

# **29-31 MACMAHON STREET, HURSTVILLE**

## **URBAN DESIGN STUDY**

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urban design study

This study has been prepared by Kennedy Associates Architects. The study addresses the urban design issues associated with the site located at:

29-31MacMahon Street, Hurstville

The subject site is located in the heart of the Hurstville Town Centre, Hurstville Strategic Centre and Hurstville Urban Renewal Corridor. For this study we have termed this the Hurstville Commercial Precinct, being the areas currently zoned B3 & B4.

The subject site is within approximately 200m of Hurstville Railway Station and 100m of the Hurstville Bus Interchange. The site consists of three allotments, is generally rectangular in shape, with a frontage to MacMahon Street of 30.18 metres and an overall site area of approximately 1113 square metres.

MacMahon Street, which is located at approximately the highest point in Hurstville. is the primary civic street of Hurstville containing both the Hurstville Civic Centre and Hurstville Council Offices as well as a function centre, museum & 2 churches (including one on the subject site).

Several of the buildings in MacMahon Street are heritage items of local heritage significance. The street also contains a substantial carpark and several late 20thC buildings

The subject site is currently occupied by the Hurstville Church of Christ, who are seeking to redevelop the site to contain both new church facilities and a residential flat building.

A planning proposal has been submitted seeking to obtain permission for the redevelopment of the site. The Planning Proposal seeks to increase the permissible height on the subject site from the currently zoned 40m to 55m.

The NSW Department of Planning and Environment have provided a PRE - GATEWAY REVIEW dated February 2016 (Ref. No: PGR 2015\_HURST\_001\_00 ).

It says, in part:

SUMMARY OF THE PROPOSAL

"The client is seeking a site specific LEP amendment to permit a maximum building height of 55m and base FSR of 6:1 (plus a bonus of 1:1 for ground floor community facility use) at 29 – 31 MacMahon St, Hurstville. Council did not support the Planning Proposal request. The client lodged a Pre-Gateway Review request with the Dept. They advised that the proposal does have some strategic merit, and should proceed to the JRPP.

The subject site was zoned 3(b) City Centre Business Zone under Hurstville LEP 1994 when the planning proposal was originally submitted to Council. The site is located within the area subject to the draft Hurstville City Centre LEP 2014, which was notified in July 2015 as an amendment to Hurstville LEP 2012. The City Centre LEP was notified after Council refused the planning proposal and after the applicant submitted a request to the Department for a Pre-Gateway Review. The site is now zoned 84 Mixed Use under Hurstville LEP 2012.

The current zoning permits the development of residential flat buildings with consent, therefore the proposal does not seek a change in zoning. The proposal seeks to change the maximum permissible building height for the site from 40 metres to 55 metres (see Figure 3) and change the maximum floor space ratio from 4.5:1 to 6:1 (see Figure 4). The proposal also seeks to apply a site specific bonus floor space ratio of 1:1 for development involving a community facility.

The proposal will facilitate a 17 storey mixed use development with a gross floor area of 7,789m2 containing:

- a place of public worship and community facilities on the ground and first floor with a total floor area of 1,200m2;
- 70 residential apartments across 14 floors;.
- 115 car parking spaces at basement level; and. a plant room on the roof level (17th floor).

The site is surrounded by a mixture of low to high density mixed use buildings, residential flat buildings, low density housing, shops and community facilities. The site is within close proximity to the Hurstville Railway Station and Bus interchange (north of the site), as well as the Hurstville Westfield Shopping Centre (east of the site).

The site is in the Hurstville Local Government Area (LGA). A Plan for Growing Sydney identifies the site within the Hurstville Strategic Centre and in the Urban Renewal Corridor where additional housing will be delivered.

The Department is concerned, based on the evidence provided with the planning proposal, that the proposal may have an undesirable impact on the character of the area and that there is no compelling reason to amend the controls to the extent proposed.

However, the Department recognises the proposal has some strategic merit and would provide additional housing to support the Hurstville Strategic Centre and Urban Renewal Corridor identified in A Plan for Growing Sydney, and recommends it proceed to the Sydney East Joint Regional Planning Panel for independent review.

CONCLUSION

It is recommended the proposal be referred to the Sydney East Joint Regional Planning Panel (Panel) for independent review. The planning proposal demonstrates some strategic and site-specific merit and is generally consistent with the current metropolitan, regional and local planning framework. The planning proposal would provide additional housing in support of the Hurstville Strategic Centre and Urban Renewal Corridor along the railway line, as identified in A Plan for Growing Sydney.

The proposal would facilitate a development type that is consistent with the existing built form of the surrounding area and would seek to reinstate the community and church uses. It is also noted there are a number of examples where the existing 'as-built' heights of neighbouring buildings exceed the current height controls. The Department is not however convinced that adequate urban design and development feasibility evidence has been provided to support an increase over the current planning controls for the site.

While the Department supports the retention of community and church uses on the ground and first floors of the proposed development, the bonus FSR mechanism is not supported. The height and floor space ratio controls should be based on sound urban design analysis."

The applicant has accepted the comments by the department that, "The Department is not however convinced that adequate urban design and development feasibility evidence has been provided to support an increase over the current planning controls for the site."

The applicant has engaged Kennedy Associates to undertake the urban design analysis required to fully determine the site's development potential.

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INTRODUCTION



This study is in Two Parts

Part One

Part One of this study presents, by means of a series of diagrams, analysis of:

- the existing urban context
- the built character of that context in terms of building scale & height
- the relationship of MacMahon Street & the subject site to the overall context
- the potential future direction within Hurstville Town Centre and Hurstville Commercial Precinct based on existing development with regard to building height
- the development issues and opportunities with regards to the subject site

The diagrams and comments provided within them show a number of identifiable patterns and factors that can be used to help determine what the appropriate future direction and character of Hurstville is likely to be.

Key among these are:

- the location of Hurstville Town Centre as a 'high point' in its district
- the significance of Hurstville as both historically and currently as an urban centre
- the linear nature of the Hurstville Commercial Precinct
- the location of MacMahon Street and the subject site in the centre of the Hurstville Commercial Precinct
- the substantial increase in development over recent times within the Hurstville Commercial Precinct
- a lack of clarity within the development of Hurstville Commercial Precinct with respect to building heights
- the existence of a number of buildings within Hurstville Commercial Precinct of between 50 and 60m in height
- the existence of a at least one approved 65m high building
- the likelihood of several more buildings of a similar scale being constructed in Hurstville Commercial Precinct

The study also identifies that there are several potential future strategic directions that could be taken with regard to the overall height and density of Hurstville Commercial Precinct and in particular the 'town centre' within that precinct, being the area centred on MacMahon Street.

Further, the study identifies that:

- the current height regime appears to place primary emphasis on the two gateway sites
- the current heights permissible within the town centre appear to be below those of the gateway sites

With respect to the subject site the study identifies that:

- there are several factors to be addressed when looking at the development potential of the site
- these factors result in several different potential building forms / masses
- that key to those factors are:
- the overall height and 'type' of building to be provided
- the impacts that development will have on the adjoining heritage building, the streetscape of MacMahon Street and the adjoining residential developments

Part Two

Part Two of this study addresses specific development issues relating to the subject site.

The study looks at the site with respect to the following criteria:

- FSR
- Height
- compliance with the recommendations of the NSW Apartment Design Guide (ADG) with respect to building separation and solar impacts on the immediately adjacent residential developments at:
  - 23-27 MacMahon Street (The MacMahon Plaza Development)
  - 2 Barratt Street & 18-22 Woodville Street (The Hua Cheng Development)
- the development potential of the adjoining site at No 33 MacMahon Street, located on the corner of MacMahon and Barratt Streets
- the urban fit and impacts of the building massing previously proposed in the Hurstville DCP for the subject site (noting that that massing was removed from the most recent version of the DCP)
- the impacts of a building of up to 65m in height on the urban townscape of Hurstville

This study assumes:

- a 6m wide setback to the adjoining heritage item (fire station) reflecting a similar separation on the opposite side of the building
- basement carparking
- two floors of community use (church)
- boundary to boundary development at ground level
- a first floor podium level to match that on adjoining developments
- ADG compliant residential development above

This study identifies that:

- the key issue with respect to ADG compliance is the building separation between the proposed development and the existing building at no 23- 27 MacMahon Street
- a building separation from the main building line of 23-27 MacMahon Street of 18m above first floor level will provide sufficient space between the two buildings to not only maintain amenity to that building but also enable ongoing sunlight penetration to the recently completed residential development behind the subject site at No 18-22 Woodville Street
- concentrating the building massing in the southern portion of the subject site will deliver the highest level of amenity to both the site itself and adjoining properties
- a building with a limited street frontage/width but taller overall height (taller/thinner) is best suited to the site
- buildings with an FSR or up to 6.5: 1 and a height of up to 60 m can be comfortably accommodated on the site
- the existing East and West Gateway sites establish a base tower height of 60m - 65m

Obstacle Limitation Surface (OLS)

The Obstacle Limitation Surface (OLS) defines the airspace surrounding an airport that must be protected from obstacles so aircraft flying in good weather during the initial and final stages of flight, or in the vicinity of the airport, can do so safely.

Our understanding is that with respect to Hurstville Town Centre the relevant OLS is 65m above the ground level. This height can be exceeded but only through a complex approval process.

Accordingly, it can be argued that in urban design terms the OLS becomes the default benchmark maximum building height for the Town Centre

This is evidenced in the current and recent approvals of buildings up to but not exceeding 65m in height.

Council Site

The area of land bounded by MacMahon Street and Queens Road, being the land primarily owned and occupied by Hurstville Council, is currently listed as a deferred matter.

This site, the largest portion of land available for redevelopment in the Town Centre, is located at the heart of the Town Centre and is located at the highest point in Hurstville, making it a key site within the town centre.

Prior to the most recent version of the DCP being released the land included proposals for both a public park facing Barratt Street and a building of at least 55m in height at the opposite end facing Park Road. It has to be assumed that the deferral of the height controls on this site is a function of an anticipation that a study such as this one might propose a greater uplift in height for at least a portion of the site than the previously proposed 55m.

Given the analysis undertaken in this study and the fact that Hurstville Town Centre already accommodates buildings of up to 60 – 65m in height, any urban design strategy based on having the town centre equal to, if not more significant than, the edge 'Gateway' locations would have to assume that building heights of 60m – 65m, equal to that of the gateway sites, will be proposed for this site.

Moreover, in both strategic and environmental terms (overshadowing, noise etc) the most logical location for that height will be in a series of tower buildings fronting MacMahon Street.

On this basis a development on the subject site of 60 to 65m would form part of a broader and urban strategy about the Town Centre as a whole.

Conclusion

Based on the above, this study has identified and demonstrated that:

- Hurstville has an identifiable development pattern based on the East and West Gateway locations & the Town Centre
- Hurstville Commercial Precinct and Hurstville Town Centre already contain a significant range of development
- this range includes both the type and scale of development and buildings of up to 60m in height
- Hurstville Town Centre is the location most appropriate for a continuing intensification of urban form within the Precinct
- Hurstville Town Centre is the location most likely to continue to experience an increase in height
- this height is likely to be up to 65m
- the height of the future development on the council owned civic centre site opposite the subject site is likely to be up to 65m
- the subject site is located at the core of Hurstville Town Centre
- the subject site is well placed to accommodate redevelopment that would be of 'strategic and site-specific merit'
- the subject site is well placed to accommodate an uplift in height of some form above that currently permitted
- given the existing and anticipated context, a building height on the subject site of 60m to 65m has the capacity to fit within the existing and anticipated urban context of MacMahon Street

Recommendations

That the subject site be rezoned to permit:

• a mixed use development with an:

- overall height of up to 60m to the FCL of the top floor
- overall height of up to 65m to the top of the lift tower and roof structures
- maximum building height of AHD RL 135 to the top of the lift tower and roof structures
- FSR of up to 6.5:1

• minimum building separation to adjoining developments as follows:

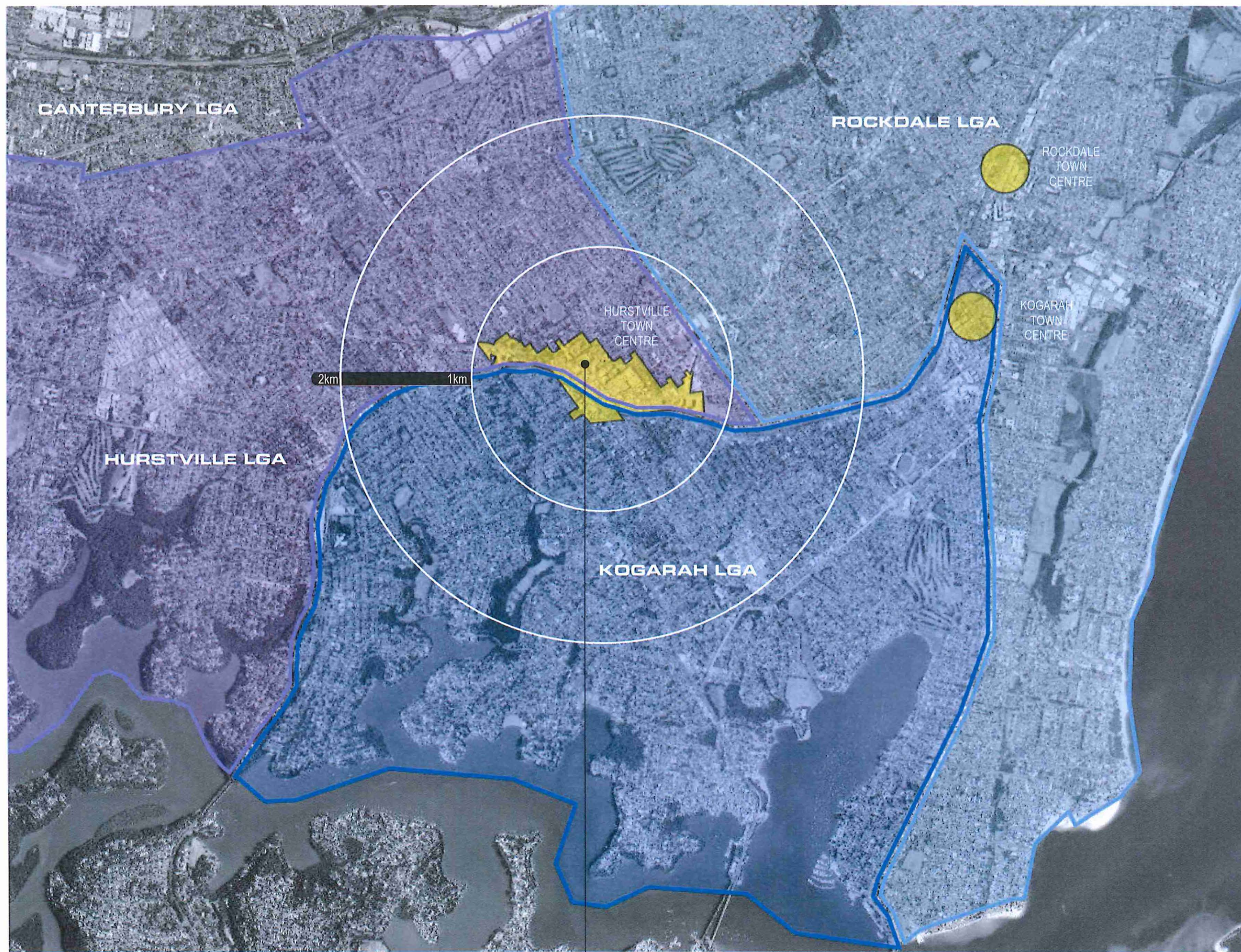
- 23 - 27 MacMahon Street
  - 6m to a depth of 12m from MacMahon Street along the common boundary with 23 - 27 MacMahon Street adjacent the heritage item at ground level
  - zero setback elsewhere at ground level
  - 6m along the common boundary with 23 - 27 MacMahon Street between MacMahon Street and the point perpendicular to the north west corner of the residential component of the existing building at 23 - 27 MacMahon Street above ground level
  - 16m along the common boundary with 23 - 27 MacMahon Street at any point facing the the residential component of the existing building at 23 - 27 MacMahon Street above ground level
- 18-22 Woodville Street
  - zero setback at ground level
  - 6m to the common boundary with 18-22 Woodville Street at all levels above ground floor
- 33 MacMahon Street
  - zero setback at all levels

