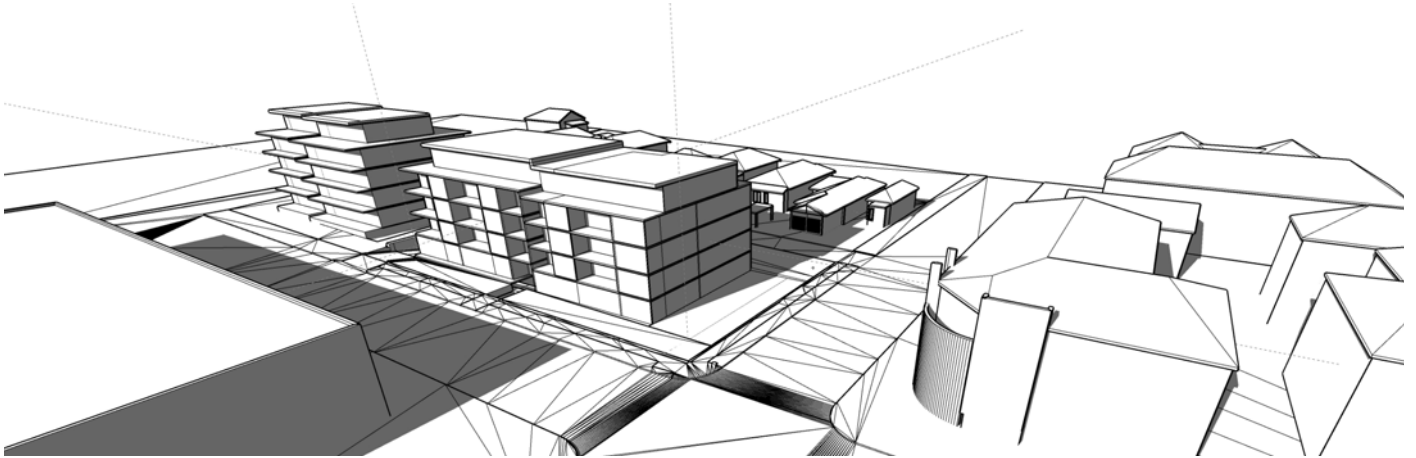




2-22 William Street, Granville

Urban Design Study

P18-019
26.02.2019

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1.0 Study Background

A planning proposal request for 2-22 William Street, Granville (the Site) was lodged with Parramatta Council on 15 December 2015. The proposal sought to increase the building height and floor space ratio (FSR) to enable a new residential flat development at 10-22 William Street. The proposal included a 2.3:1 FSR with 23 metre (7 storeys) building height. The proposal included the removal of Heritage Item No. 205 (10 William Street) from Schedule 5 of the Parramatta LEP 2011. Following Council amalgamations, assessment and approval of the planning proposal request became the responsibility of Cumberland Council.

A revised planning proposal concept scheme was submitted to Cumberland Council in September 2016. This was subsequently updated and submitted on the 16th October 2018 after Planning Panel comments. The proposal reduced the building height and FSR of the original planning proposal to address overshadowing of adjoining properties to the south of the Site. The revised scheme sought to increase the height of building control to 20 metres (5 storeys) and an FSR of 1.7:1. The amended proposal also proposed the demolition of the heritage item located at 10 William Street.

1.1 Study Objective and Methodology

DesignInc has been engaged by Cumberland Council to provide an urban design study for a proposed development site at 2-22 William Street. The study will develop a preferred urban design built form outcome that is contextually appropriate and delivers good amenity outcomes for residents of the building itself and its neighbours. The study will recommend appropriate LEP and DCP controls to enable this outcome. The built form outcome will comply with Apartment Design Guide (ADG) and State Environmental Planning Policy No 65 - Design Quality of Residential Flat Development (SEPP 65).

The study comprises context analysis, development of an urban design framework and testing of an FSR of 1.7:1 and HOB of 16 metres development scenario. Note the urban design study development scenario assumes testing that the heritage item at 10 William Street is demolished. Refer to heritage discussion in this report.

1.2 Site Location and Description

Refer Figure 1: Site Location

The Site is located at 2-22 William Street, Granville and comprises an entire street block bound by William Street, Clyde Street, Factory Street with a rear access lane (First Lane). The Site has an area of approximately 3,700m² and comprises 15 allotments. The street block dimensions are approximately 104 metres wide by 36 metres in depth. The Site is located approximately 150 metres from Clyde Train Station and about 500-600 metres from Granville Station and Granville Shopping Area located along Mary Street and South Street.



Figure 1: Site Location

2.0 Context Analysis

2.1 Ownership Patterns

Refer Figure 2: Overall Site Plan

The current ownership comprise multiple private lots with a consolidated ownership of lots 10-22 William Street. For the purpose of this Study, Site 1 comprises 10-22 William Street and Site 2 comprises 2-8 William Street.



Figure 2: Overall Site Plan

2.2 Heritage

No. 10 William Street is a listed heritage item. Cumberland Council has obtained independent heritage advice, which states that the retention of the heritage item at 10 William Street is not necessary to demonstrate the historic built character of the area. As such it is assumed for the purposes of this study that the heritage item is not retained.

There are several other heritage items in the vicinity of the Site including Granville RSL, Granville Swimming Centre and Granville Memorial Park and to the rear on the corner of First Street and Factory Street, the Granville Multicultural Centre.

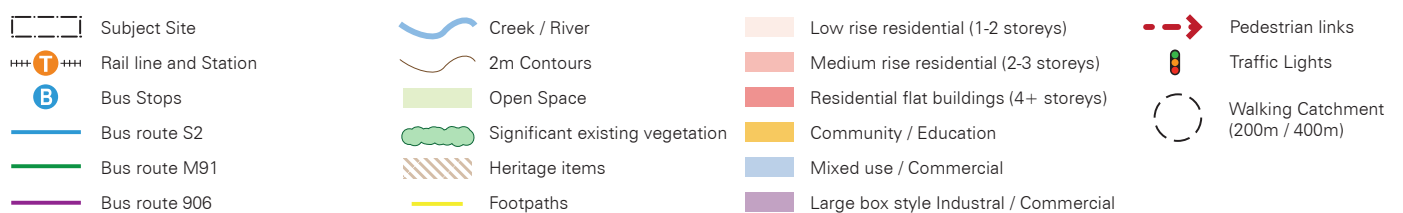


Figure 3: Existing Conditions

2-22 William Street, Granville - Urban Design Study

2.3 Existing Built Form

Existing built form on the Site comprises low scale detached residential dwellings, a two storey strata titled residential flat building and a commercial building used for warehousing at the western end of the block. All buildings front William Street and have vehicle access off the rear lane.

Surrounding the Site, there is a diverse mix of built form and land use character. Larger footprint 1-2 storey commercial, industrial and entertainment and community uses are located to the north and east. Granville RSL, Granville Swimming Centre and Granville Memorial Park are to the north of William Street. Granville Industrial Area is located to the east along Duck River. To the south and west, there is a mix of lower scale 1-2 storey residential detached dwellings and 2-4 storey residential apartment buildings. A new apartment building at No.39-43 William Street is 6 storeys in height.



William Street Site



Factory opposite William Street Site



Existing higher density residential on Clyde Street



Laneway to the south



Existing residential on First Street to the south of the Site



Heritage Item on Factory Street, south of the Site

(Source: Google Streetview)

2.4 Topography, Views and Vistas

The topography is gently sloping varying by 2 metres over the 104.5 metre width block. Views are confined to local features surrounding the Site such as Clyde Railway Station, Granville Industrial Area and Granville Diggers. Longer distance views are to Granville Town Centre.



Granville Diggers Club with view to the new higher density development at Granville, Town Centre in the distance. (Source: Google Streetview)

3.0 Current Planning Controls

The Site is zoned R4 (High Density Residential) and has a maximum building height control of 14 metres and a maximum FSR of 1:1. The residential to the south is zoned R2 Low Density Residential with an FSR control of 0.5:1 and a 9m height limit.

The FSR, zoning and height changes to the west of the Site, on William Street closer to the Granville Shopping Area, to 1.7:1 FSR and 20 metres maximum building height control. The land use zoning is still R4. A new apartment building has been built at No.39-43 William Street and is 6 storeys in height.

3.1 Parramatta DCP Controls

Relevant Parramatta DCP controls to this site development include:

Height

3.1.2 Height Transition

- Where there is a common boundary between areas where a different height limit is specified, the top storey on the land with the higher height limit is to be stepped back to fit within a plane projected at a 45 degree angle from the floor below the topmost floor.

3.3.2 Private and Communal Open Space

- **C.7** A minimum of 10m² private open space per dwelling with minimum dimensions of 2.5 metres.
- **C.8** A minimum of 10m² communal open space per dwelling with minimum dimensions of 2.5 metres.
- **Table 3.1.3.7** Provide a deep soil zone of a minimum 30% of the Site, of which at least 50% is to be located at rear of site, with minimum dimensions of 4m x 4m.
- **Table 3.1.3.7** Provide a landscaped area of minimum 40% of the Site (including deep soil zone).

Table 3.1.3.7 Setbacks

- Provide a front setback on the primary frontage of William Street of minimum 5 – 9 metres.
- Provide a secondary street frontage of minimum 3 – 5 metres.
- Provide a rear setback on the lane of a minimum 15% of length of site.
- **C.4.1.6 C1 (f)** For development in the R4 High Density Housing Zone, south of the railway line, setbacks apply to the first 4 storeys of development. Remaining storeys are to be set back an additional 3 metres. Balconies may encroach the upper level setback (levels 5 and 6 only) for a maximum depth of 1 metre.

3.3.3 Visual and Acoustic Privacy

- **C.10** The minimum separation between habitable rooms/balconies is 12m.
- **C.11** For loft dwellings facing rear lanes, the minimum separation between habitable rooms/balconies is 8m.
- **C.12** The minimum separation between habitable rooms/balconies is up to 12m and including the third storey and 18m above the third storey.

3.3.5 Solar Access and Cross Ventilation

- **C.8** The minimum floor to ceiling height is 2.7m.
- **C.9** 80% of dwellings are to be naturally cross ventilated. (Note the ADG requirement is less than this and supersedes this requirement).
- **C.10** Single aspect dwellings are limited in depth to 8m from a window.
- **C.11** The maximum building depth is 18m, subject to showing that the building can provide acceptable amenity outcomes.
- **P.2** Adjoining properties are to receive a minimum of 3 hours sunlight in the primary living area, and in at least 50% of the private open space between 9am and 3pm on 21 June. Where existing development currently receives less sunlight than this requirement, this should not be unreasonably reduced.

3.4.4 Safety and Security

- **C.1** Buildings should contain multiple stair/ lift cores which limit the number of dwellings with access from the circulation core.
- **C.2** Individual dwellings should be designed to overlook communal areas such as play areas, and gardens.
- **C.4** Frontages of development should face other frontages rather than their backs or sides.
- **C.5** Where developments have a car park or laneway for access to a car park, building layouts should provide some windows, lighting or secondary access doors that address the car park.
- **C.6** Access from car parks to dwellings should be direct and safe for residents day and night.

3.6.2 Parking and Vehicular Access

- **C.21** Carparking spaces are to be located in a basement.

