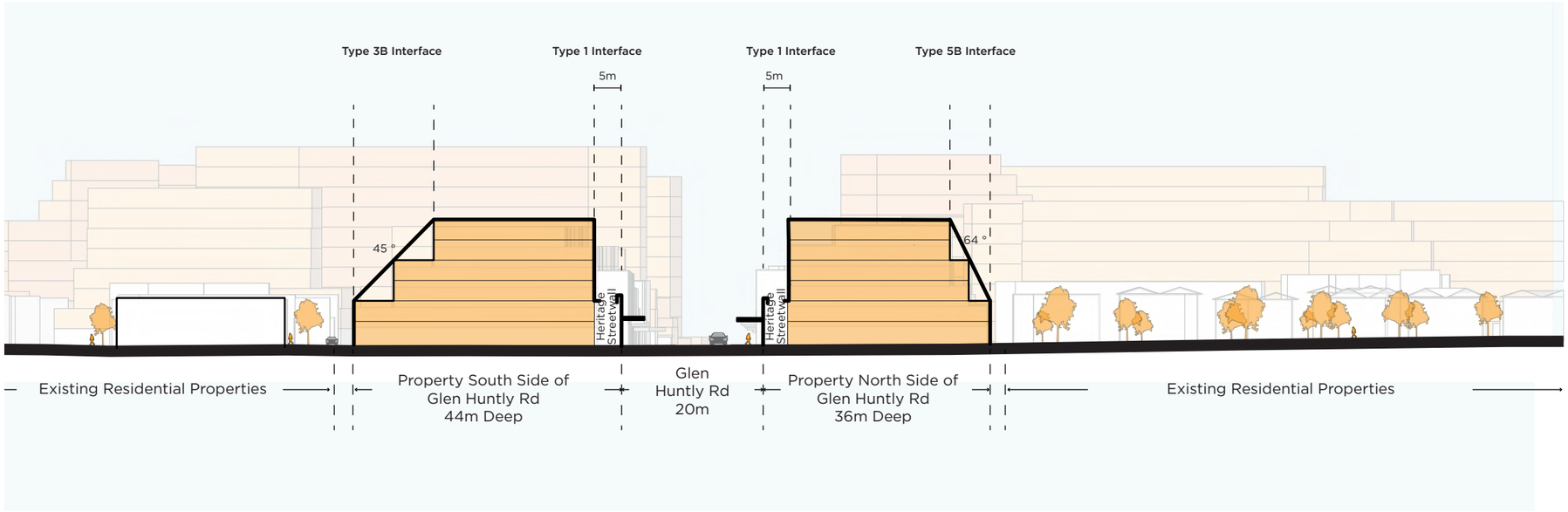
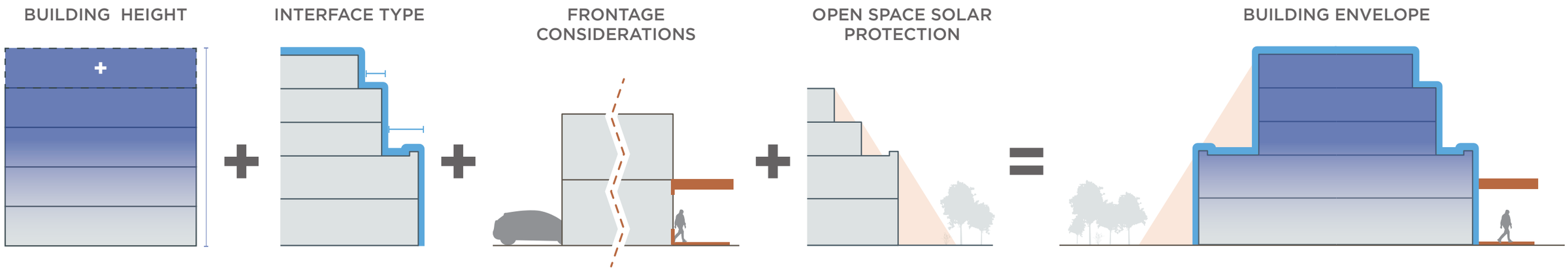


Figure 11: Section C

5.7 Recommendations Summary

The following diagram shows how the different controls work together to create the recommended building envelopes and frontage conditions. The tables below summarise the main details of each control category.



Building Height

Storeys	Height
5	20m
6	24m
8	31m
12	46m

Floor-to-floor

Use		Min. Height
Commercial	Ground	4.2m
	Above	3.8m
Residential		3.2m

Interface Types

Type	Ground Setback	Max. Podium/ Streetwall Height	Upper Level Setbacks
1*	0m (Min. & max.)	3 storeys (12.5m) Must not exceed tallest abutting streetwall.	Storeys 4-6: 5m from property boundary Storeys 7+: 1.5m for each 1m height (33°)
2	0m (Min.)	2 storeys (8m)	Storeys 3-4: 3m from property boundary Storeys 5+: 5m from property boundary
3A	0m (Min.)	1 storey (4.2m)	4.2m - 11.8m: 1m for each 2m height (64°) Above 11.8m: 1m for each 1m height (45°)
3B	0m (Min.)	2 storeys (8m)	Above 8m: 1m for each 1m height (45°)
4A	0m (Min.)	3 storeys (12.5m)	Above 12.5m: 5m from property boundary
4B	4.5m (Min.) Stanley St	3 storeys (12.5m)	Above 12.5m: 5m from property boundary
4C	2.5m (Min.) Orrong Rd	3 storeys (12.5m)	Above 12.5m: 5m from property boundary
5A	0m (Min.)	1 storey (4.2m)	4.2m - 23.2m: 1m for each 2m height (64°) Above 23.2m: 1m for each 1m height (45°)
5B	0m (Min.)	2 storeys (8m)	8m - 23.2m: 1m for each 2m height (64°) Above 23.2m: 1m for each 1m height (45°)
6	0m (Min.)	4 storeys (15.8m)	Above 15.8m: 5m from property boundary
7A	0m (Min.)	Match height of heritage building eave	Storeys 3-6: 1m for each 2m height (64°) Storeys 6+: 1m for each 1m height (45°)
7B	0m (Min.)	Match height of heritage building eave	Storeys 3-6: 1m for each 2m height (64°) Storeys 6+: 1m for each 1m height (45°)

**Mandatory*.

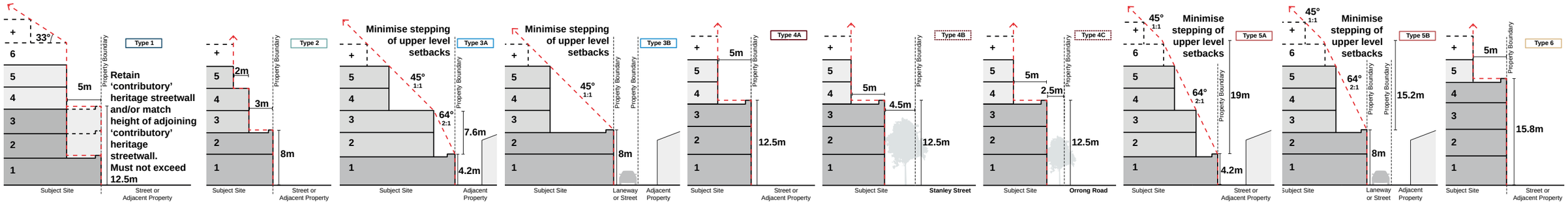
Frontage Considerations

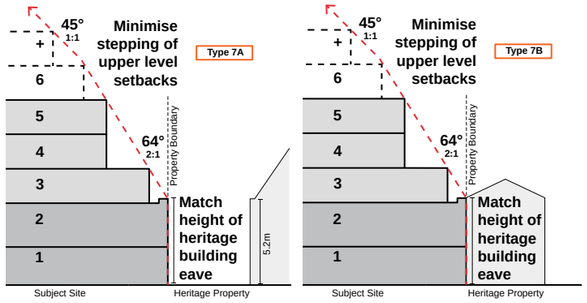
Shown in maps as:	Compliance
Active Frontage	Must comply with guideline '6.1.11 Active Frontages' in chapter 6.
Overhang/Awning	Where overhangs/awnings are identified, an awning must be provided in accordance with guideline '6.1.12 Awnings & Signage' in chapter 6. Does not apply to any building that did not traditionally have an awning.
Vehicle Access	Vehicle access must be located in accordance with the plan and should follow guideline '6.1.17 Garage Doors' in chapter 6.
All interfaces to public realm	Must comply with guideline '6.1.7 Safety' in chapter 6. Should comply with guideline '6.1.11 Active Frontages' in chapter 6.

Open Space Solar Protection

Shadow Controls	Compliance
Winter Solstice*	No additional shadows must be cast beyond the existing shadow (from existing buildings and infrastructure) or the shadow that would be cast by a street wall built to the nominated street wall height in the planning scheme, from 10am to 2pm on June 22nd.
Glen Huntly Road Southern Footpath*	No additional shadows must be cast beyond the existing shadow (from existing buildings and infrastructure) from 10am to 2pm on September 22nd, onto the southern footpath of Glen Huntly Road (measured as 3.5m from the property boundary).

**Mandatory*.





Railway Line
Tram Line
5 Storeys (20m)
6 Storeys (24m)
8 Storeys (31m)
12 Storeys (46m)
W. Solstice Shadow Controls
Potential Future Open Space
No change - Subject to individual HO
Sth. Footpath Shadow Control
Interface Type 1*
Interface Type 2
Interface Type 3A/3B
Interface Type 4
Interface Type 4B/4C
Interface Type 5A/5B
Interface Type 6
Interface Type 7A/7B
Public Land

*Mandatory
†Protect view of heritage church

5.7.1 Maximum Building Envelopes

The following aerial view shows the maximum building envelopes for the activity centre. These are not real built forms, rather the limits to which new development should abide by.

This aerial view is taken from the south east, looking towards the north west.

Figure 12: Maximum building envelopes

The following aerial view shows the maximum building envelopes for the activity centre. These are not real built forms, rather the limits to which new development should abide by.

This aerial view is taken from the north east, looking towards the south west.

Figure 13: Maximum building envelopes


CARTER LOVETT
ST GEORGES
HAIR KEEN
Elsternwick

6.0 Built form design guide

6.1 Design recommendations

The following Design Recommendations provide built form guidance beyond the maximum building envelope. These can be implemented as design guidelines within the planning scheme or through strategic documents.
The recommendations go above and beyond existing standards, guidelines and Planning Scheme requirements and are to be read in conjunction with those standards and guidelines.

6.1.1 Environmentally Sustainable Design

Development must express a strong commitment to Environmentally Sustainable Design principles, in particular passive thermal design, optimal orientation, effective sun shading, cross ventilation and open plan living. This should be evident in the external architectural expression and account for the threat of more extreme weather conditions resulting from climate change.

Energy

- Provide on-site energy generation / management systems that reduce greenhouse gas emissions and peak electrical load.
- Good passive solar design principles that reduce the reliance on mechanical systems for heating and cooling, and promote the use of natural daylight over artificial lighting. In particular, adopt good passive solar design principles in the design of facades including shading devices that exclude sun in summer and allow it into buildings in winter; locating living spaces to take advantage of winter sunlight.
- Apartment buildings should be designed with narrow depths, dual orientation and multiple entrance lobbies that allow for natural cross ventilation and good solar access.
- High level of insulation as a simple means of reducing the energy consumption of buildings.
- Specify and install energy-efficient electrical appliances.
- Outdoor clothes drying spaces or internal drying spaces within apartments to reduce reliance on clothes dryers.
- The use of green roof and green facade/green wall elements to reduce heat loads on internal building spaces.

Water

- Specify and install water-efficient appliances and plumbing fixtures.
- Ensure rainwater capture and reuse within individual sites, where possible.

Materials

- The use of low embodied energy materials is encouraged, subject to appropriate whole-of-life analysis.
- Encourage techniques that reduce the amount of material used for construction, the environmental impact of the selected construction materials, and the efficient use of those materials.
- The use of materials with low global warming and ozone depleting potential is encouraged.
- The use of locally sourced materials is encouraged.

Illura Apartments, West Melbourne

Aurora Estate, Wollert

6.1.2 Designing in Heritage Streetscape

All development proposals involving significant or contributory heritage buildings must demonstrate how the design proposal responds to its significance, and how the development is in accordance with the relevant heritage policy and guidelines which may include the Burra Charter. A specialist heritage consultant is to be engaged early in the design process to inform the outcome.

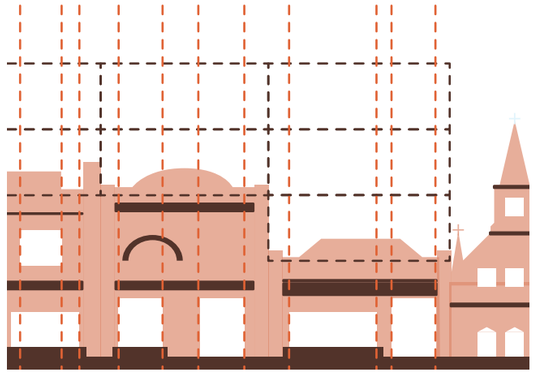
Additions to significant and contributory heritage buildings should be setback from the street wall. Any new upper level additions and works should be respectful to the scale and form of the heritage place or contributory elements of that place. Additions should read as a secondary and recessive element within the streetscape.

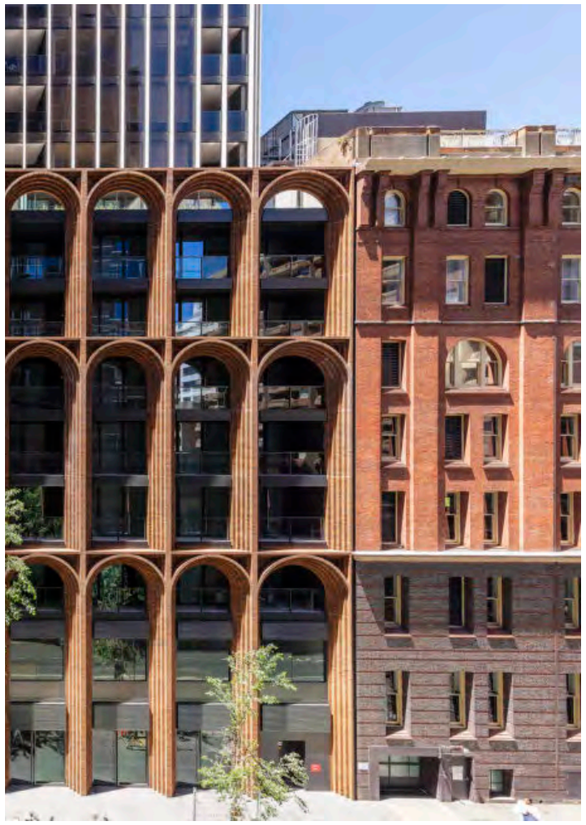
Development adjacent to, between and in addition to significant, contributory and character heritage buildings must enhance the character and appearance of the precinct. It must avoid the distortion of historic remnants by copying styles and details. The proportions, siting and general visual bulk of new development must minimise negative impacts on the significance of heritage buildings. Heritage buildings must retain their prominence as character-contributory elements within the precincts.

Infill buildings should adopt a contemporary architectural form or simplified interpretation of nearby contributory buildings.

Design Requirements:

- New development should respect the visual rhythms and key levels set by nearby heritage buildings and their architectural elements, including the scale, solid-to-void ratio and patterning of fenestration and doors, ridgelines, window sills and visually prominent load-bearing elements.
- The contemporary architecture of new developments could re-interpret design elements of heritage buildings that reinforce the precinct's character.
- The reproduction of heritage features, particularly ornaments, must be avoided.
- Infill buildings should not visually dominate adjoining heritage built form or block views to their main elevations.
- New development should transition sensitively to individually significant heritage sites contained within the framework area and to residential heritage areas adjacent to the study area.





Respecting the streetscape's visual rhythm. *Koichi Takada Architects.*

6.1.3 Building Services & Waste

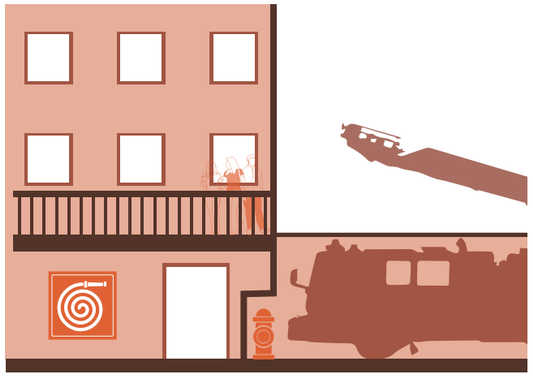
Efficient and functional building services should be integrated into the building's design and the context's heritage streetscape.

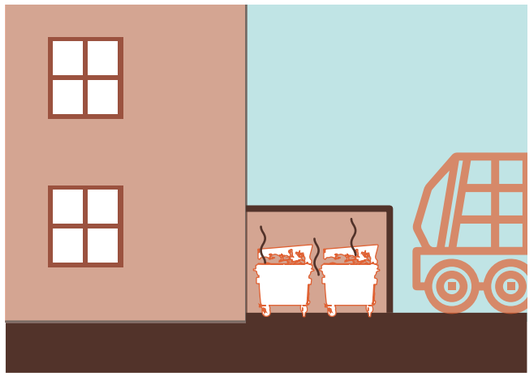
Well designed waste collection strategies should facilitate recycling and reduce the amount of waste going to landfill.

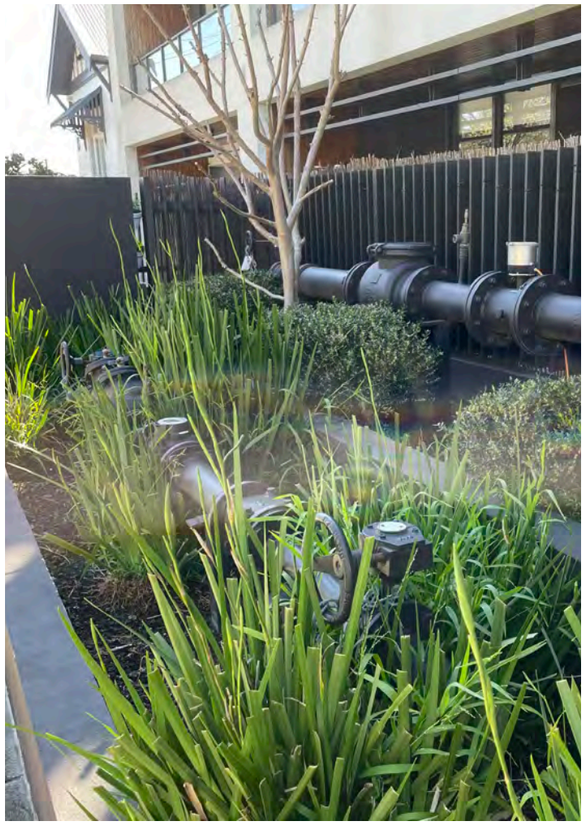
Alternate waste collection schemes that improve efficiency and reduce environmental impacts should also be considered where supported with a waste management plan.

Specific recommendations include:

- Locate new services and service areas so they do not impact significant spaces or the heritage fabric where possible.
- Building services should be integrated into the façade design.
- Roof top services should be screened from view and considered as a 'fifth elevation' as they may be viewed from taller surrounding buildings.
- Locate on-site waste storage and collection areas in locations that are unobtrusive, minimise odour and noise to residents, and mitigate any adverse impacts on neighbouring properties.
- Provide an appropriate waste management plan with building development applications in consultation with Council.
- During construction, provide and maintain appropriate temporary waste facilities that maximise recycling opportunities for both construction and domestic type waste.







Integrate Building Services.

Shared Bulk Bin Service.

6.1.4 Building Separation

Appropriate building separation, in combination with other design initiatives, can achieve internal amenity, visual acoustic privacy and daylight access. Building separation also contributes to the amount of sunlight reaching the public realm. The following recommendations should be considered in relation to sunlight access to public open spaces including equinox and solstice and controls.

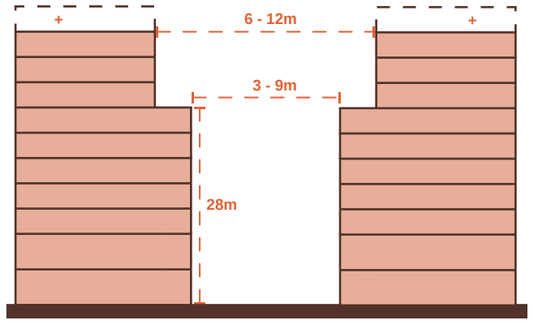
The following minimum building separation standards should be met:

<u>For building separation from adjacent properties (equitable development)</u>

- Where no outlook is proposed:
  - 0m if it does not affect the reasonable development opportunity of adjoining sites/buildings and a continuous street wall/podium is encouraged.
  - 6m for storeys over 28 metres
- From a secondary outlook (bedroom, bathroom, non-living, commercial & non-habitable) to the boundary line:
  - 3m for storeys up to 28 metres
  - 6m for storeys over 28 metres
- From a primary outlook (living, habitable, main balcony edge) to the boundary line:
  - 4.5m for storeys up to 28 metres
  - 6m for storeys over 28 metres

For building separation within a site

- From a secondary outlook (bedroom, bathroom, non-living, non-habitable) to no outlook (blank wall):
  - 3m for storeys up to 28 metres
  - 6m for storeys over 28 metres
- From a primary outlook (living, habitable, main balcony edge) to no outlook (blank wall):
  - 4.5m for storeys up to 28 metres
  - 6m for storeys over 28 metres
- Between secondary outlooks (bedroom, bathroom, non-living, non-habitable):
  - 6m for storeys up to 28 metres
  - 12m for storeys over 28 metres
- From a primary outlook (living, habitable, main balcony edge) to a secondary outlook (bedroom, bathroom, non-living, non-habitable):
  - 7.5m for storeys up to 28 metres
  - 12m for storeys over 28 metres



- Between primary outlooks (living, habitable, main balcony edge):
  - 9m for storeys up to 28 metres
  - 12m for storeys over 28 metres

Where the common boundary is a laneway, the setback is measured from the centre of the laneway.

These are based on common industry practice. Different scenarios such as upper level setbacks, changes in uses per level and screening allow for differences in building separation.

In addition to the above, developments must ensure compliance with the Better Apartment Design Standards.

380 Queensberry Street

Building separation in St Kilda Road

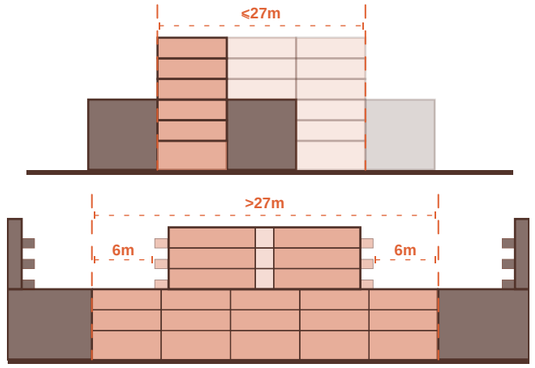
6.1.5 Building Breaks & Articulation

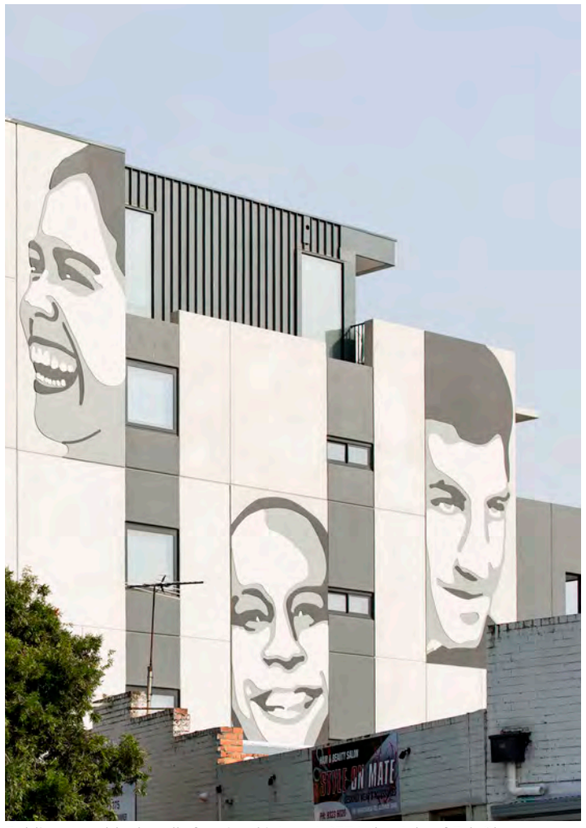
Developments along Glenhuntly Road must reduce the opportunity for long, continuous expanses of built form above the podium level. This is a risk with smaller lot sizes lending themselves to front and rear facing product and therefore being built to the side boundaries. Lot consolidation is encouraged to allow for the introduction of side facing typologies above the streetwall. Building breaks, setbacks and façade articulation that create a 'tooth and gap' approach are encouraged. These will increase sky views and the visual interest of the overall streetscape and character of the area.

Walls that are built to the side or rear boundaries above the podium/streetwall can often be seen from the street including at oblique angles and can appear very prominent depending on their scale and location. All visible boundary walls (including those expected to be visible temporarily) must be articulated and are encouraged to adopt techniques that may include patternation that is integrated with the primary architectural expression, artworks, colour and materials that are consistent with Elsternwick's character, to reduce negative visual impact, and increase visual interest.