INFORMATION



# PART 1





subject site: 29-31 macmahon street, hurstville

## COMMENT

### HURSTVILLE TOWN CENTRE

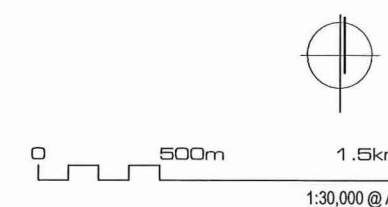
- major transport hub on railway line
- adjacent kogarah LGA
- at high point / ridge above georges river
- stand alone town centre  
not part of urban corridor

## LOCALITY

urban design study

29-31 Macmahon Street, HURSTVILLE

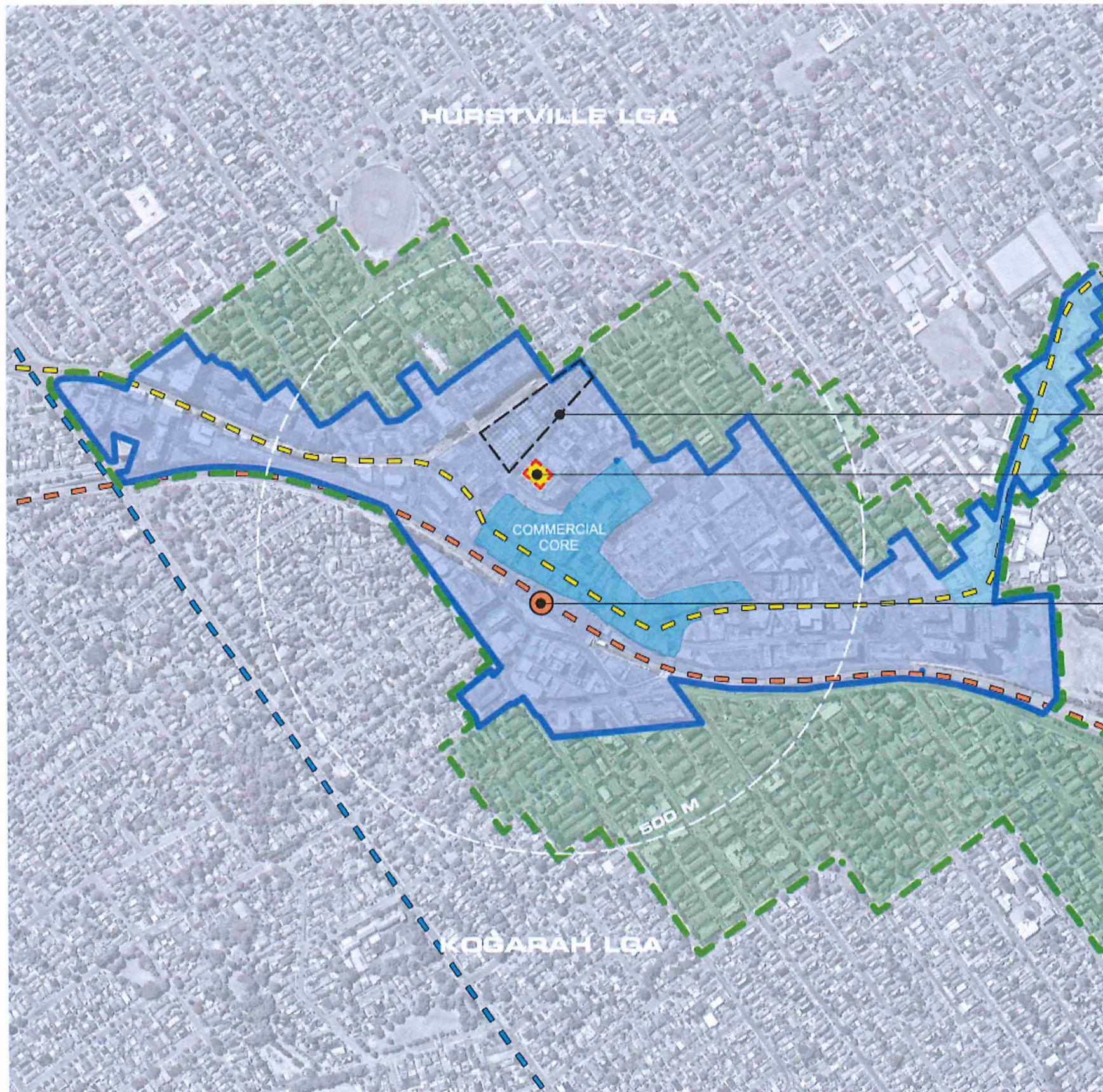
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source: Hurstville LEP 2012 - Land Zoning Map - Sheet LZN\_008A + 008B  
Kogarah LEP 2012 - Land Zoning Map - Sheet LZN\_003 + 006

subject site: 29-31 macmahon street, hurstville

## COMMENT

- commercial precinct stretches approximately 2km along forest road
- railway station + town centre in middle of precinct
- subject site in centre of precinct

hurstville civic centre precinct

subject site: located at high point of hurstville town centre

hurstville railway station

hurstville station

subject site

hurstville town centre "commercial core" based on commercial B3 zone

hurstville town centre "commercial precinct" based on commercial B3 + B4 zone

medium density zoning based on R3 zoning

indicates line of king georges road

indicates line of forest road

indicates T4 Illawarra train line

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1:7,500 @ A3

## WIDER CONTEXT

urban design study

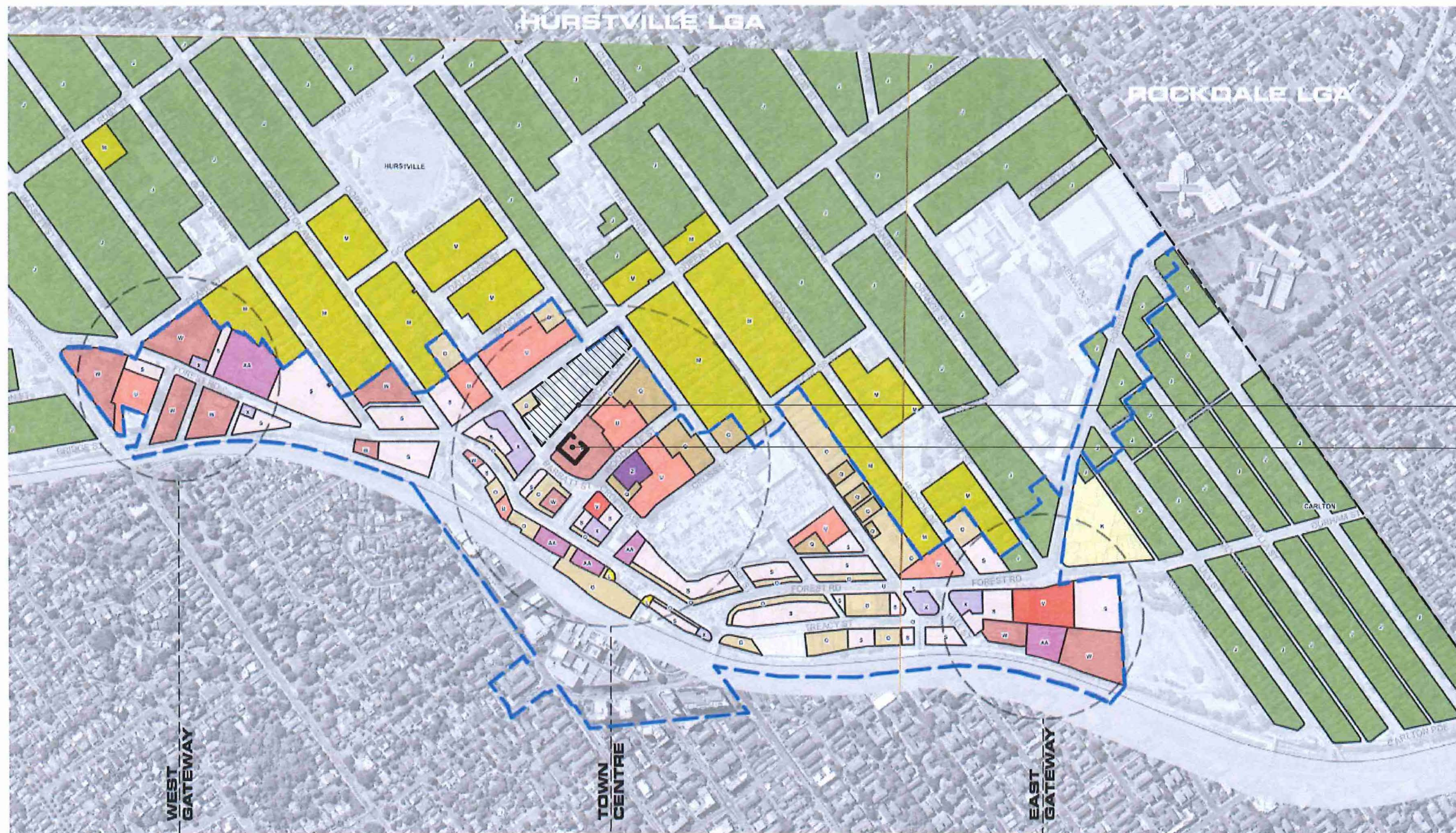
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## COMMENT

- LEP allows range of building heights across commercial precinct
- 60m high building at both east + west gateway
- civic centre + council offices site unspecified
- heights do not appear to be based on topography
- town centre appears to be currently focussed on bus interchange

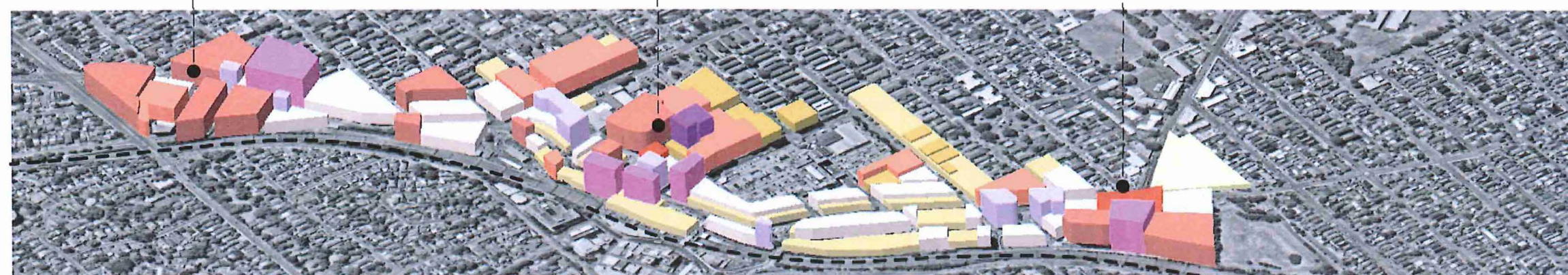
civic precinct: height of buildings unspecified in current LEP maps

subject site: 29-31 macmahon street, hurstville

hurstville 'commercial precinct' based on B3 + B4 land zoning

## Maximum Building Height (m)

|    |    |
|----|----|
| J  | 9  |
| K  | 10 |
| L  | 11 |
| M  | 12 |
| N  | 13 |
| O  | 15 |
| P  | 18 |
| Q  | 19 |
| R  | 21 |
| S  | 23 |
| T  | 28 |
| U  | 30 |
| V  | 35 |
| W  | 40 |
| X  | 45 |
| Z  | 55 |
| AA | 60 |

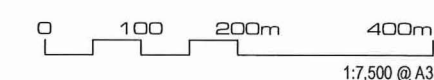


## LEP BUILDING HEIGHTS

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29-31 Macmahon Street, HURSTVILLE

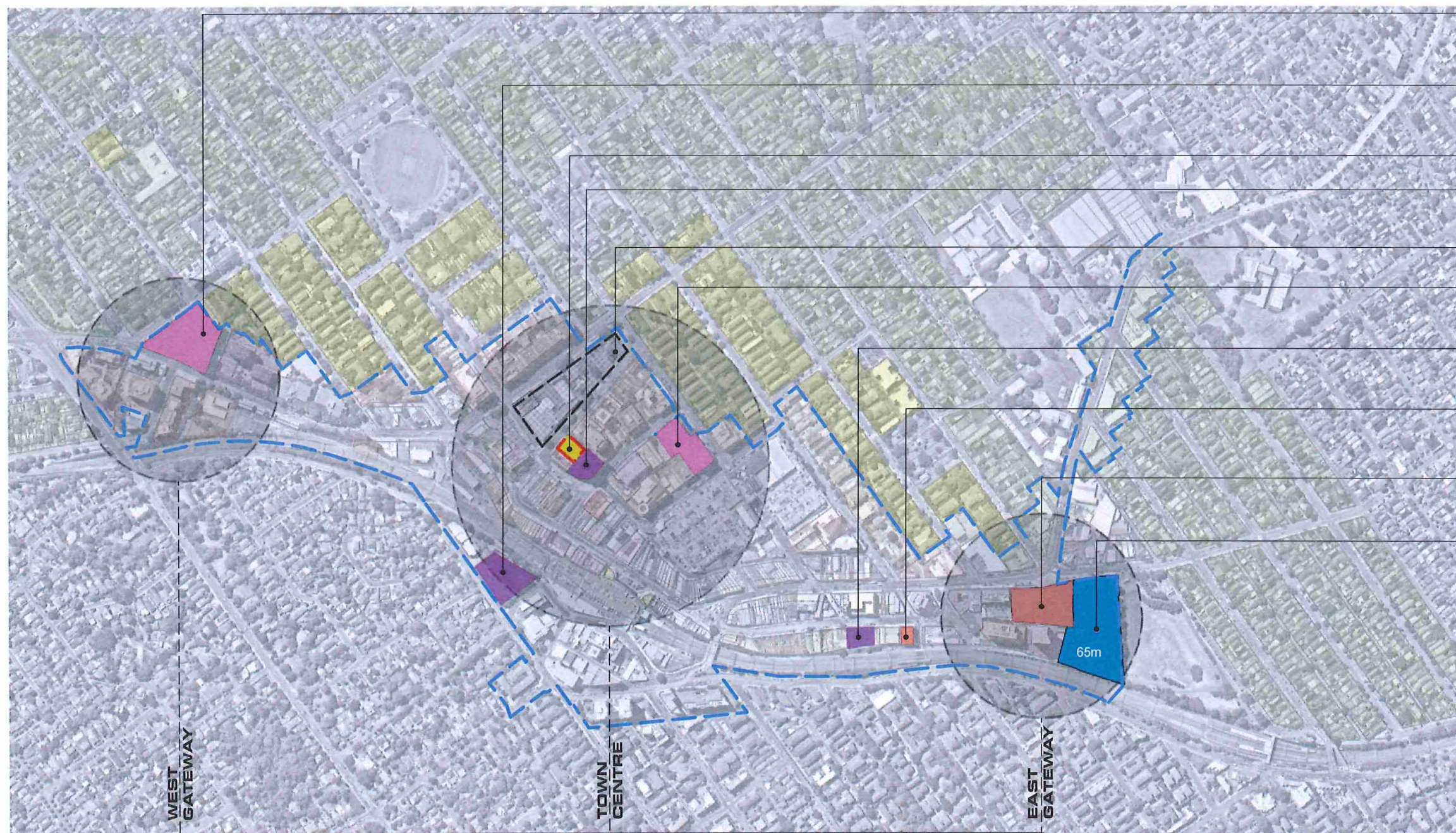
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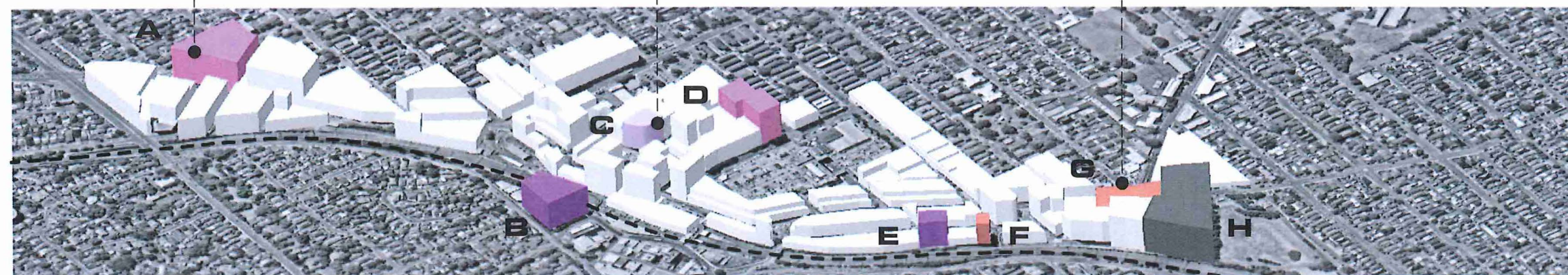