3.2 Apartment Design Guide Controls

Relevant ADG controls to this site include:

- **3.D.1** *Communal open space to be 25% of the Site area with 50% of the principal usable open space to receive a minimum of 2 hours of direct sunlight in midwinter (9am – 3 pm).*

4A Solar and daylight access

- **4A-1.1** *Living rooms and private open spaces of at least 70% of apartments in a building receive a minimum of 2 hours direct sunlight between 9 am and 3 pm at mid winter in the Sydney Metropolitan Area and in the Newcastle and Wollongong local government areas.*
- **4A-1.3** *A maximum of 15% of apartments in a building receive no direct sunlight between 9 am and 3 pm at mid winter.*

4B Natural Ventilation

- **4B-3.1** *At least 60% of apartments are naturally cross ventilated in the first nine storeys of the building. Apartments at ten storeys or greater are deemed to be cross ventilated only if any enclosure of the balconies at these levels allows adequate natural ventilation and cannot be fully enclosed.*
- **4B-3.2** *Overall depth of a cross-over or cross-through apartment does not exceed 18m, measured glass line to glass line.*

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4.0 Analysis of Compliance Issues with Current Planning Proposal

Refer Figure 4: Site 1 Typical Floor Plan Compliance Comments - Level 3 (Fourth Storey) shown.

The diagram below illustrates compliance issues with the built form provided for Site 1 in the current planning proposal. These include:

- Overall height including lift overruns is 20m.
- 45 degree upper level setback not met.
- Inadequate deep soil zone for tree planting as carpark extends under communal open space.
- Rear setback is non compliant with DCP.
- Some apartments do not meet cross flow ventilation requirements.
- Does not meet ADG separation requirements on eastern boundary.
- Room dimensions do not meet ADG requirements.
- Building does not step with topography.

Note: Details have not been provided for Site 2 by the proponent. As the Planning Proposal is for both sites, testing of an FSR of 1.7:1 and height of building of 16 metres has been done for Site 2 as well in this Report.

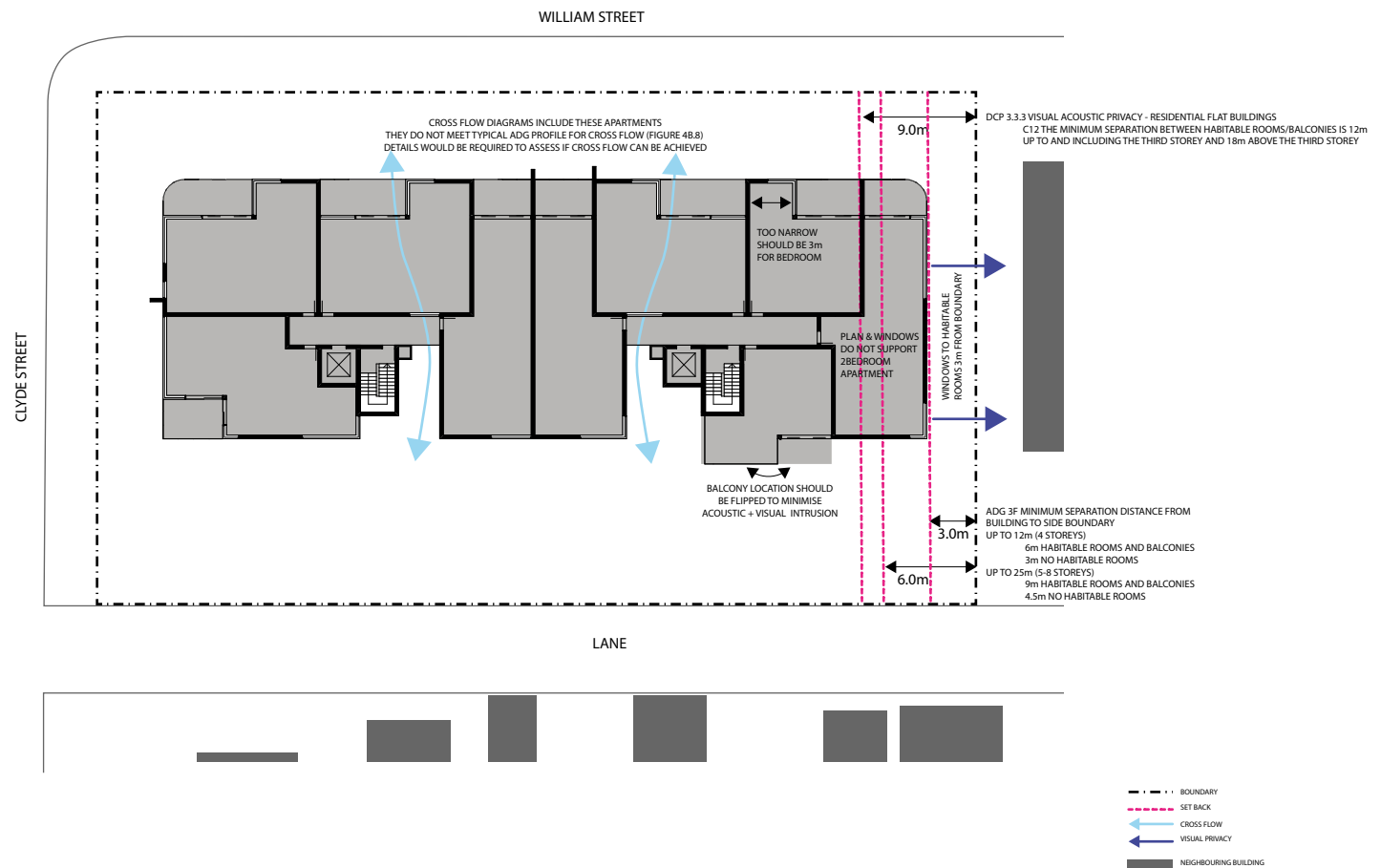


Figure 4: Site 1 Typical Floor Plan Compliance Comments - Level 3 (Fourth Storey) shown

5.0 Urban Design Framework

Refer Figure 5: Site Masterplan

The redevelopment of the William Street Site will provide an appropriately scaled vibrant, liveable new residential development with a high quality public and private domain. High quality built form, articulated facades and tree planting will improve the amenity, appearance and streetscape character. Development will address all street frontages and provide space between buildings to open up north-south views, enable visual permeability, provide privacy between habitable spaces and solar access to the communal open spaces at ground level.

Design Principles

Refer Figure 5: Site Masterplan

Setting and Topography

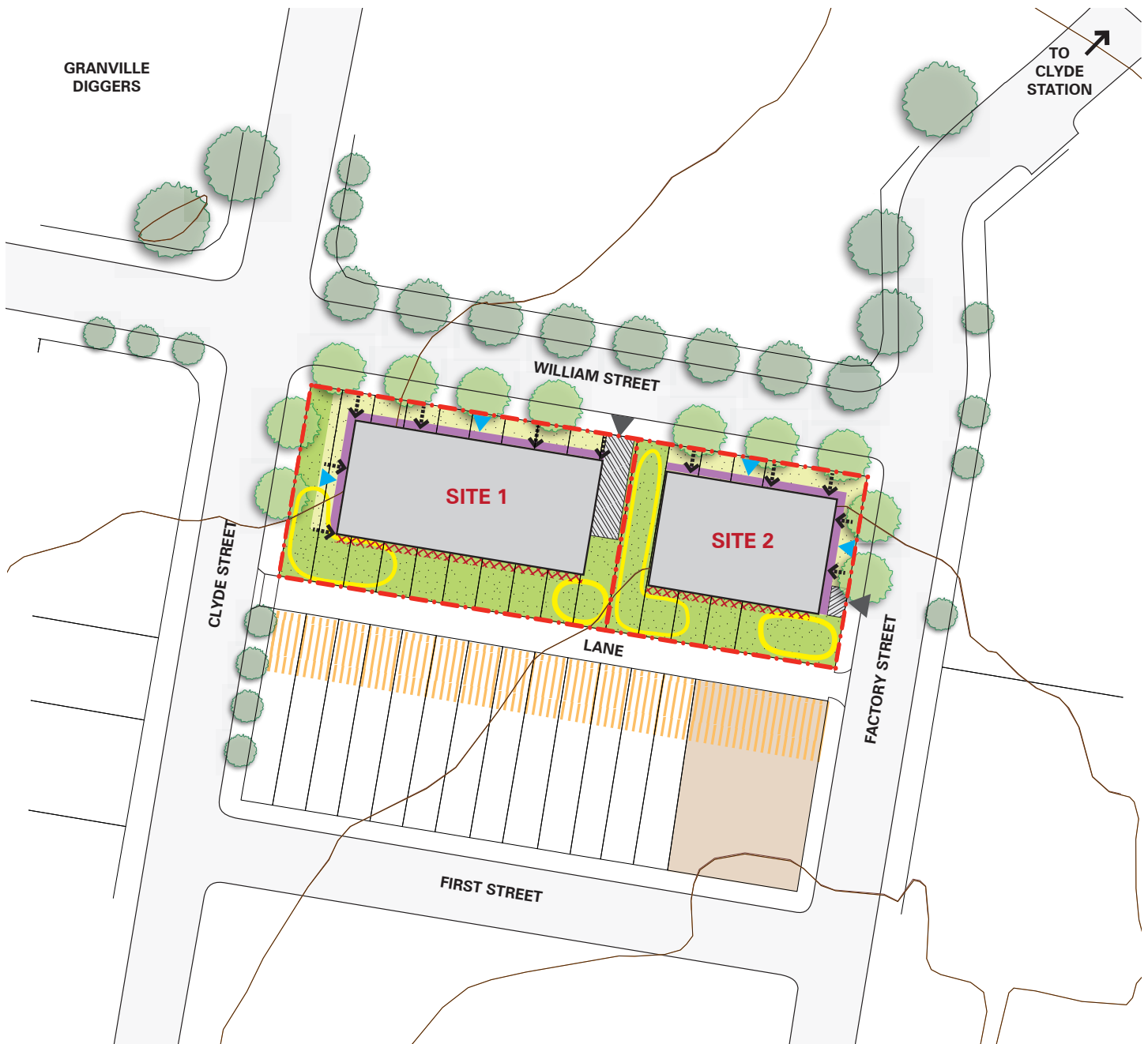
- Enable north-south visual permeability by providing mid-block views through to William Street.
- Provide better east-west and north-south pedestrian permeability, providing connections to Clyde Station and Granville Town Centre.
- Provide a high quality public domain, including good pedestrian amenity, by providing street trees and pavement treatments.
- Extend street tree planting on William, Clyde and Factory Street, to match the existing, where practical.
- Step building form to follow the Site topography.

Private and Communal Open Space

- Three hours of solar access is maintained to the dwellings to the south of the Site.
- Provide a greater building setback to Clyde Street to provide better solar access and enable a ground floor communal open space in preference to locating on the roof.
- Provide private gardens for ground floor units adjacent the building.

Built Form

- Design buildings to align to the street at ground level, have adequate building separation within the requirements of SEPP 65 and retaining landscaped setbacks at ground level.
- Ensure new development provides an active street address for residential, locating and designing entries to be clear, inviting and safe. Provide building access from William, Clyde and Factory Street.
- Ensure the built form façade addresses the street with openings (windows and street entries) and lighting to the public domain, providing opportunity for passive surveillance, and for a direct relationship between building entries and the street.
- Provide a flexible 3.3 metre floor to floor height for the ground floor apartments.
- Provide apartment buildings that maximise northern and eastern aspect as far as possible.
- Encourage a high quality of design for buildings, appropriate to their high visibility and the desired future character of the area as a model for best practice, sustainable urban design.
- Encourage modulation and articulation of the horizontal and vertical proportions of facades including change in materials.
- Provide a rear building setback to the laneway to transition the scale and mass of the higher-density buildings to the lower density dwellings to the south.
- Design rear of buildings adjacent the laneway to address and overlook the lane to improve safety and security.
- Provide underground car parking and parking / service access from William Street for Site 1 and Factory Street for Site 2. This will maximise the areas with the best solar amenity. It will also ensure that the communal open spaces are continuous and cohesive without driveways bisecting these spaces.