Specific recommendations include:

- For developments with a total lot width of 27m or greater, introduce side facing typologies with a minimum 4.5m setback from the boundary (in accordance with guideline 6.1.4 'Building Separation').
- Add variation to the depth of the setback, particularly in the top level, to allow for increased sky views and articulation.
- Avoid blank walls and introduce public art or other visually interesting approaches on boundary walls even when only visible temporarily.





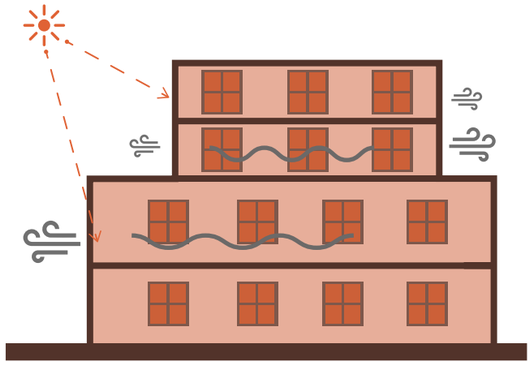
Public art on blank walls for visual interest, 177 Wheatsheaf Rd, Glenroy. Artist: Alisha Abate. Photographer: Lucy Foster.

Varying heights resembling a 'tooth and gap' approach, Masséna Quarter, Paris. Architect: Christian de Portzamparc. Photographer: Eric Sempé. From: e-architect.com/paris/massena-district

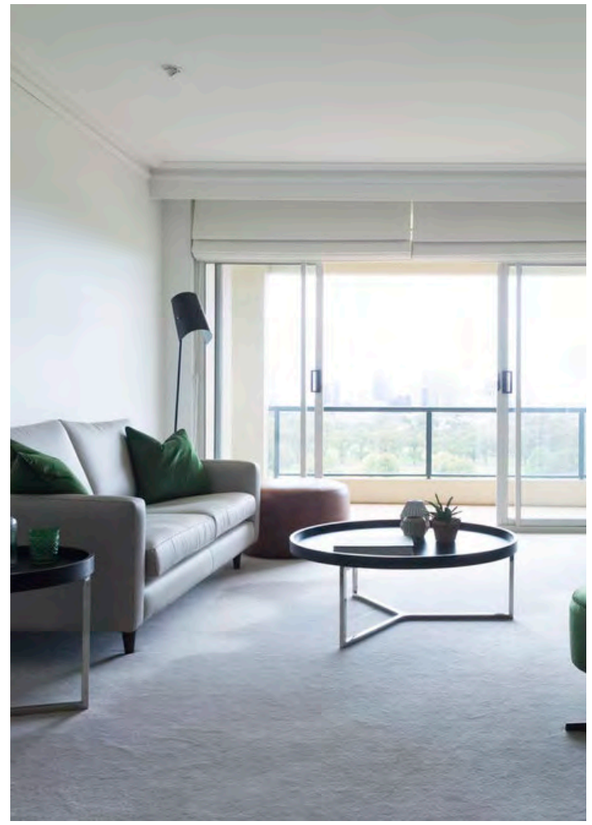
6.1.6 Building Depth

Specific recommendations include:

- Demonstrate buildings are of a depth that facilitates sunlight access and cross ventilation for internal amenity and contributes to sustainable design performance.
- For residential uses, ensure compliance with the Better Apartment Design Standards guidance on room depths. The standard notes that:
  - "Single aspect habitable rooms should not exceed a room depth of 2.5 times the ceiling height.
  - The depth of a single aspect, open plan, habitable room may be increased to 9 metres if all the following requirements are met:
    - › The room combines the living area, dining area and kitchen.
    - › The kitchen is located furthest from the window.
    - › The ceiling height is at least 2.7 metres measured from finished floor level to finished ceiling level. This excludes where services are provided above the kitchen.
    - › The room depth should be measured from the external surface of the habitable room window to the rear wall of the room."
- For commercial uses, the distance from a natural light source to a core or centre of plan must not exceed 15m, to ensure adequate sunlight access and ventilation.



Sunlight access in commercial building



Natural ventilation & sunlight in residential building

6.1.7 Safety

Specific recommendations include:

- Maximise the legibility and safety of building entrances.
- Optimise passive surveillance opportunities and maximise operable windows and balconies on interfaces with the public realm.
- Minimise potential for concealment, such as in recesses or nooks in the ground floor building line.
- Facilitate and encourage pedestrian movement, through multiple building entrances from the street and avoiding long stretches of blank walls.
- Avoid the use of reflective or dark glazing and ensure interaction between the private and public realm on the first 6 levels.
- Any arcades or laneways must have visual connection to both streets.

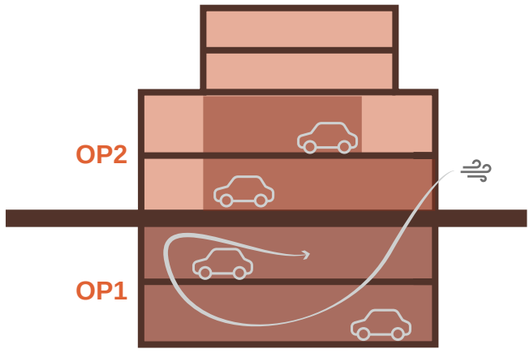
202 Queensberry Street Passive Surveillance

6.1.8 Car Parking

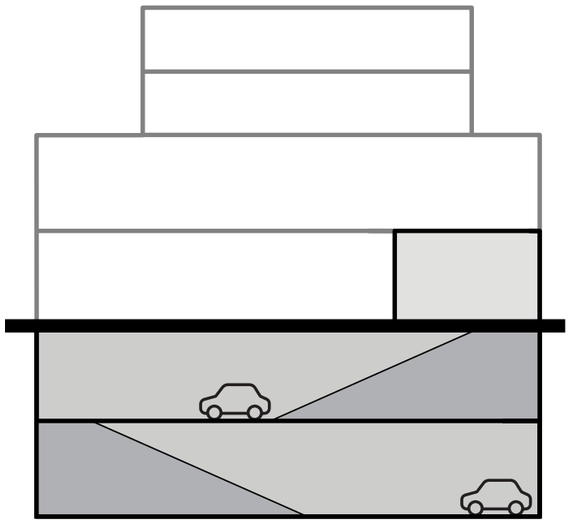
Specific recommendations include:

- Car Parking should be provided in below ground basements fully below the finished street level.
- Given the spatial requirements to provide ramps and efficient parking modules, consolidation of properties increases the efficiency of basement layouts.
- Semi-basements that extend above the finished street level to a maximum of 1.2m may be considered as an alternative in situations where dwelling privacy would benefit from a raised ground floor. All commercial fronts must be provided at footpath level.
- Natural ventilation to basement and semi-basement car parking is encouraged on sustainability grounds. Ventilation grilles and screening of openings will require detailed design attention and full integration into the façade design. Additionally, integrated public art should be considered to reduce the impact of grills and screens on the streetscape.
- Alternatives to basement car parks (OP1 in the diagram) will be considered where it can be clearly demonstrated a basement configuration cannot be achieved within a development parcel. Only above-ground car parking that is predominantly 'wrapped' by active uses (commercial, retail and/or residential) will be considered as a possible alternative (OP2 in the diagram).

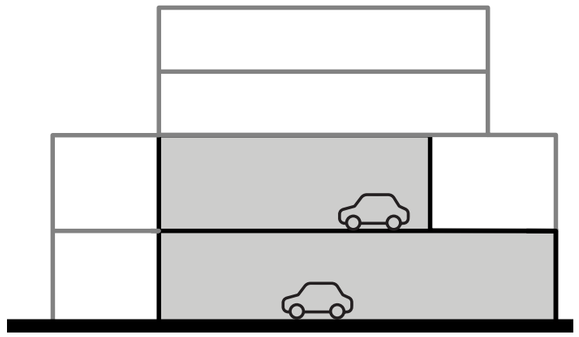
It is recommended that Council adopt reduced minimum parking rates in the activity centre, to help achieve the goals of Council's Climate Change Emergency Response Strategy and the Integrated Transport Strategy.



Basement car parking



Podium car parking wrapped in active uses

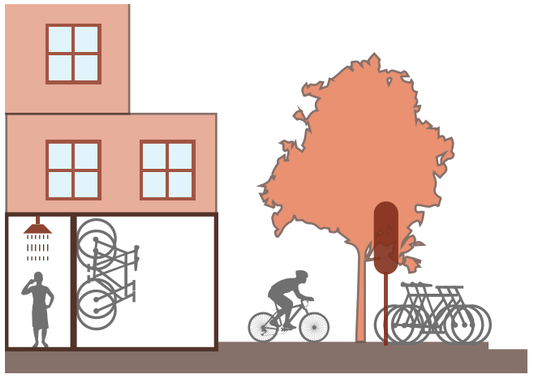


6.1.9 Bicycle Parking

The provision of good quality facilities for cyclists within buildings with convenient external access is essential to encourage the use of bicycles for transport in preference to cars.

Specific recommendations include:

- Consider place making principles when locating facilities for cyclists within the building.
- Lockable on-site storage for bicycles could be provided in convenient and highly accessible areas such as at ground level near building foyers and lift lobbies or at an apartment entry where the use is residential.
- Retail and/or commercial premises should consider the supply of a shower and change facility (including lockers) accessible by all tenants, in accordance with the requirements of 52.34.
- Shared bicycle maintenance stations are encouraged.



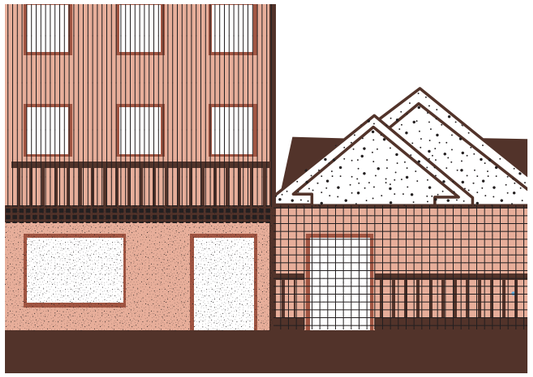
Secure bike storage.

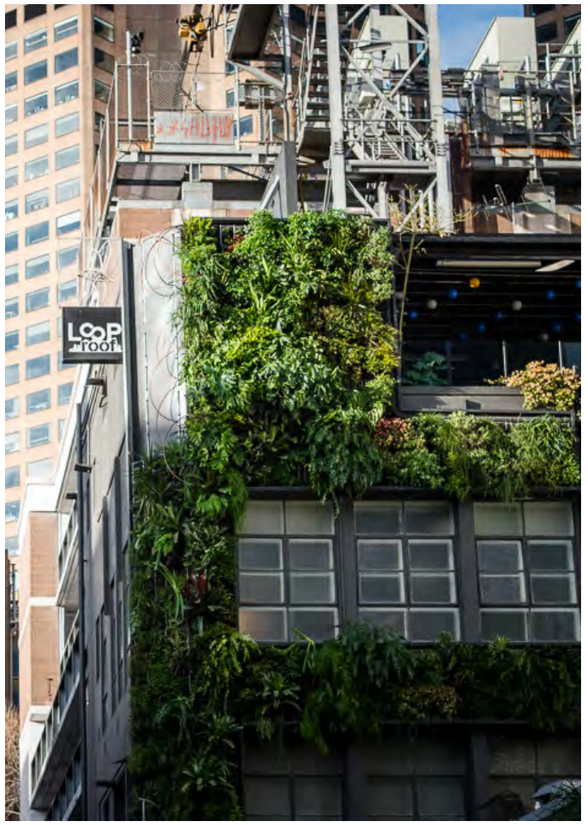
Integrated bike storage in apartments.

6.1.10 Materiality

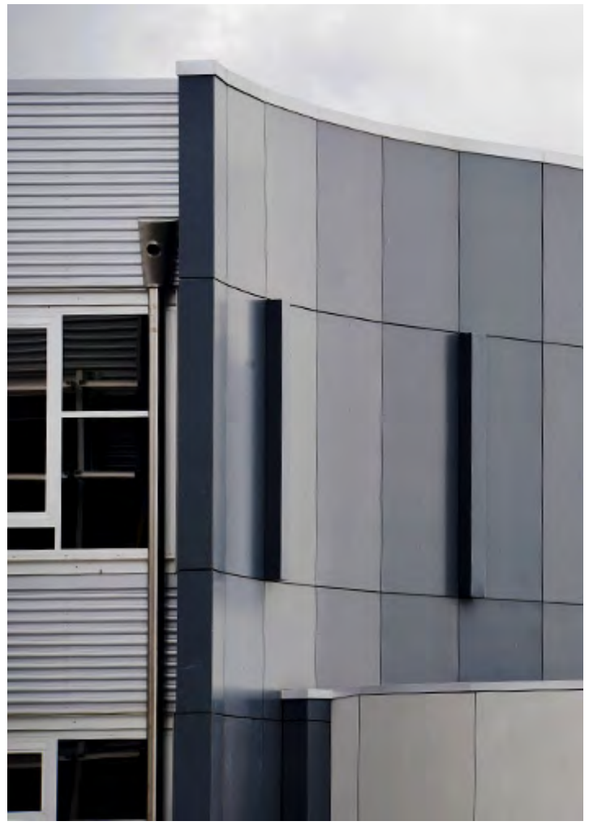
Specific recommendations include:

- Ensure materials enhance and respond to Elsternwick's valued character.
- Adopt a cohesive materials palette as an integral part of the building design.
- Select materials that contribute to the building's sustainability performance, including consideration of green walls.
- Select durable materials that withstand the effects of weathering and contribute to the value of buildings and the streetscape appearance over the long term.
- Maximise the use of materials that are self-finished and/or pre-finished.
- The use of superficial and superfluous detailing and highly saturated colour palettes that distract from heritage and don't align with Elsternwick's character is discouraged.
- Avoid the use of reflective or dark glazing that conceals activity within non-residential buildings.
- Consider green roofs or materials with a high Solar Reflective Index.
- Use recessive material/colour for upper levels behind the street wall.





Natural material such as green wall in Melbourne CBD

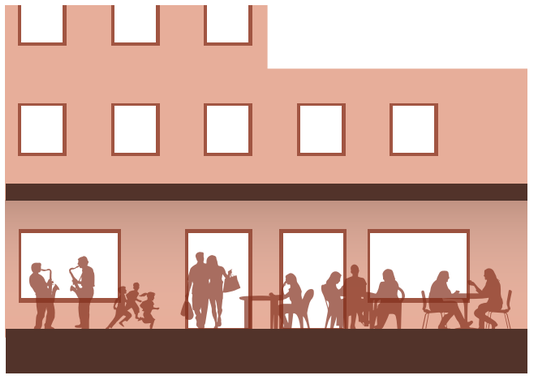


Pre-finished material should be encouraged

6.1.11 Active Frontages

Specific recommendations include:

- Buildings should engage, frame and activate the street.
- Avoid the occurrence of blank walls, particularly at ground level.
- Activity within non-residential buildings should be readily visible through the windows. The use of reflective or dark glass that prevents this is not supported.
- Development should be constructed to the property boundary, particularly along active frontage streets as indicated in figure 8, section 5.5.
- Active ground floor uses should be at the same general level as the footpath and directly accessible from the street.
- Floor to ceiling glazing across the entirety of the façade is discouraged. Larger expanses of glazing should be broken into smaller components with architectural elements such as plinths, solid vertical columns and transoms.
- Integrate landscaping above ground floor levels to provide interest in design and amenity.



Good visibility through windows

Footpath dining on Lygon Street

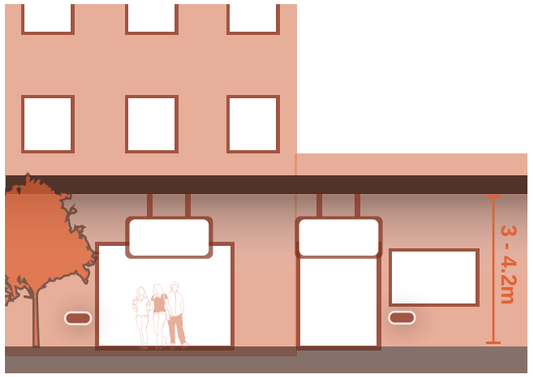
6.1.12 Awnings & Signage

Awnings

Awnings improve the amenity of footpaths and building entries for pedestrians by providing all weather protection and contributing to building identity. Awnings are particularly important in areas of high pedestrian activity and ground floor active uses.

Specific recommendations include:

- Provide predominately continuous awnings to all buildings along Glenhuntly Road, except for heritage contributory buildings that did not historically have one.
- In other areas, provide awnings to retail frontages and over commercial and common residential entries.
- All awnings are to match the height of adjacent awnings. Where there are no existing awnings adjacent to the development, these must have a soffit height in the range of 3.0 - 4.2m above finished footpath level.
- Awning depth must match adjacent awnings. Where there are no existing awnings adjacent to the development, these must aim to cover at least 80% of the footpath's depth.
- Awnings should be set back a minimum of 750mm from the kerb to avoid damage from passing trucks.
- Provide under-awning lighting for pedestrian safety.
- Design awnings to ensure they do not inhibit trees in the public domain achieving full mature canopies or impact vehicular traffic.



Signage

Specific recommendations include:

- Integrate signs and building numbers into the overall fabric of development through consistency with the building scale, proportions and detailing.
- Ensure under-awning signage reinforces Elsternwick's character in the Main Retail Precinct.
- A maximum of one under-awning sign for a residential building and one per commercial or retail tenancy.
- Signage above awnings is discouraged if it results in visual clutter in the streetscape and obscures views of the subject building and nearby contributory buildings.
- Ensure retention of signage deemed to have heritage value.
- Sky signs, reflective signs, animated signs and electronic signs are discouraged within heritage areas.
- Signage on larger multi-level buildings should be limited to company logo or tenant name only.

Example of awning in heritage streetscape.

Example of verandah in heritage streetscape.

6.1.13 Landscape Design

The following guidance applies only to landscape within the private realm, particularly within private and communal open space.

Landscape and buildings should perform as an integrated system to achieve amenity and visual quality for occupants and people in the public domain.

Maximise the benefits of communal and private outdoor spaces through landscape design that supports outdoor living.

Specific recommendations include:

- Target a minimum of 50% of communal outdoor space to be softscape planting (turf, ground covers or shrubs).
- Maximise opportunities for each development to include trees of a scale appropriate to the built form scale that facilitates growth to a mature canopy and long term health.
- Integrate landscape design with water and stormwater management.
- Select plant species appropriate to Elsternwick's context and climate, maximising use of endemic and native species and opportunities for urban biodiversity.
- Incorporate features to support fauna biodiversity.
- Landscape design of communal spaces should encourage and facilitate usage and activity, such as through effective sun shading and sense of privacy and enclosure.

Hassett Park - WSUD

Neil Street Reserve, Carlton

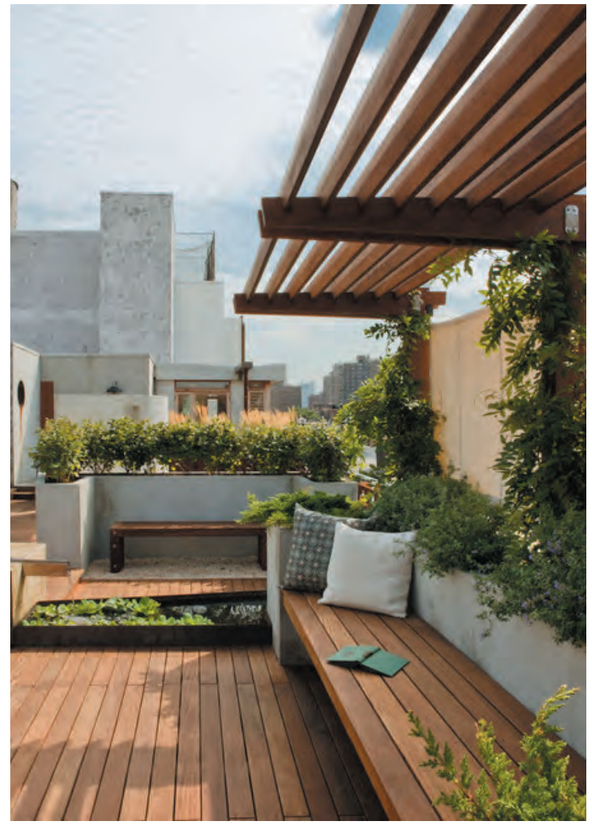
6.1.14 Deep Soil Planting Zones

Deep soil zones are useful in achieving the integration of large trees in developments and facilitate the infiltration of water into the ground. Basements and podiums must consider the provision of deep soil planting zones.

Specific recommendations include:

- Maximise deep soil planting within the areas available, given other design parameters and site contamination audit conditions.
- Deep soil zones are to be of appropriate dimensions that achieve their function as planting space for large trees.
- Locating deep soil zones is encouraged within key communal outdoor space areas or elsewhere where a large tree will benefit the maximum number of residents and where the tree can contribute to the public domain.
- Ensure compliance with Clause 58.03-5 of the planning scheme, including canopy cover and deep soil requirements, soil requirements for trees and tree type.

Planting over basement car park.



Planting on podium.

6.1.15 Structure/Podium/Rooftop Planting and Design

Planted landscapes are encouraged on built elements including podiums and rooftops. These environments can positively contribute to the quality and quantity of green space available to residents and provide opportunities for greater ecological diversity within Elsternwick.

Specific recommendations include:

- Planting beds are to be of a depth adequate to support healthy growth of the chosen species.
- Plant selection should consider the different conditions elevated planting may experience.
- Building structures must incorporate elements appropriate to the increased weight and drainage requirements of planted landscapes.

Basement car parks, upper levels and roof terraces or green roofs are likely to result in areas of planting over built structures. It is important to coordinate the design of basement car parks with the design of outdoor spaces to ensure the growth and long term health of planting. The ongoing maintenance of landscaping must be considered.

Specific recommendations include:

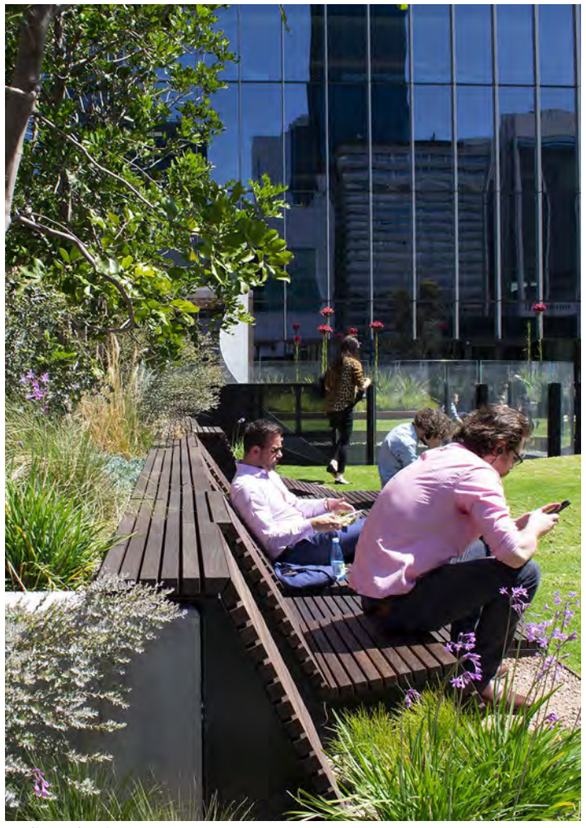
- Design for landscaping on structures to provide optimum conditions for plant growth by:
  - Providing soil depth, soil volume and soil area appropriate to the size of the plants to be established.
  - Providing appropriate soil conditions and irrigation methods.
  - Providing appropriate drainage.
- Green roofs can be extensive - with low build-up height and soil depth suitable for self-generative plants like succulents and grasses, or intensive with higher build up and soil depths suitable for trees, shrubs and vegetables.

The roof is a key component of design and architectural expression. Quality roof design considers the contribution of the roof to the overall performance and function of the building and the character of its context, particularly if it is viewed from above in close proximity from other buildings.

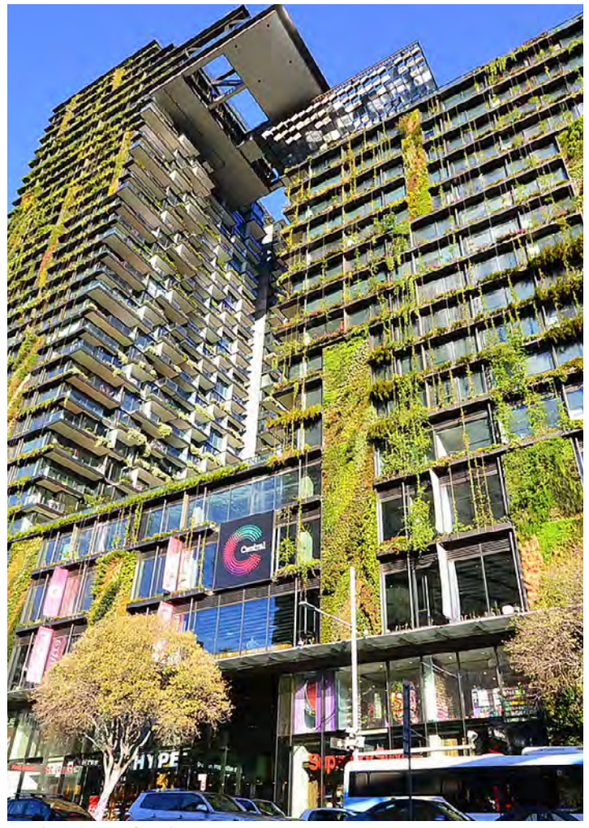
Buildings are encouraged to have a visual ‘finish’ at the roof level. This can be in the form of a roof with eaves, a parapet, a recessed top floor, a separately detailed element or a combination of the above. Roof spaces and forms should be treated as a considered aspect of the overall building form (a ‘fifth elevation’).