- A** 458 forest road (TOGA apartments):  
LEP HOB map - 40m  
approved height - 60m
- B** 12 woniora road (former ATO):  
height control limit - 39m  
DA application height - 63  
JRPP commentary - between 39-63m
- subject site:** 29-31 macmahon street, hurstville
- C** 2 Barratt / 18-22 Woodville St (HUA CHENG):  
LEP HOB map - 40m  
approved height - 46m
- hurstville civic centre precinct**
- D** 25-35 park road (MERITON):  
LEP HOB map - 19m  
as-built height - 60m
- E** 23-31 treacy street:  
LEP HOB map - 23  
approved height - 48m
- F** 1-5 treacy street:  
LEP HOB map - 23  
approved height - 40m
- G** 97-101 forest road:  
LEP HOB map - 35m  
as-built height - min 39m
- H** 93 forest road:  
LEP HOB map - 23-40m  
approved height - 65m

hurstville 'commercial precinct' based on B3 + B4 land zoning

## COMMENT

- approved and as built building heights have varied from LEP controls across hurstville commercial precinct
- approved height variations have been up to twice LEP heights
- uplift is generating a different urban character to that envisaged by LEP
- reasonable to anticipate that this process will continue similar other town centres across sydney

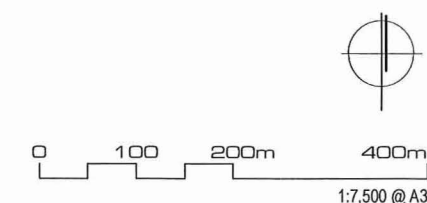


## WIDER CONTEXT - BUILDING HEIGHTS

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29-31 Macmahon Street, HURSTVILLE

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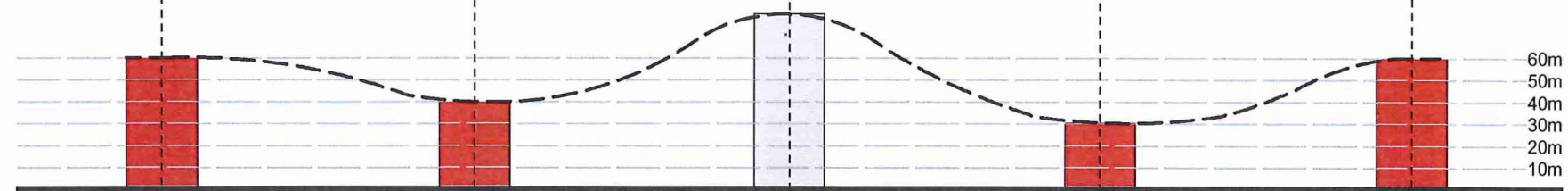
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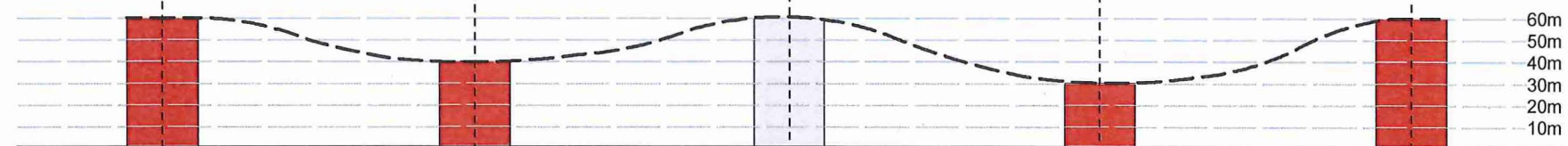




subject site: 29-31 macmahon street, hurstville



WEST GATEWAY TOWN CENTRE EAST GATEWAY  
**STRATEGY A - GREATER HEIGHT UPLIFT TO TOWN CENTRE (PYRAMID)**



WEST GATEWAY TOWN CENTRE EAST GATEWAY  
**STRATEGY B - HEIGHT OF TOWN CENTRE EQUAL TO GATEWAYS**

## COMMENT

- based on existing controls + as built data, height of town centre to be similar in scale to gateway buildings
- potential exists to increase height in town centre to bring focus to centre, similar to other town centres (pyramid)

## URBAN DEVELOPMENT STRATEGY

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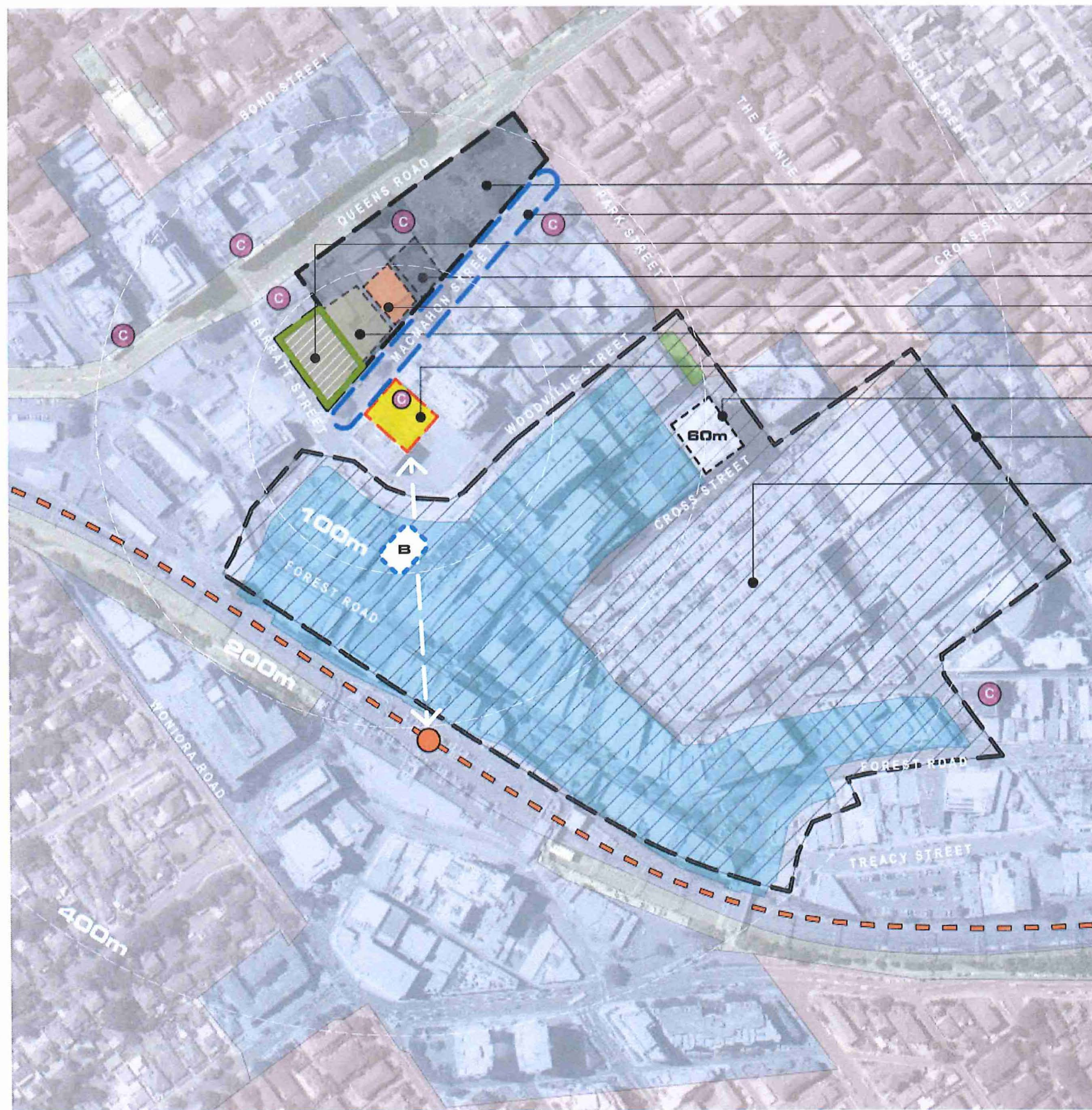


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## COMMENT

- site located in heart of hurstville town centre
- site adjacent both civic + commercial amenities
- site approximately 100m from bus interchange + 200m from railway station

- civic precinct: currently deferred matter on council LEP maps
- macmahon street: primary civic street of hurstville
- park: possible location of new park identified on earlier council documents (public domain plan 2007)
- museum
- civic centre
- council offices
- subject site: 29-31 macmahon street, hurstville
- 60m high building
- shopping precinct / commercial core
- westfield shopping centre

- hurstville station
- church
- civic centre
- council offices
- bus interchange
- subject site

B3 - COMMERCIAL CORE

B4 - MIXED USE

R3 - MEDIUM DENSITY RESIDENTIAL

R2 - LOW DENSITY RESIDENTIAL

RE1 - PUBLIC RECREATION

indicates T4 Illawarra train line

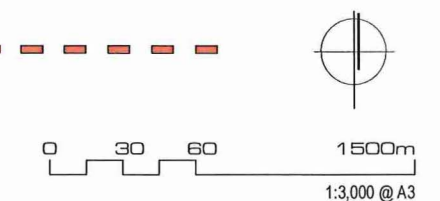


## WIDER CONTEXT - TOWN CENTRE

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29-31 Macmahon Street, HURSTVILLE

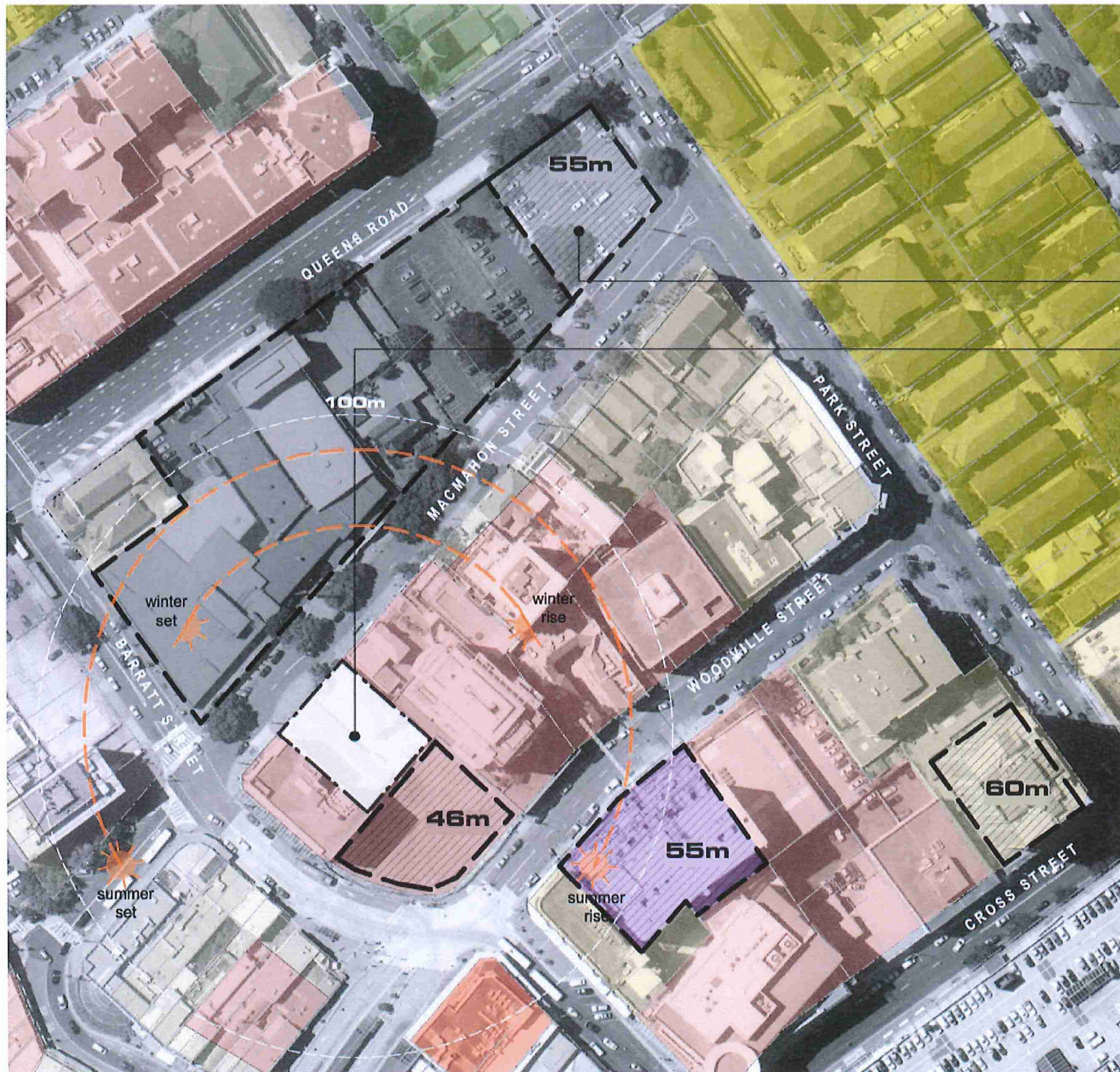
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as shown in (LEP + AS APPROVED / BUILT MAP)

## COMMENT

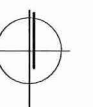
- subject site in zone already consisting of buildings of up to 60m in height
- subject site located towards southern end of macmahon street where overshadowing will have least impact on amenity of other buildings
- subject site located in prime location for urban intensification (off main traffic routes, overlooking civic precinct immediately adjacent transport and amenities)

civic precinct: currently deferred matter on council LEP maps / previously shown as 55m

subject site: 29-31 macmahon street, hurstville

## Maximum Building Height (m)

|    |    |
|----|----|
| J  | 9  |
| K  | 10 |
| L  | 11 |
| M  | 12 |
| N  | 13 |
| O  | 15 |
| P  | 18 |
| Q  | 19 |
| R  | 21 |
| S  | 23 |
| T  | 28 |
| U  | 30 |
| V  | 35 |
| W  | 40 |
| X  | 45 |
| Z  | 55 |
| AA | 60 |



## LOCAL CONTEXT - HEIGHT OF BUILDING

urban design study

29-31 Macmahon Street, HURSTVILLE

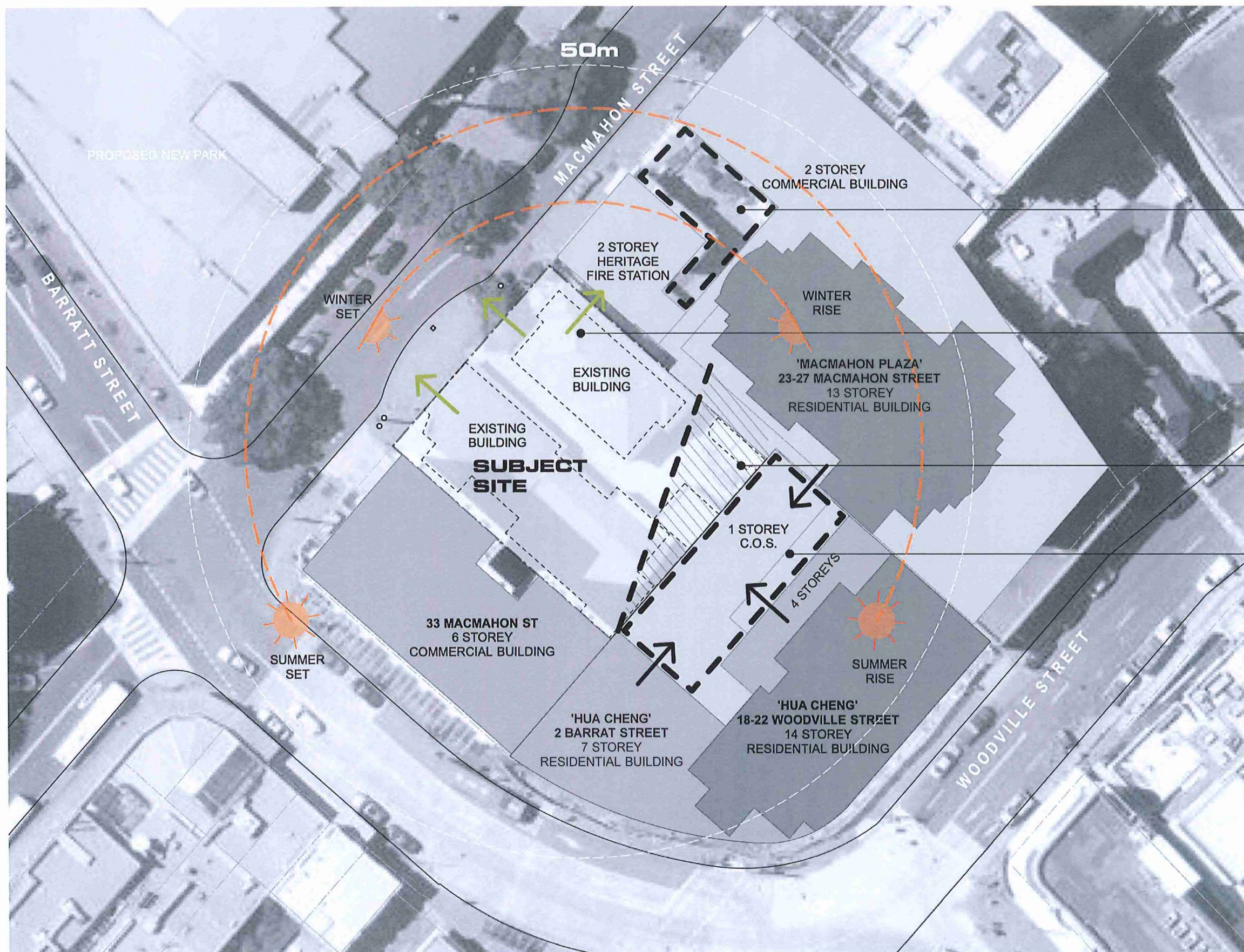
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## COMMENT