- | | | | | | |
|--|------------------------------------|--|--|--|---|
| | SUBJECT SITE | | HERITAGE | | BUILDING ENVELOPES - ENSURE BUILDING LENGTH IS LIMITED TO A MAX. 50M TO REDUCE VISUAL BULK |
| | 2M CONTOURS | | DRIVEWAY | | LIVING ROOMS / BALCONIES OVERLOOKING COMMUNAL OPEN SPACE AND LANEWAY |
| | ACTIVE STREET ADDRESS | | PRIVATE OPEN SPACE | | MINIMISE OVERSHADOWING / OVERLOOKING OF ADJACENT RESIDENTIAL. PROVIDE TRANSITION TO LOWER SCALE RESIDENTIAL |
| | DIRECT STREET ACCESS TO APARTMENTS | | COMMUNAL OPEN SPACE / DEEP SOIL ZONE / TREE PLANTING | | AREA OF 2 HRS SOLAR ACCESS IN MIDWINTER 9AM - 3PM |
| | VEHICLE ACCESS | | EXISTING STREET TREE PLANTING | | |
| | BUILDING ENTRY | | NEW STREET TREE PLANTING | | |



Figure 5: Site Masterplan

6.0 Masterplan Options

6.1 Site 1

Refer Figures 6 - 17.

The following diagrams compare the current planning proposal (which is not compliant with the height control) against the preferred site development scenario.

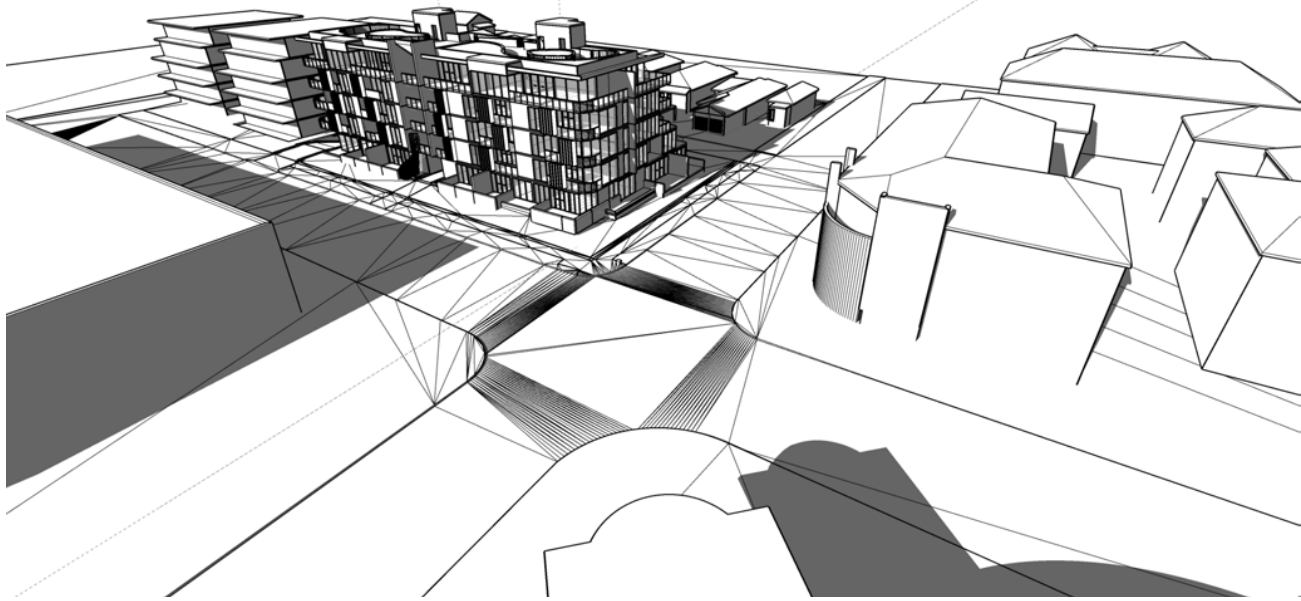


Figure 6: Site 1 Planning Proposal Envelope 3D massing - elevated view from Granville Diggers

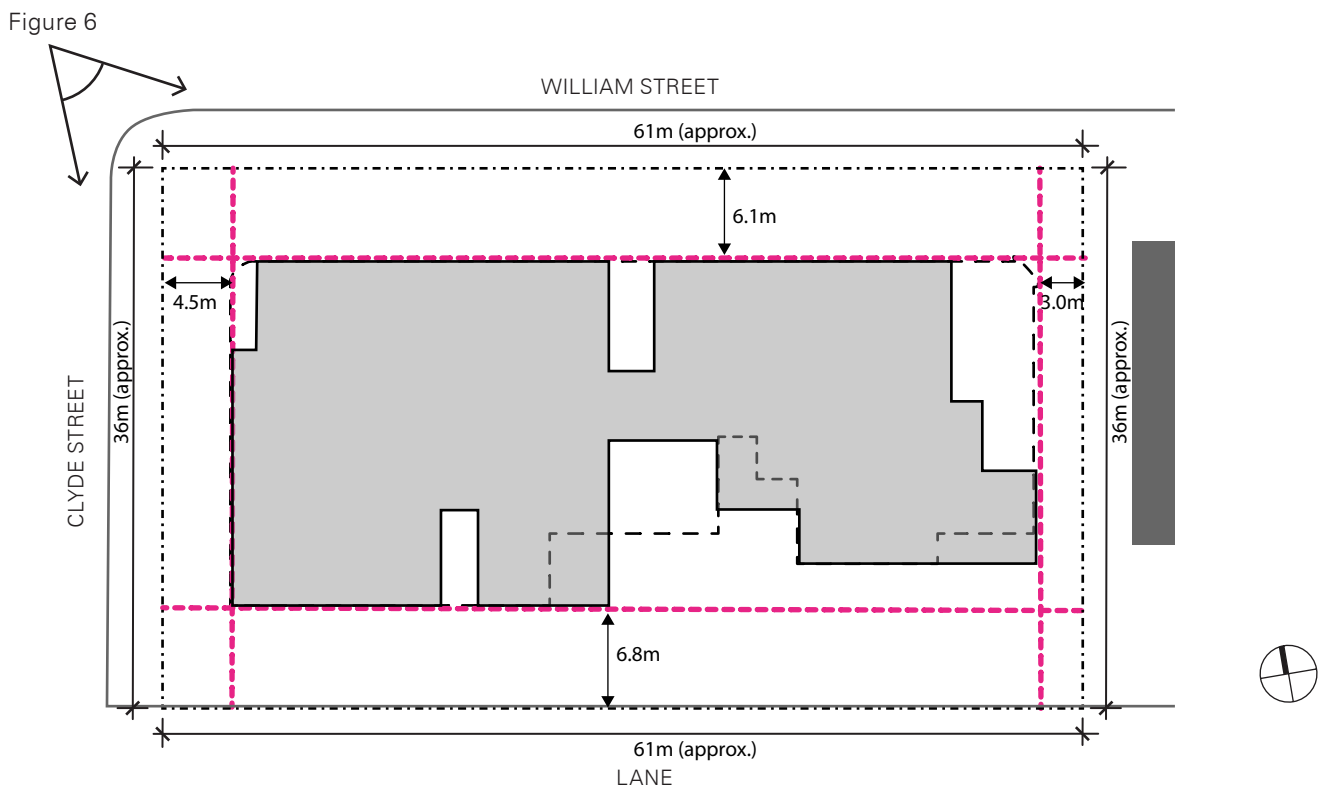


Figure 7: Site 1 Planning Proposal Ground Floor Building Footprint - Setbacks

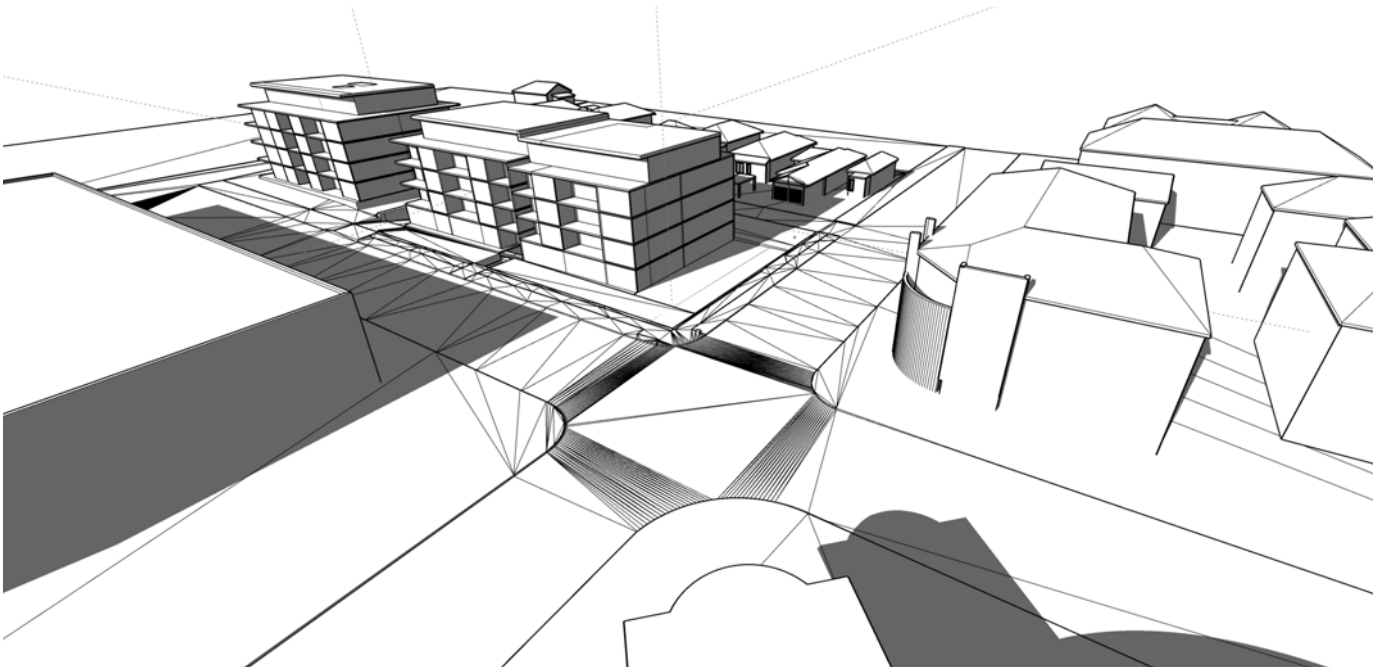


Figure 8: Site 1 ADG & DCP Compliant Envelope 3D massing - elevated view from Granville Diggers