Specific recommendations include:

- Ensure roof materiality has sufficient solar reflectivity to reduce building heat gain.
- Maximise the opportunity for roofs to deliver one or multiple functions including:
  - Communal and/or private outdoor recreation opportunities.
  - Green roofs for improved sustainability performance, food cultivation and urban biodiversity.
  - Efficient installation of renewable energy technology including solar panels, solar hot water systems and other technologies.
- Integrate service elements (for example service plant, lift overruns, vent stacks, ventilation equipment) into the roof design to minimise visual intrusion and create “clean” roofscapes.
- Plant and roof equipment should be designed and coordinated to have a clean, positive visual impact to integrate sustainable features.
- Roof gardens/green roofs are a preferred solution.



Podium planting.



Landscaping on facades.

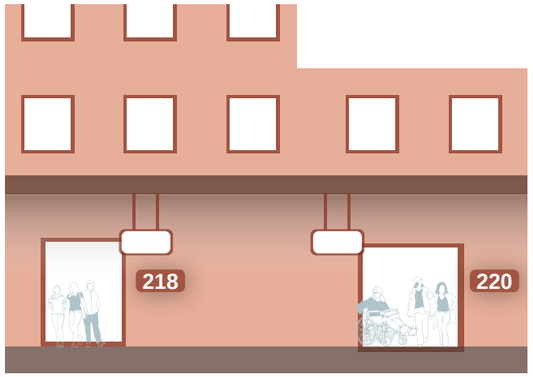
6.1.16 Building Access for Pedestrians

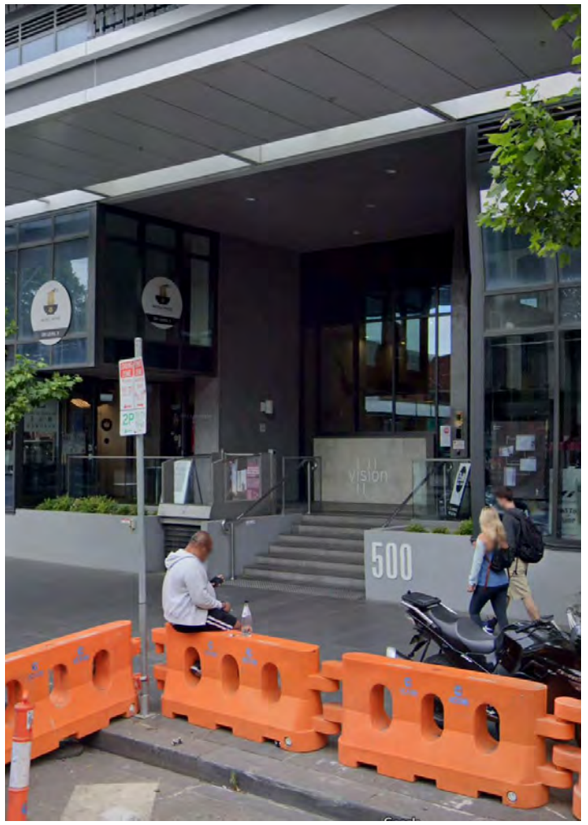
Quality and equitable pedestrian access where all residents, employees and visitors can access buildings and public and/or communal spaces is central to an inclusive community and user-friendly places.

Building entrances are the primary interface of a building with the public domain, contributing to the character and legibility of a street and forming a significant component of the overall facade composition.

Specific recommendations include:

- Access must be equitable for those with mobility impairments, using strollers, wheelchairs or bicycles.
- Ensure equitable access is provided to all public and shared entries.
- Locate the primary entry of a building to address a development parcel's primary street frontage. Corner sites can locate the primary access on the secondary street to increase shopfronts and retail access on the primary street.
- Design entries and associated elements (such as signs and street numbers) to emphasise their visible presence from various approaches to the building.
- Provide distinct and separate entries from the street for pedestrians and cars and, where possible, for commercial and residential access in mixed-use buildings (noting heritage fabric may impact the ability to achieve this outcome).
- Entries are to be generous and safe with double height spaces in larger developments and particularly within the Cultural and Urban Renewal precincts.
- Each individual ground floor dwelling is encouraged to have a separate entry and address to the public street to activate the street edge. Most street level apartments should achieve this. Ground floor dwellings are strongly discouraged within shopping and high foot traffic areas.
- Design shared entries for upper level dwellings to be clearly legible as the 'higher order' entries for example through facade modulation or awning projection.
- Provide an entry canopy for protection from sun and rain.





Clear entry element with equitable access under canopy protection.

Separate entries for pedestrians and cars, on secondary street for a corner site.

6.1.17 Garage Doors

Specific recommendations include:

- Garage doors are not to be overly featured and should be similar to the colours of surrounding walls. Innovative approaches to gain light and/or ventilation through garage doors are encouraged.
- Segmented door systems such as tilt up or panel lift and sliding doors are preferred.
- Avoid continuous runs of garage doors.

Addition of artistic elements.

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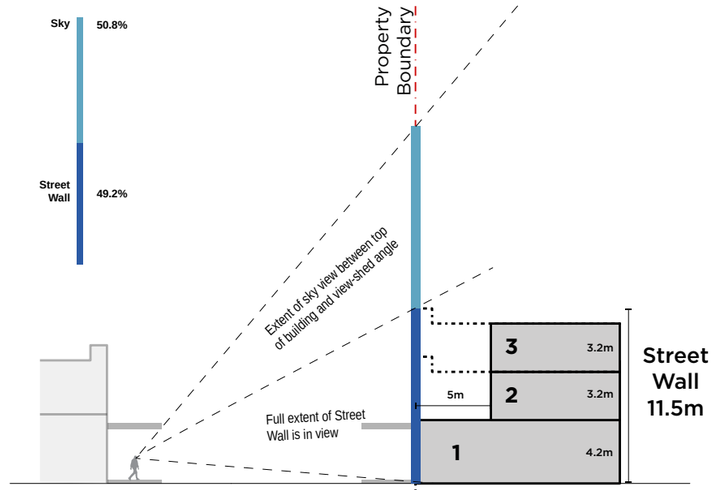
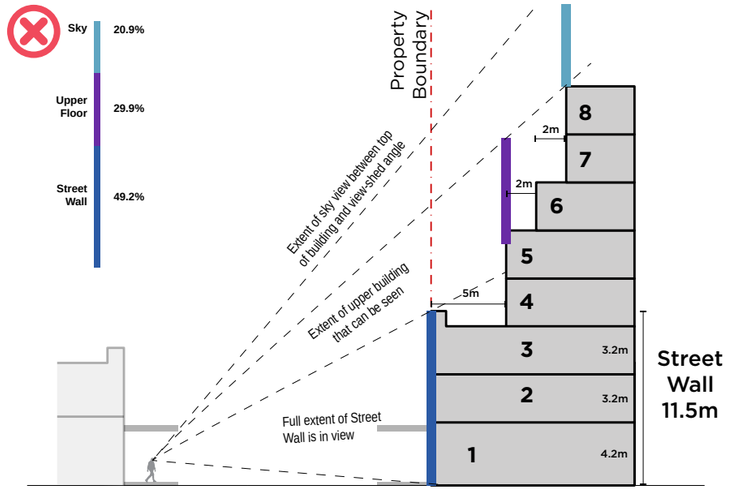
7.0 Appendix A

View Cone Analysis

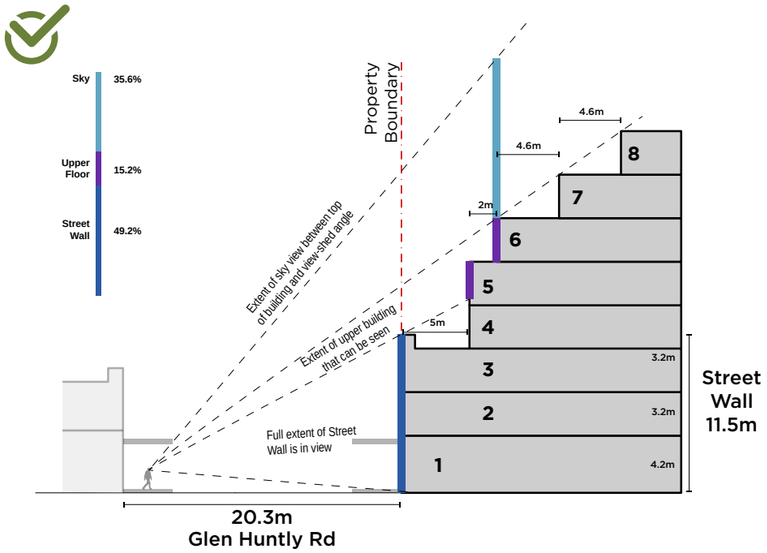
Existing - 3 Storeys Street Wall



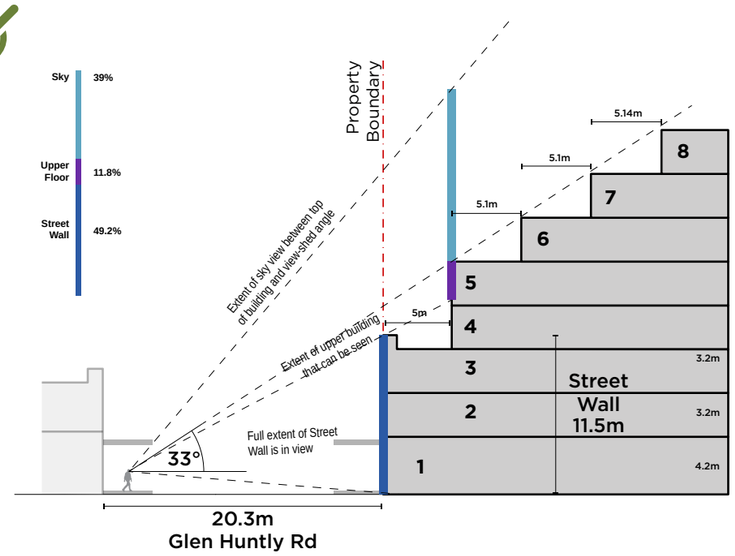
Scenario A - 8 Storeys with 2m upper level setbacks



Scenario B - 8 Storeys with hidden 7+



Scenario C - 8 Storeys with hidden 6+

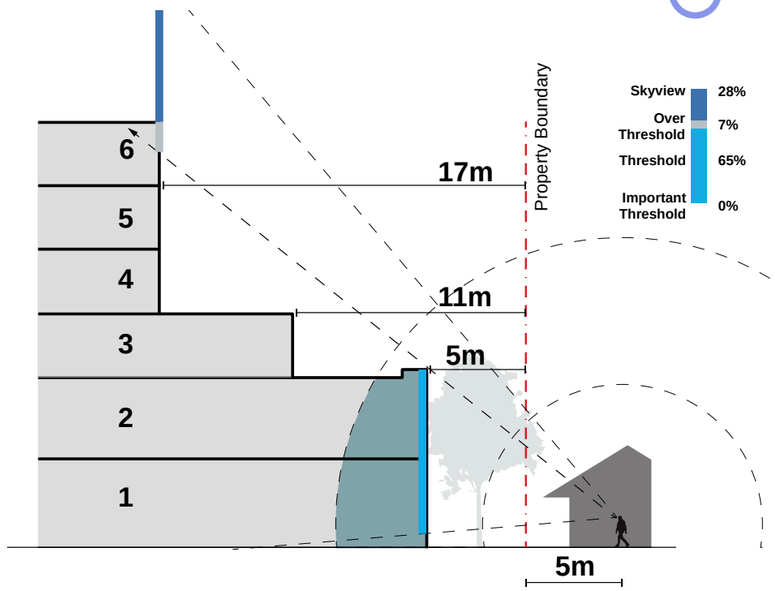


Transitions Analysis

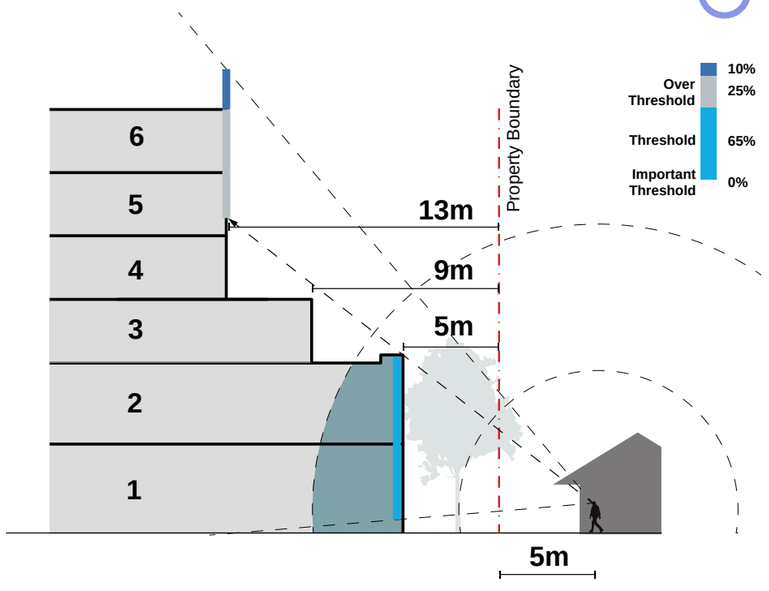
Transition to Sensitive Interfaces - Urban Renewal Area and strategic sites

Benchmark Scenarios

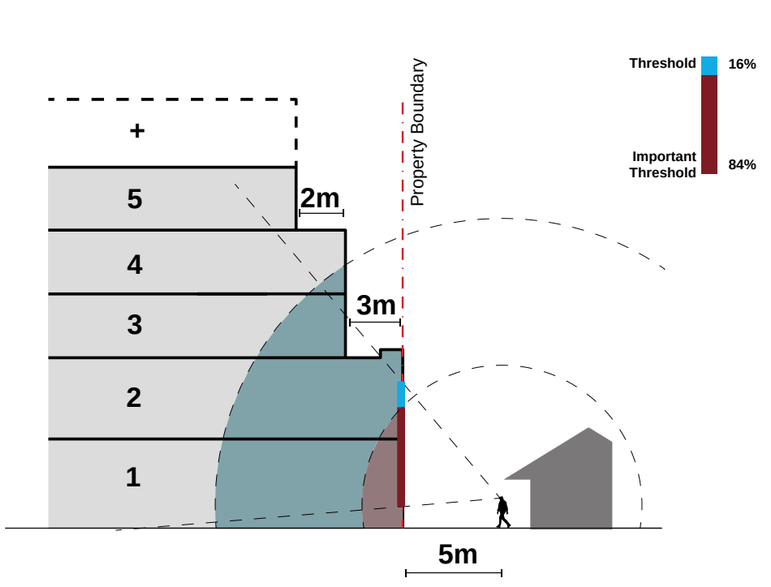
SCENARIO 1



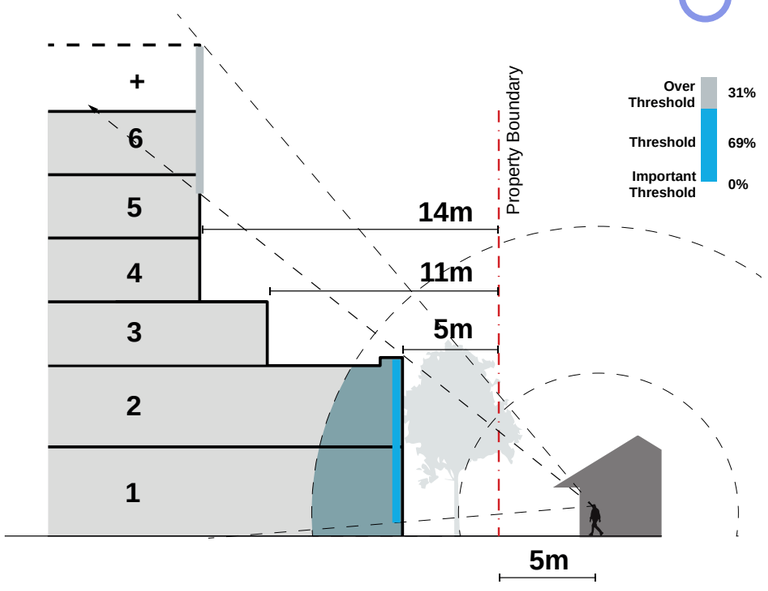
SCENARIO 3



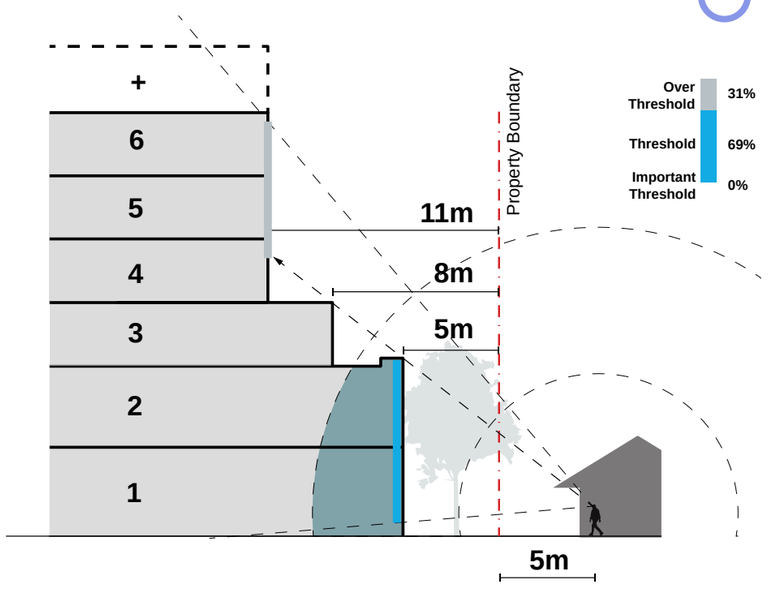
SCENARIO 5



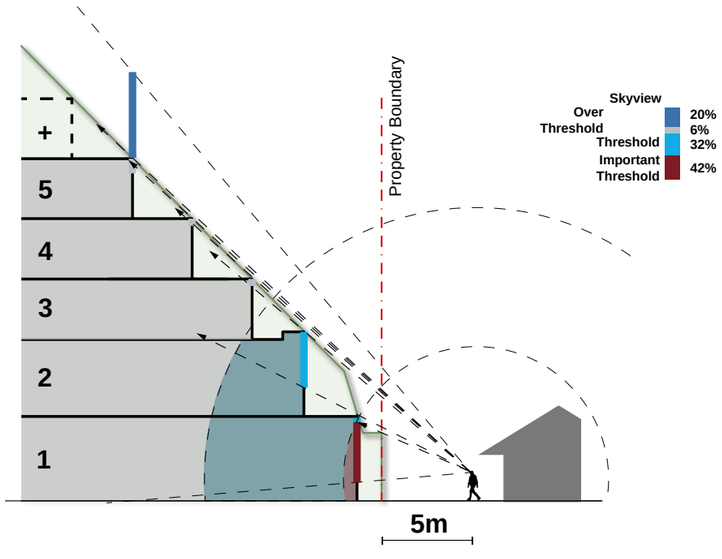
SCENARIO 2



SCENARIO 4



SCENARIO 6



Visual Bulk Analysis

Existing

Pedestrian View - West to East - North Footpath

Existing

Pedestrian View - West to East - South Footpath

Existing

Pedestrian View - East to West - South Footpath

Existing

Pedestrian View - East to West - Mid-Road

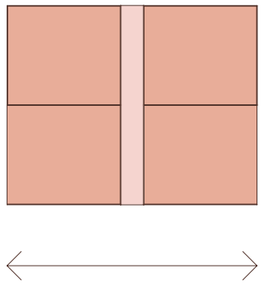
Existing

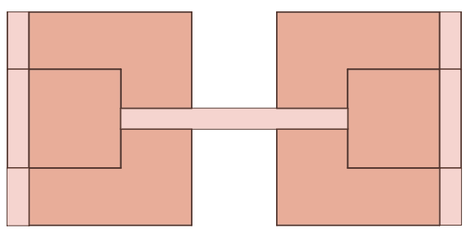
Pedestrian View - East to West - North Footpath

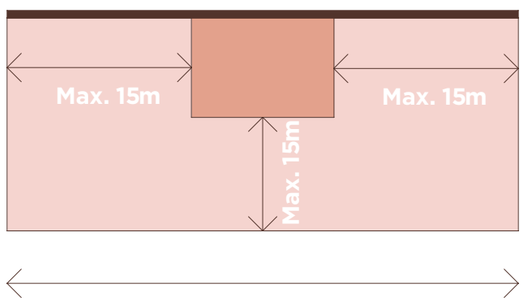
Testing Sites

Methodology

- Apartment Sizes
  - 1 Bedroom Apartments: average 56m2
  - 2 Bedroom Apartments: average 76m2
  - 3 Bedroom Apartments: average 105m2
- BADS compliant
- Car park ratio > 1.5
  - with max. 2 basements



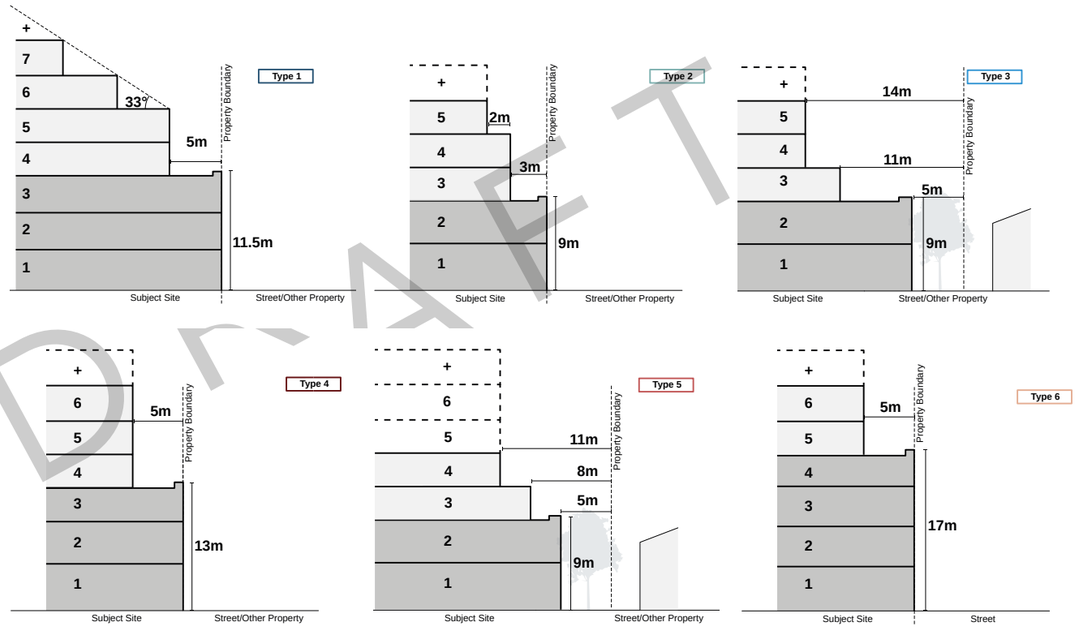




Floor-to-floor

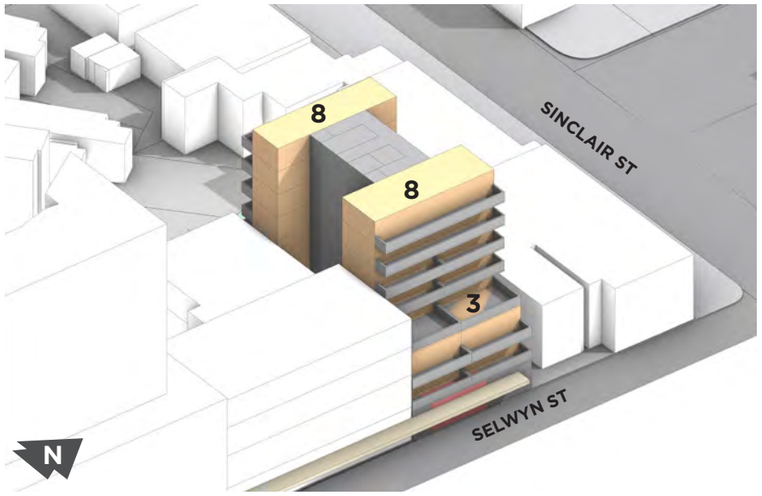
Use		Min. Height
Commercial	Ground	4.2m
	Above	3.8m
Residential		3.2m

The controls shown below were used in Test 1. Test 2 uses the controls outlined in Chapter 5.