- subject site impacted by existing development
- site offers good views and orientation to north and northwest to macmahon street and civic precinct

open space around heritage item

**views / orientation:** subject site offers good orientation and views to north and northwest

zone of site affected by amenity / overlooking / balconies of adjoining properties

**COS:** communal open space at first floor podium level, balconies from adjoining sites overlook COS

## IMMEDIATE CONTEXT

urban design study

29-31 Macmahon Street, HURSTVILLE

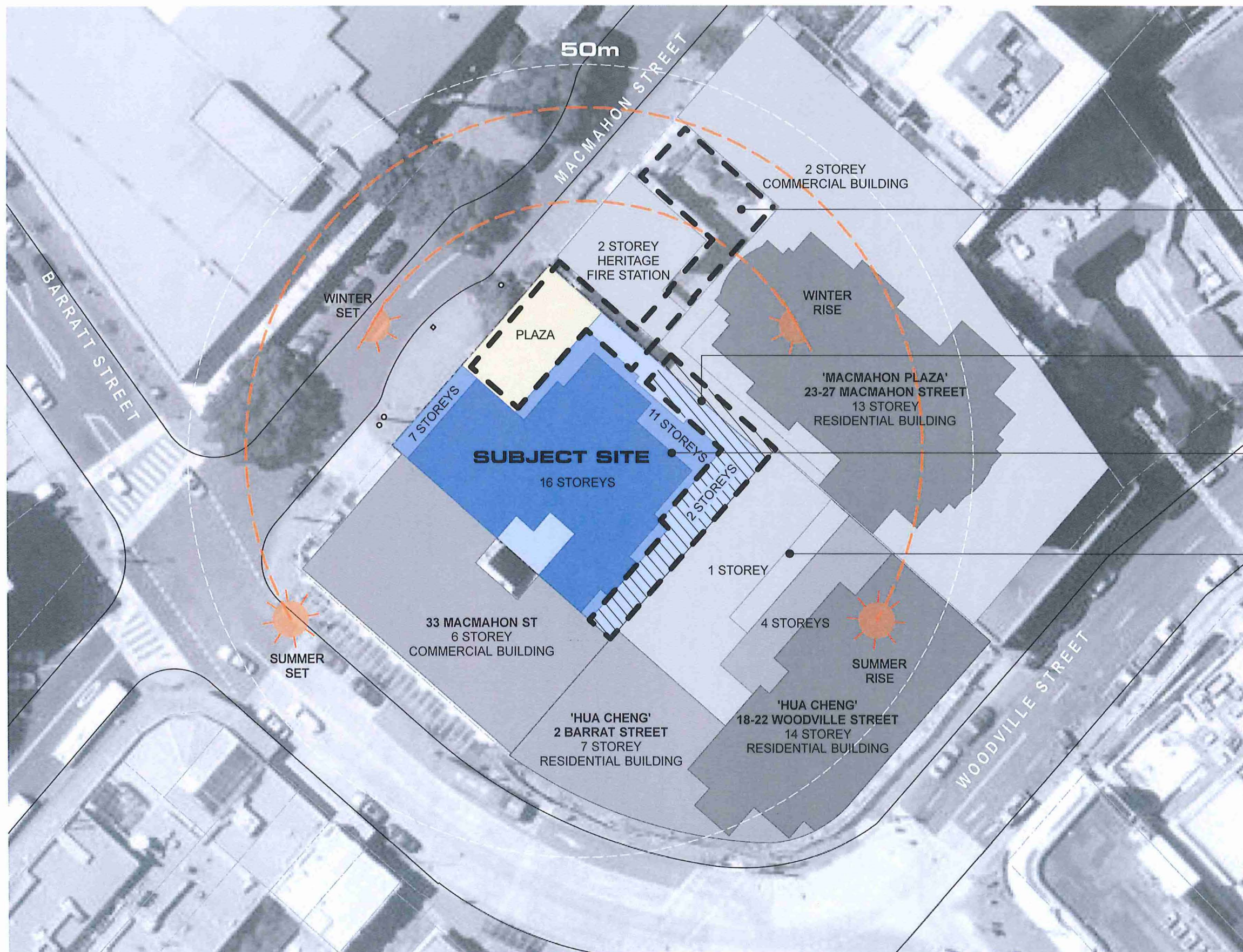
kennedy associates architects level 3 / 1 booth street annandale 2038 p + 61 2 9557 6466 f + 61 2 9557 6477 nominated architect - steve kennedy - registration no. 5828

0 5 10 25m  
1:500 @ A3

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## COMMENT

- current proposal seeks to address site constraints through setbacks to heritage item and adjoining neighbours

open space around heritage item to both sides of fire station

**setbacks:** proposed building steps away from rear and side boundaries to address adjoining properties

**footprint:** building footprint as currently proposed

**COS:** communal open space at first floor podium level. balconies overlook COS

## ORIGINAL SCHEME - FOOTPRINT

urban design study

29-31 Macmahon Street, HURSTVILLE

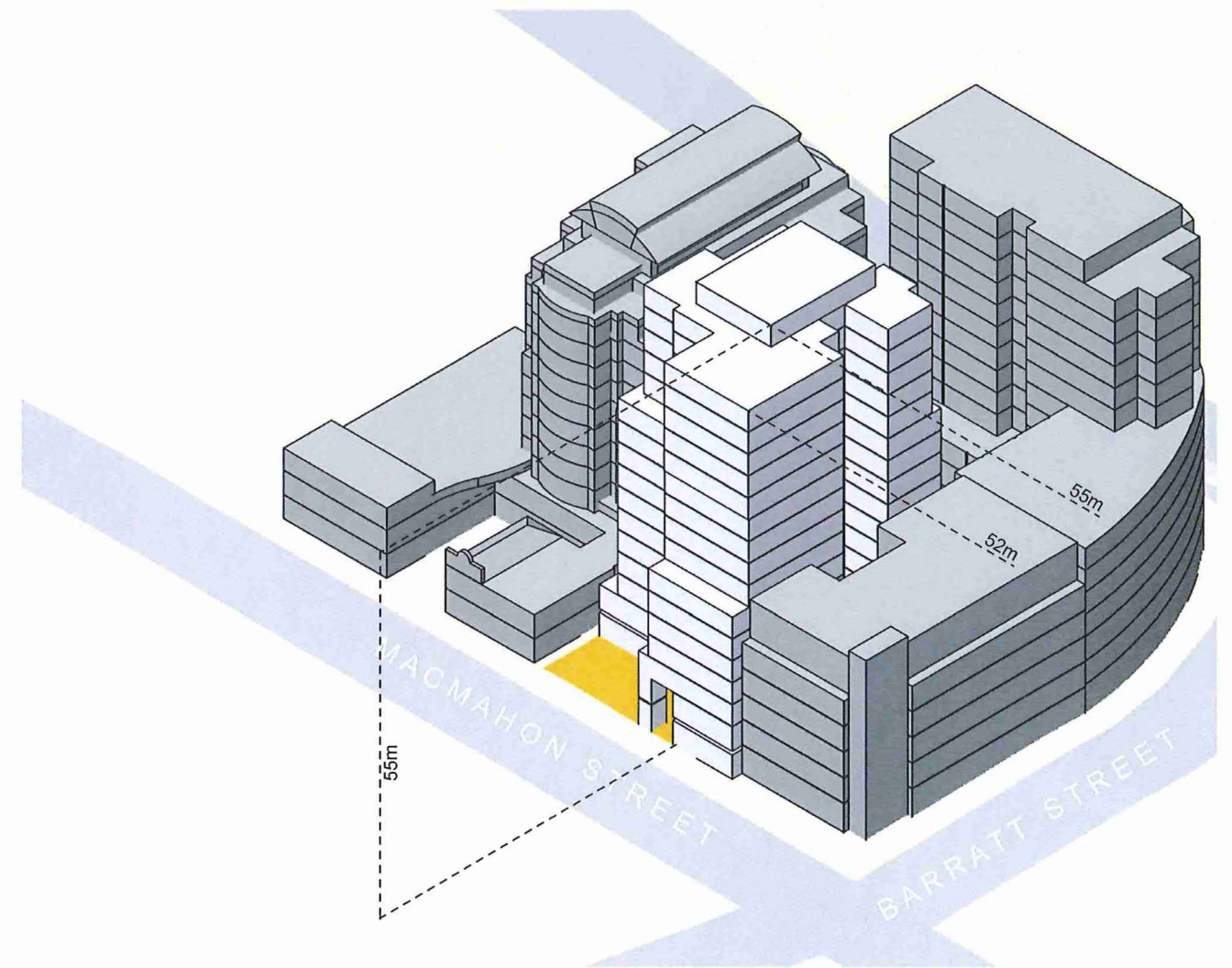
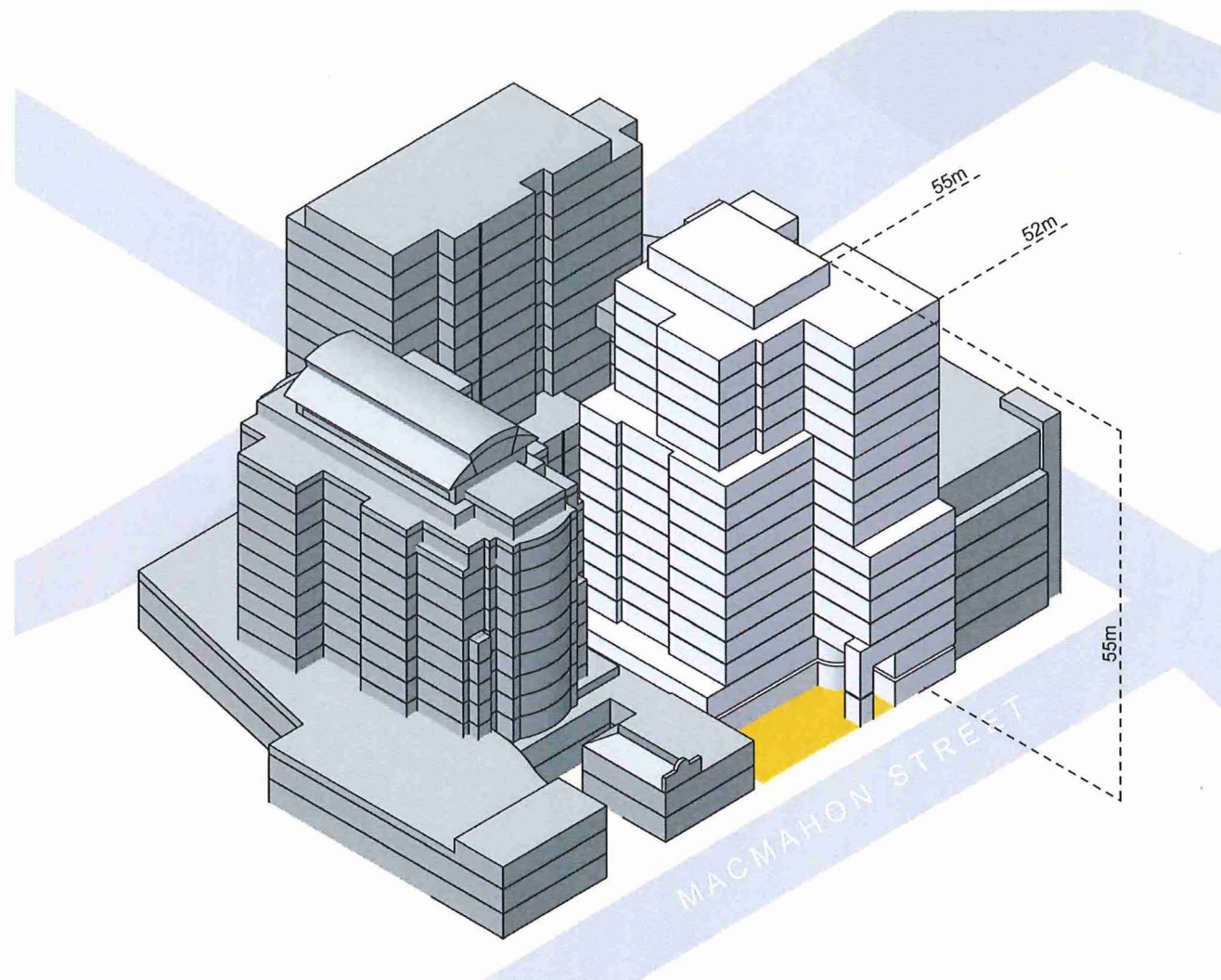
kennedy associates architects level 3 / 1 booth street annandale 2038 p + 61 2 9557 6466 f + 61 2 9557 6477 nominated architect - steve kennedy - registration no. 5828

0 5 10 25m  
1:500 @ A3

1610 - 109

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#### COMMENT

- current proposal provides highly modelled and stepped building form
- height of building varies between 2,7,11 and 16 storeys
- proposed height of 55m appears to fit within existing context.