Figure 8

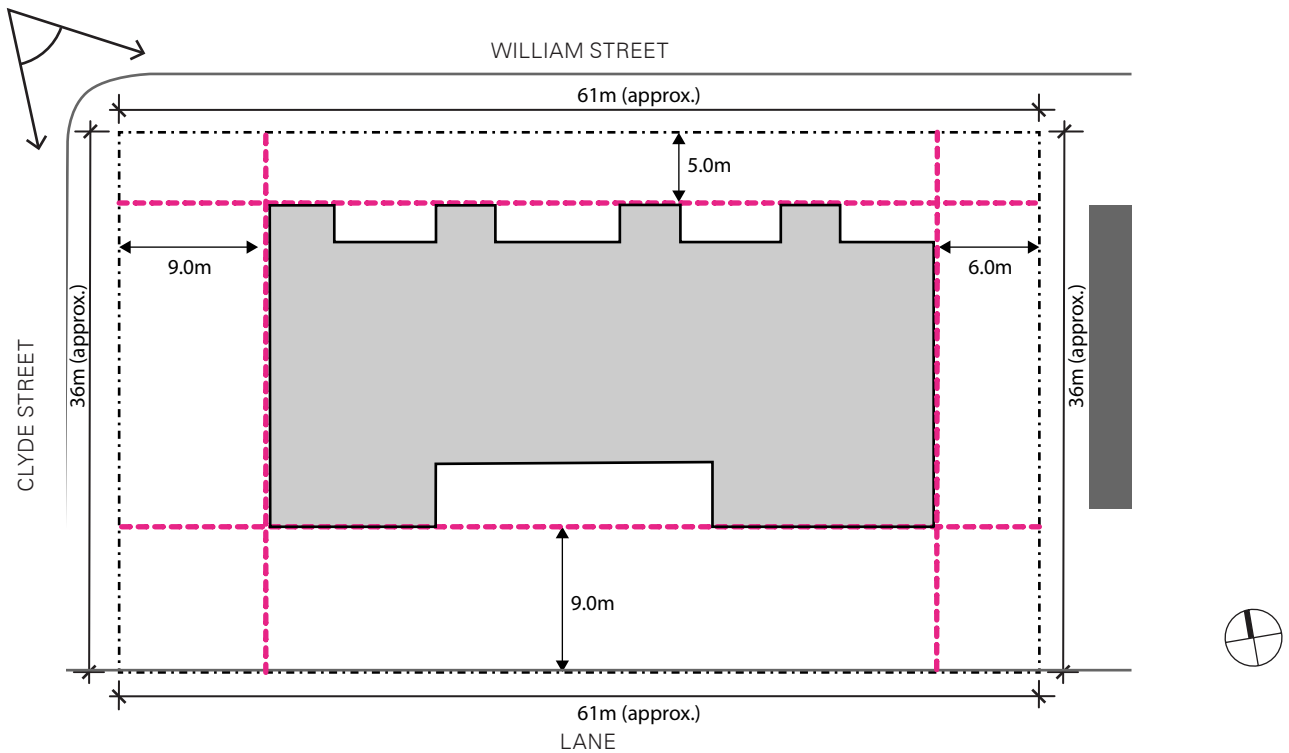
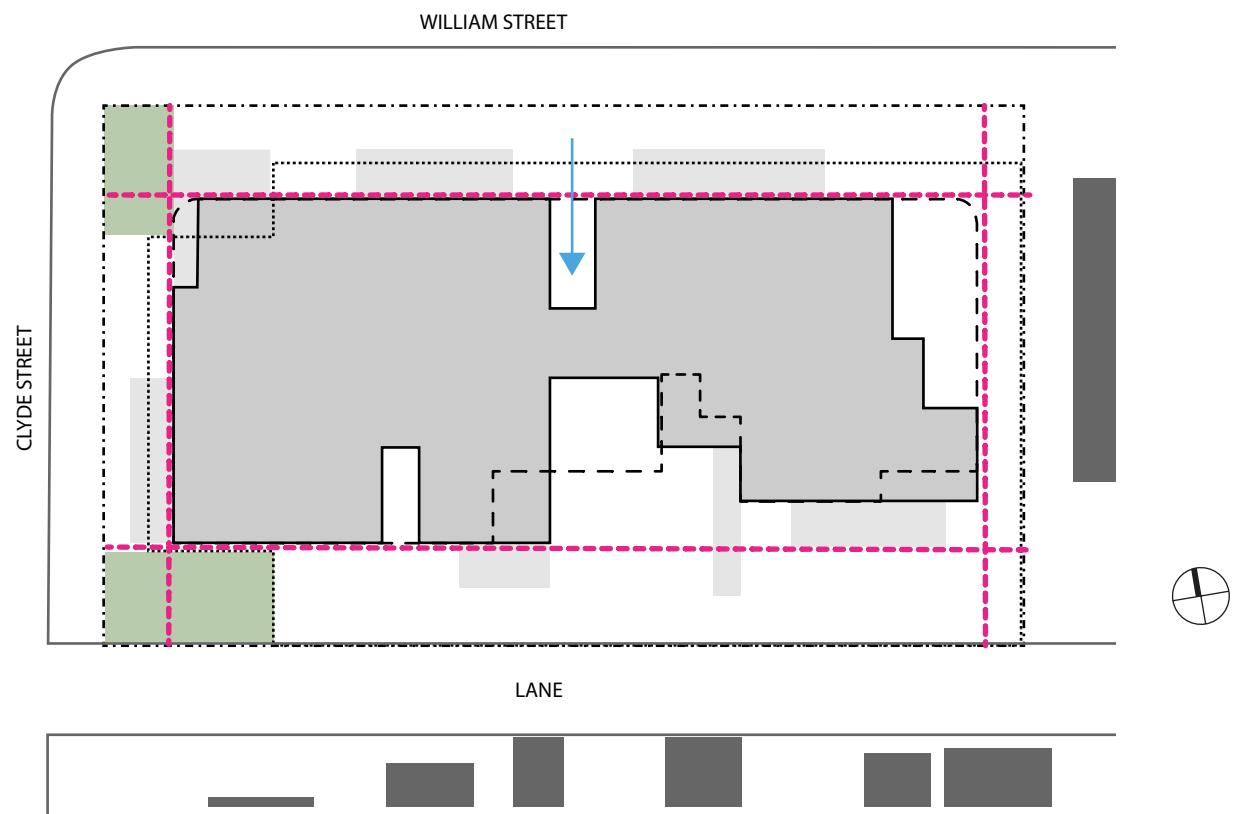


Figure 9: Site 1 ADG & DCP Compliant Ground Floor Building Footprint - Setbacks

2-22 William Street, Granville - Urban Design Study



107SQM DEEP SOIL
107/2175*100=4.9%

PDCP PART 3.1 TABLE 3.1.3.7
DEEP SOIL 30% OF SITE AREA OF WHICH 50% TO BE LOCATED TO REAR
DEEP SOIL MINIMUM DIMENSIONS 4M X 4M
DEEP SOIL DEFINITION PART 3 3.3 ENVIRONMENTAL AMENITY 3.3.1 LANDSCAPE P.14-
ADG 3E-1 7% OF SITE AREA FOR DEEP SOIL ZONE WITH A MINIMUM DIMENSION OF 6 METRES

GFA CALCULATION	
GROUND FLOOR	816sqm
FIRST FLOOR	839sqm
SECOND FLOOR	731sqm
THIRD FLOOR	731sqm
FOURTH FLOOR	660sqm
TOTAL	3,777sqm

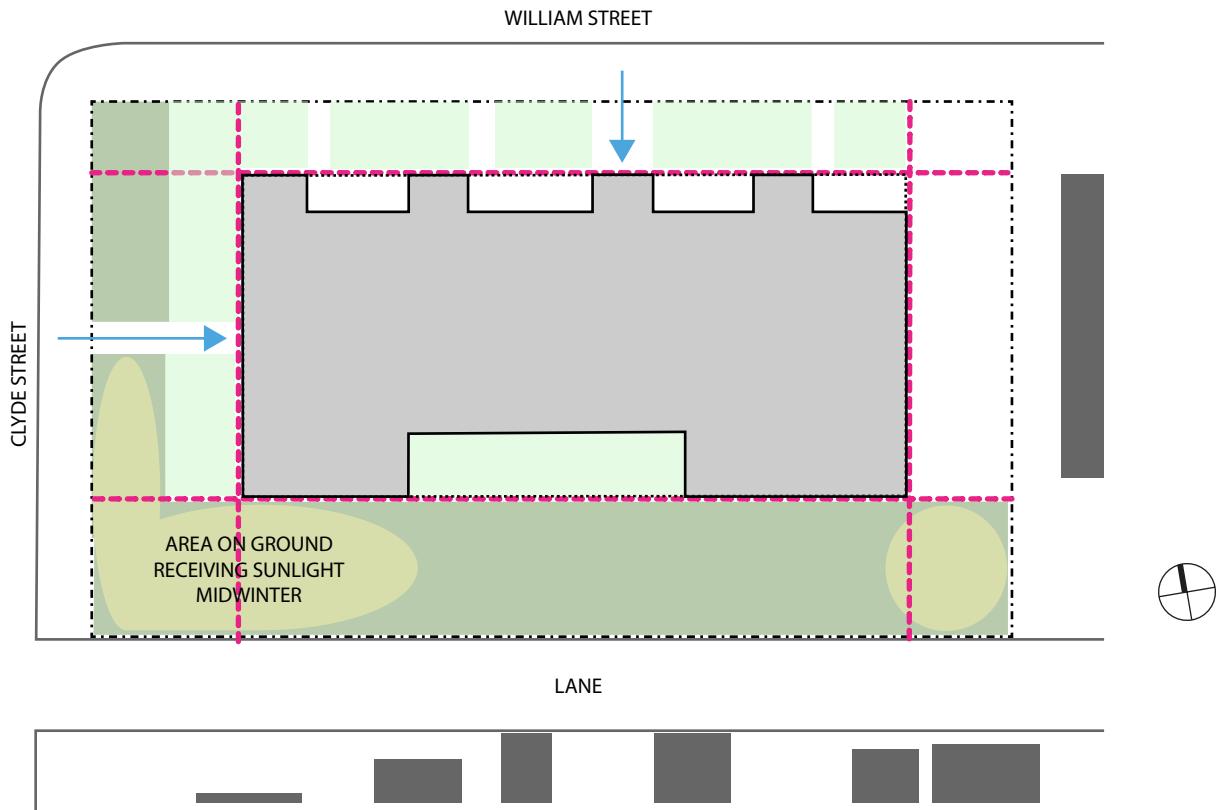
FSR 1.74:1

- BOUNDARY
- SET BACK
- BASEMENT OUTLINE
- BUILDING OUTLINE
- LEVEL ONE OUTLINE
- BUILDING FOOTPRINT
- OUTDOOR AREA
- NEIGHBOURING BUILDING
- DEEP SOIL
- MAIN BUILDING ENTRANCE
- PRIVATE GARDENS FOR GROUND FLOOR UNITS

Deep Soil Zone	107m ²	4.9% *
Communal Open Space	560m ²	26% * (rooftop)

* Does not meet DCP/ADG requirement

Figure 10: Site 1 Planning Proposal Envelope



700 SQM DEEP SOIL
 $700/2175 \times 100 = 32.1\%$

PDCP PART 3.1 TABLE 3.1.3.7
 DEEP SOIL 30% OF SITE AREA OF WHICH 50% TO BE LOCATED TO REAR
 DEEP SOIL MINIMUM DIMENSIONS 4m x 4m
 DEEP SOIL DEFINITION PART 3 3.3 ENVIRONMENTAL AMENITY 3.3.1 LANDSCAPE P.14
 ADG 3E-1 7% OF SITE AREA FOR DEEP SOIL ZONE WITH A MINIMUM DIMENSION OF 6 METRES

GFA CALCULATION	
GROUND FLOOR	844sqm
FIRST FLOOR	768sqm
SECOND FLOOR	768sqm
THIRD FLOOR	768sqm
FOURTH FLOOR	590sqm
TOTAL	3,738sqm