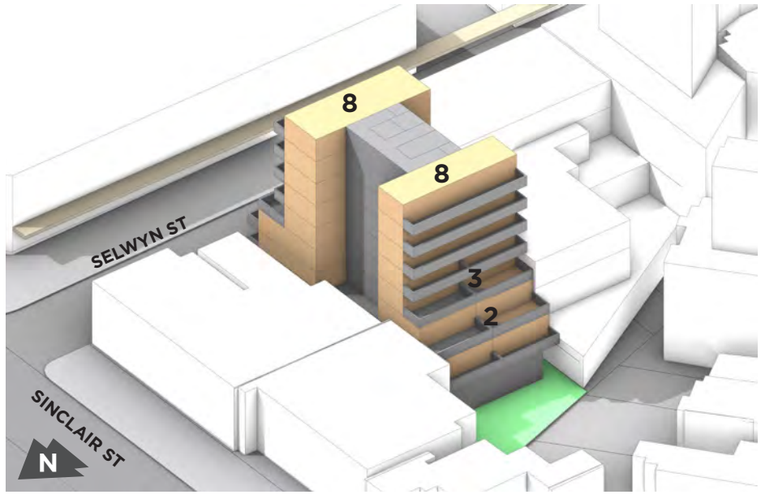


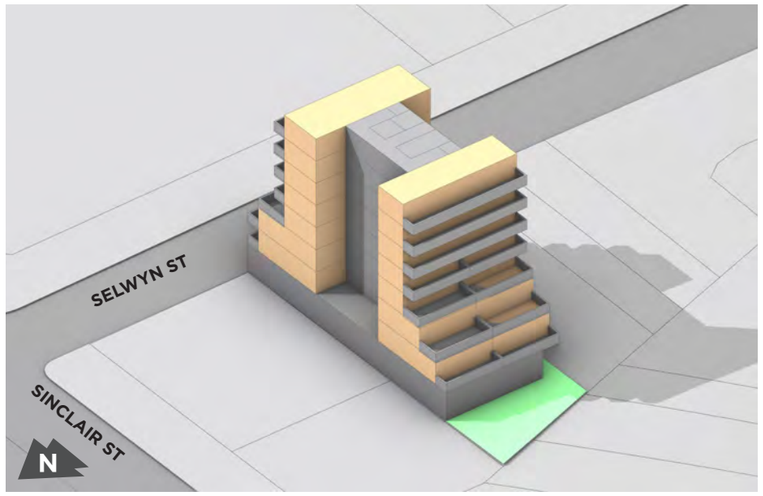
19 Selwyn St

SE/NW Isometric views



Commercial
Residential





Controls & Yield

Interfaces	4, 5
Max Height	8
Site Area (m^2)	788
FAR	4.5:1
Total GFA (m^2)	3,546
Commercial GFA (m^2)	88
Residential GFA (m^2)	2,281

Total GFA includes all covered areas, including private open space, above ground carpark, circulation, services, structure, party walls, commercial and residential.

Commercial GFA includes all commercial areas and their structure and party walls.

Residential GFA includes all residential areas and their private open space, structure and party walls.

Test 1

19 Selwyn St

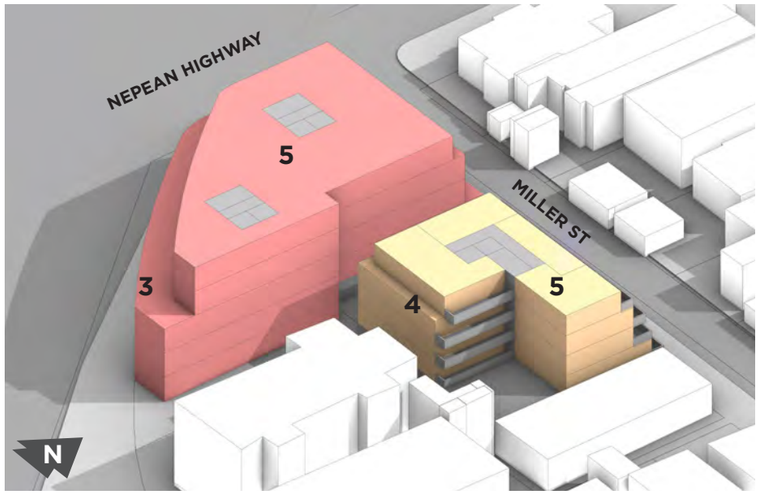
Shadow Analysis - 22/09

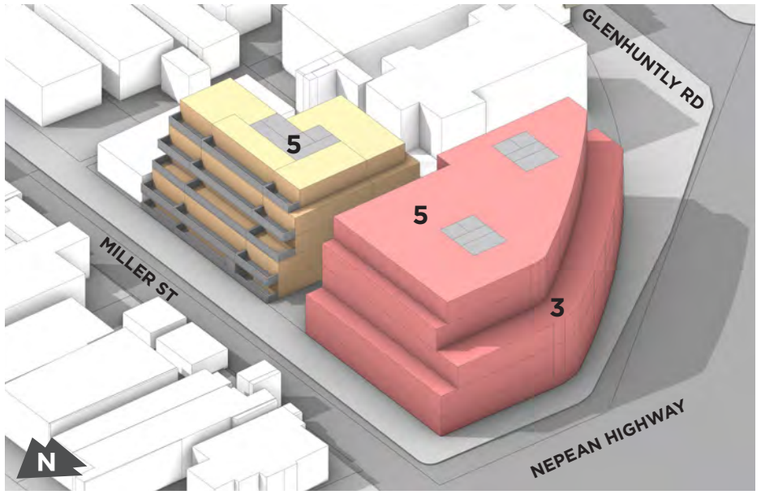
Note: the shadows in the diagram overlay the 10:00, 12:00 and 14:00 (22/09) in the same image.

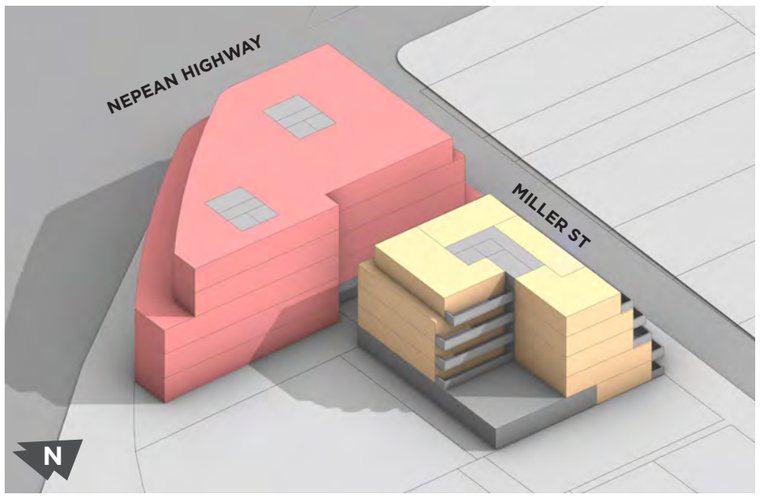
201 Glenhuntly Rd

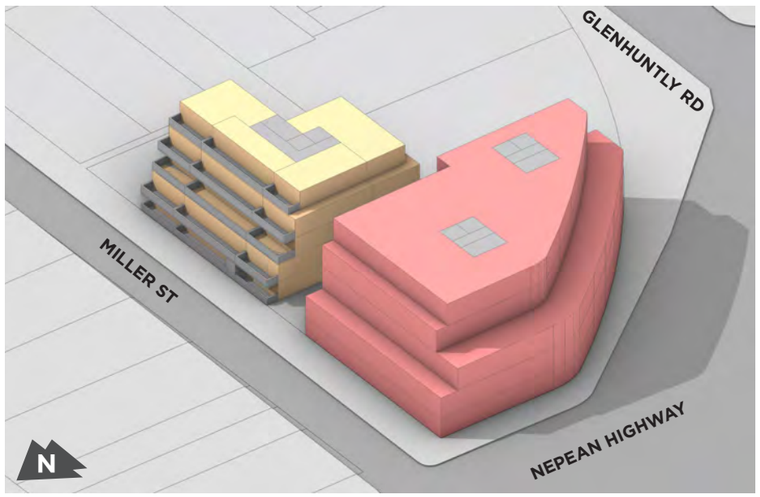
SE/NW Isometric views

Commercial
Residential









Controls & Yield

Interfaces	2, 4, 5
Max Height	5
Site Area (m^2)	2,772
FAR	3.7:1
Total GFA (m^2)	10,133
Commercial GFA (m^2)	6,358
Residential GFA (m^2)	2,463

Total GFA includes all covered areas, including private open space, above ground carpark, circulation, services, structure, party walls, commercial and residential.

Commercial GFA includes all commercial areas and their structure and party walls.

Residential GFA includes all residential areas and their private open space, structure and party walls.

Test 1

201 Glenhuntly Rd

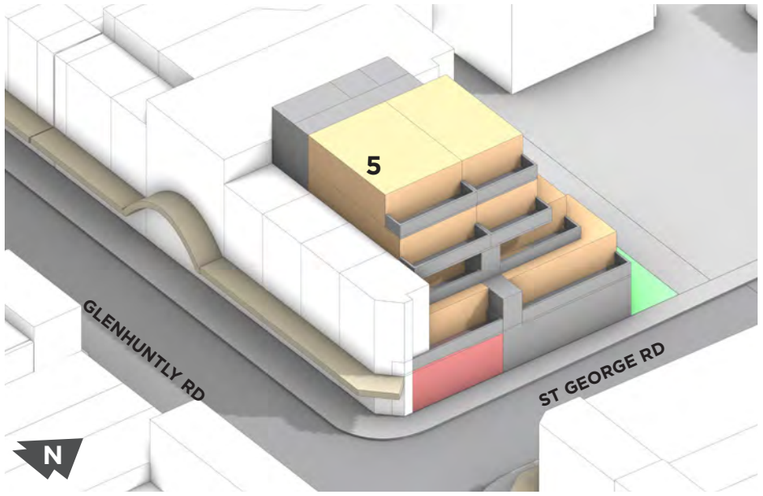
Shadow Analysis - 22/09 @10, 12, 14

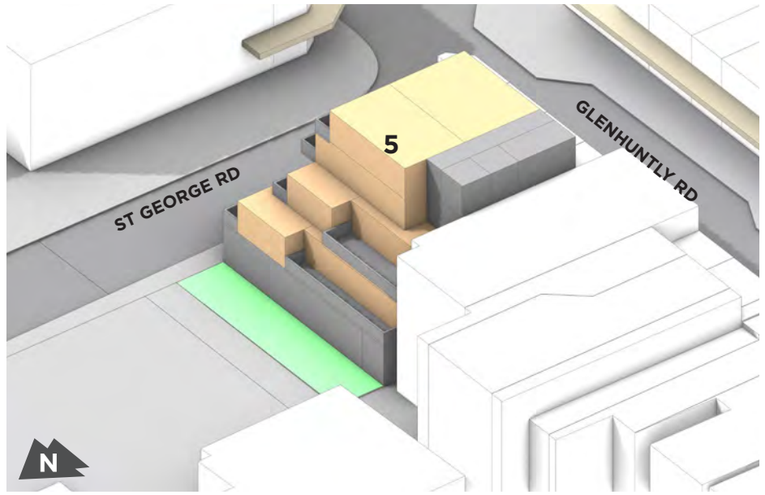
Note: the shadows in the diagram overlay the 10:00, 12:00 and 14:00 (22/09) in the same image.

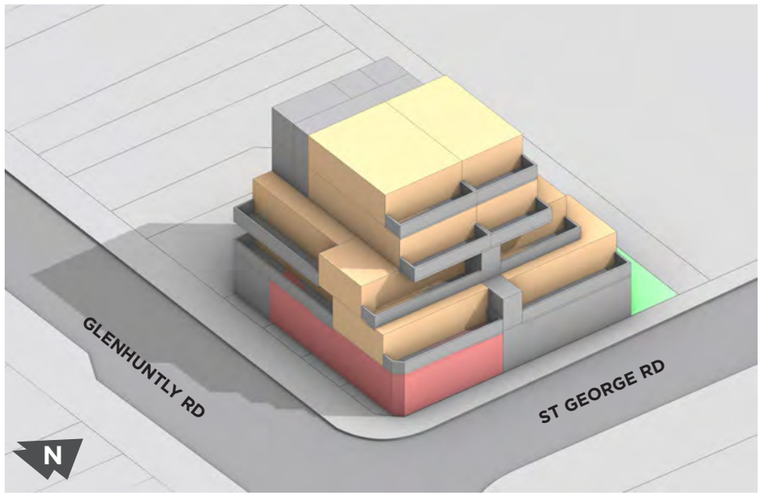
323-329 Glenhuntly Rd

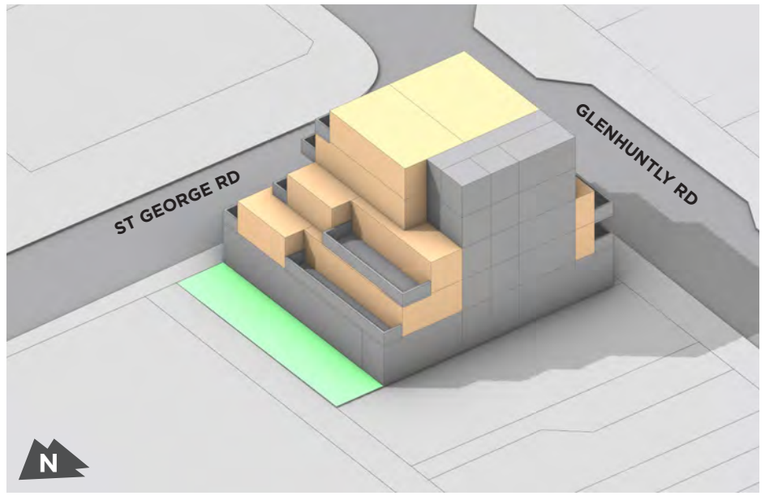
SE/NW Isometric views

Commercial
Residential









Controls & Yield

Interfaces	1, 2, 5
Max Height	5
Site Area (m^2)	684
FAR	3.2:1
Total GFA (m^2)	2,154
Commercial GFA (m^2)	194
Residential GFA (m^2)	1,300

Total GFA includes all covered areas, including private open space, above ground carpark, circulation, services, structure, party walls, commercial and residential.

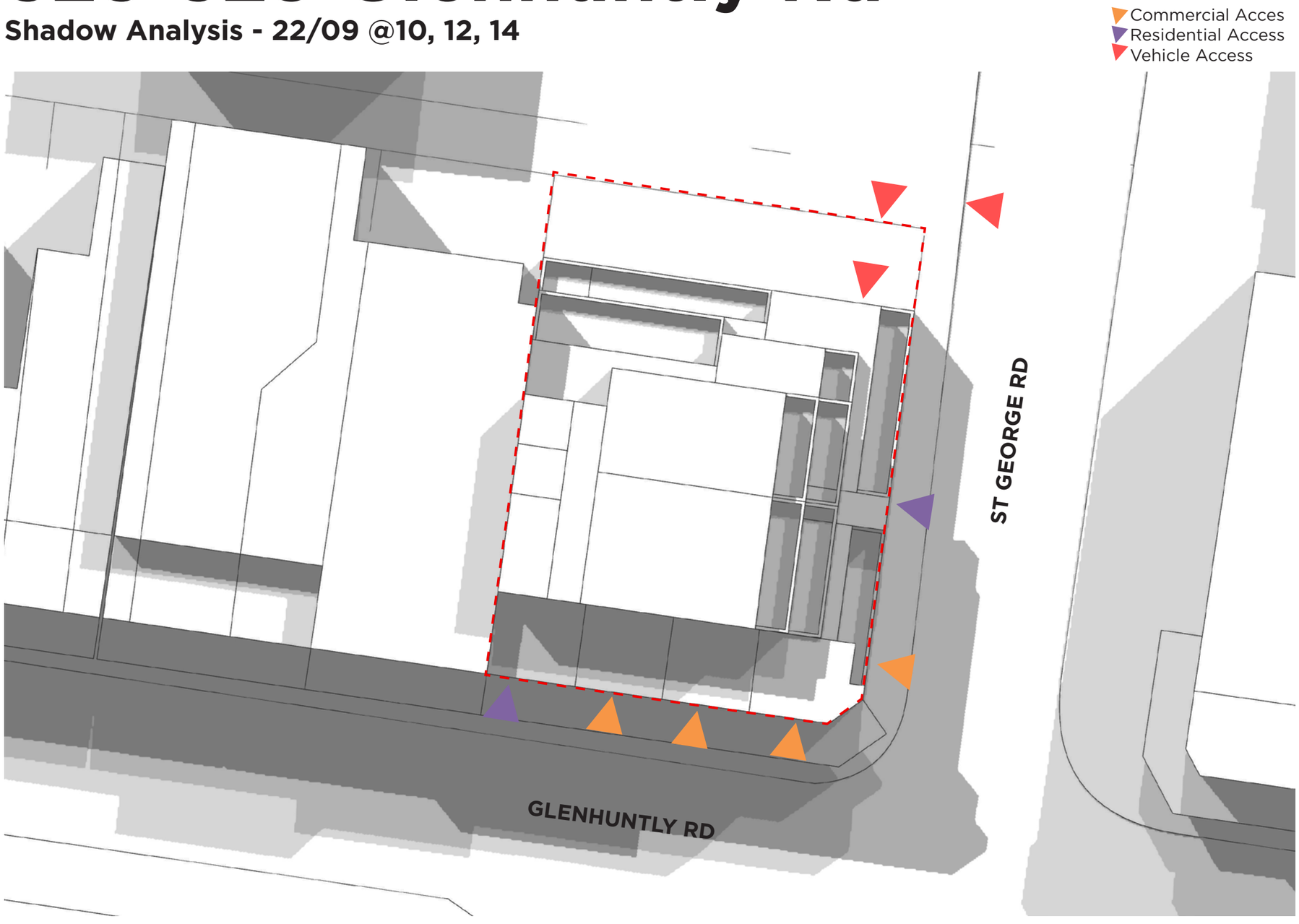
Commercial GFA includes all commercial areas and their structure and party walls.

Residential GFA includes all residential areas and their private open space, structure and party walls.

Test 1

323-329 Glenhuntly Rd

Shadow Analysis - 22/09 @10, 12, 14

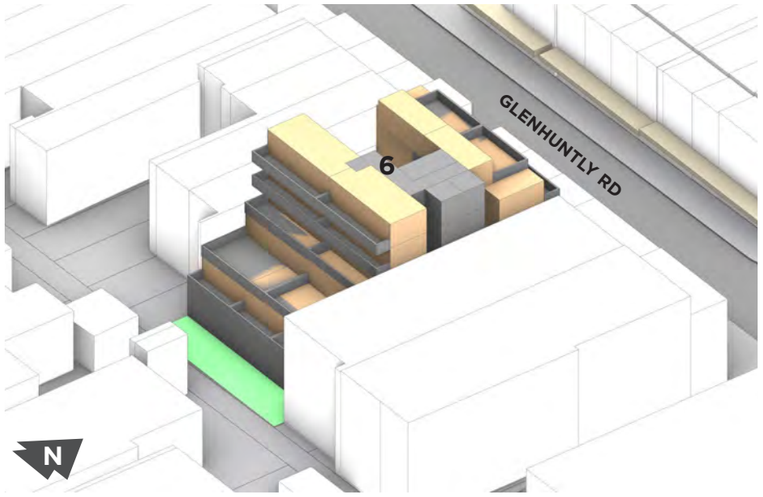


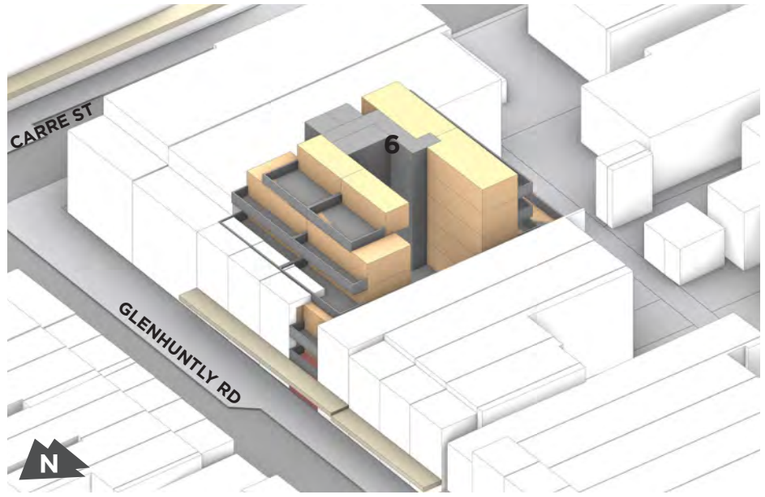
Note: the shadows in the diagram overlay the 10:00, 12:00 and 14:00 (22/09) in the same image.

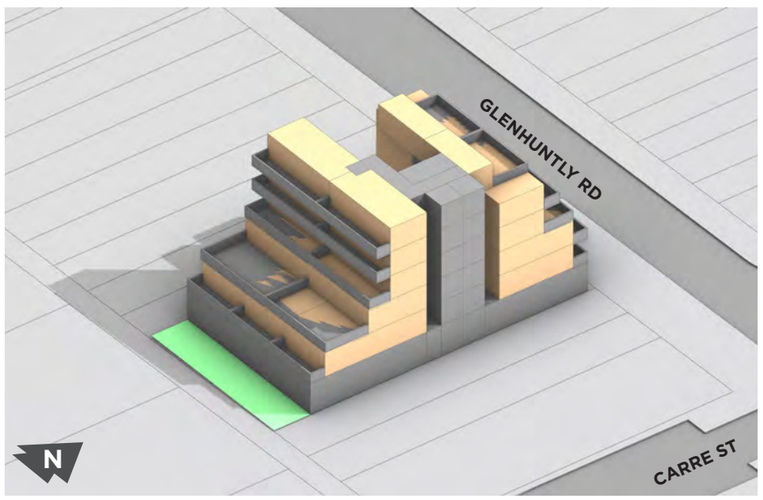
358-362 Glenhuntly Rd

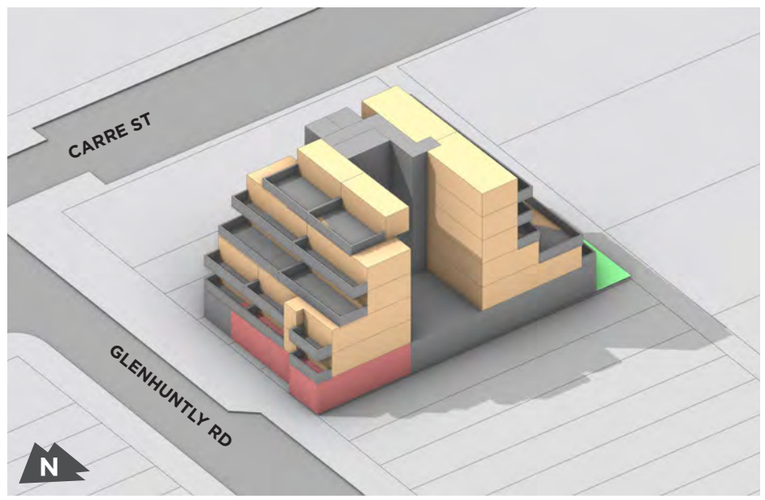
SE/NW Isometric views

Commercial
Residential









Controls & Yield

Interfaces	1, 3
Max Height	6
Site Area (m^2)	992
FAR	3.6:1
Total GFA (m^2)	3,565
Commercial GFA (m^2)	218
Residential GFA (m^2)	2,243

Total GFA includes all covered areas, including private open space, above ground carpark, circulation, services, structure, party walls, commercial and residential.

Commercial GFA includes all commercial areas and their structure and party walls.

Residential GFA includes all residential areas and their private open space, structure and party walls.

Test 1

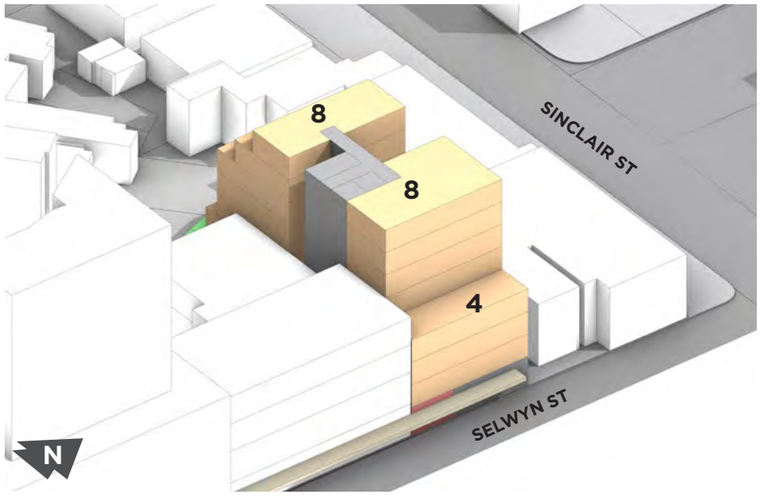
358-362 Glenhuntly Rd

Shadow Analysis - 22/09 @10, 12, 14

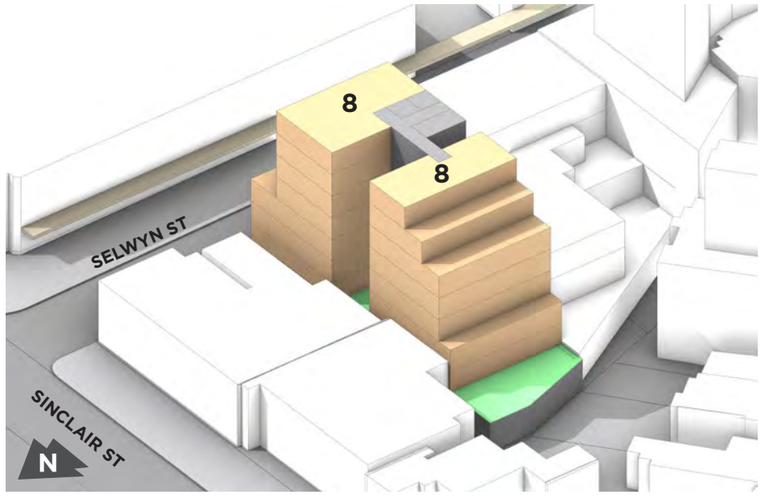
Note: the shadows in the diagram overlay the 10:00, 12:00 and 14:00 (22/09) in the same image.