### ORIGINAL SCHEME - MASSING STUDIES BASED ON CURRENT PROPOSAL

urban design study

29-31 Macmahon Street, HURSTVILLE

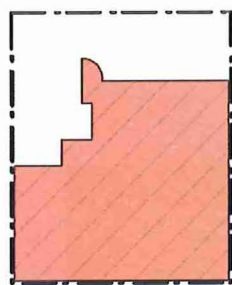
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1610 -

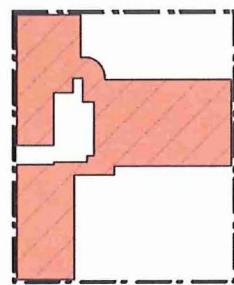
110

MAY 2016

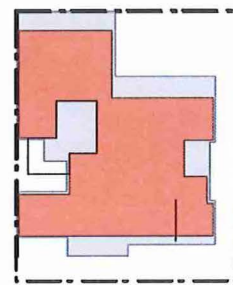




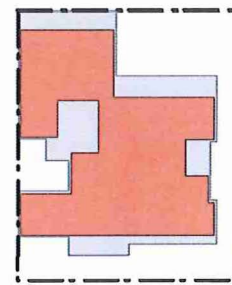
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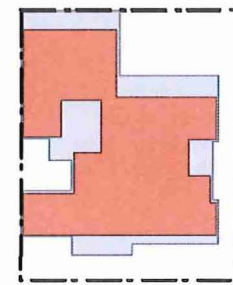
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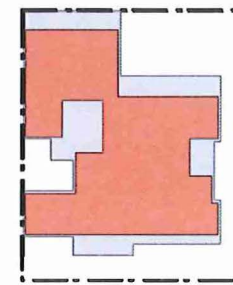
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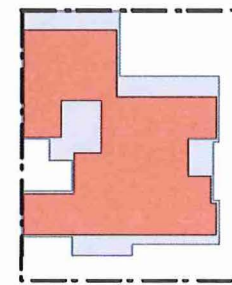
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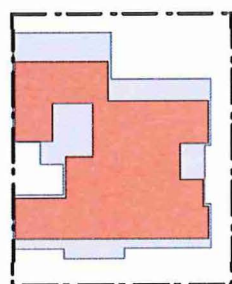
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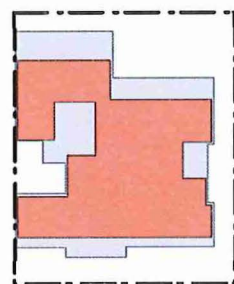
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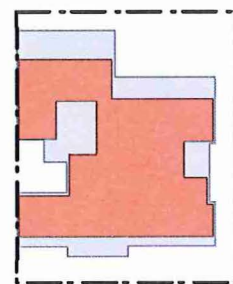
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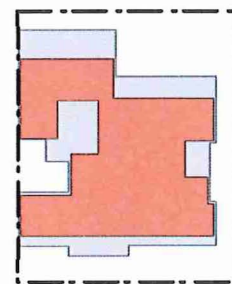
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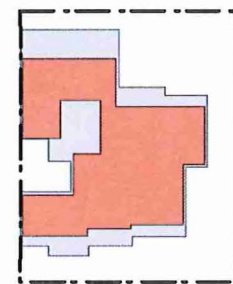
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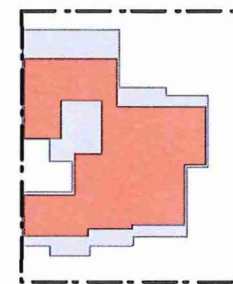
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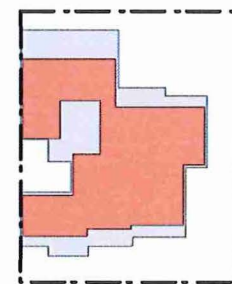
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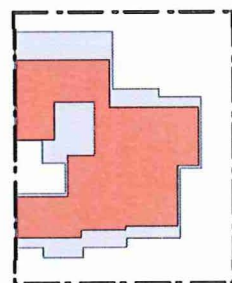
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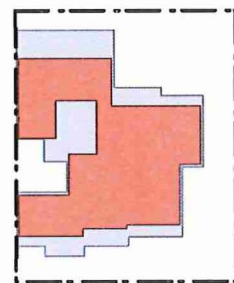
LEVEL 12



LEVEL 13



LEVEL 14



LEVEL 15

#### SUMMARY

Site Area

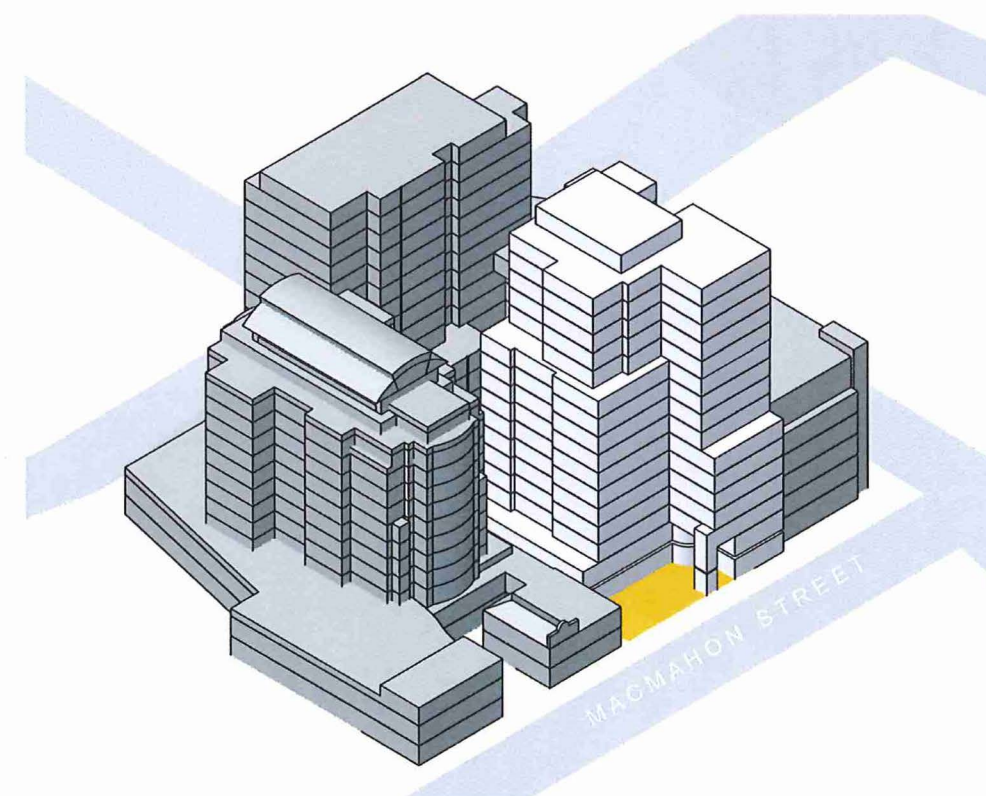
1113 sq m

LEP permissible FSR  
permissible GFA

4.5 : 1  
5008 sq m

GFA proposed  
FSR proposed

nom 7530 sq m  
6.8 : 1



## ORIGINAL SCHEME - FSR ANALYSIS - AS PER PLANNING PROPOSAL

urban design study

29-31 Macmahon Street, HURSTVILLE

kennedy associates architects level 3 / 1 booth street annandale 2038 p + 61 2 9557 6466 f + 61 2 9557 6477 nominated architect - steve kennedy - registration no. 5828

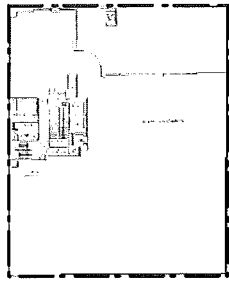
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1610 -

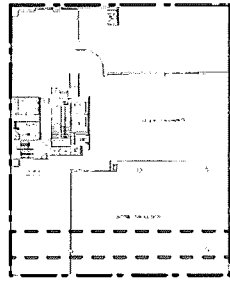
111

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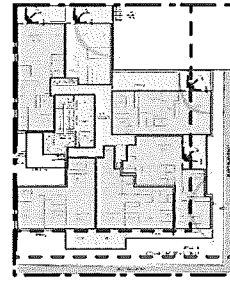




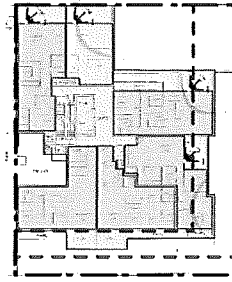
GROUND LEVEL



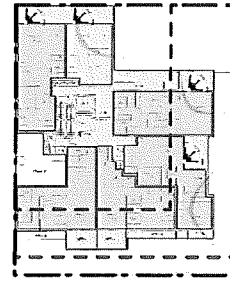
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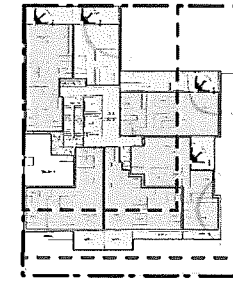
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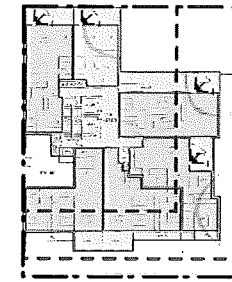
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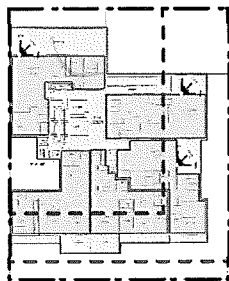
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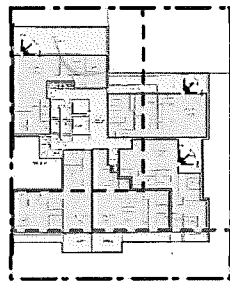
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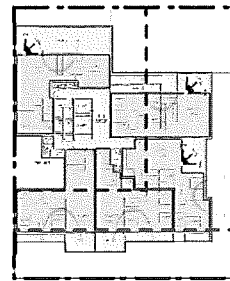
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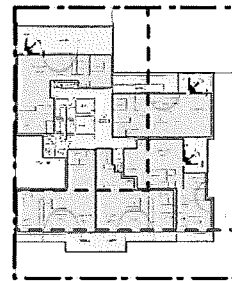
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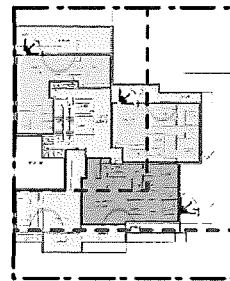
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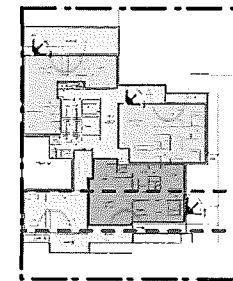
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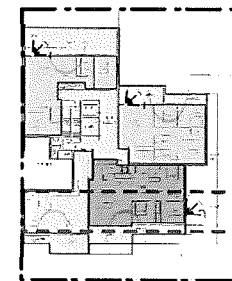
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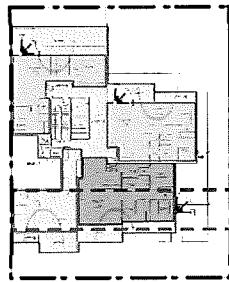
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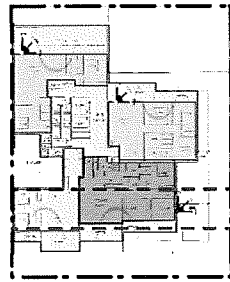
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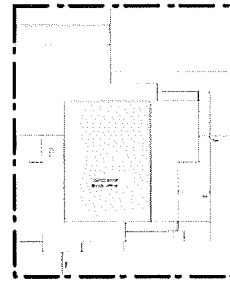
LEVEL 13



LEVEL 14



LEVEL 15



LEVEL 16



commercial



1 bedroom unit



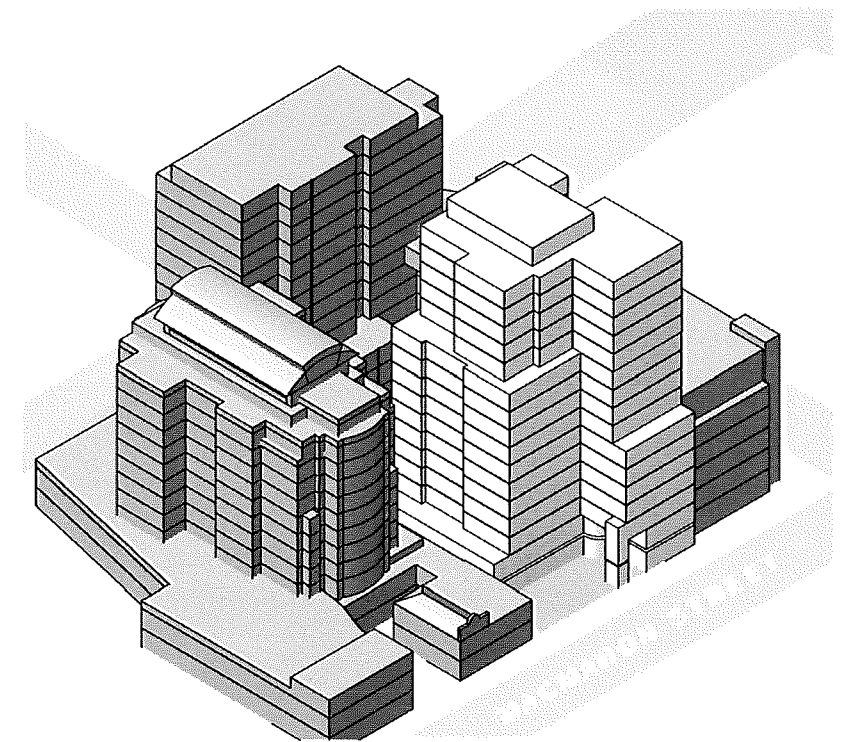
2 bedroom unit



3 bedroom unit

#### YIELD

| Type  | Unit Yield | (%)  |
|-------|------------|------|
| 1 Bed | 20         | 30%  |
| 2 Bed | 30         | 45%  |
| 3 Bed | 16         | 24%  |
| Total | 66         | 100% |



## ORIGINAL SCHEME - YIELD ANALYSIS - AS PER PLANNING PROPOSAL

urban design study

29-31 Macmahon Street, HURSTVILLE

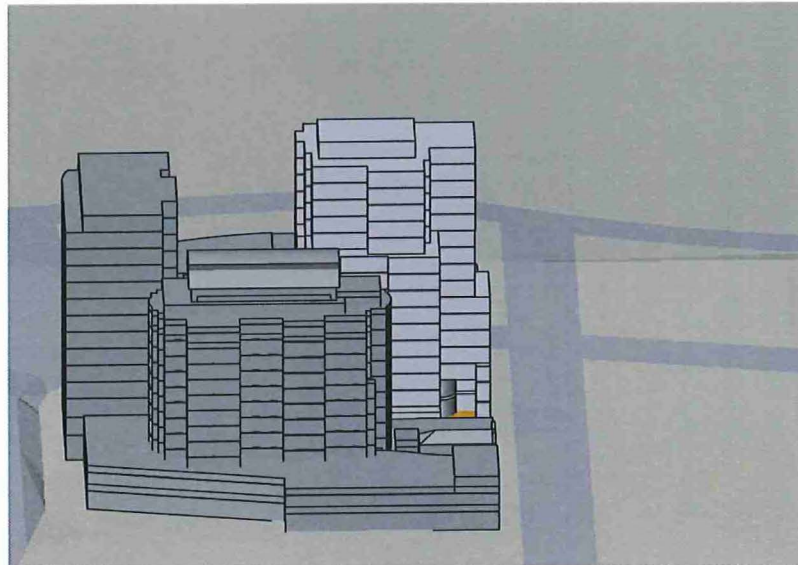
kennedy associates architects level 3 / 1 booth street annandale 2038 p + 61 2 9557 6466 f + 61 2 9557 6477 nominated architect - steve kennedy - registration no. 5828

0 10 20 50m  
1:1000 @ A3

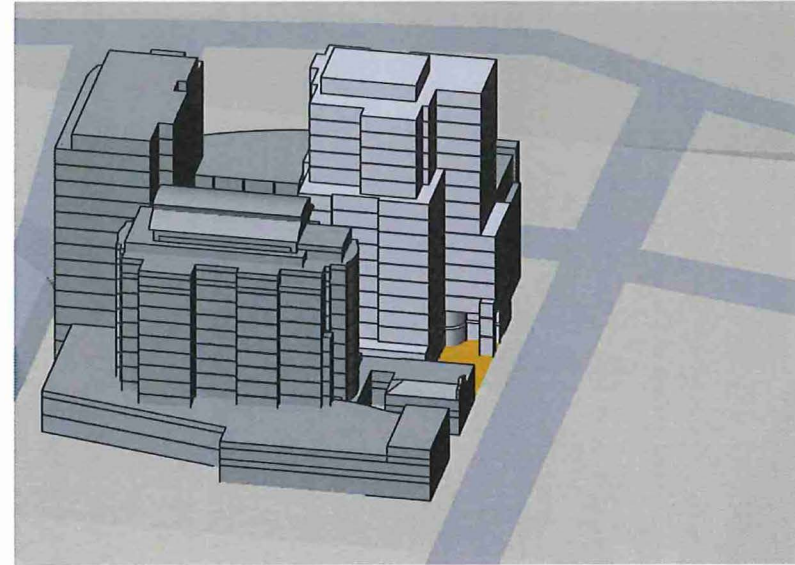
1610 - 112

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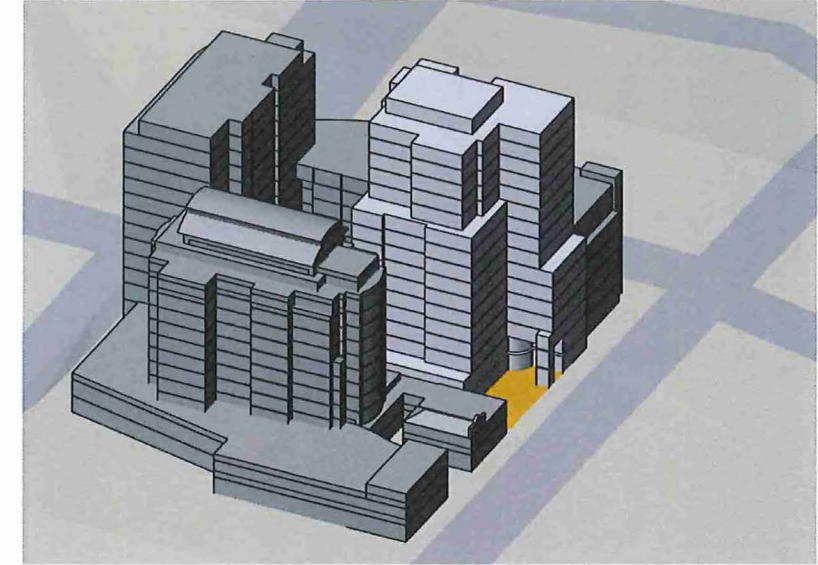