FSR 1.72:1

- BOUNDARY
- SET BACK
- BASEMENT OUTLINE
- BUILDING OUTLINE
- LEVEL ONE OUTLINE
- BUILDING FOOTPRINT
- OUTDOOR AREA
- NEIGHBOURING BUILDING
- DEEP SOIL
- MAIN BUILDING ENTRANCE
- PRIVATE GARDENS FOR GROUND FLOOR UNITS

Deep Soil Zone	700m ²	32.1% *
Communal Open Space	550m ²	25% *

* Meets DCP/ADG requirement

Figure 11: Site 1 ADG & DCP Compliant Envelope

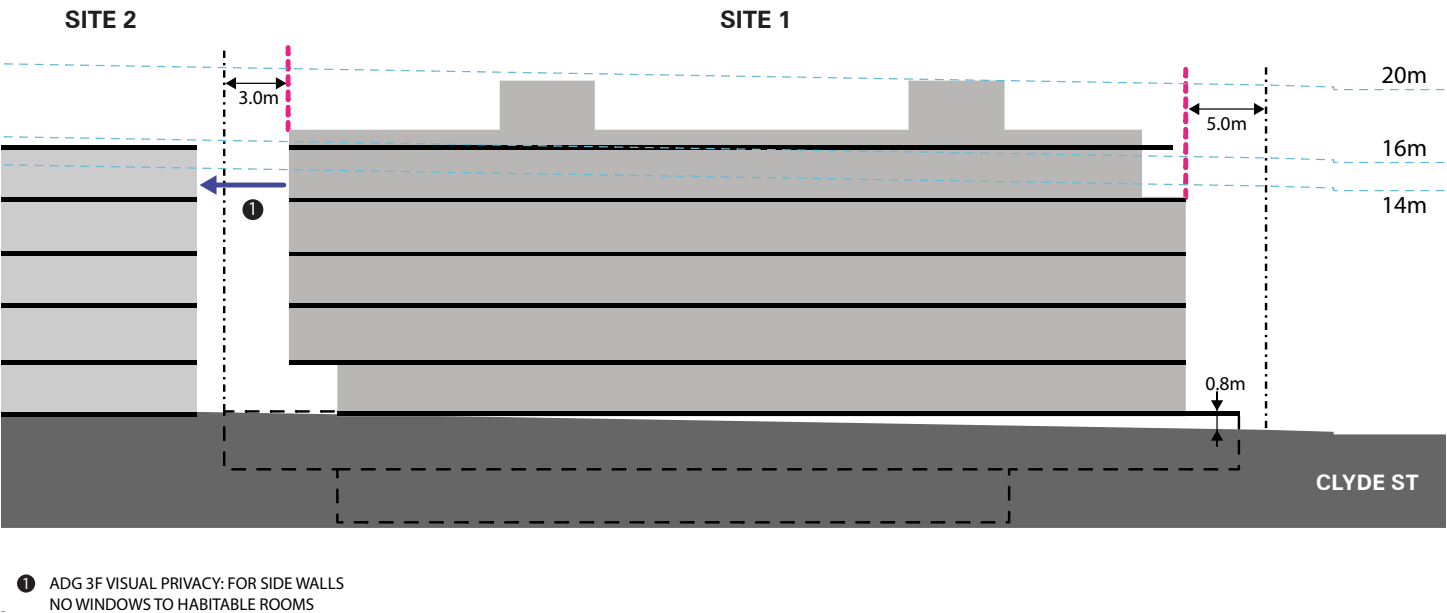


Figure 12: Site 1 William Street Elevation: Planning Proposal

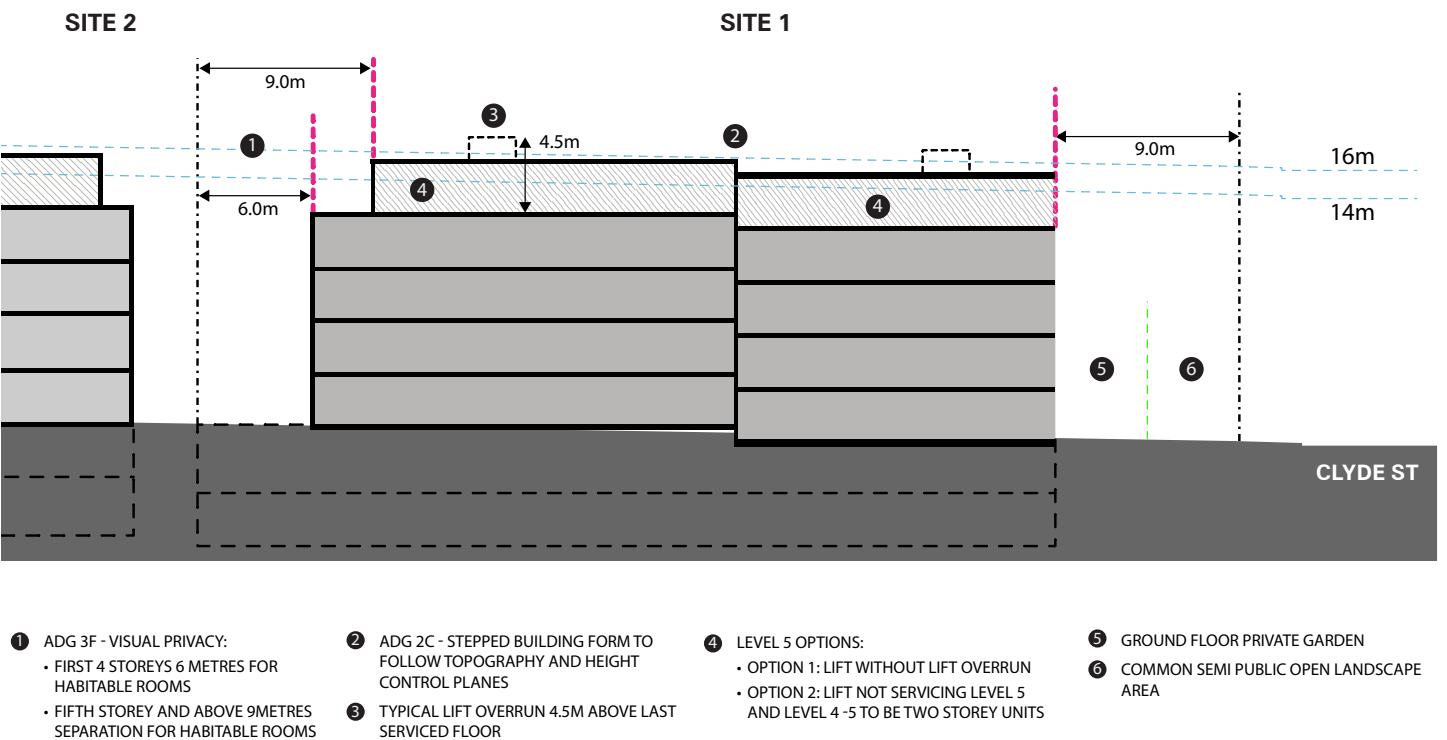


Figure 13: Site 1 William Street Elevation: Option: ADG + DCP Compliant

2-22 William Street, Granville - Urban Design Study

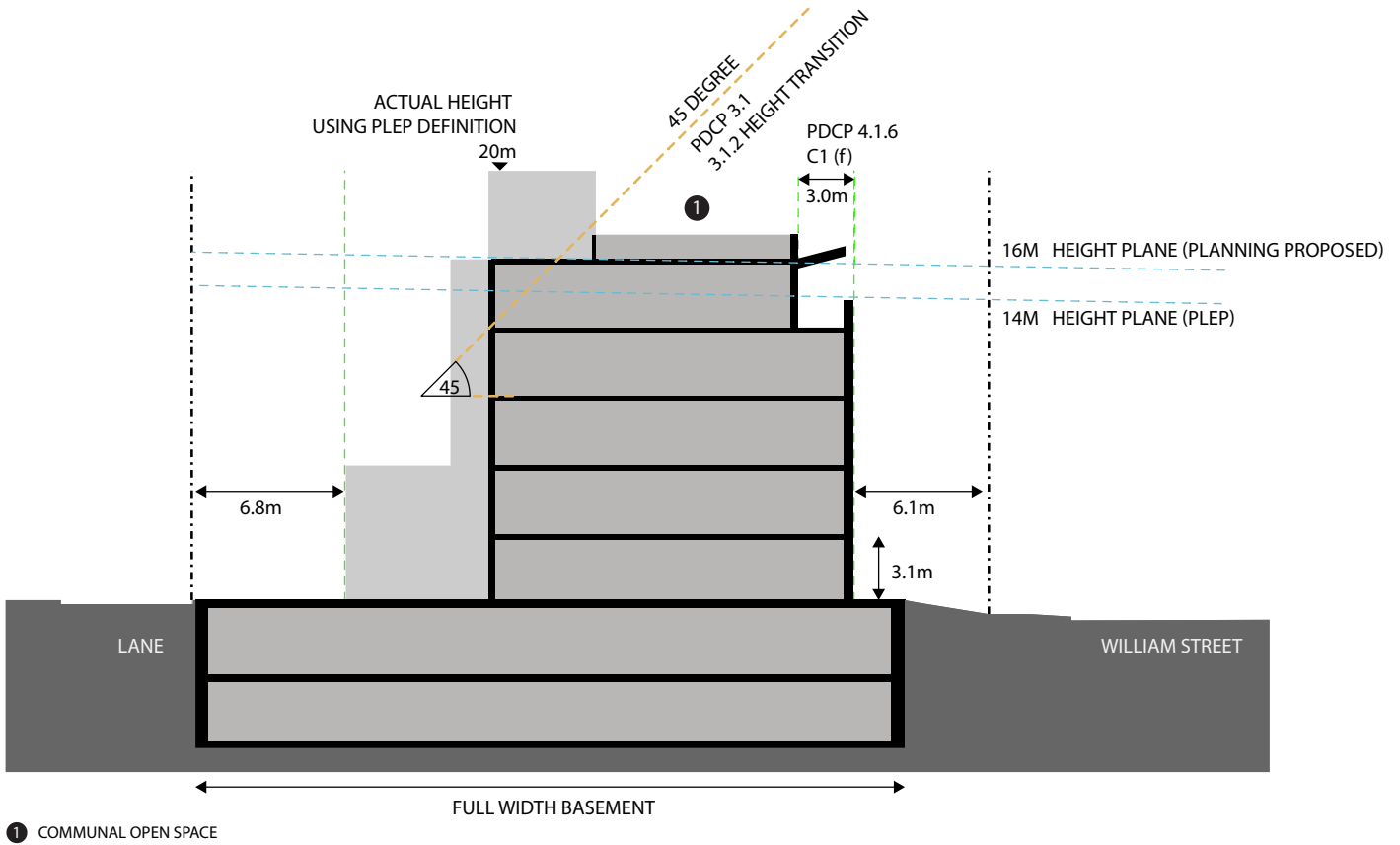


Figure 14: Site 1 Section North South - Planning Proposal

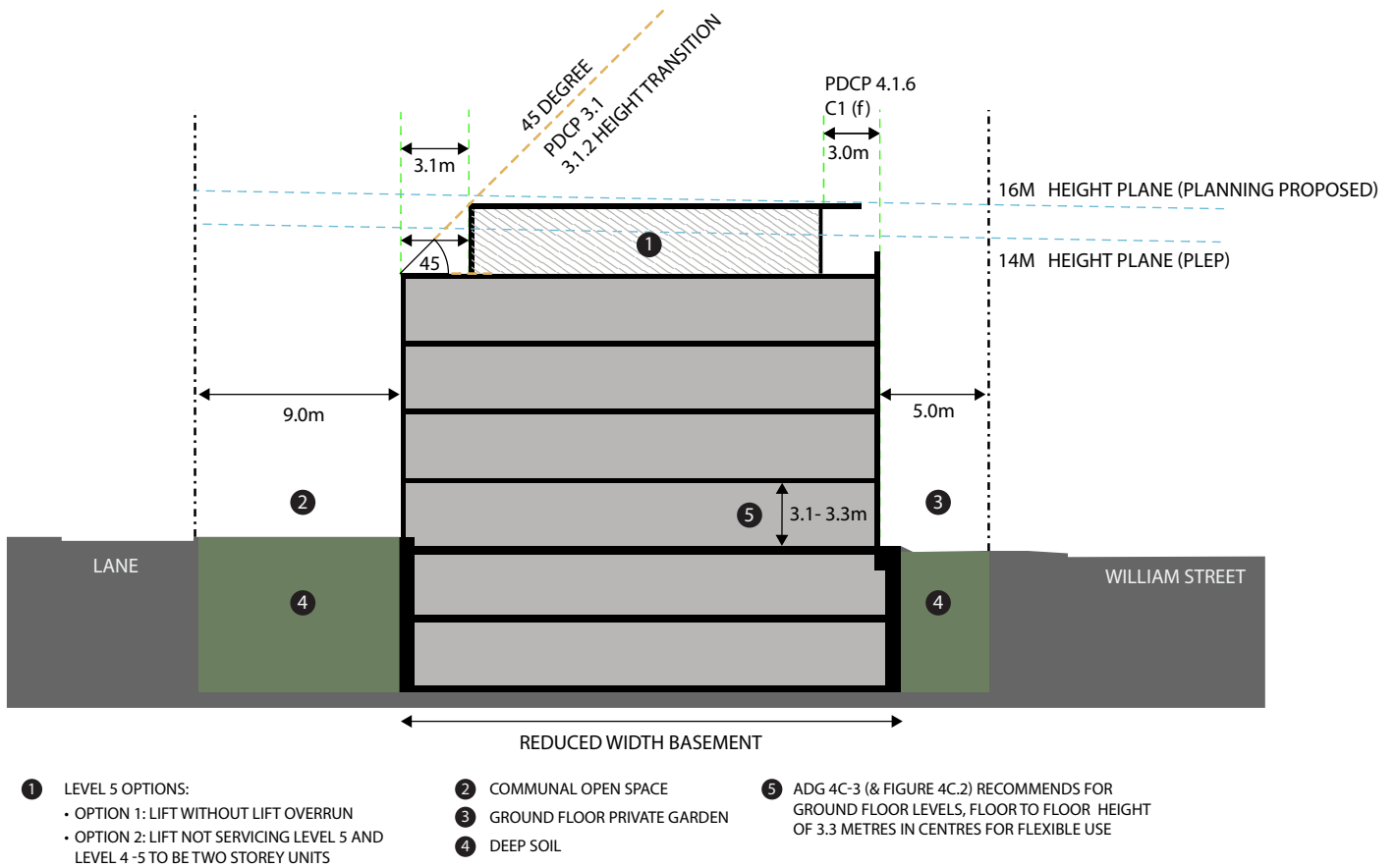


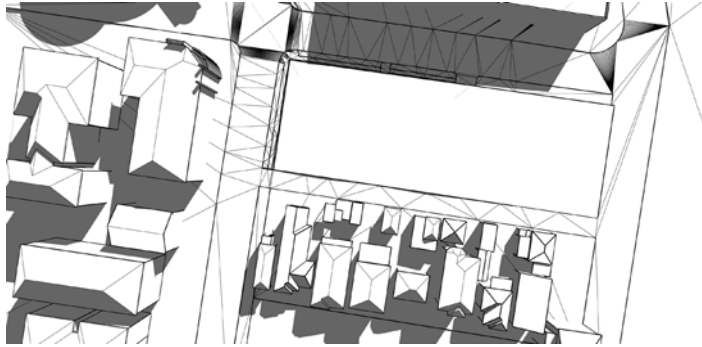
Figure 15: Site 1 Section North South - Option: ADG & DCP Compliant

2-22 William Street, Granville - Urban Design Study

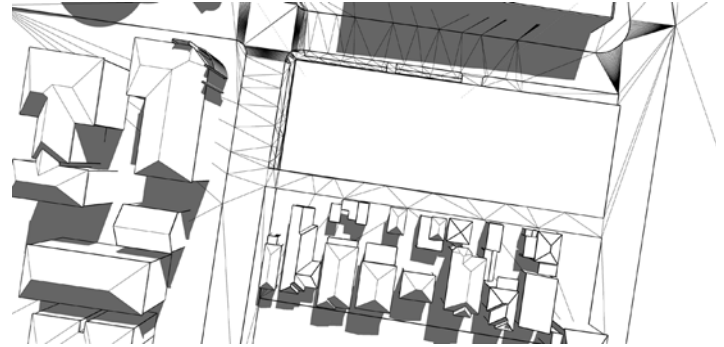
Overshadowing on neighbouring properties

Refer Figure 16 and Figure 17.

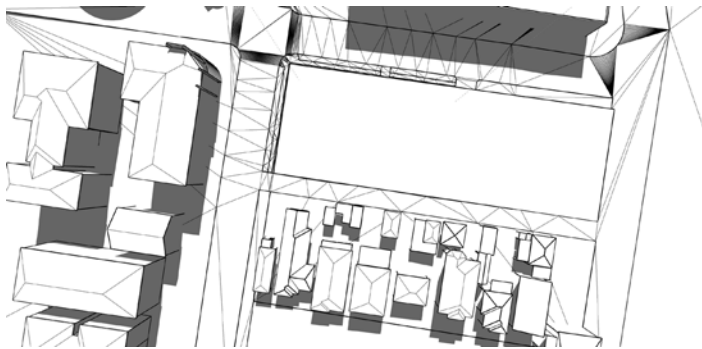
Figure 16 shows that properties at No.s 5,9,11,13 and 15 First Street have existing rear buildings that already significantly overshadow their own rear open spaces. Looking at the existing shadow diagrams for the 21 June, for No.s 5, 9, 11, 13 and 15 it is arguable whether they currently achieve the DCP requirement.