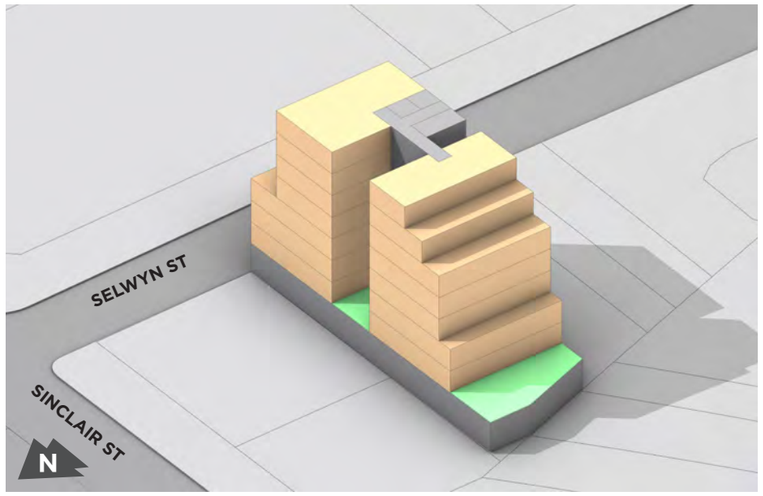
19 Selwyn St

SE/NW Isometric views



Commercial
Residential





Controls & Yield

Interfaces	4, 5
Max Height	8
Site Area (m^2)	788
FAR	5.4:1
Total GFA (m^2)	4,245
Commercial GFA (m^2)	75
Residential GFA (m^2)	2,871

Total GFA includes all covered areas, including private open space, above ground carpark, circulation, services, structure, party walls, commercial and residential.

Commercial GFA includes all commercial areas and their structure and party walls.

Residential GFA includes all residential areas and their private open space, structure and party walls.

Test 2

19 Selwyn St

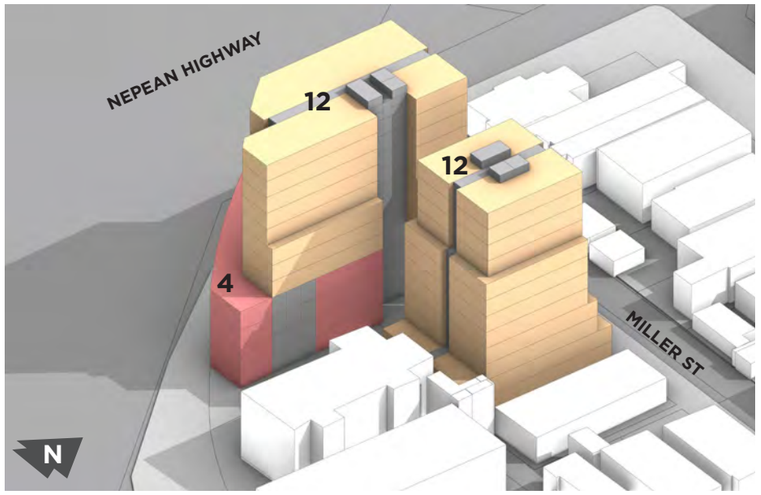
Shadow Analysis - 22/09 @10, 12, 14

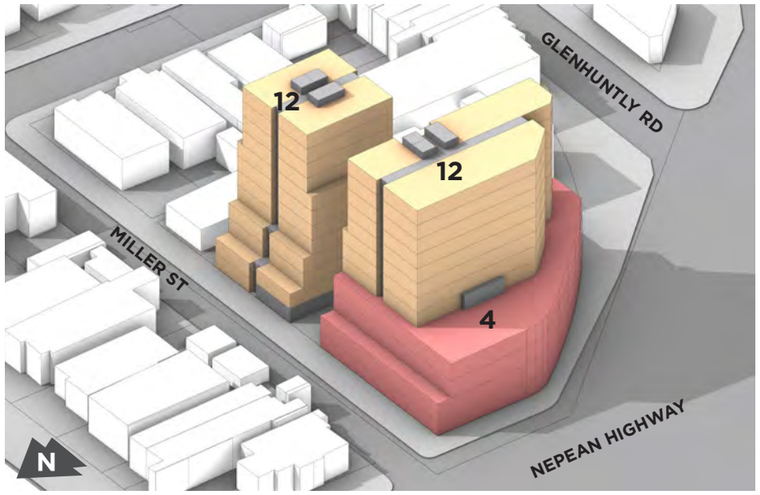
Note: the shadows in the diagram overlay the 10:00, 12:00 and 14:00 (22/09) in the same image.

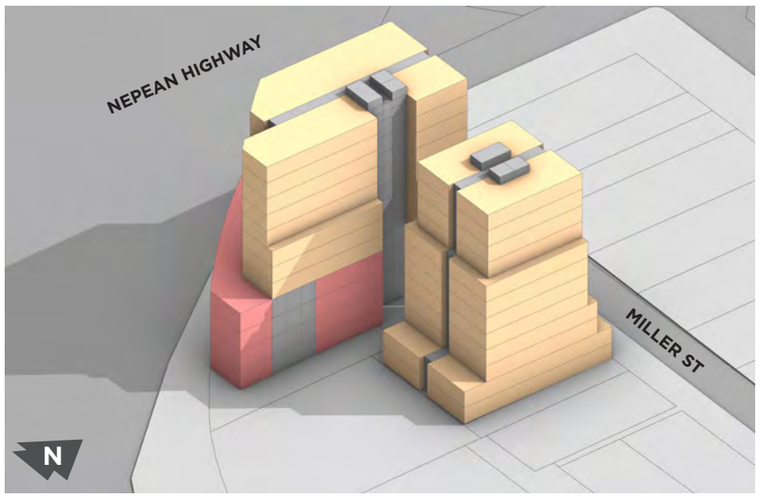
201 Glenhuntly Rd

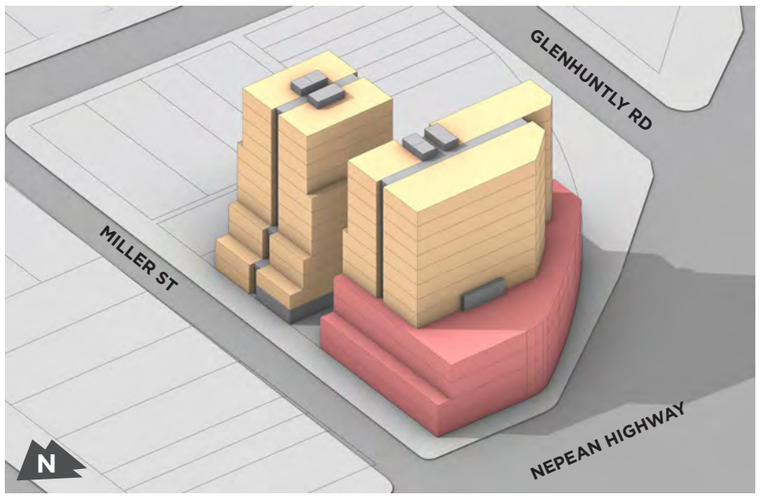
SE/NW Isometric views

Commercial
Residential









Controls & Yield

Interfaces	2, 6
Max Height	12
Site Area (m^2)	2,772
FAR	6.4:1
Total GFA (m^2)	17,607
Commercial GFA (m^2)	5,255
Residential GFA (m^2)	9,410

Total GFA includes all covered areas, including private open space, above ground carpark, circulation, services, structure, party walls, commercial and residential.

Commercial GFA includes all commercial areas and their structure and party walls.

Residential GFA includes all residential areas and their private open space, structure and party walls.

Test 2

201 Glenhuntly Rd

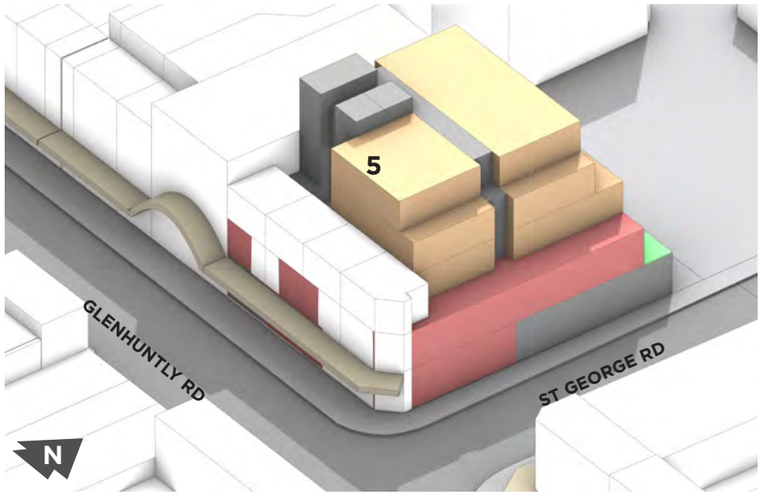
Shadow Analysis - 22/09 @10, 12, 14

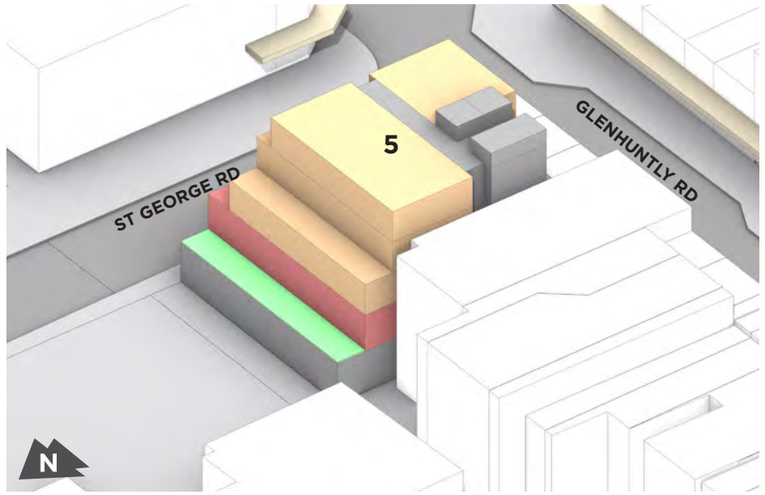
Note: the shadows in the diagram overlay the 10:00, 12:00 and 14:00 (22/09) in the same image.

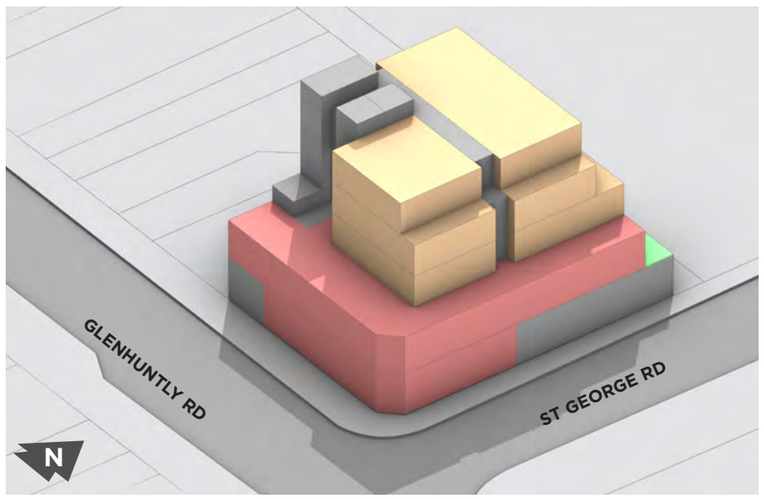
323-329 Glenhuntly Rd

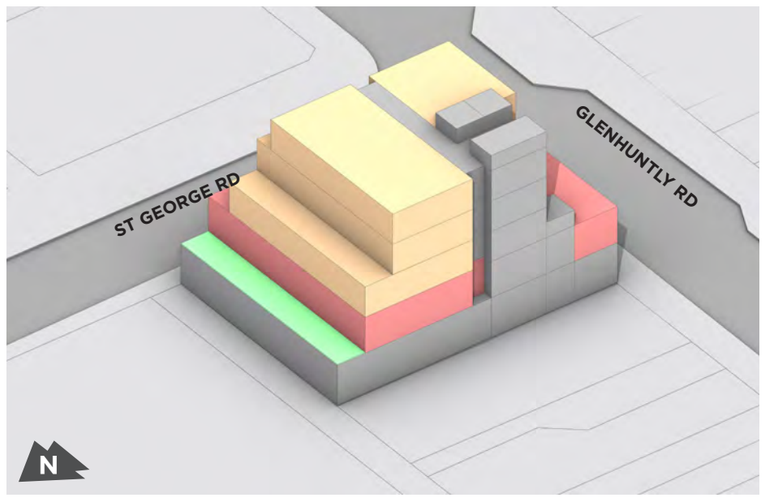
SE/NW Isometric views

Commercial
Residential









Controls & Yield

Interfaces	1, 2, 5
Max Height	5
Site Area (m^2)	684
FAR	3.5:1
Total GFA (m^2)	2,376
Commercial GFA (m^2)	774
Residential GFA (m^2)	837

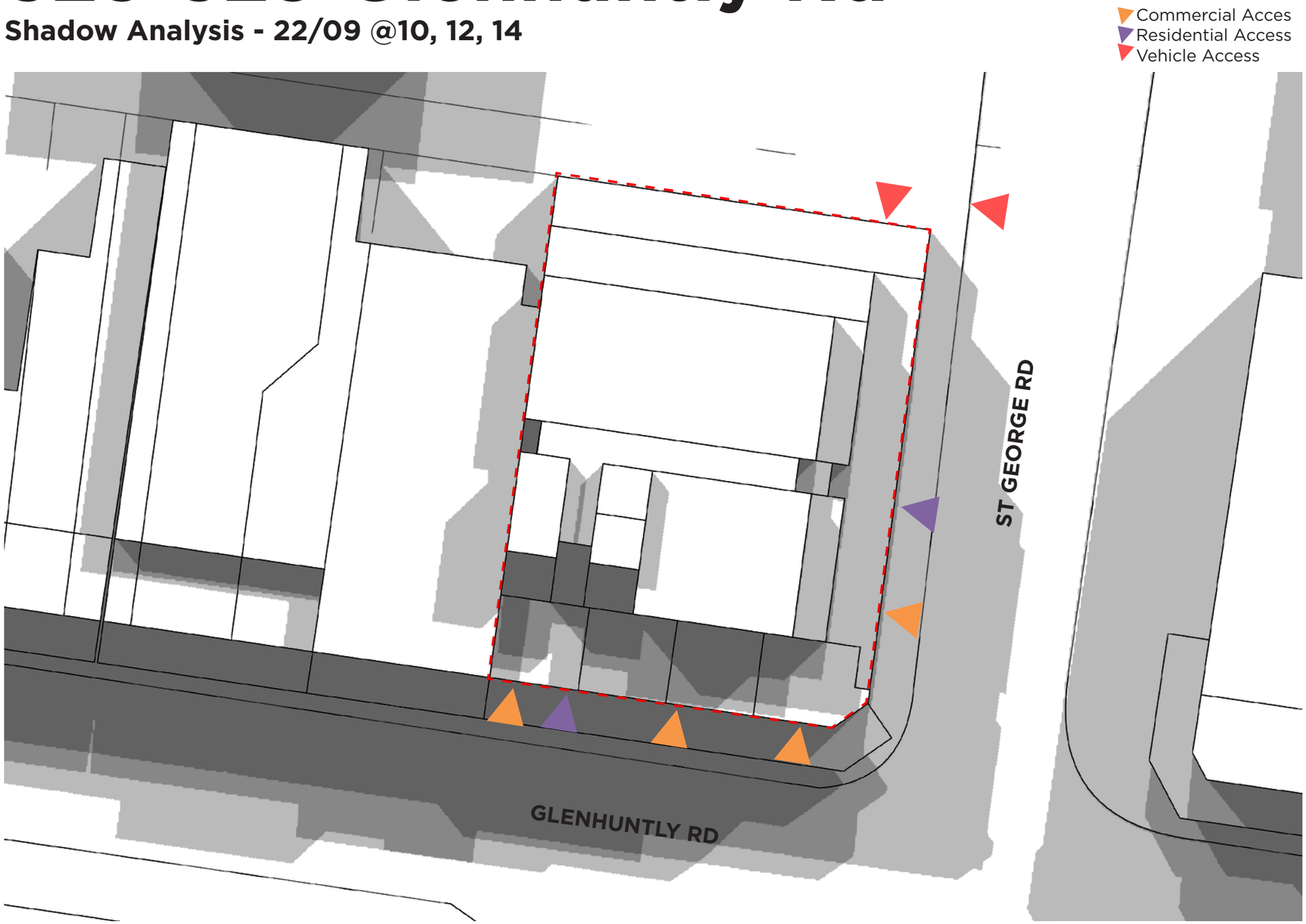
Total GFA includes all covered areas, including private open space, above ground carpark, circulation, services, structure, party walls, commercial and residential.

Commercial GFA includes all commercial areas and their structure and party walls.

Residential GFA includes all residential areas and their private open space, structure and party walls.

323-329 Glenhuntly Rd

Shadow Analysis - 22/09 @10, 12, 14

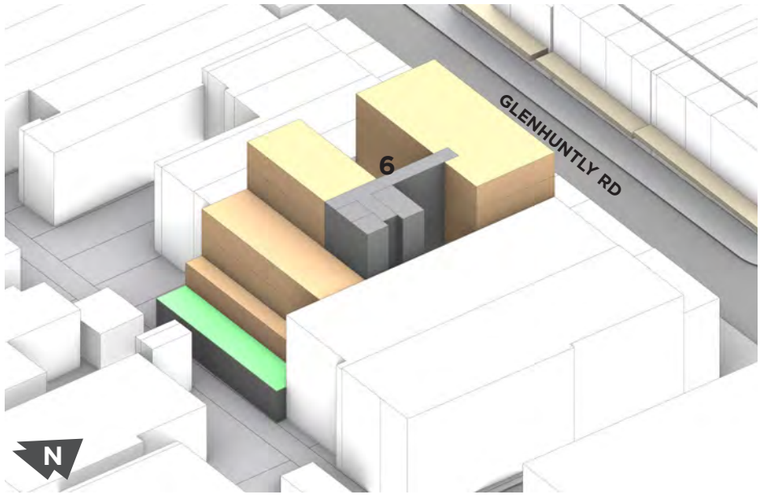


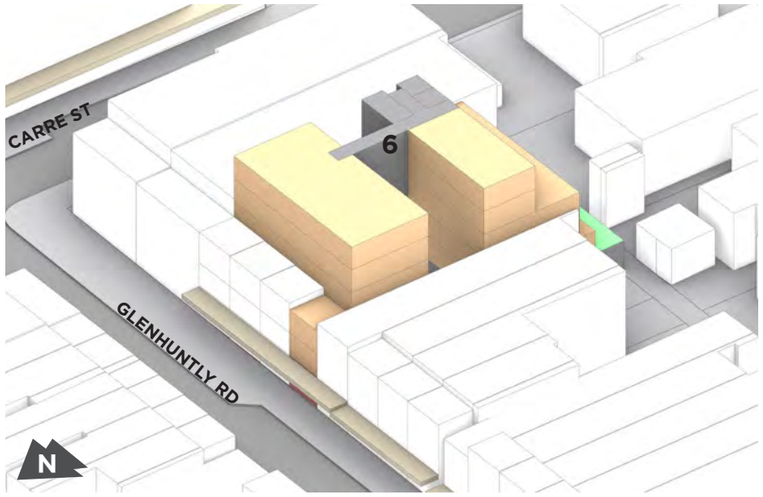
Note: the shadows in the diagram overlay the 10:00, 12:00 and 14:00 (22/09) in the same image.

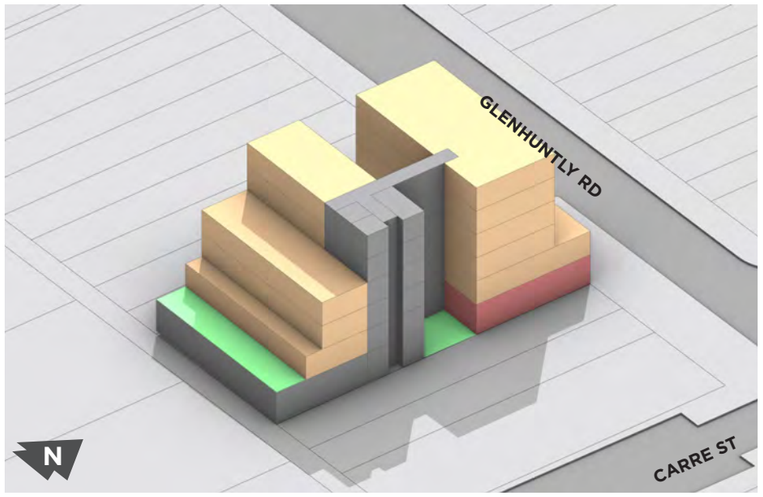
358-362 Glenhuntly Rd

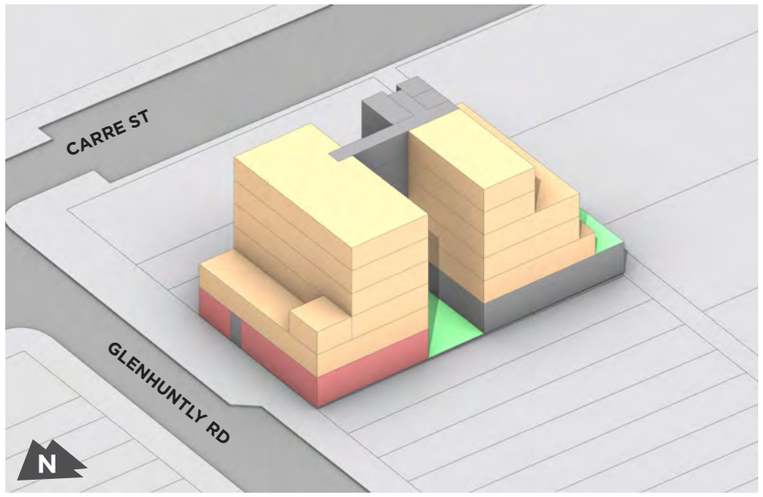
SE/NW Isometric views

Commercial
Residential









Controls & Yield

Interfaces	1, 3
Max Height	6
Site Area (m^2)	992
FAR	3.6:1
Total GFA (m^2)	3,605
Commercial GFA (m^2)	328
Residential GFA (m^2)	2,371

Total GFA includes all ``covered areas, including private open space, above ground carpark, circulation, services, structure, party walls, commercial and residential.

Commercial GFA includes all commercial areas and their structure and party walls.

Residential GFA includes all residential areas and their private open space, structure and party walls.

Test 2

358-362 Glenhuntly Rd

Shadow Analysis - 22/09 @10, 12, 14

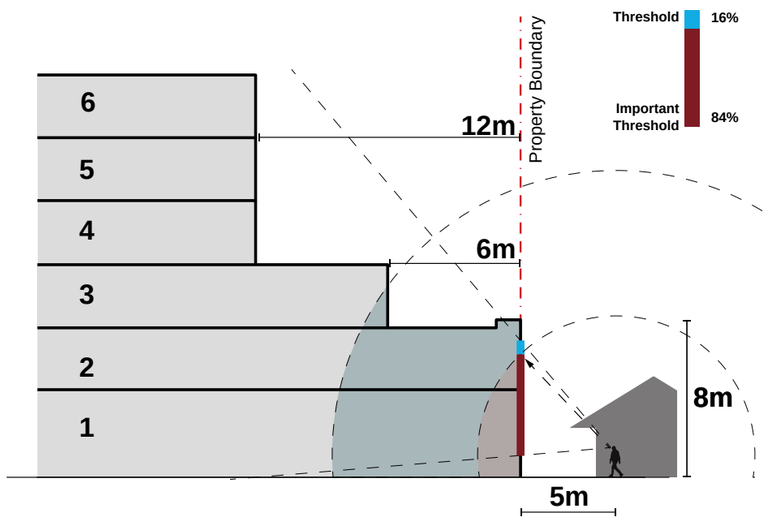
Note: the shadows in the diagram overlay the 10:00, 12:00 and 14:00 (22/09) in the same image.