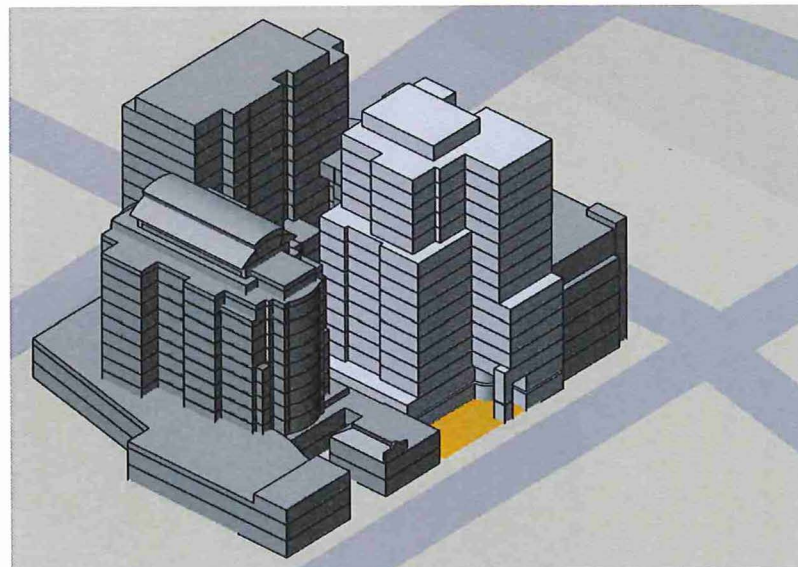
**9am** - winter sun



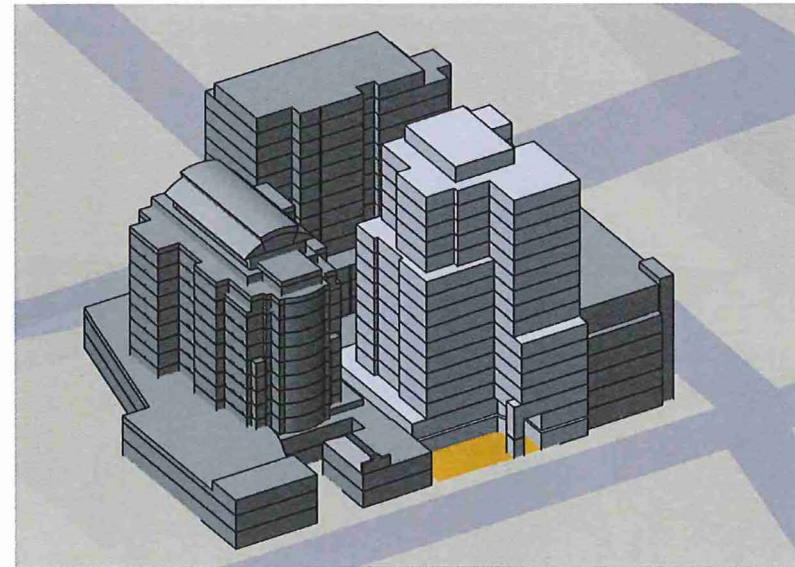
**10am** - winter sun



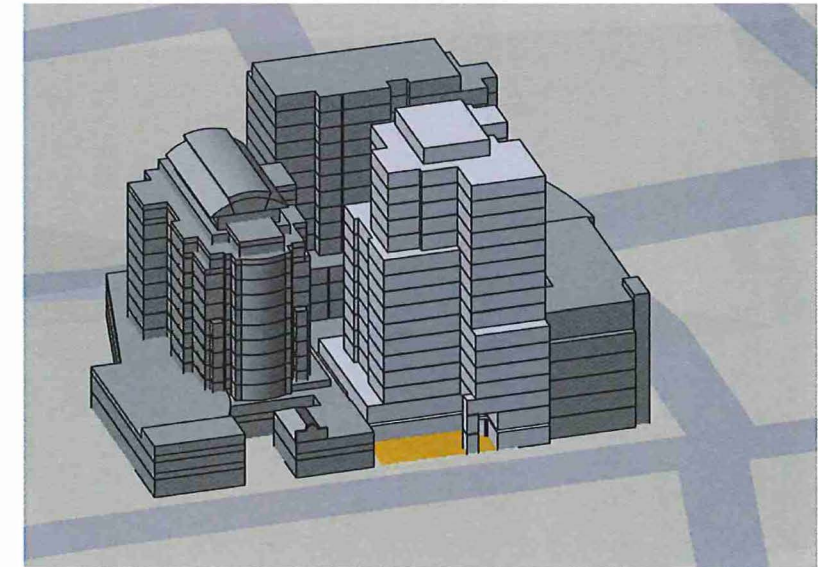
**11am** - winter sun



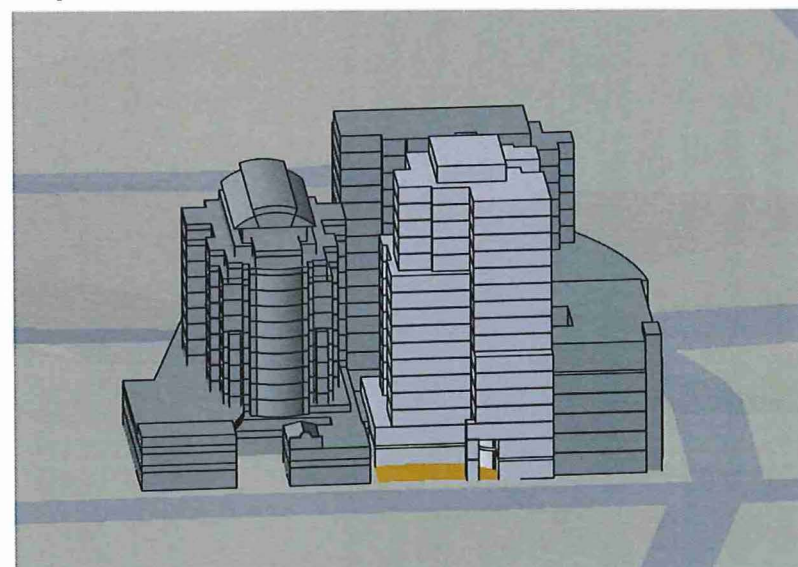
**12pm** - winter sun



**1pm** - winter sun



**2pm** - winter sun



**3pm** - winter sun

## ORIGINAL SCHEME - SOLAR ANALYSIS

urban design study

29-31 Macmahon Street, HURSTVILLE

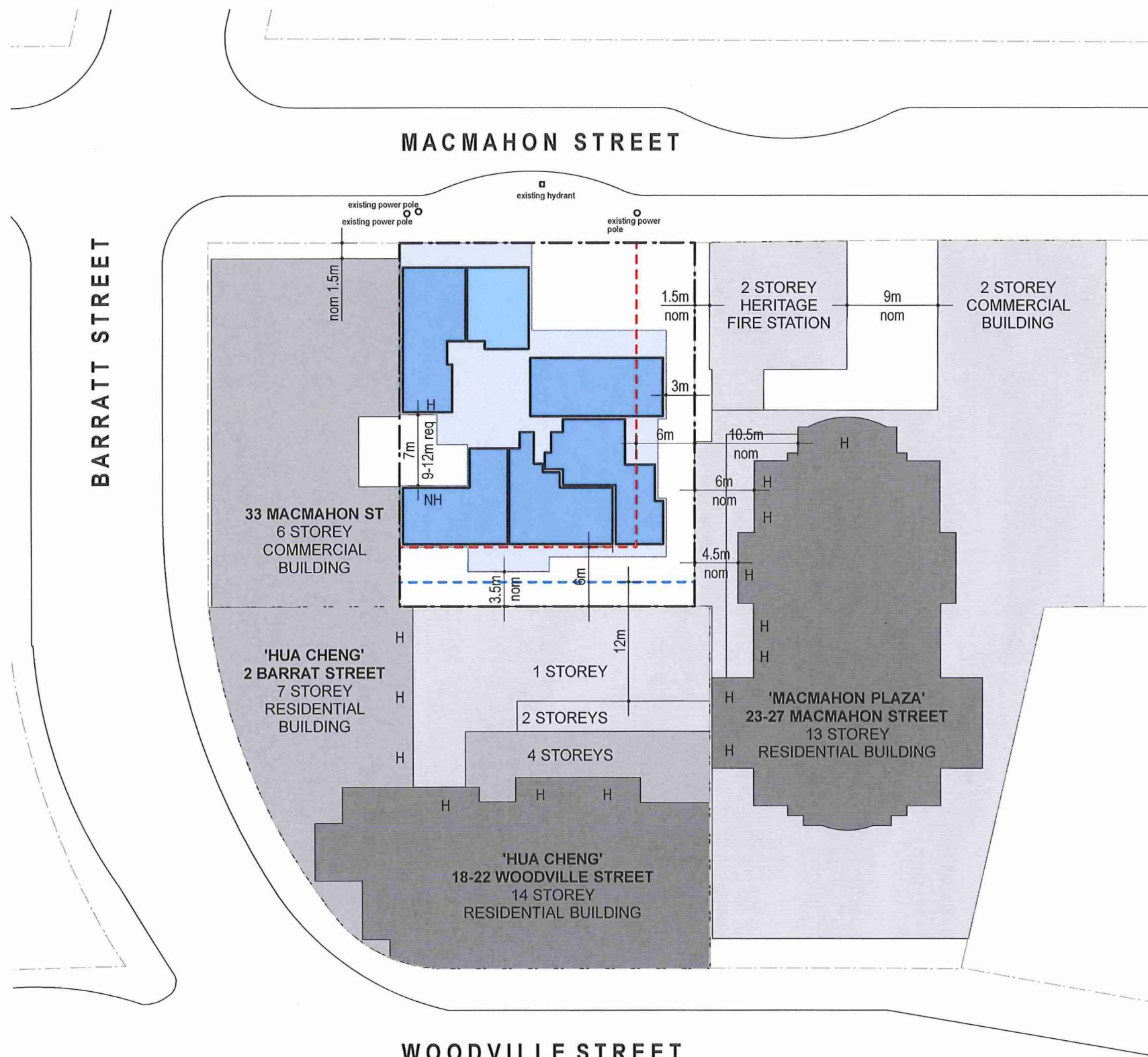
kennedy associates architects level 3 / 1 booth street annandale 2038 p + 61 2 9557 6466 f + 61 2 9557 6477 nominated architect - steve kennedy - registration no. 5828

1610 -

113

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## ORIGINAL SCHEME - ADG ANALYSIS - LEVELS 2-6

urban design study

29-31 Macmahon Street, HURSTVILLE

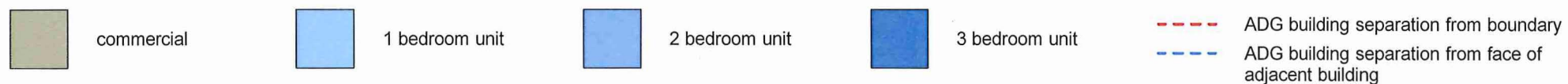
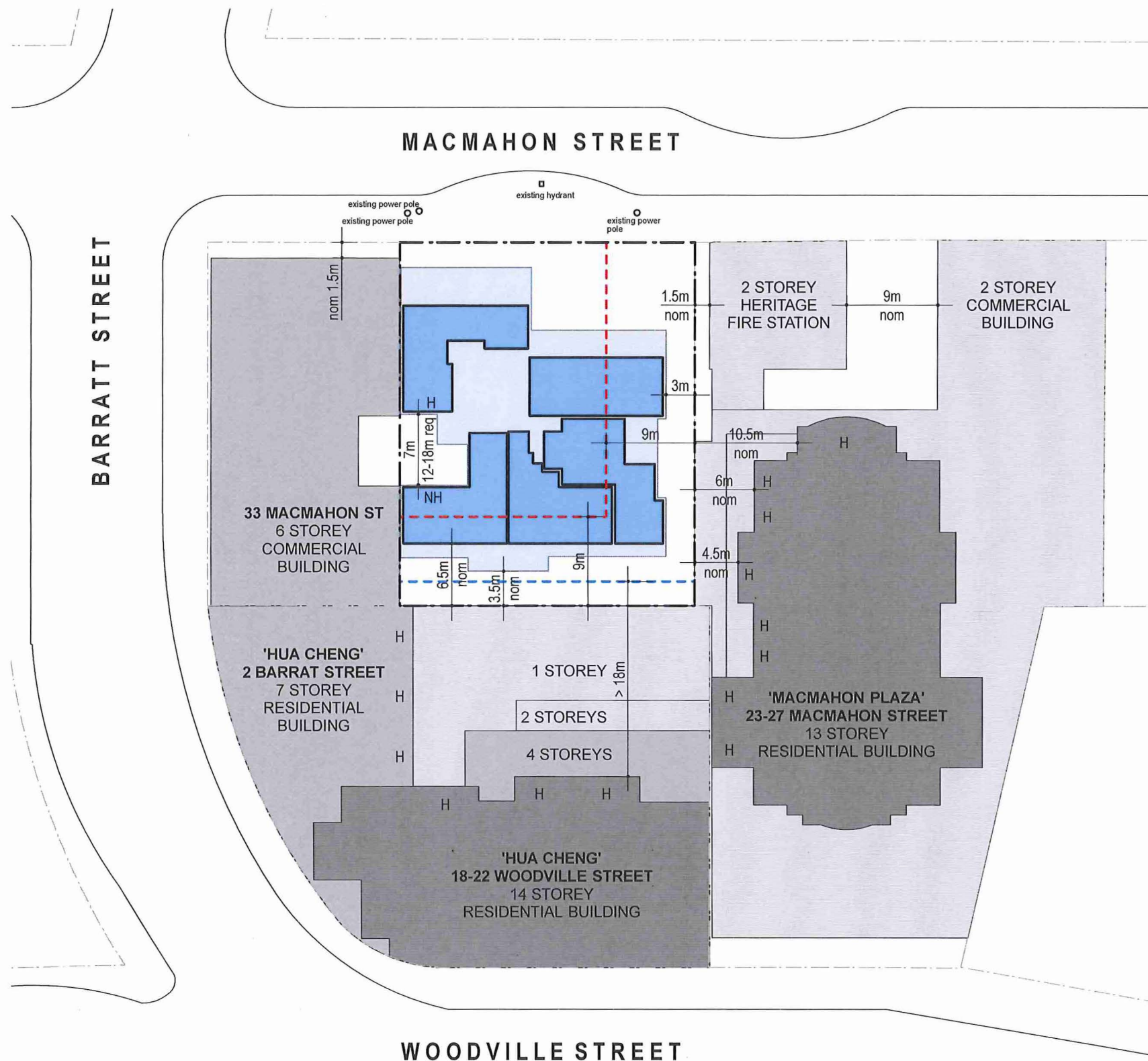
kennedy associates architects level 3 / 1 booth street annandale 2038 p + 61 2 9557 6466 f + 61 2 9557 6477 nominated architect - steve kennedy - registration no. 5828