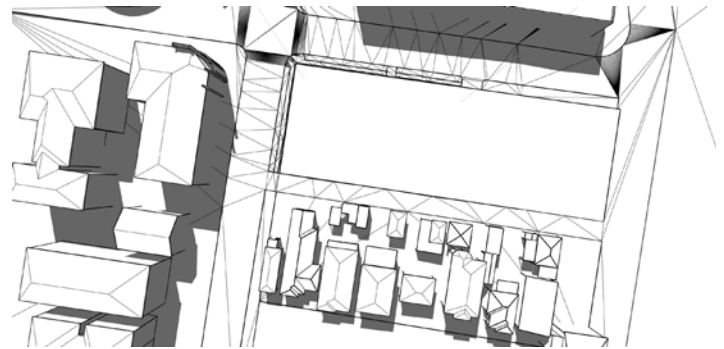
9am



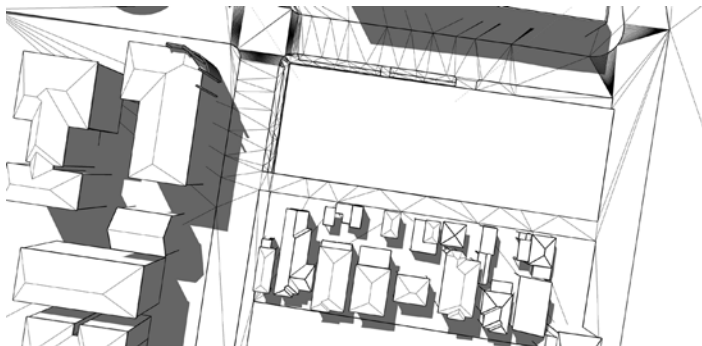
10am



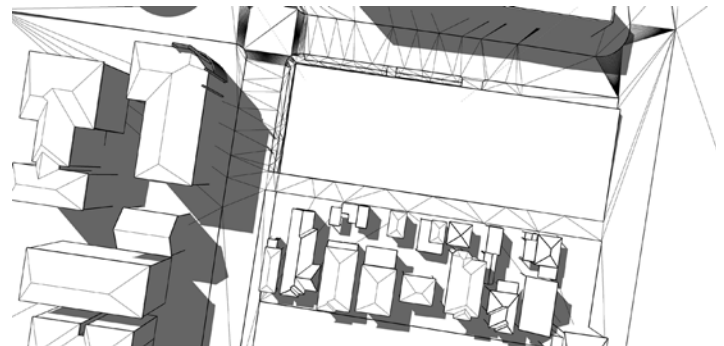
11am



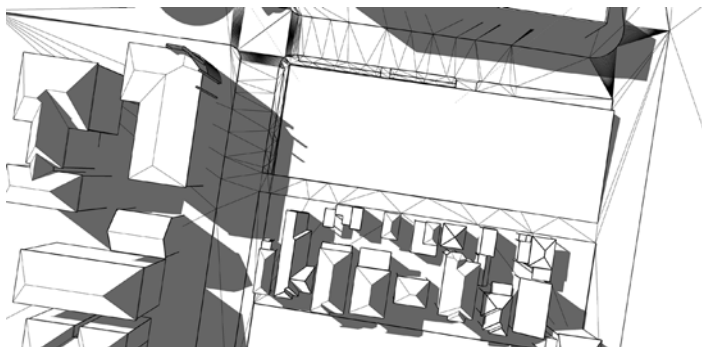
12pm



1pm



2pm



3pm

Figure 16: Shadow Study at mid winter without development

Figure 17 shows that the Planning Proposal will further decrease sunlight access for No.s 11 and 13 due to the lift overrun and because no upper level floor setback has been provided.

Figure 17 also shows that the compliant ADG and DCP option in this report would ensure that there is no additional overshadowing impact to No.s 11 and 13 after 1pm which is an improvement to the Planning Proposal. This is primarily as there is a greater building setback to the upper floor and no lift overrun.



Figure 17: Shadow Study Comparison at mid winter

2-22 William Street, Granville - Urban Design Study

6.2 Site 2

Refer Figures 18 to 23.

Site 2 has a different layout to Site 1. The major communal open space that obtains the best solar access for the 2 hour ADG requirement is located adjacent to the side boundary of Site 1. Driveway access is located off Factory Street.