Unacceptable

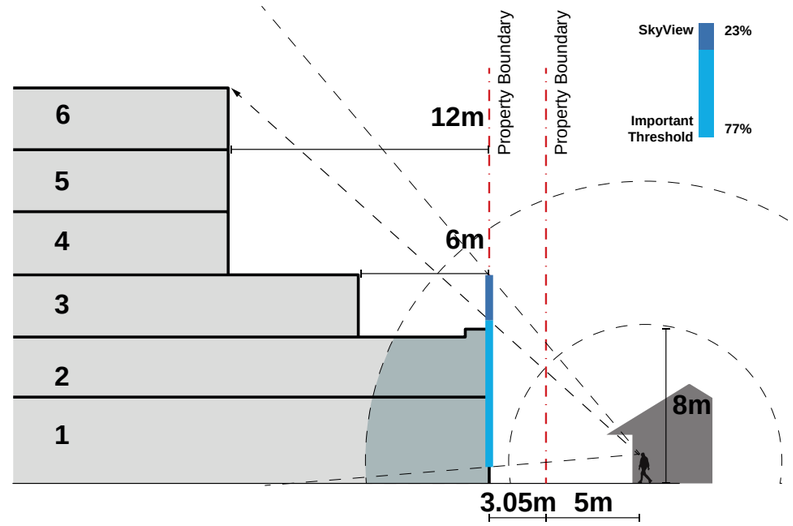
Disfavoured

Preferred

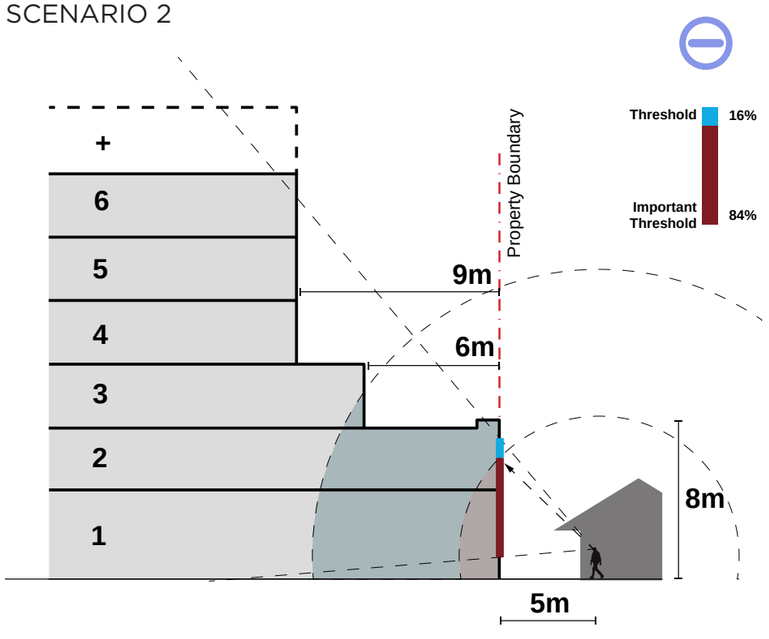
SCENARIO 1



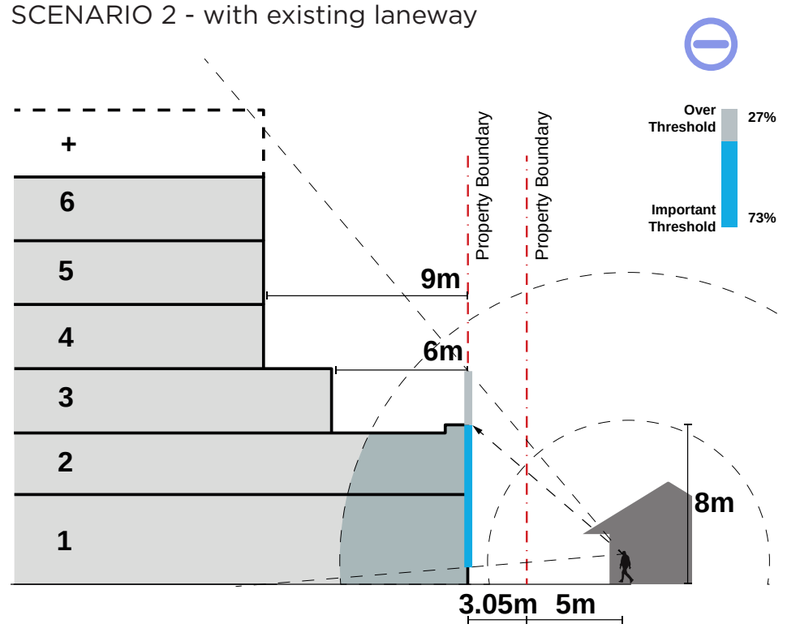
SCENARIO 1 - with existing laneway



SCENARIO 2



SCENARIO 2 - with existing laneway



1. Gehl, J., 2010. *Cities for people*. Washington, DC: Island Press, pp.36-43.

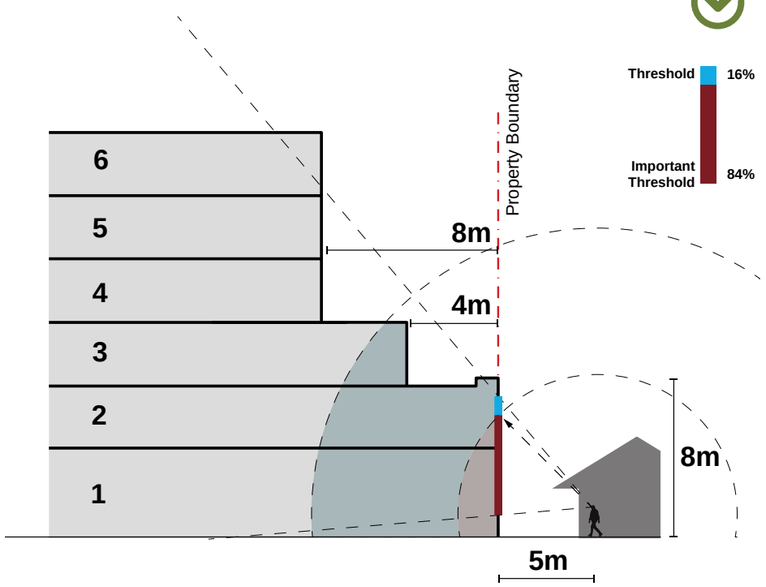
* *The height and setback measurement parameters remain the same for each scenario in the following analysis*

Unacceptable

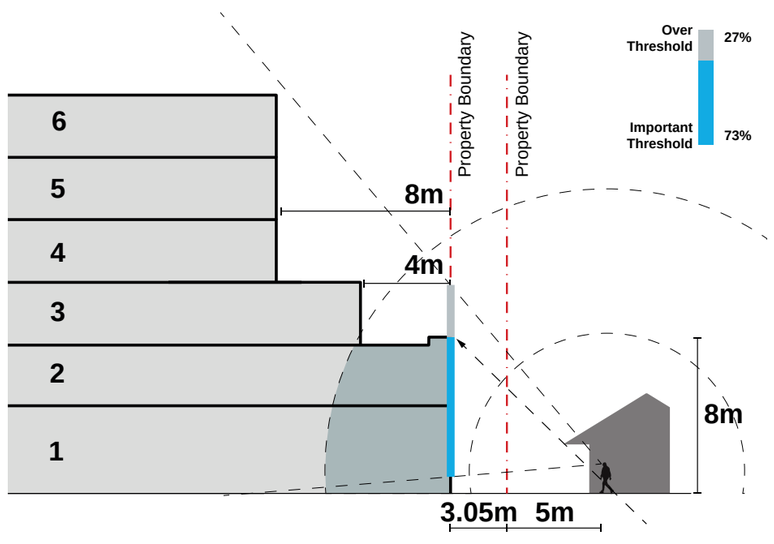
Disfavoured

Preferred

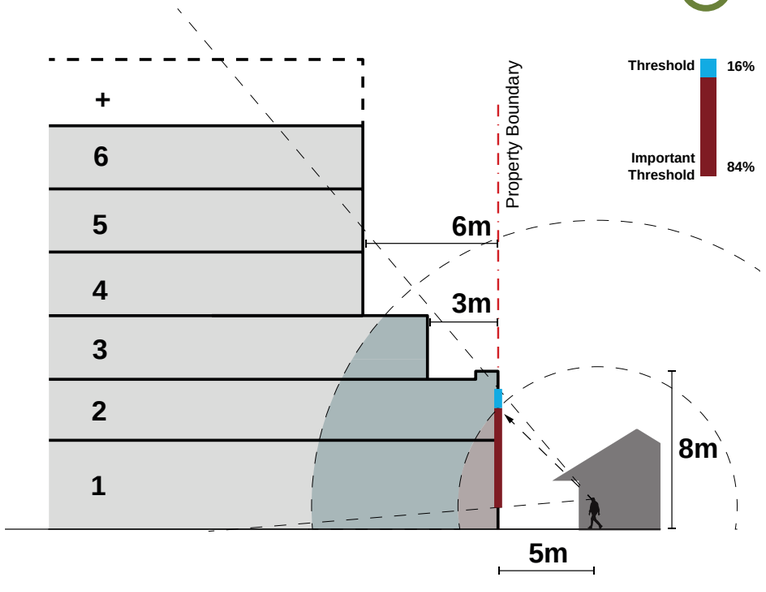
SCENARIO 3



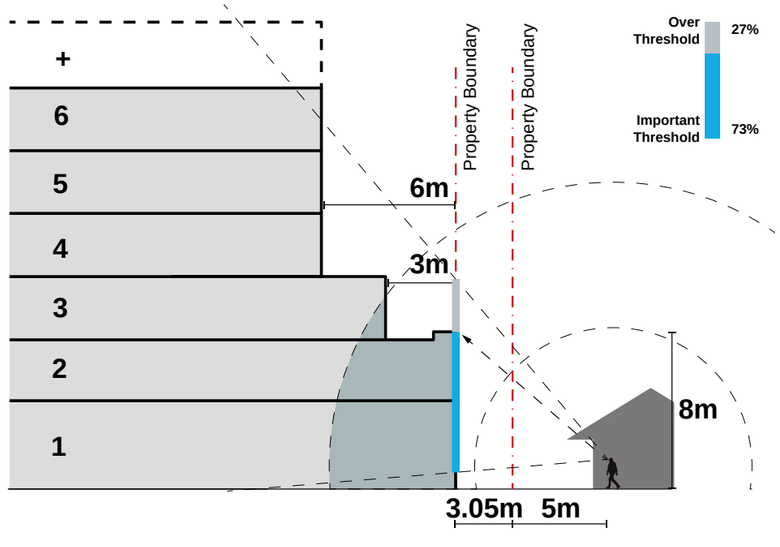
SCENARIO 3 - with existing laneway



SCENARIO 4



SCENARIO 4 - with existing laneway



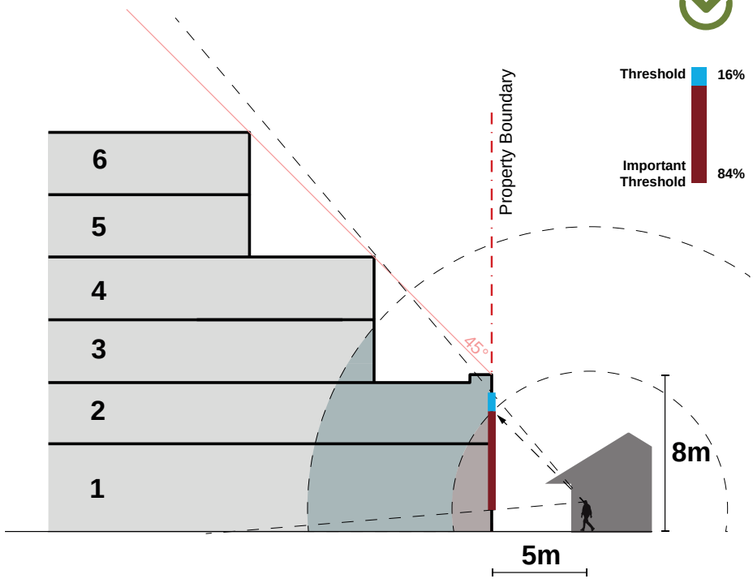
** The height and setback measurement parameters remain the same for each scenario in the following analysis*

Unacceptable

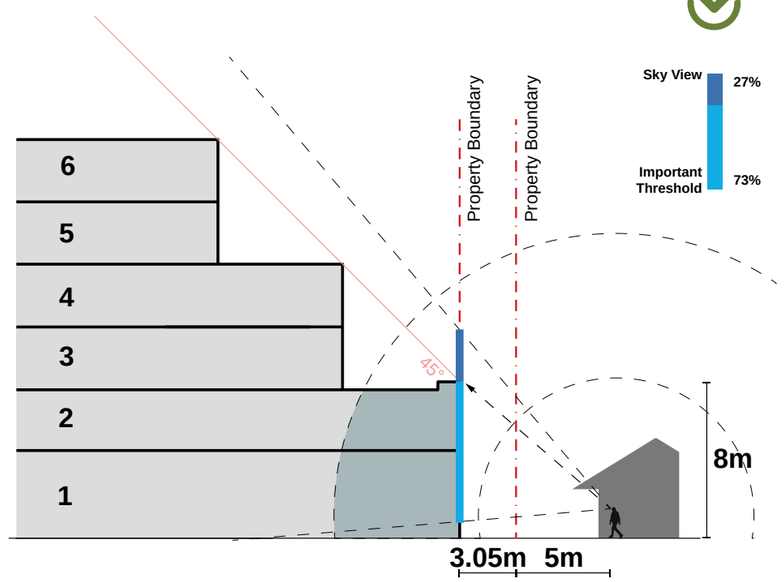
Disfavoured

Preferred

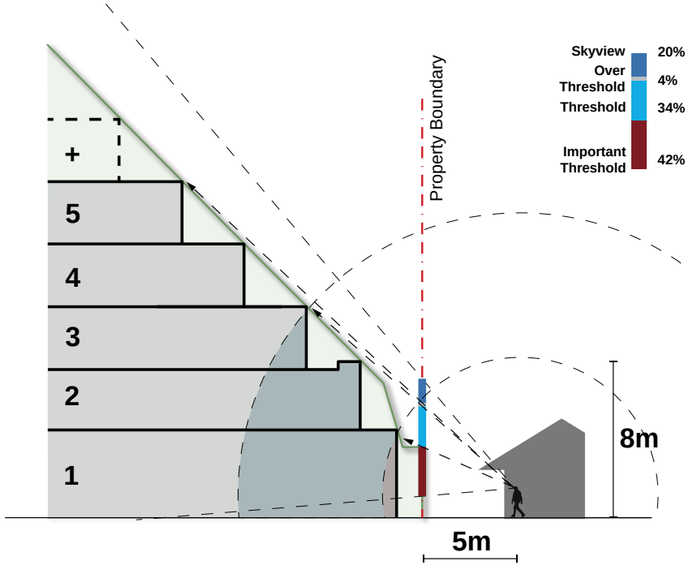
SCENARIO 5



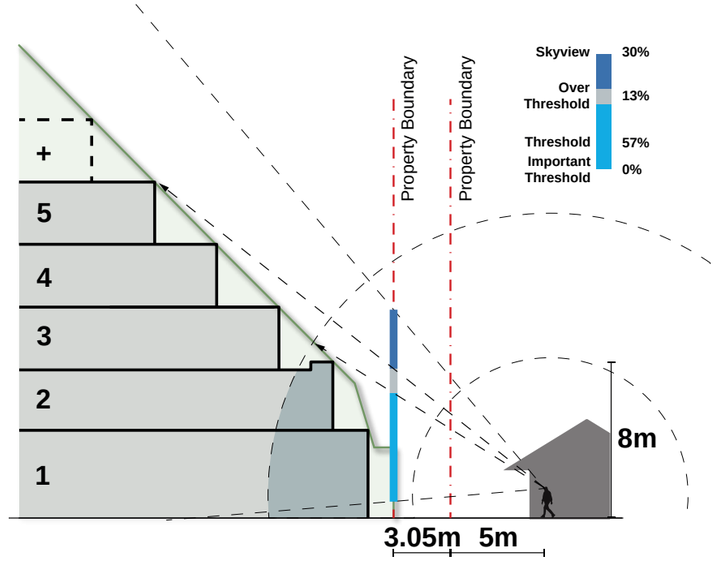
SCENARIO 5 - with existing laneway



SCENARIO 6 - B17



SCENARIO 6 - B17 with existing laneway



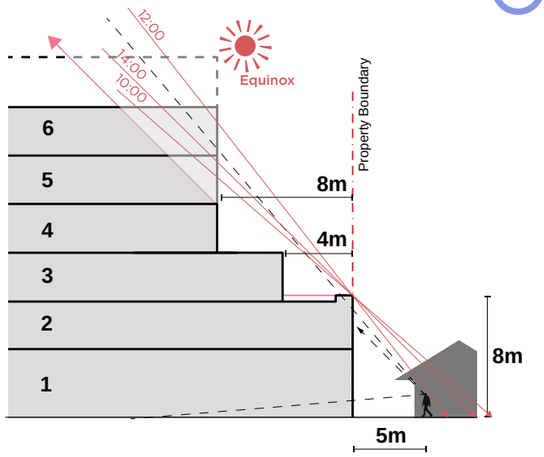
** The height and setback measurement parameters remain the same for each scenario in the following analysis*

Unacceptable

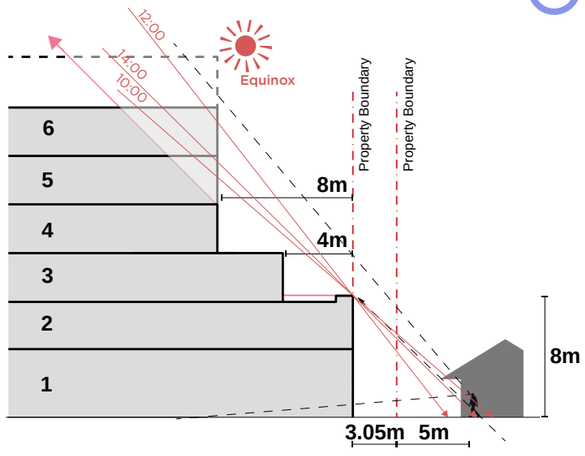
Disfavoured

Preferred

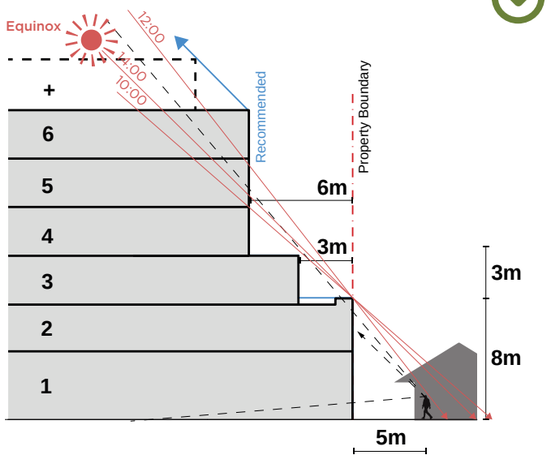
SCENARIO 3



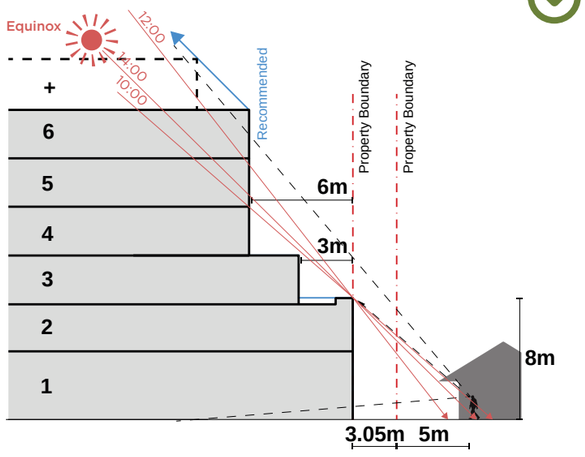
SCENARIO 3 - with existing laneway



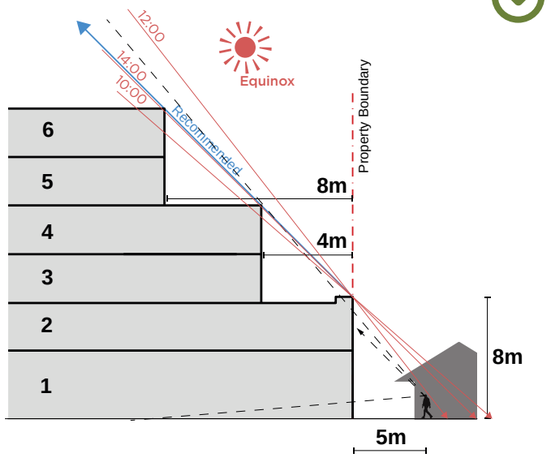
SCENARIO 4



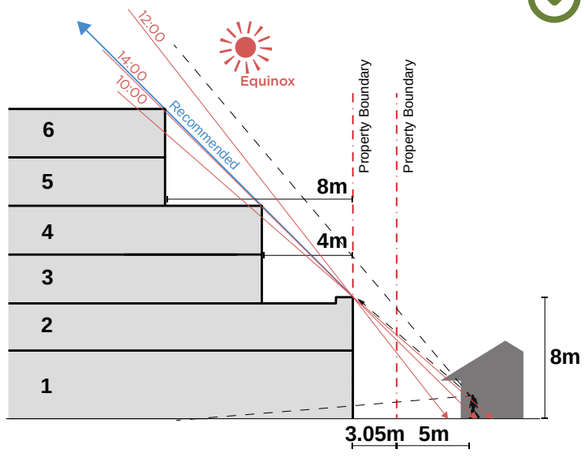
SCENARIO 4 - with existing laneway



SCENARIO 5



SCENARIO 5 - with existing laneway



** The height and setback measurement parameters remain the same for each scenario in the following analysis*

8.0 Appendix B

Appendix B provides additional modelling and testing of built form outcomes resulting for the input from expert heritage consultants.

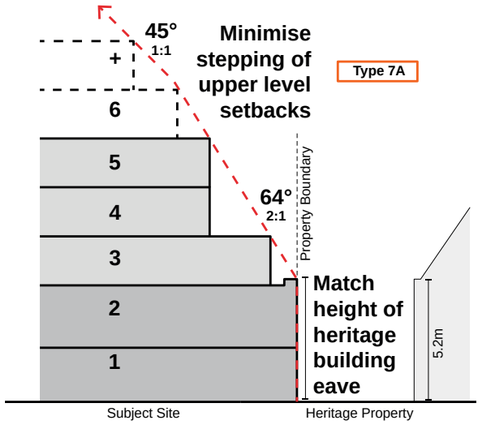
The proposed changes to built form setbacks and design guidance builds on the modelling and testing done from an urban design perspective and deals with the impact on the integrity of the heritage buildings and streetscapes.

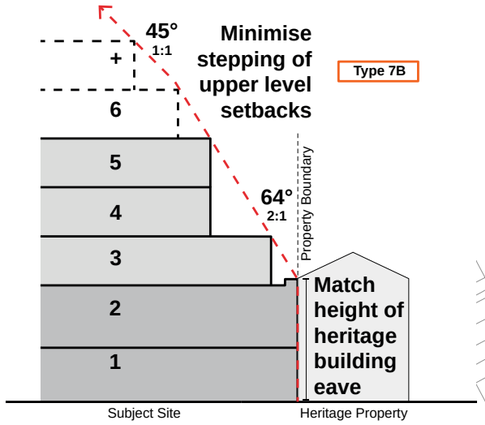
Heritage Advice

Heritage Sensitive Interfaces

Type 7A and Type 7B interfaces have been based on the principle of interfaces 5A and 5B which are applied to the northern rear interface of heritage buildings along Glen Huntly Road. The modifications respond directly to significant heritage buildings, specifically St Clements Church on the corner of Glen Huntly Road and Nepean Highway and the Former Elsternwick Fire Station at 2-4 Selwyn Street.

The following design guidelines should also be applied to any development immediately abutting these heritage buildings.





1. New upper-level development behind existing heritage buildings should:

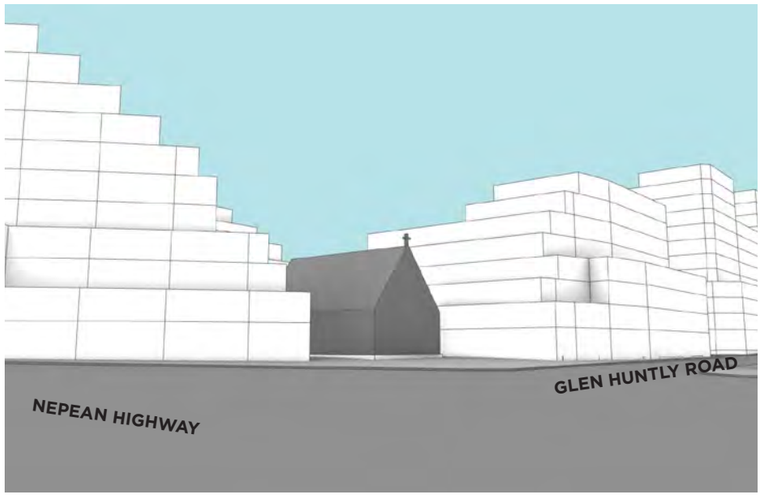
- Incorporate materials and finishes that are recessive in texture and colour.
- Generally, utilise visually lightweight, but high quality, materials that create a juxtaposition with the heavier masonry typical of the heritage buildings.
- Incorporate simple architectural detailing so it does not detract from significant elements of the existing building or streetscape.
- Provide a recessive backdrop to the heritage streetscape within precincts and to individual heritage buildings by:
  - avoiding highly articulated facades with recessed and projecting elements.
  - avoiding highly contrasting or vibrant primary colours.
  - avoiding the replication of existing decorative features and architectural detail.
- Be articulated to reflect the fine-grained character of narrow sites.
- Encourage that upper-level development behind rows of identical or similar shop/residences is consistent in form, massing and façade treatment.

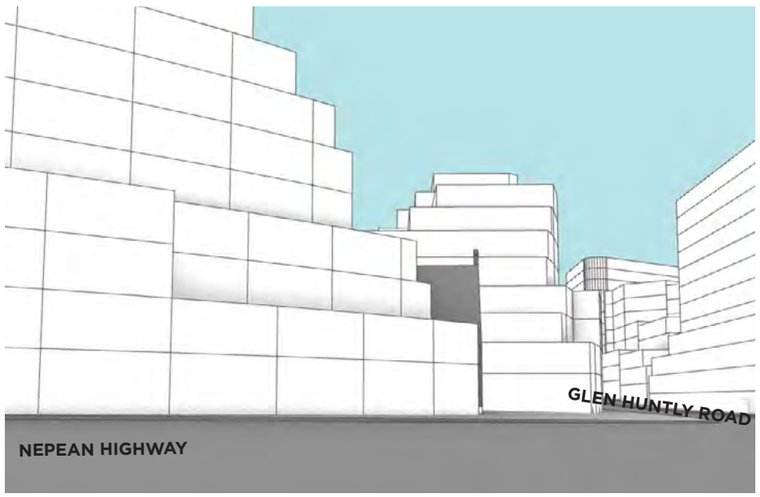
2. New development on land immediately abutting heritage places should:

- Provide a sensitive site-responsive transition between the existing heritage fabric and the proposed new built form.
- Retain the visual prominence of prominent corner buildings and local landmarks.
- Be distinguishable from the original heritage fabric and adopt a high quality and respectful contextual design response.
- Incorporate simple architectural detailing so it does not detract from significant elements of the existing building or streetscape.
- Provide a recessive backdrop to the heritage buildings by:
  - avoiding highly articulated facades with recessed and projecting elements.
  - avoiding highly contrasting or vibrant primary colours.
  - avoiding the replication of existing decorative features and architectural detail.