0 5 10 25m  
1:500 @ A3

1610 - 114

MAY 2016



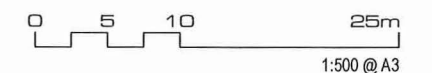


## ORIGINAL SCHEME - ADG ANALYSIS - LEVELS 7-10

urban design study

29-31 Macmahon Street, HURSTVILLE

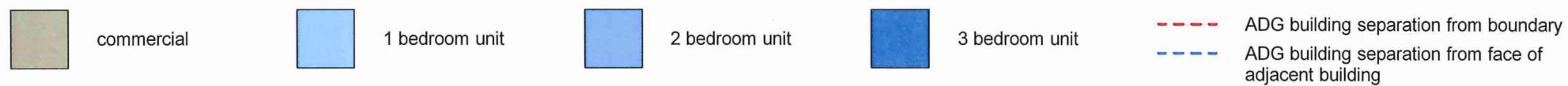
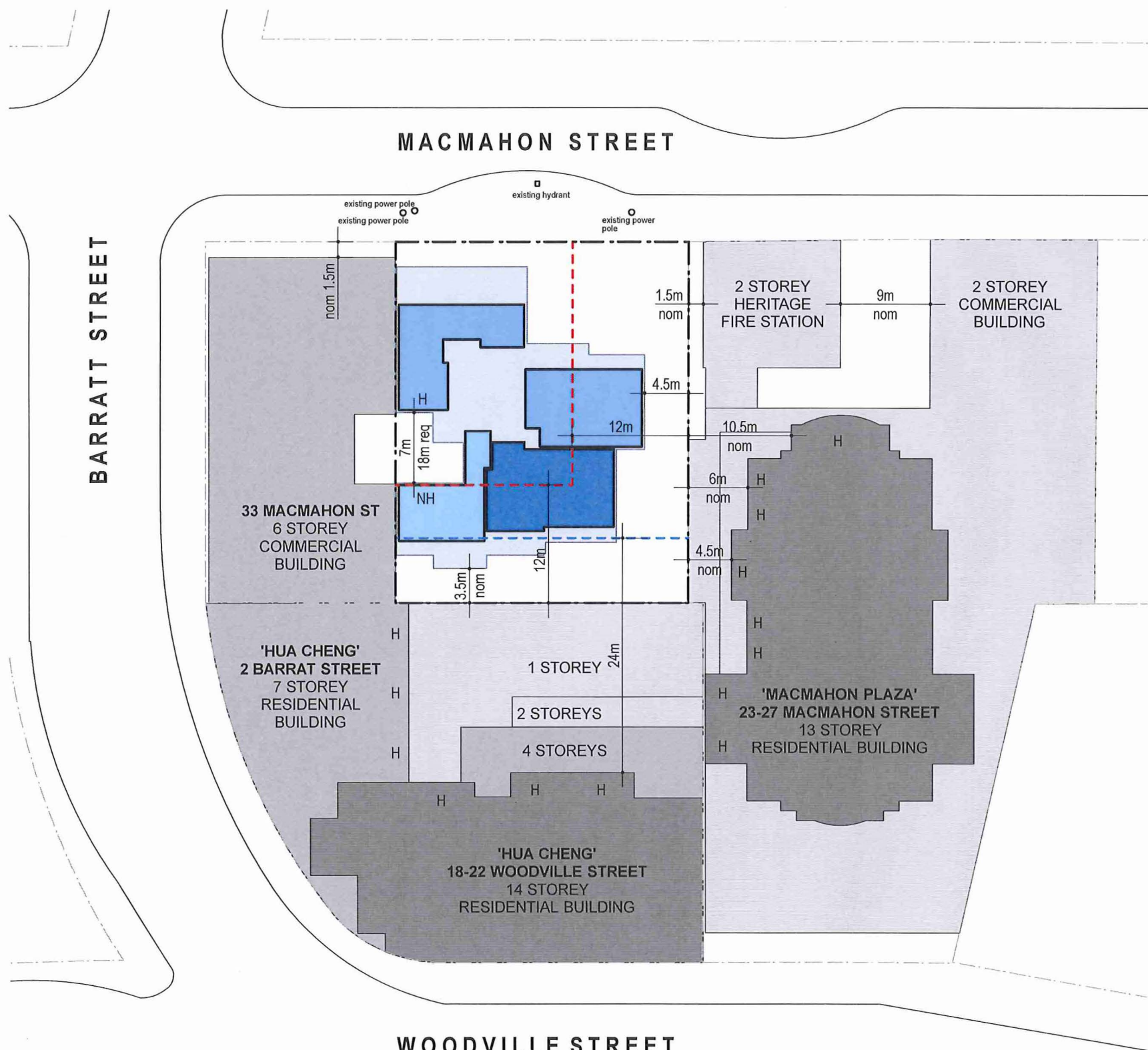
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1610 - 115

MAY 2016



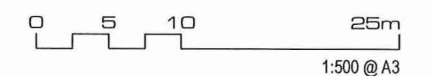


**ORIGINAL SCHEME - ADG ANALYSIS - LEVELS 11-15**

urban design study

29-31 Macmahon Street, HURSTVILLE

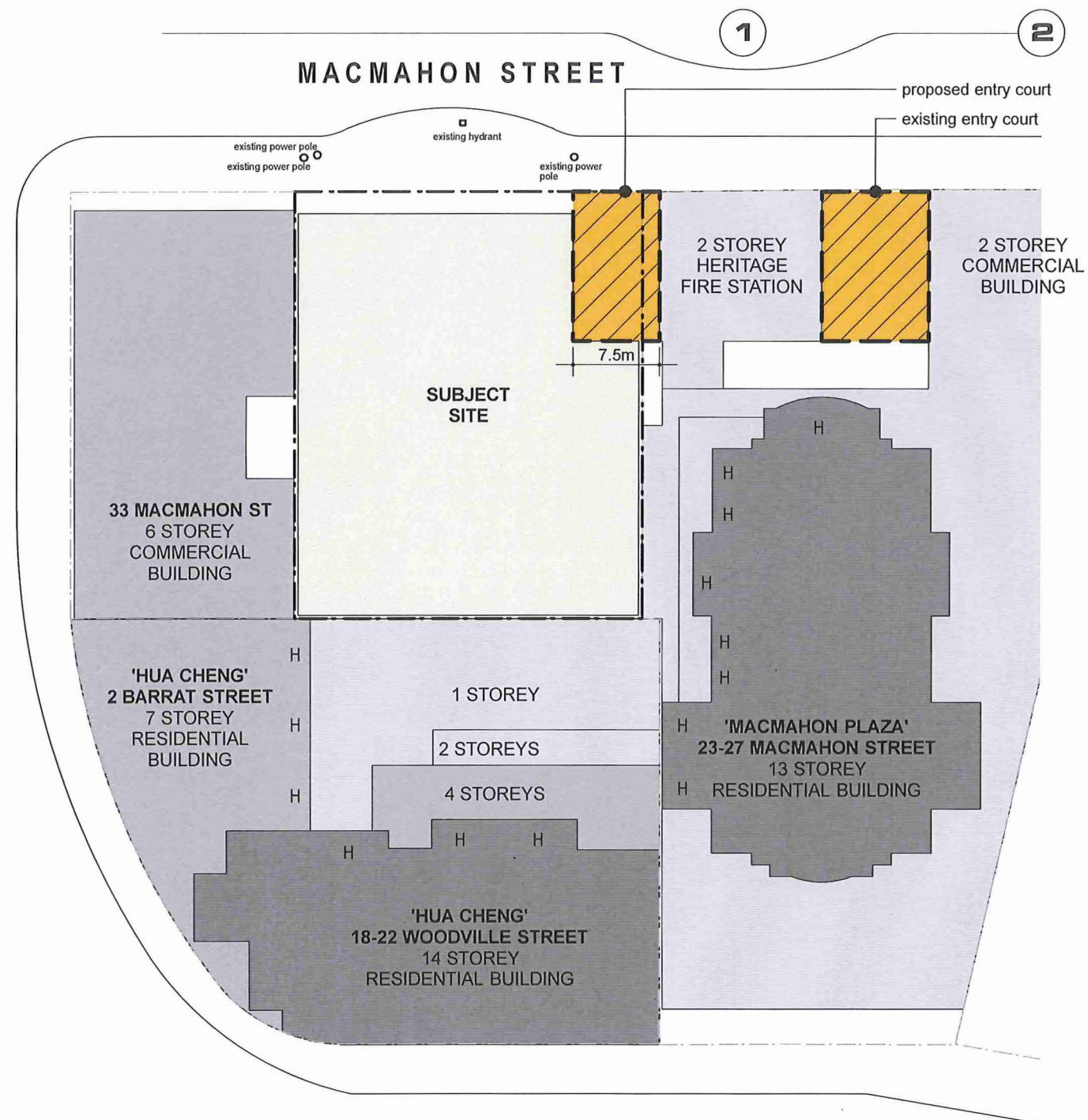
kennedy associates architects level 3 / 1 booth street annandale 2038 p + 61 2 9557 6466 f + 61 2 9557 6477 nominated architect - steve kennedy - registration no. 5828



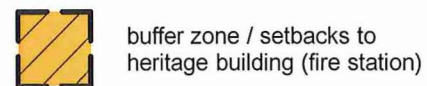


# PART 2





**HERITAGE INTERFACE - GROUND PLANE**

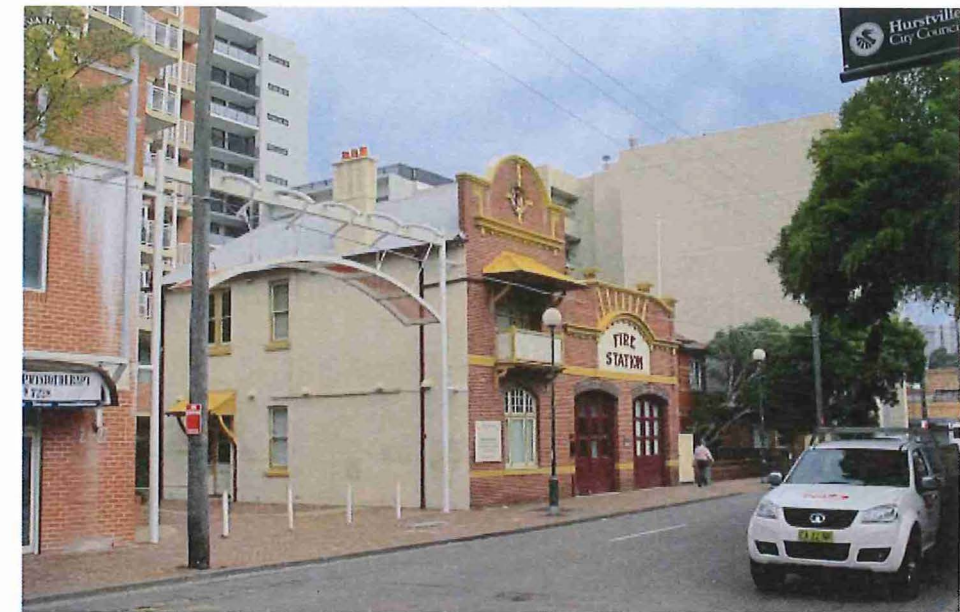


## HERITAGE INTERFACE

urban design study

29-31 Macmahon Street, HURSTVILLE

kennedy associates architects level 3 / 1 booth street annandale 2038 p + 61 2 9557 6466 f + 61 2 9557 6477 nominated architect - steve kennedy - registration no. 5828



**SITE PHOTO 1 - HERITAGE FIRE STATION**



**SITE PHOTO 2 - HERITAGE FIRE STATION**

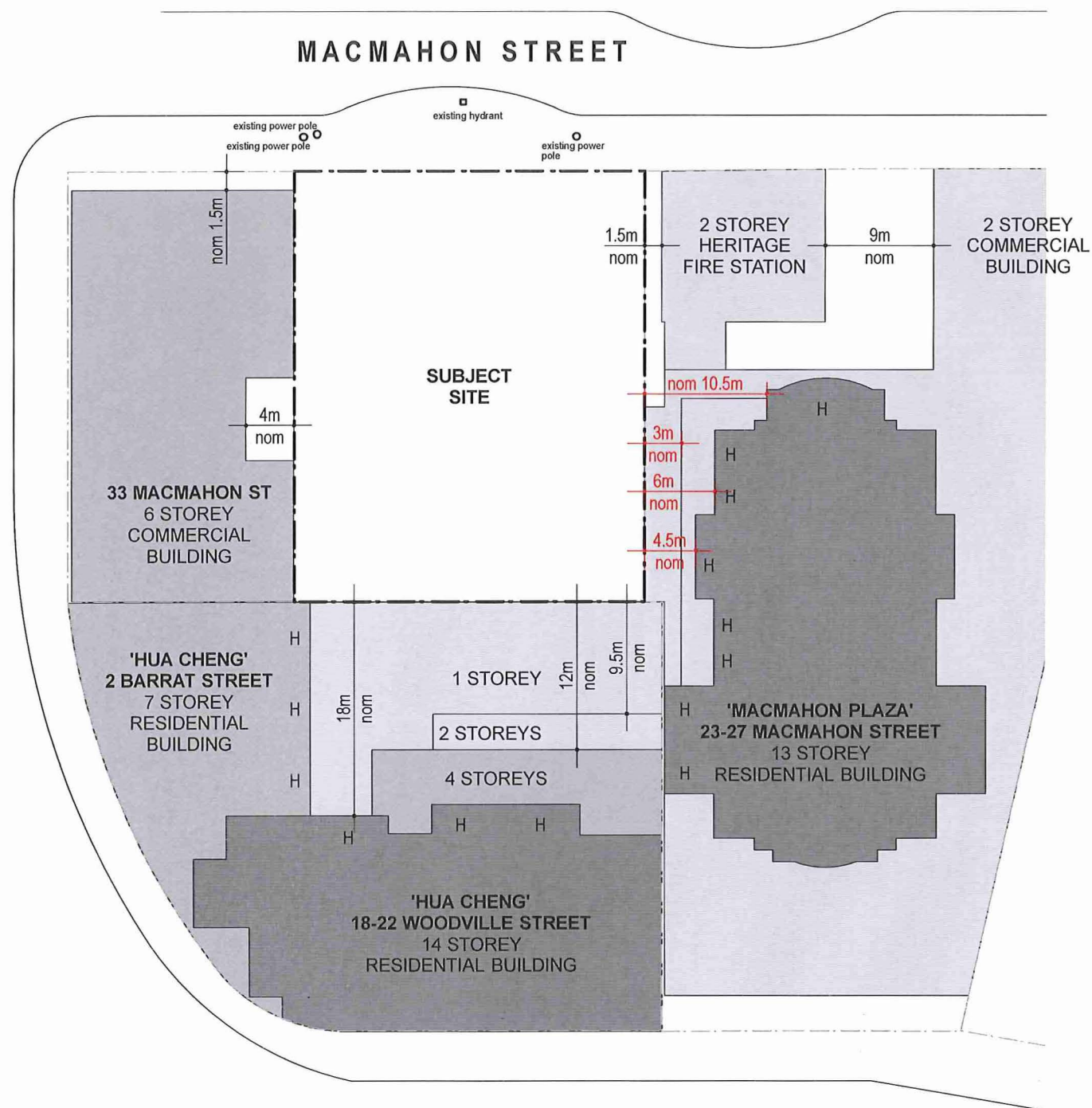


0 5 10 25m  
1:500 @ A3

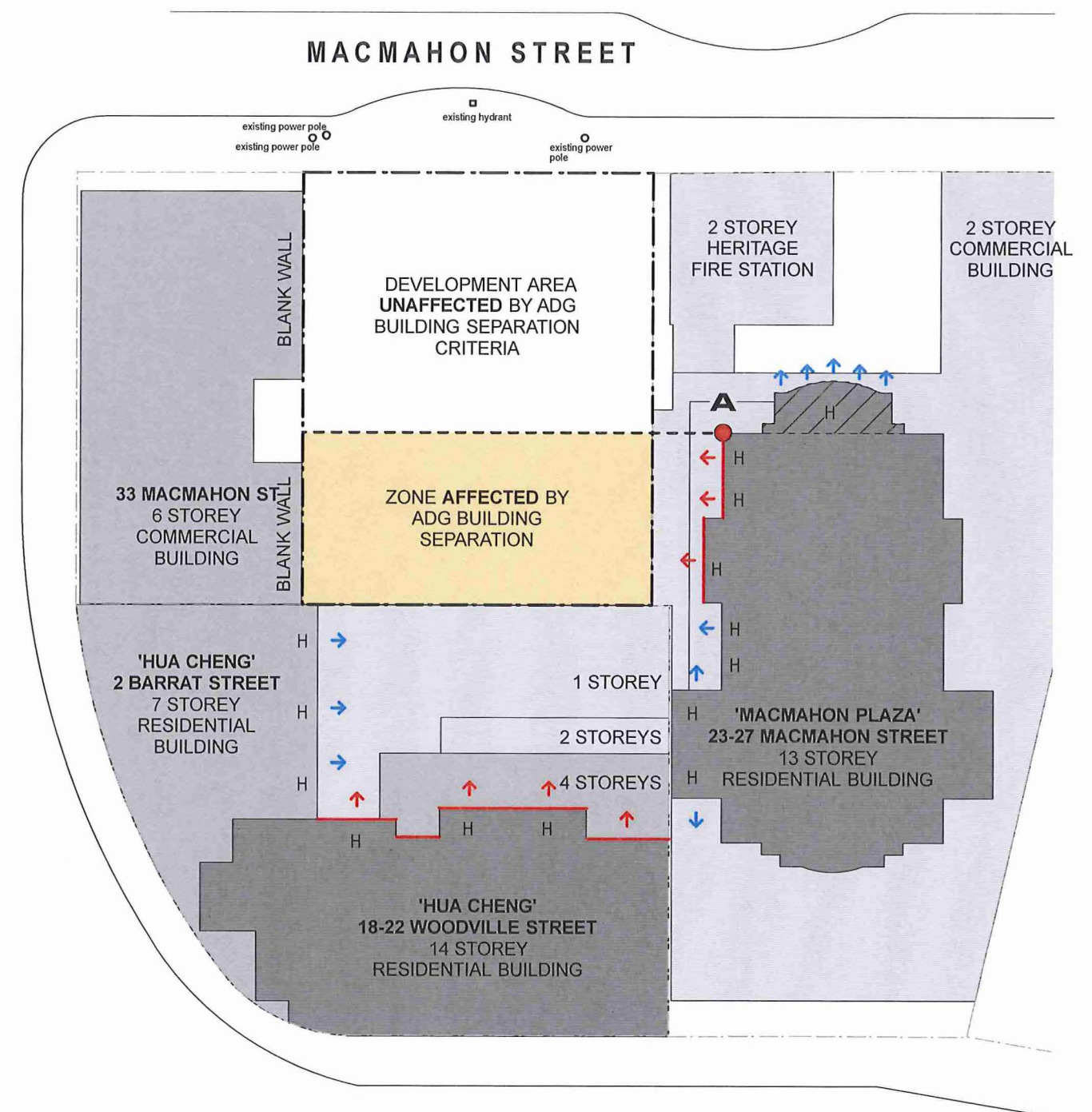
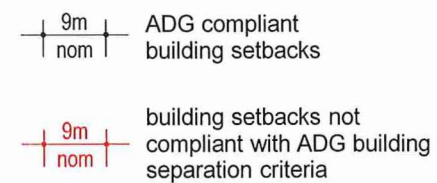
1610 - 201