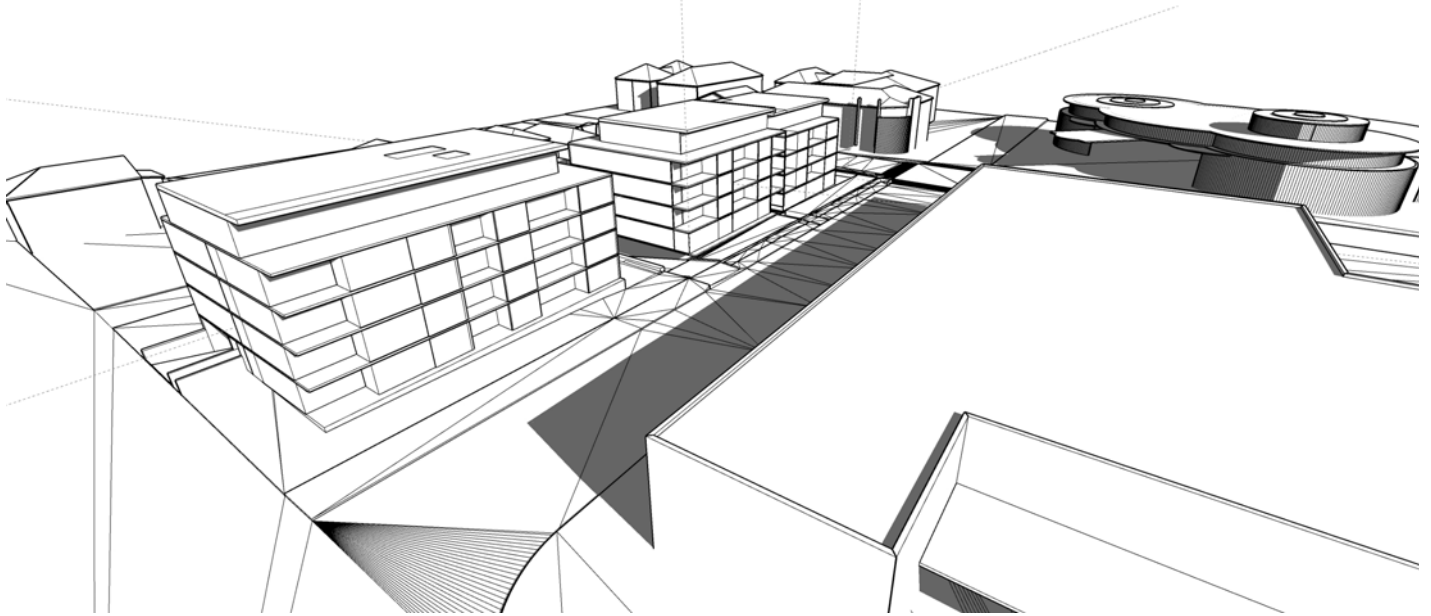


Figure 18: Site 2 ADG & DCP Compliant Envelope

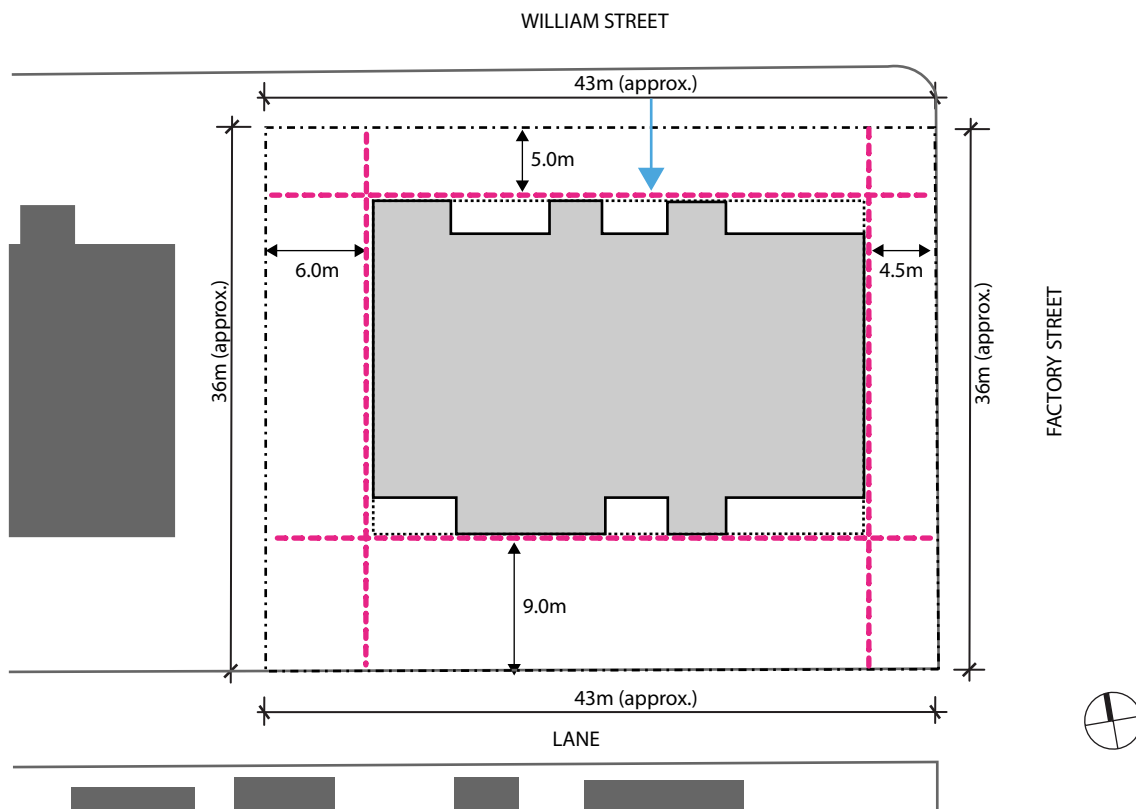
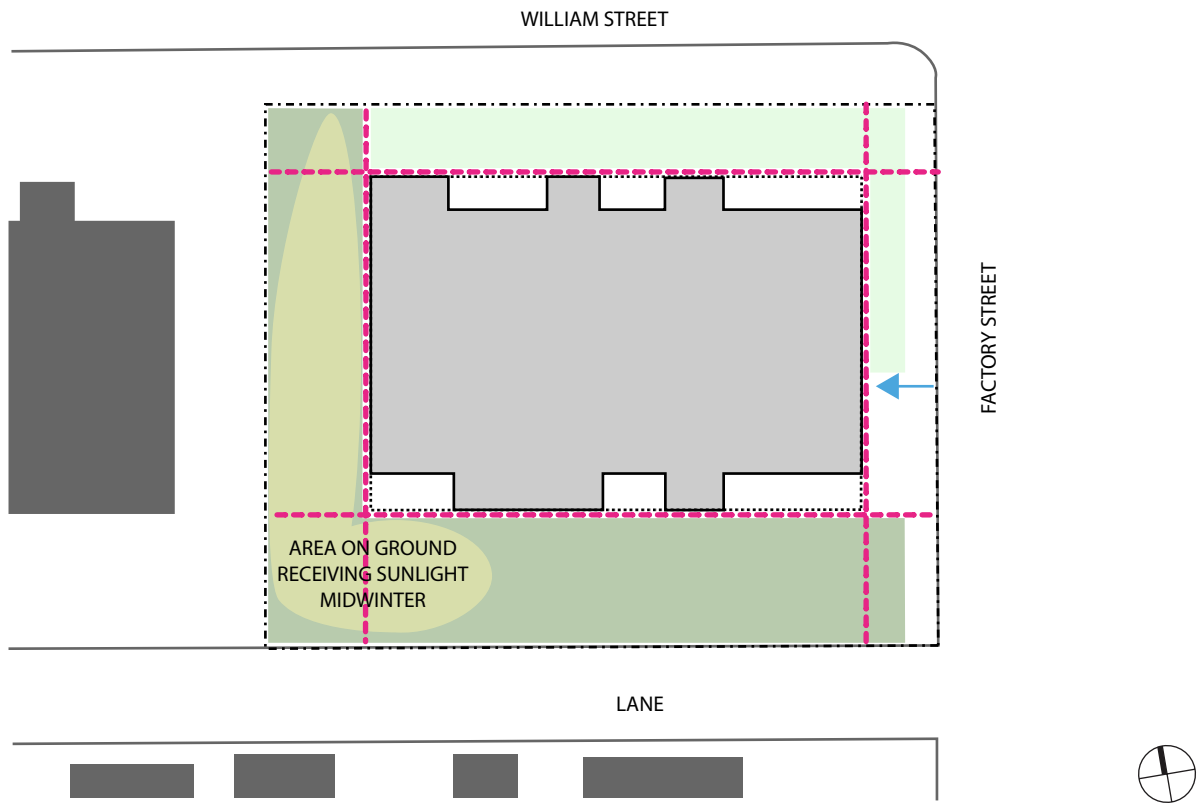


Figure 19: Site 2 ADG & DCP Compliant Ground Floor Building Footprint - Setbacks



470 SQM DEEP SOIL
 $470/1539 \times 100 = 30.5\%$

PDCP PART 3.1 TABLE 3.1.3.7
 DEEP SOIL 30% OF SITE AREA OF WHICH 50% TO BE LOCATED TO REAR
 DEEP SOIL MINIMUM DIMENSIONS 4m x 4m
 DEEP SOIL DEFINITION PART 3 3.3 ENVIRONMENTAL AMENITY 3.3.1 LANDSCAPE P.14
 ADG 3E-1 7% OF SITE AREA FOR DEEP SOIL ZONE WITH A MINIMUM DIMENSION OF 6 METRES

GFA CALCULATION	
GROUND FLOOR	480sqm
FIRST FLOOR	568sqm
SECOND FLOOR	568sqm
THIRD FLOOR	568sqm
FOURTH FLOOR	448sqm
TOTAL	2632sqm

FSR 1.71:1

- BOUNDARY
- - - SET BACK
- BASEMENT OUTLINE
- BUILDING OUTLINE
- - - LEVEL ONE OUTLINE
- BUILDING FOOTPRINT
- OUTDOOR AREA
- NEIGHBOURING BUILDING
- DEEP SOIL
- ← MAIN BUILDING ENTRANCE
- PRIVATE GARDENS FOR GROUND FLOOR UNITS