St. Clements Church

Pedestrain level views



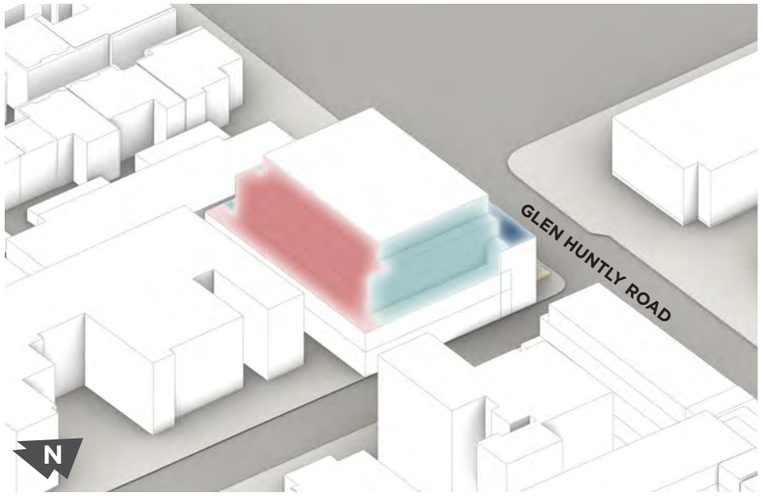


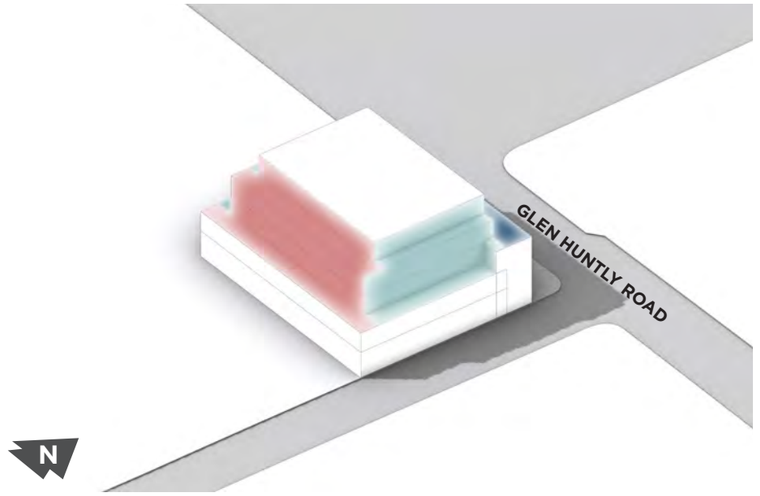
St. Clements Church

The adjacent images show St Clements Church in the context of surrounding built form where the maximum volume allowed on neighbouring sites has been represented. These site would also be subject to the Heritage Design Guidelines noted above.

525-537 Glen Huntly Rd

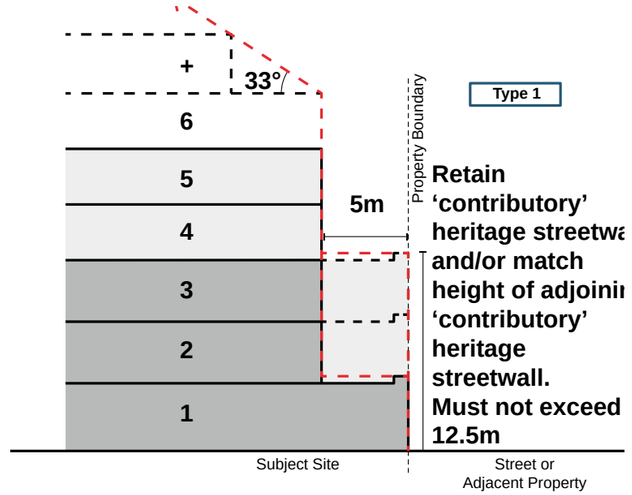
SE/NW Isometric views

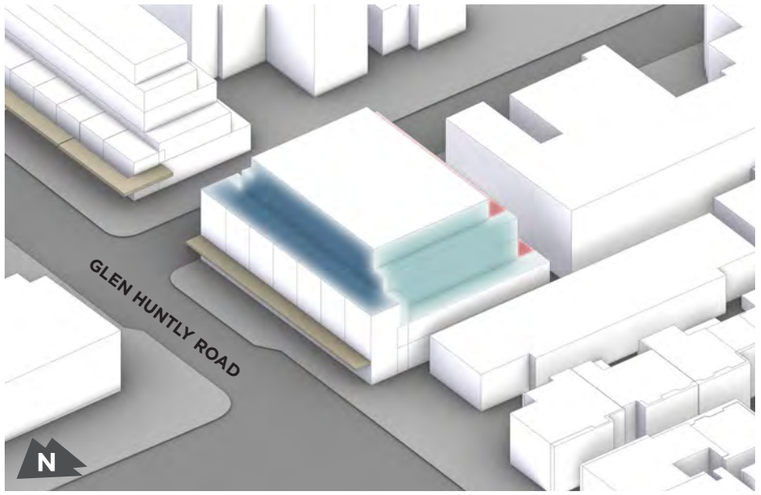


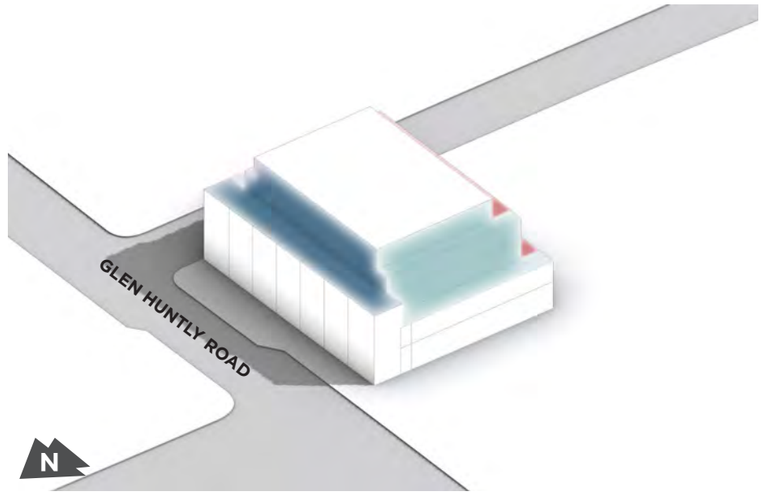


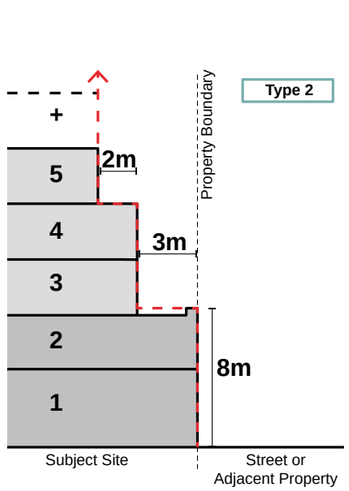
Interface Types

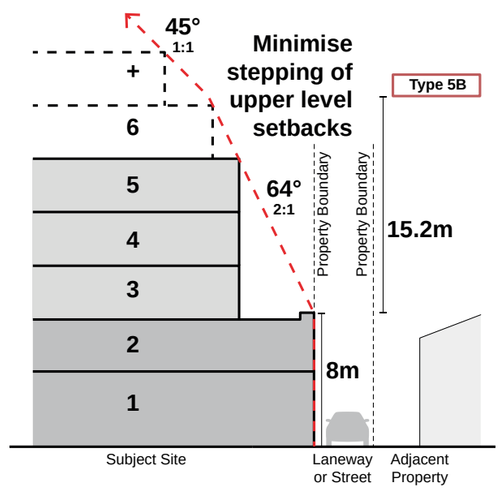
- Type 5B
- Type 2
- Type 1











Standalone group of heritage shops

The above modelling shows the standalone group of shops at the eastern end of teh main shopping strip and the suggested Typ1, Type 2 and Type 5B interfaces,

Testing Setback Scenarios along Glen Huntly Rd

Testing different upper level setback scenarios along Glen Huntly Road

The following images show the different visual impact various setback have on the prominence or otherwise of new development above a heritage streetscape.

View Location 1

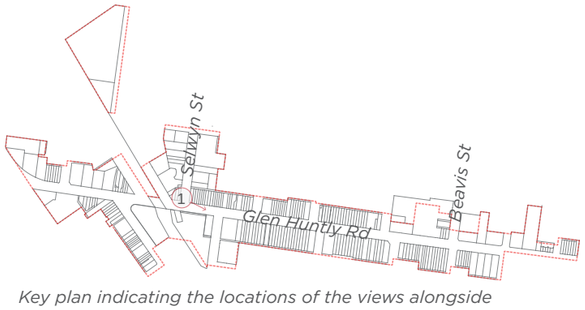
The adjacent images show the different visual impacts of the following setbacks when viewed from location 1.

Scenario 1: Type 1A. 5 metre setback above the streetwall with a 33 degree setback to the levels above *6* (as tested in the main body of this document)

Scenario 2: Type 1B. 6 metre setback above the streetwall with a 33 degree setback to the levels above *6*

Scenario 3: Type 1C. 5 metre setback above the streetwall with a 33 degree setback to the levels above *5*

Scenario 4: Type 1D. 6 metre setback above the streetwall with a 33 degree setback to the levels above *5*



Key plan indicating the locations of the views alongside

** The height and setback measurement parameters remain the same for each scenario in the following analysis*

1.

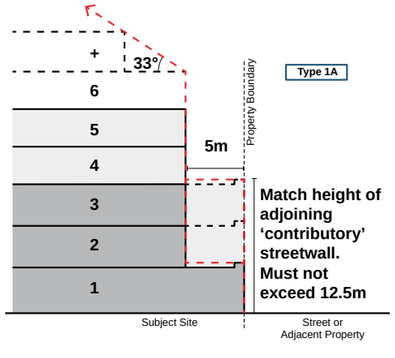
Scenario 1 - 5m setback behind streetwall and 33° upper level setback from level 7

Scenario 2 - 6m setback behind streetwall and 33° upper level setback from level 7

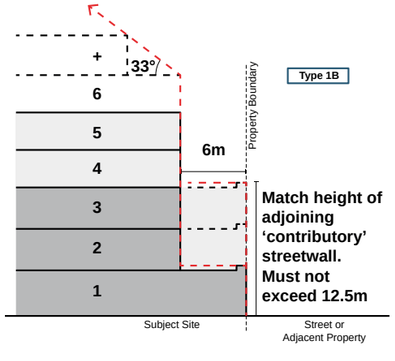
Scenario 3 - 5m setback behind streetwall and 33° upper level setback from level 6

Scenario 4 - 6m setback behind streetwall and 33° upper level setback from level 6

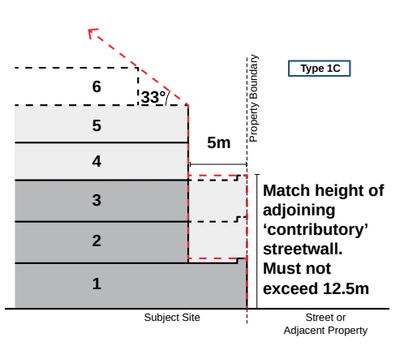
Scenario 1



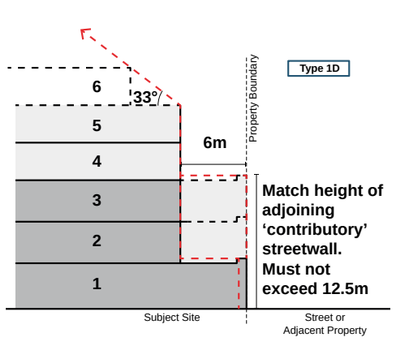
Scenario 2



Scenario 3



Scenario 4



Testing Setback Scenarios along Glen Huntly Rd

View Location 2

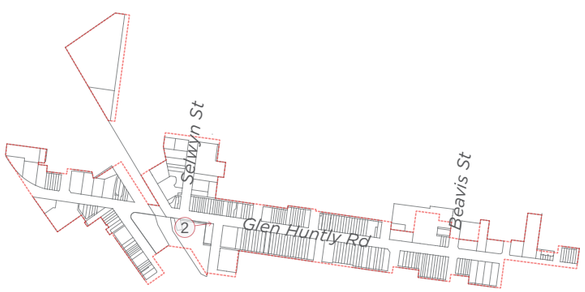
The adjacent images show the different visual impacts of the following setbacks when viewed from location 2.

Scenario 1: Type 1A. 5 metre setback above the streetwall with a 33 degree setback to the levels above *6* (as tested in the main body of this document)

Scenario 2: Type 1B. 6 metre setback above the streetwall with a 33 degree setback to the levels above *6*

Scenario 3: Type 1C. 5 metre setback above the streetwall with a 33 degree setback to the levels above *5*

Scenario 4: Type 1D. 6 metre setback above the streetwall with a 33 degree setback to the levels above *5*



Key plan indicating the locations of the views alongside

** The height and setback measurement parameters remain the same for each scenario in the following analysis*

2.

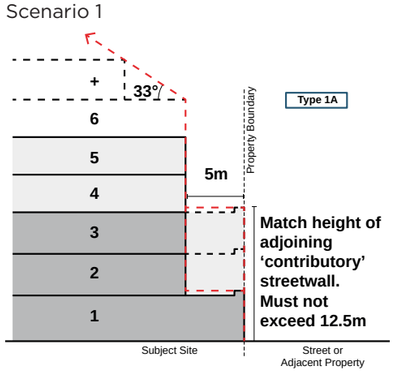
Scenario 1 - 5m setback behind streetwall and 33° upper level setback from level 7

Scenario 2 - 6m setback behind streetwall and 33° upper level setback from level 7

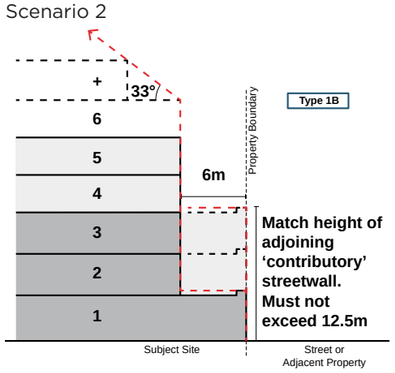
Scenario 3 - 5m setback behind streetwall and 33° upper level setback from level 6

Scenario 4 - 6m setback behind streetwall and 33° upper level setback from level 6

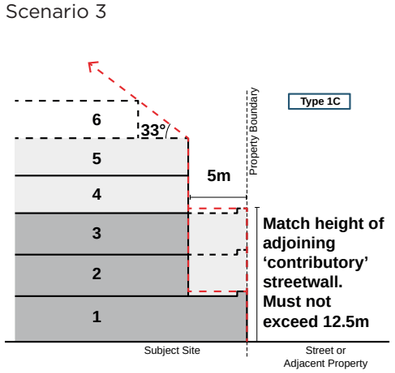
Scenario 1



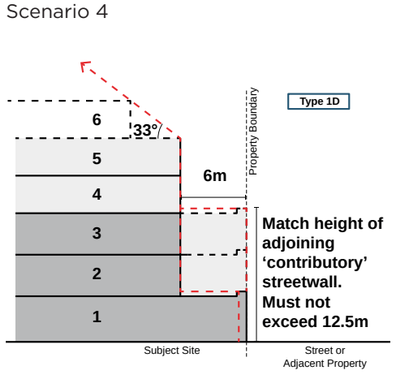
Scenario 2



Scenario 3



Scenario 4



Testing Setback Scenarios along Glen Huntly Rd

View Location 3

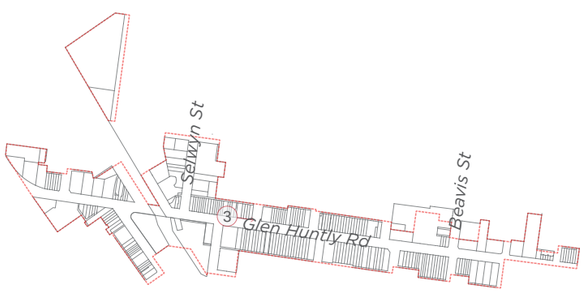
The adjacent images show the different visual impacts of the following setbacks when viewed from location 3.

Scenario 1: Type 1A. 5 metre setback above the streetwall with a 33 degree setback to the levels above *6* (as tested in the main body of this document)

Scenario 2: Type 1B. 6 metre setback above the streetwall with a 33 degree setback to the levels above *6*

Scenario 3: Type 1C. 5 metre setback above the streetwall with a 33 degree setback to the levels above *5*

Scenario 4: Type 1D. 6 metre setback above the streetwall with a 33 degree setback to the levels above *5*



Key plan indicating the locations of the views alongside

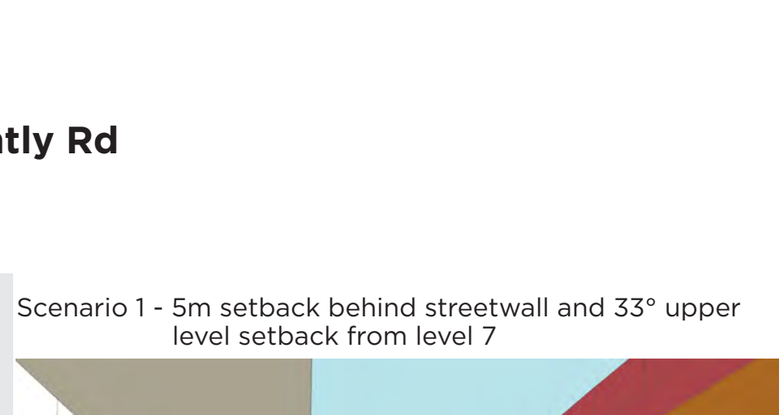
** The height and setback measurement parameters remain the same for each scenario in the following analysis*

3.

Scenario 1 - 5m setback behind streetwall and 33° upper level setback from level 7

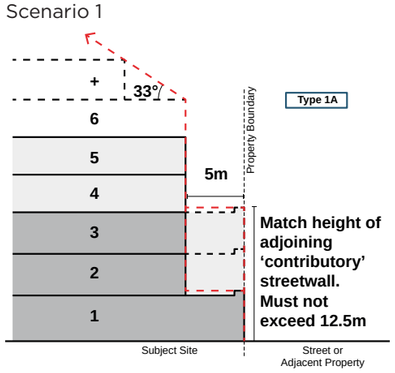
Scenario 2 - 6m setback behind streetwall and 33° upper level setback from level 7

Scenario 3 - 5m setback behind streetwall and 33° upper level setback from level 6

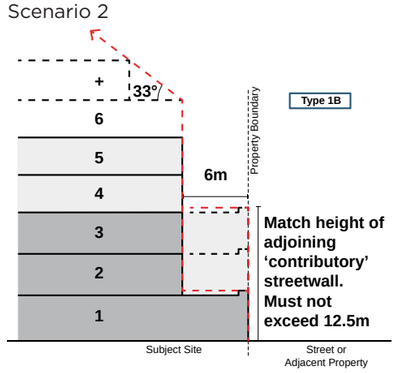


Scenario 4 - 6m setback behind streetwall and 33° upper level setback from level 6

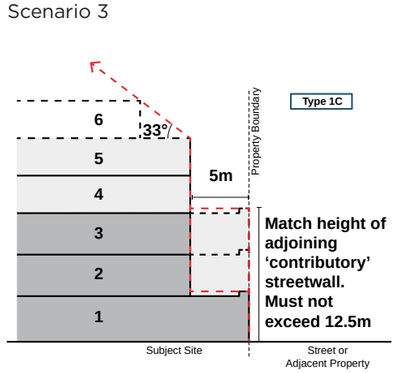
Scenario 1



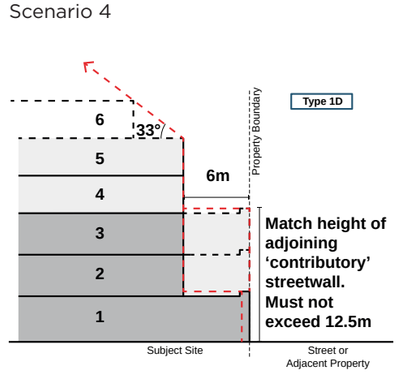
Scenario 2



Scenario 3



Scenario 4



Testing Setback Scenarios along Glen Huntly Rd

View Location 4

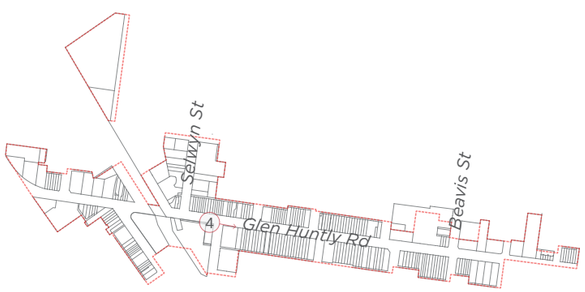
The adjacent images show the different visual impacts of the following setbacks when viewed from location 4.

Scenario 1: Type 1A. 5 metre setback above the streetwall with a 33 degree setback to the levels above *6* (as tested in the main body of this document)

Scenario 2: Type 1B. 6 metre setback above the streetwall with a 33 degree setback to the levels above *6*

Scenario 3: Type 1C. 5 metre setback above the streetwall with a 33 degree setback to the levels above *5*

Scenario 4: Type 1D. 6 metre setback above the streetwall with a 33 degree setback to the levels above *5*



Key plan indicating the locations of the views alongside

** The height and setback measurement parameters remain the same for each scenario in the following analysis*

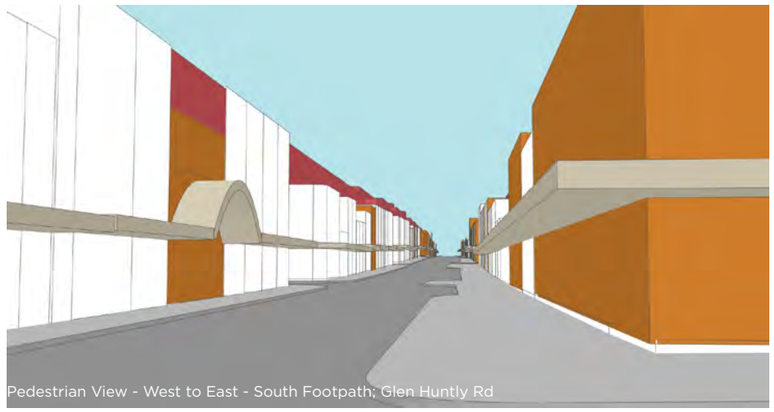
4.

Scenario 1 - 5m setback behind streetwall and 33° upper level setback from level 7

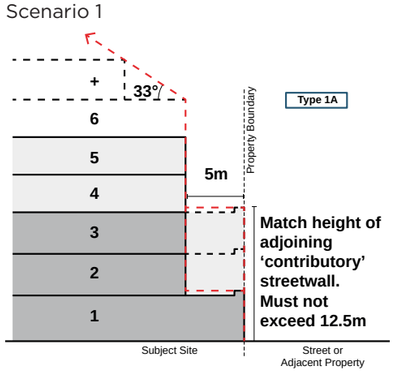
Scenario 2 - 6m setback behind streetwall and 33° upper level setback from level 7

Scenario 3 - 5m setback behind streetwall and 33° upper level setback from level 6

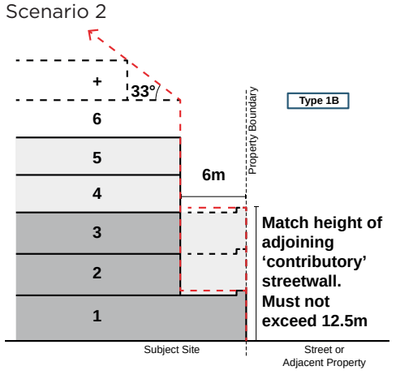
Scenario 4 - 6m setback behind streetwall and 33° upper level setback from level 6



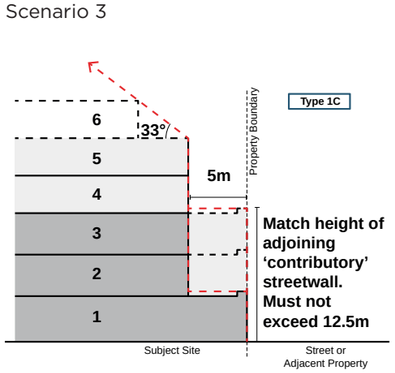
Scenario 1



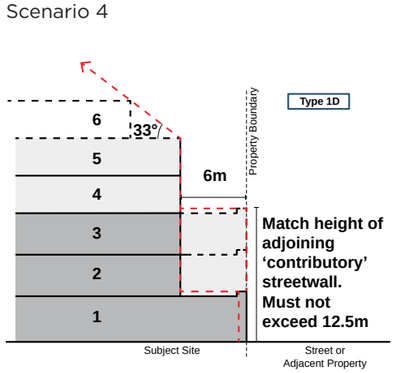
Scenario 2



Scenario 3



Scenario 4



Testing Setback Scenarios along Glen Huntly Rd

View Location 5

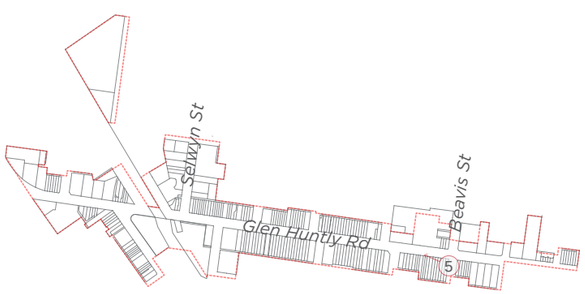
The adjacent images show the different visual impacts of the following setbacks when viewed from location 5.