Deep Soil Zone	470m ²	30.5% *
Communal Open Space	541m ²	35% *

* Meets DCP/ADG requirement

Figure 20: Site 2 ADG & DCP Compliant Envelope

2-22 William Street, Granville - Urban Design Study

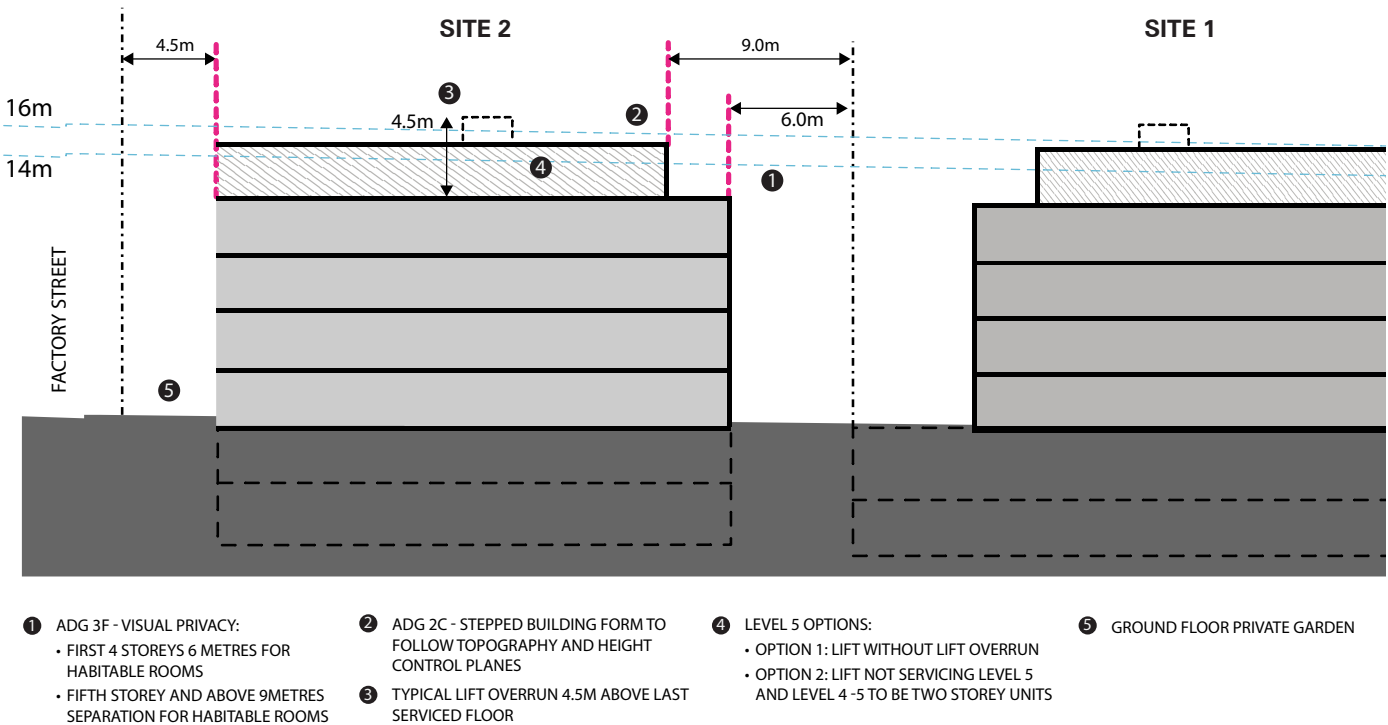


Figure 21: Site 2 William Street Elevation: Option: ADG + DCP Compliant

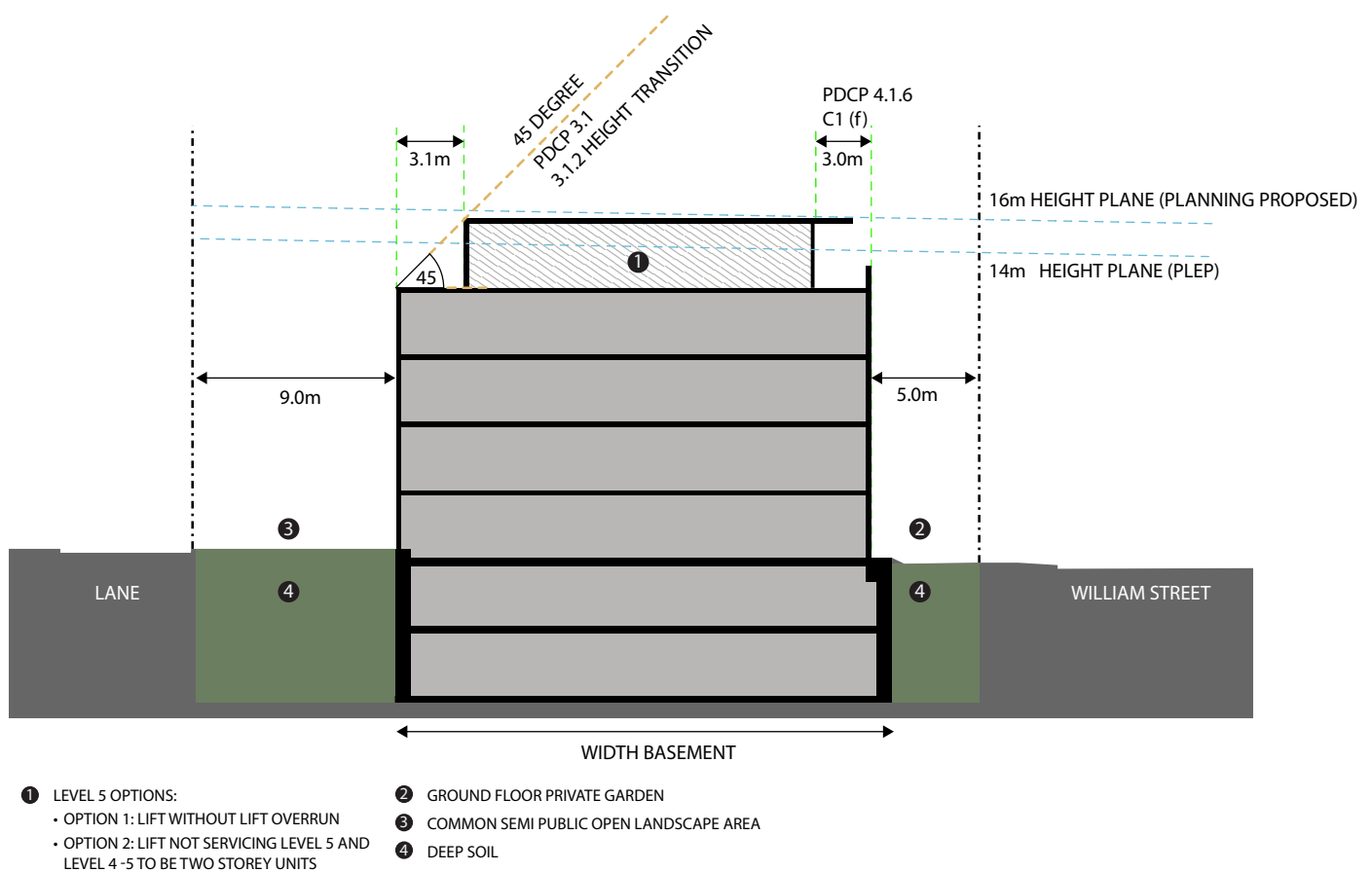
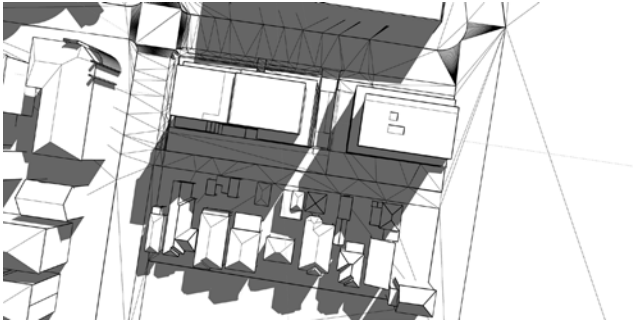
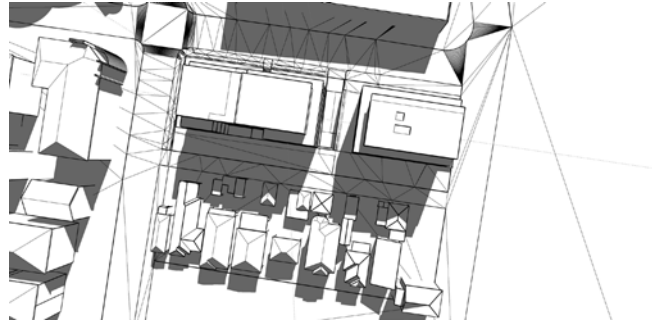


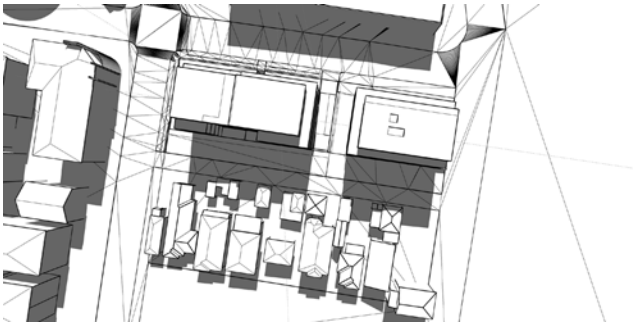
Figure 22: Site 2 Section North South - Option: ADG & DCP Compliant



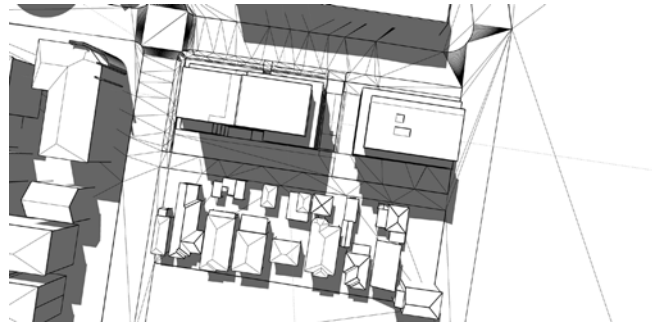
9am



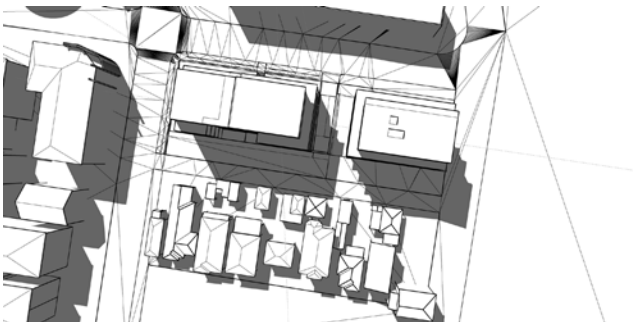
10am



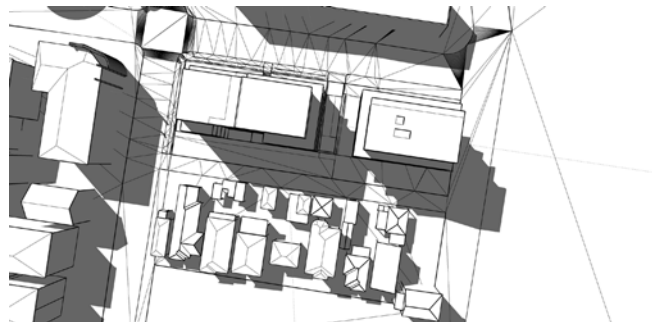
11am



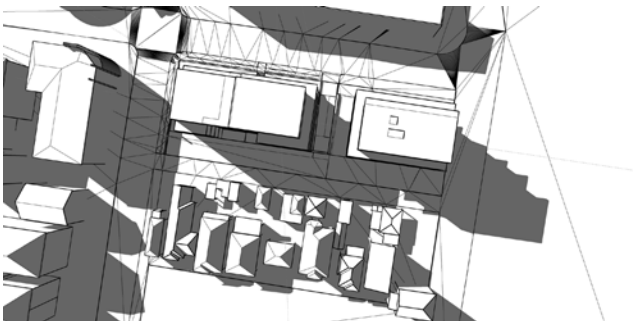
12pm



1pm



2pm



3pm

Figure 23: Site 2 Shadow Analysis at mid winter

7.0 LEP and DCP Recommendations

Height

In order to enable a 3.3m flexible ground floor height it is recommended that the overall height control for the block be set at 16.2 metres.

FSR

The preferred site envelope options developed for this study enabled an FSR of 1.72:1 for Site 1 and an FSR of 1.71:1 for Site 2. It is recommended that 1.7:1 FSR be adopted for the Planning Proposal.

Communal Open Space

It is noted that you cannot have the communal open space on the roof and meet the 16.2m height limit due to the lift needing to extend up 3 metres to provide roof access. It is recommended that the communal open space be provided at ground level as both Sites have sufficient width and area to achieve this. This will also be more sympathetic with the existing residential context that has rear yards.

Overshadowing on neighbouring properties

Properties at No.s 5,9,11,13 and 15 First Street have existing rear buildings that already significantly overshadow their own rear open spaces and it is arguable whether they currently achieve the DCP requirement.

The Planning Proposal will further decrease sunlight access for No.s 11 and 13 First Street due to the lift overrun and because no upper level floor setback has been provided.

The compliant ADG and DCP option in this report would ensure that there is no additional overshadowing impact to No.s 11 and 13 First Street after 1pm which is an improvement to the Planning Proposal.

Variations to the DCP

The proposed building envelope for the masterplan maximises solar access to the communal open space and ensures that the open space is provided at ground level in preference to a roof communal open space. The building depth has been allowed to be maximised to 22 metres in depth as an indicative floor plan layout has shown that acceptable amenity can still be achieved.

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