Scenario 1: Type 1A. 5 metre setback above the streetwall with a 33 degree setback to the levels above *6* (as tested in the main body of this document)

Scenario 2: Type 1B. 6 metre setback above the streetwall with a 33 degree setback to the levels above *6*

Scenario 3: Type 1C. 5 metre setback above the streetwall with a 33 degree setback to the levels above *5*

Scenario 4: Type 1D. 6 metre setback above the streetwall with a 33 degree setback to the levels above *5*



Key plan indicating the locations of the views alongside

** The height and setback measurement parameters remain the same for each scenario in the following analysis*

5.

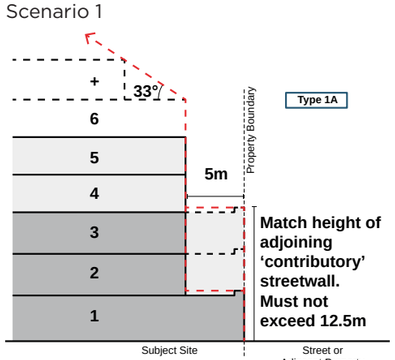
Scenario 1 - 5m setback behind streetwall and 33° upper level setback from level 7

Scenario 2 - 6m setback behind streetwall and 33° upper level setback from level 7

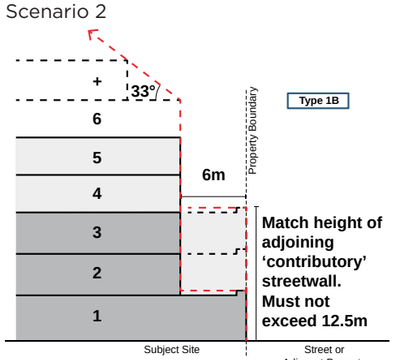
Scenario 3 - 5m setback behind streetwall and 33° upper level setback from level 6

Scenario 4 - 6m setback behind streetwall and 33° upper level setback from level 6

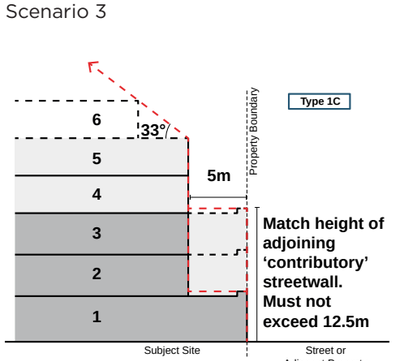
Scenario 1



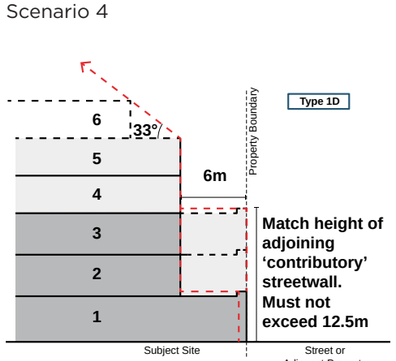
Scenario 2



Scenario 3



Scenario 4



Testing Setback Scenarios along Glen Huntly Rd

View Location 6

The adjacent images show the different visual impacts of the following setbacks when viewed from location 6.

Scenario 1: Type 1A. 5 metre setback above the streetwall with a 33 degree setback to the levels above *6* (as tested in the main body of this document)

Scenario 2: Type 1B. 6 metre setback above the streetwall with a 33 degree setback to the levels above *6*

Scenario 3: Type 1C. 5 metre setback above the streetwall with a 33 degree setback to the levels above *5*

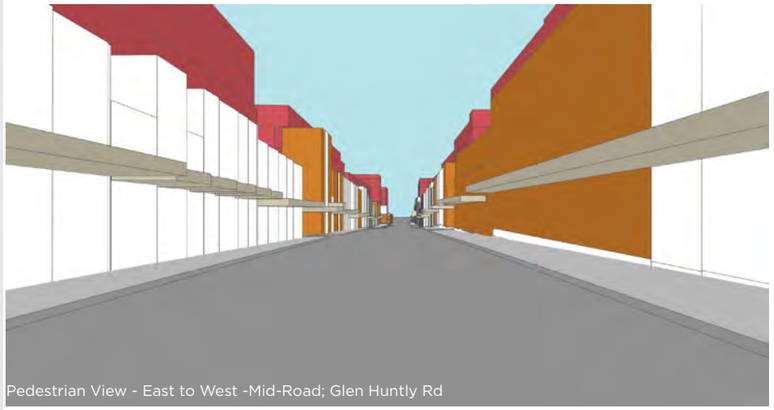
Scenario 4: Type 1D. 6 metre setback above the streetwall with a 33 degree setback to the levels above *5*

Key plan indicating the locations of the views alongside

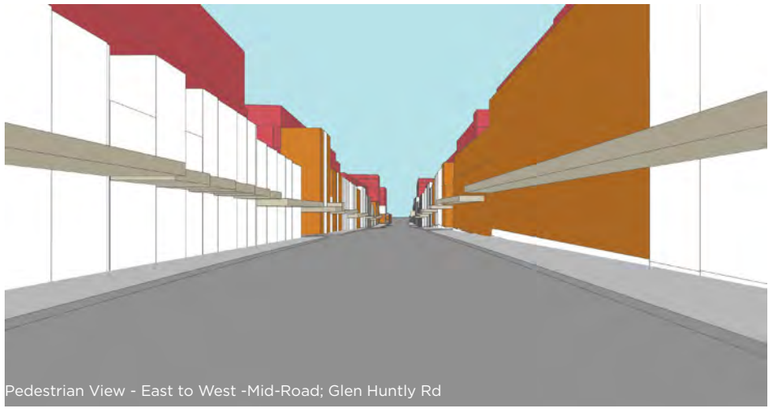
** The height and setback measurement parameters remain the same for each scenario in the following analysis*

6.

Scenario 1 - 5m setback behind streetwall and 33° upper level setback from level 7



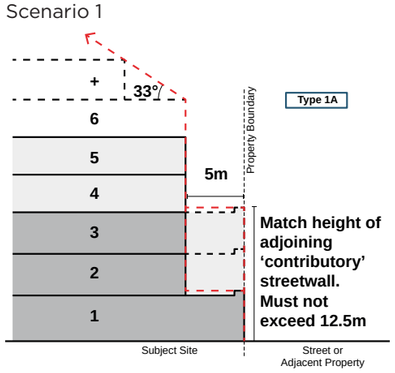
Scenario 2 - 6m setback behind streetwall and 33° upper level setback from level 7



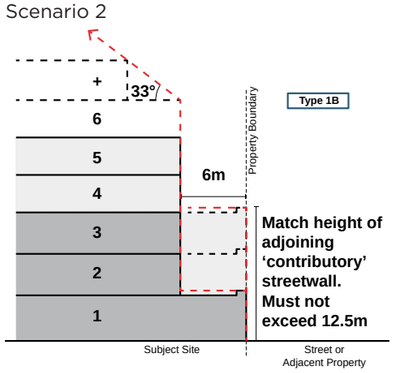
Scenario 3 - 5m setback behind streetwall and 33° upper level setback from level 6

Scenario 4 - 6m setback behind streetwall and 33° upper level setback from level 6

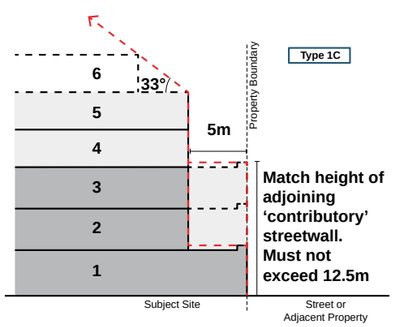
Scenario 1



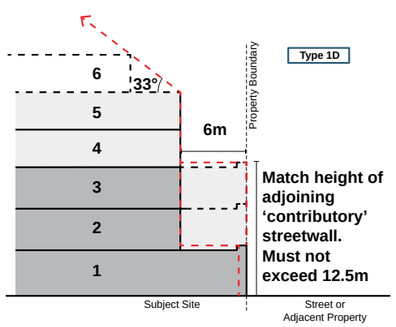
Scenario 2



Scenario 3



Scenario 4



View Location 7

The adjacent images show the different visual impacts of the following setbacks when viewed from location 5.

Scenario 1: Type 1A. 5 metre setback above the streetwall with a 33 degree setback to the levels above *6* (as tested in the main body of this document)

Scenario 2: Type 1B. 6 metre setback above the streetwall with a 33 degree setback to the levels above *6*

Scenario 3: Type 1C. 5 metre setback above the streetwall with a 33 degree setback to the levels above *5*

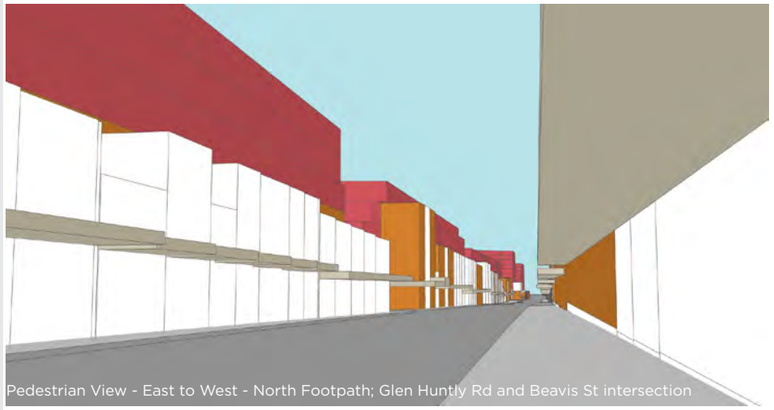
Scenario 4: Type 1D. 6 metre setback above the streetwall with a 33 degree setback to the levels above *5*

Key plan indicating the locations of the views alongside

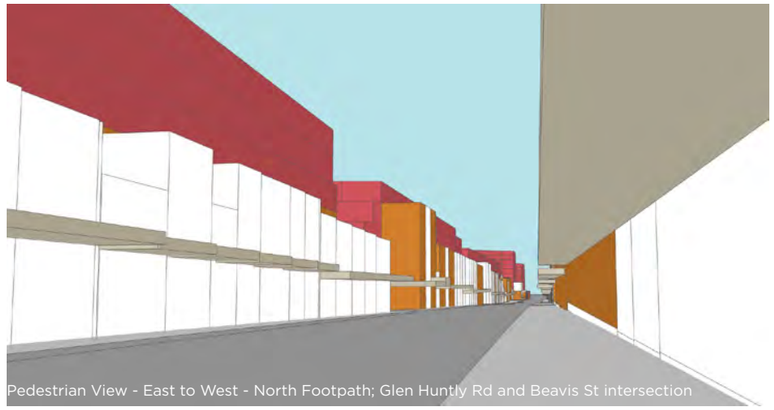
** The height and setback measurement parameters remain the same for each scenario in the following analysis*

7.

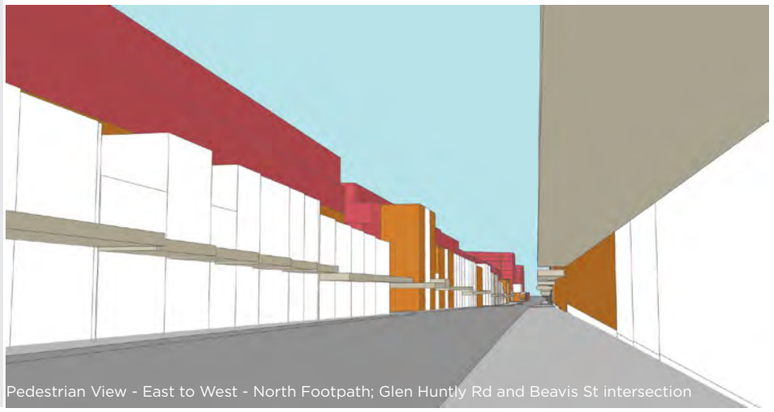
Scenario 1 - 5m setback behind streetwall and 33° upper level setback from level 7



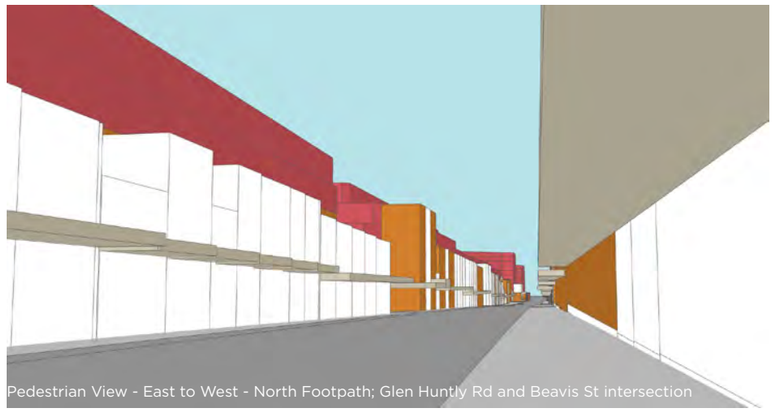
Scenario 2 - 6m setback behind streetwall and 33° upper level setback from level 7



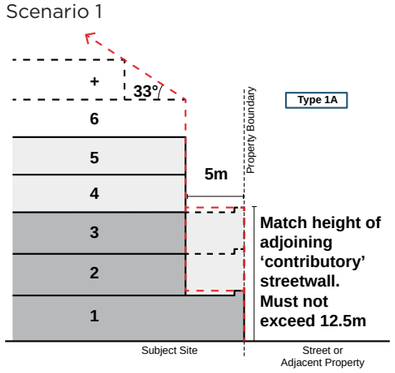
Scenario 3 - 5m setback behind streetwall and 33° upper level setback from level 6



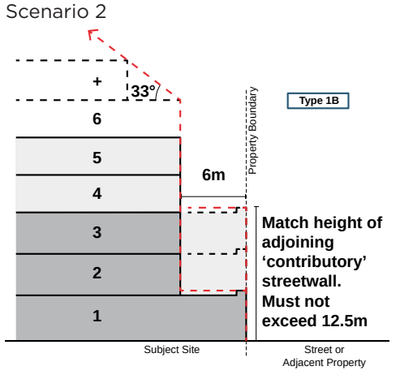
Scenario 4 - 6m setback behind streetwall and 33° upper level setback from level 6



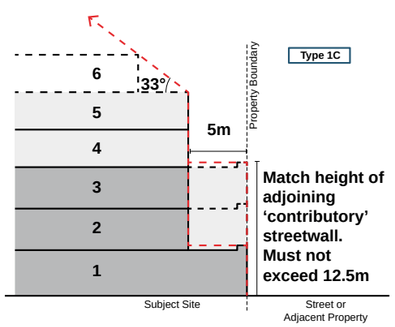
Scenario 1



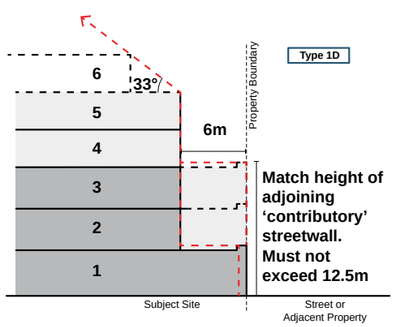
Scenario 2



Scenario 3

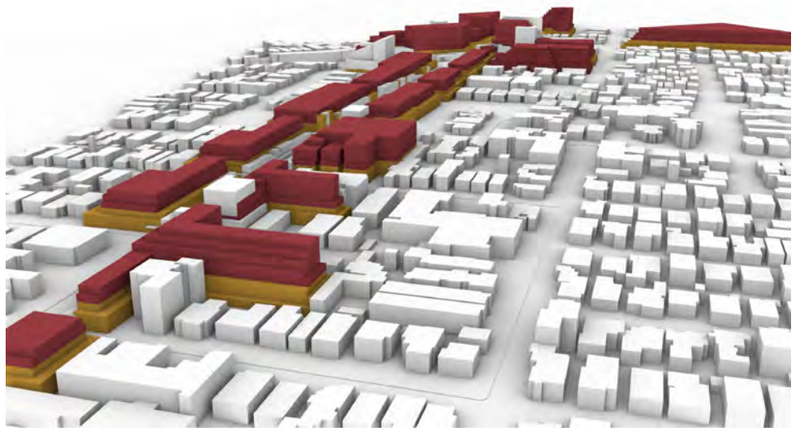


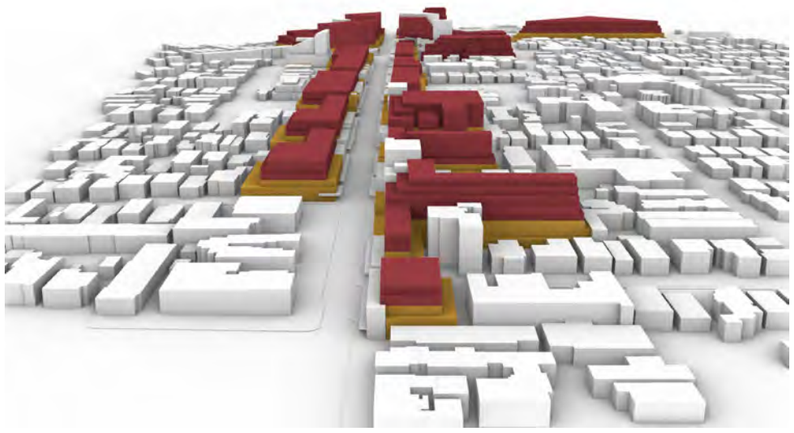
Scenario 4



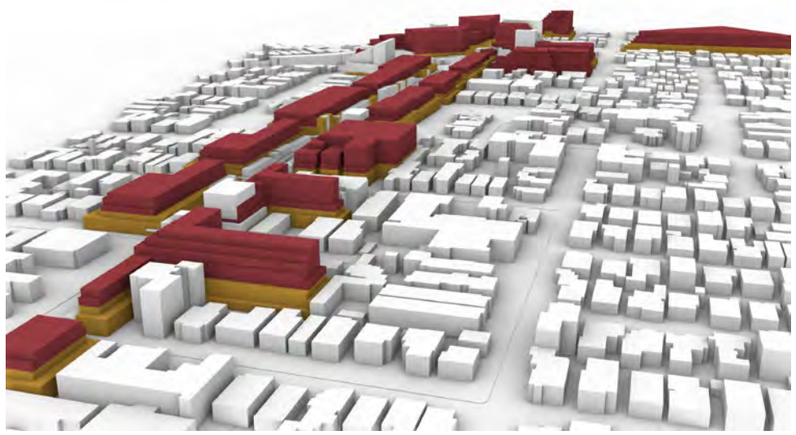
Aerial Views showing setbacks

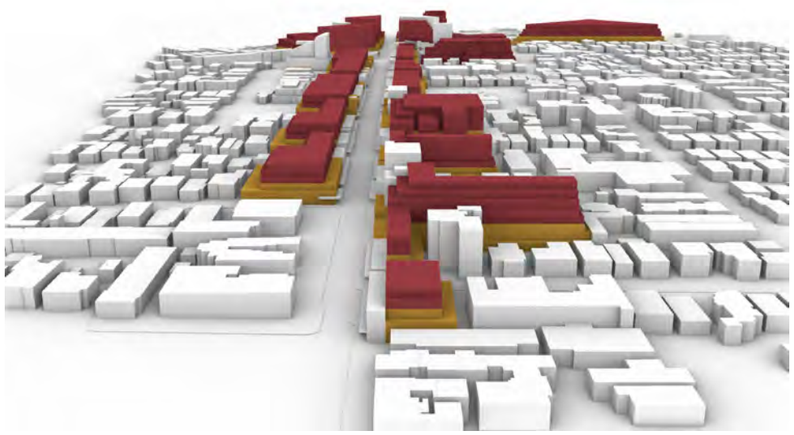
Scenario 1 - 5m Upper Level setback behind Streetwall

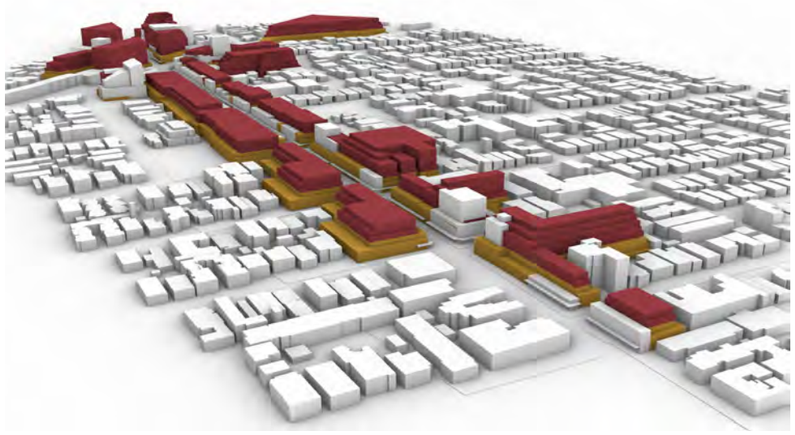




Scenario 2 - 6m Upper Level setback behind Streetwall

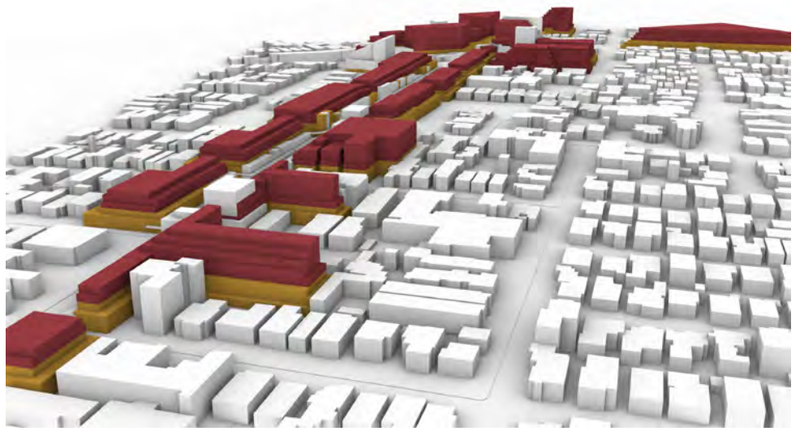


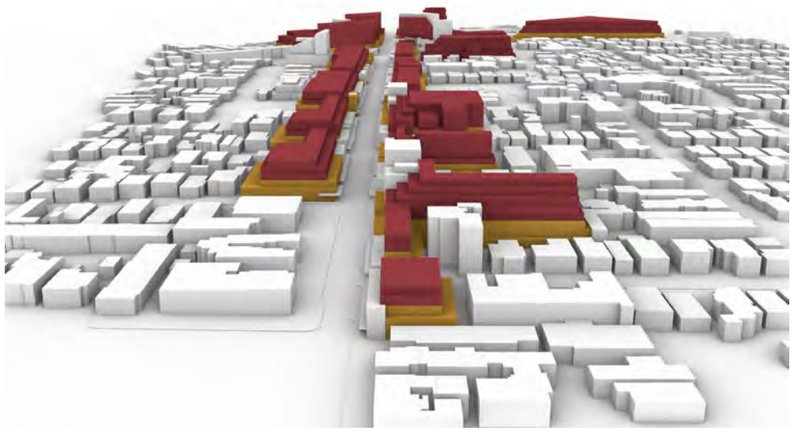


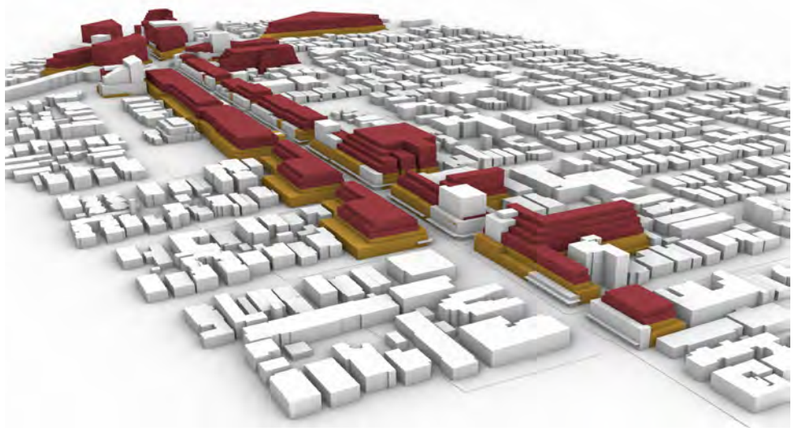


Aerial Views showing setbacks

Scenario 3 - 5m Upper Level setback behind Streetwall and 33° Upper Level setback from Level 6







Scenario 4 - 6m Upper Level setback behind Streetwall and 33° Upper Level setback from Level 6