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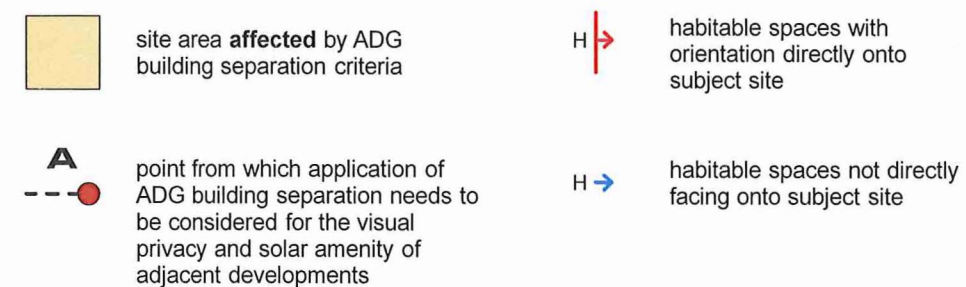




## NEIGHBOURING SETBACKS



## ADG BUILDING SEPARATION ZONE



## NEIGHBOURING SETBACKS / BUILDING SEPARATION

urban design study

29-31 Macmahon Street, HURSTVILLE

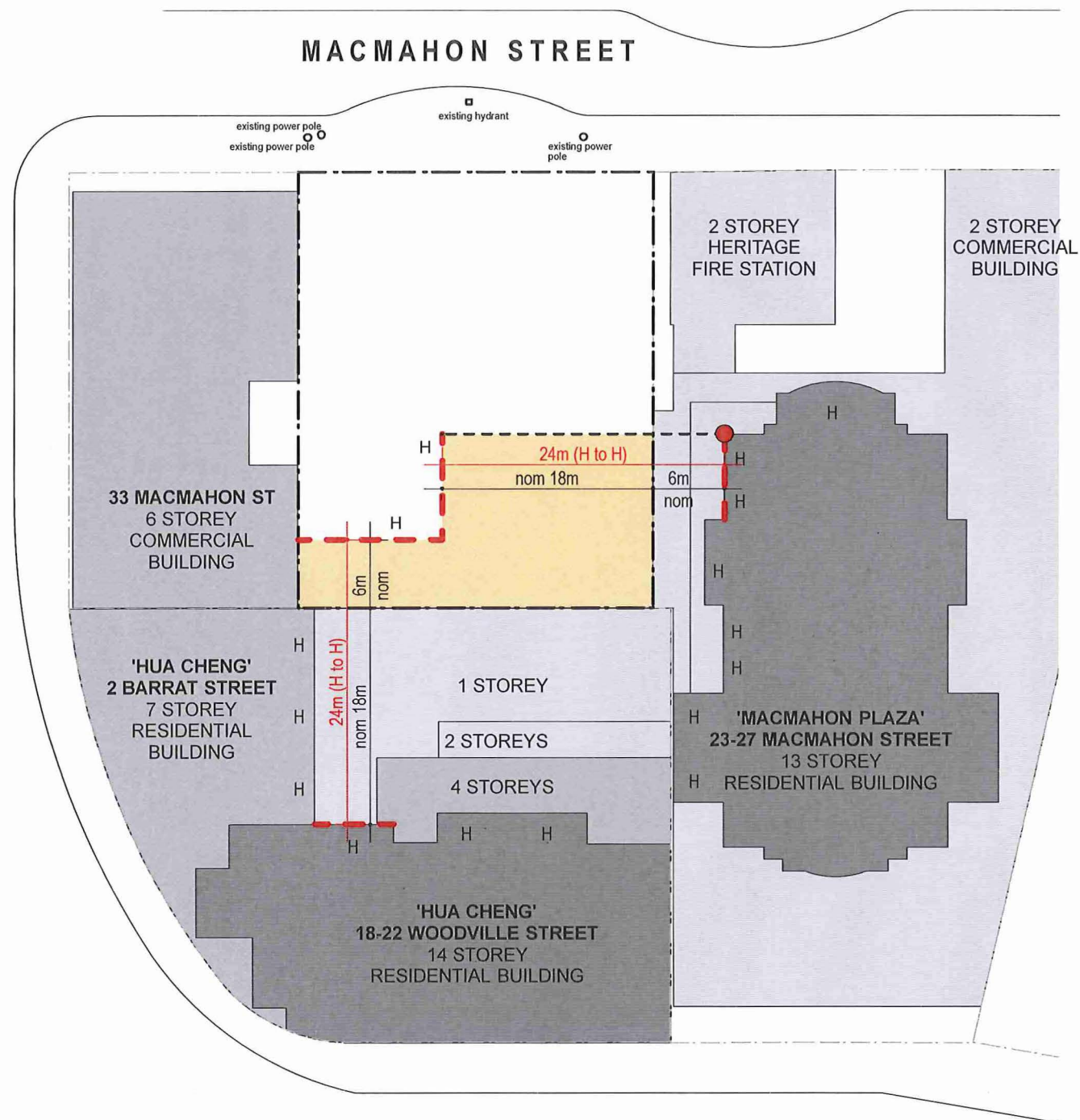
kennedy associates architects level 3 / 1 booth street annandale 2038 p + 61 2 9557 6466 f + 61 2 9557 6477 nominated architect - steve kennedy - registration no. 5828

0 5 10 25m  
1:500 @ A3

1610 - 202

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**ADG 1 - BUILDING SEPARATION INTERPRETATION A**

**COMMENT A:**

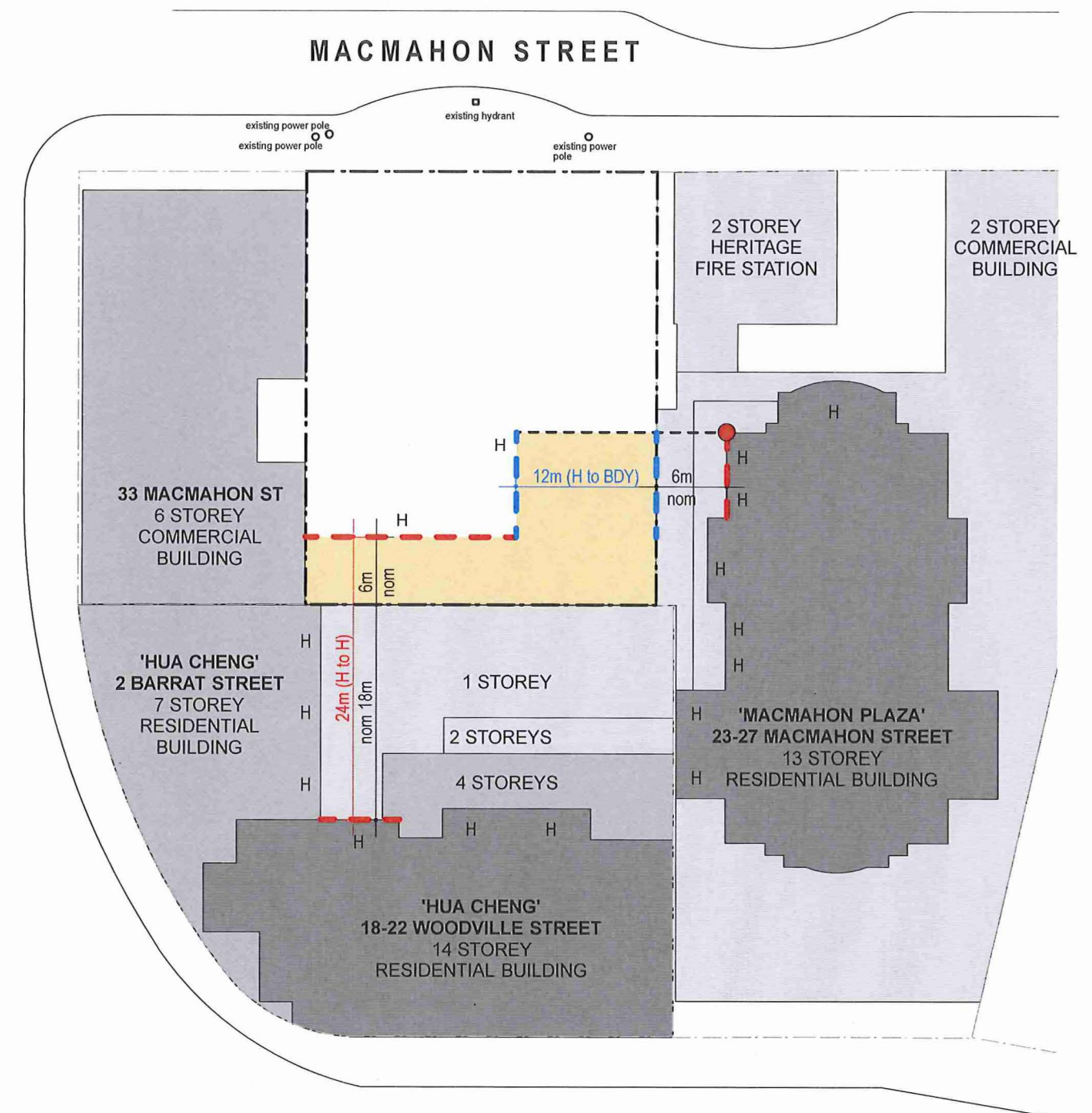
- 24m building separation applied to both adjoining properties, 18-22 Woodville Street, Hurstville & 23 - 27 MacMahon St (ADG P 37)
- ADG overall distance applied as total rather than individual setbacks



site area **affected** by ADG building separation criteria



24m separation between habitable spaces



**ADG 2 - BUILDING SEPARATION INTERPRETATION B**

**COMMENT B:**

- total of 24m building separation retained between subject site and 18-22 Woodville Street, Hurstville (ADG P 37)
- due to lack of setbacks provided by 23 -27 MacMahon Street limited impacts resulting from building offsets, setback of 12m applied to subject site facing 23 - 27 MacMahon St equal to 50% of ADG criteria (ADG P63)



site area **affected** by ADG building separation criteria



24m separation between habitable spaces



12m separation between habitable spaces



**ADG COMPLIANCE - BUILDING SEPARATION**

urban design study

29-31 Macmahon Street, HURSTVILLE

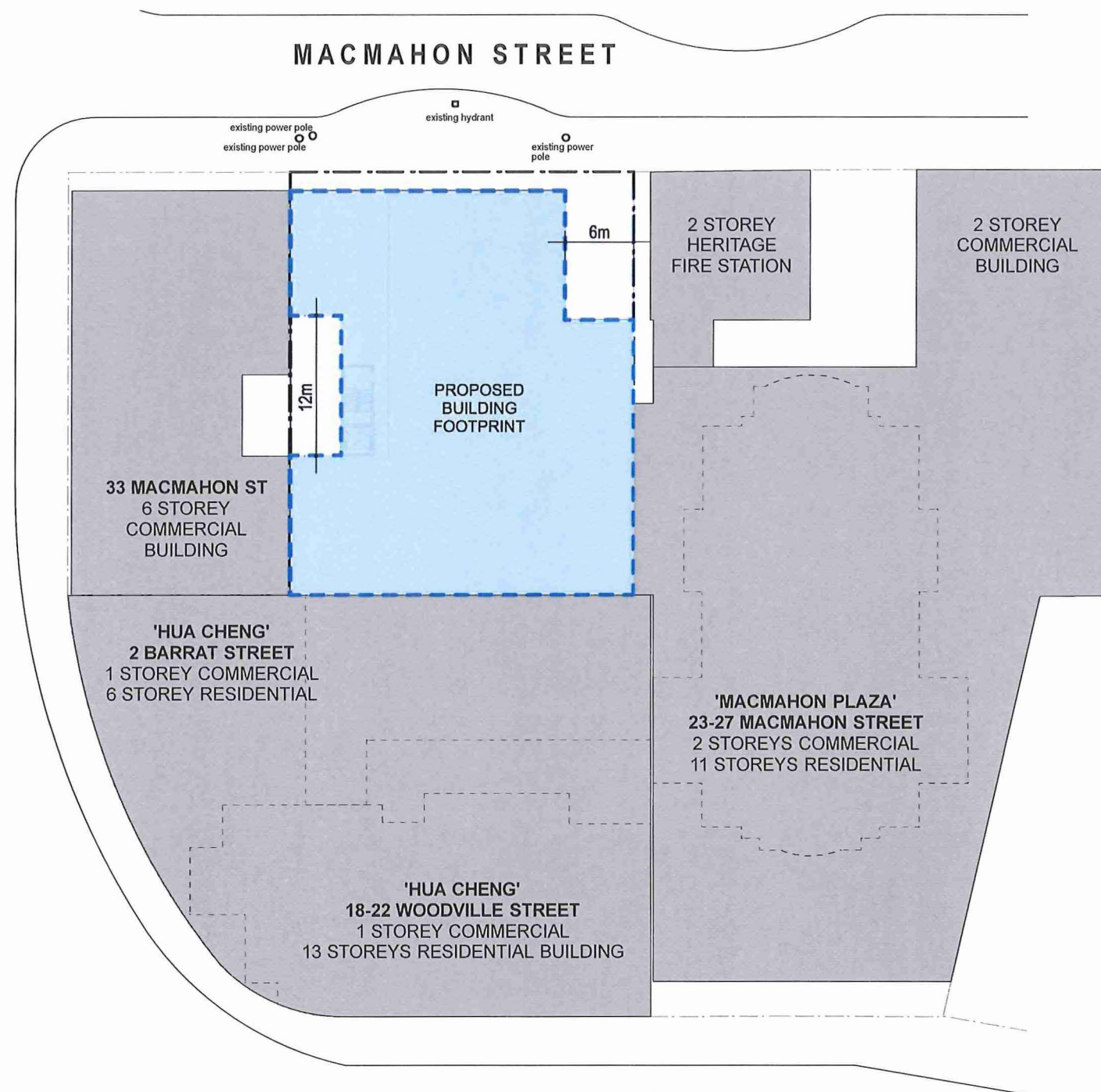
kennedy associates architects level 3 / 1 booth street annandale 2038 p + 61 2 9557 6466 f + 61 2 9557 6477 nominated architect - steve kennedy - registration no. 5828

0 5 10 25m  
1:500 @ A3

1610 - 203

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## PROPOSED - GROUND LEVEL

### COMMENT:

ground level occupies entire site excluding forecourt and light well



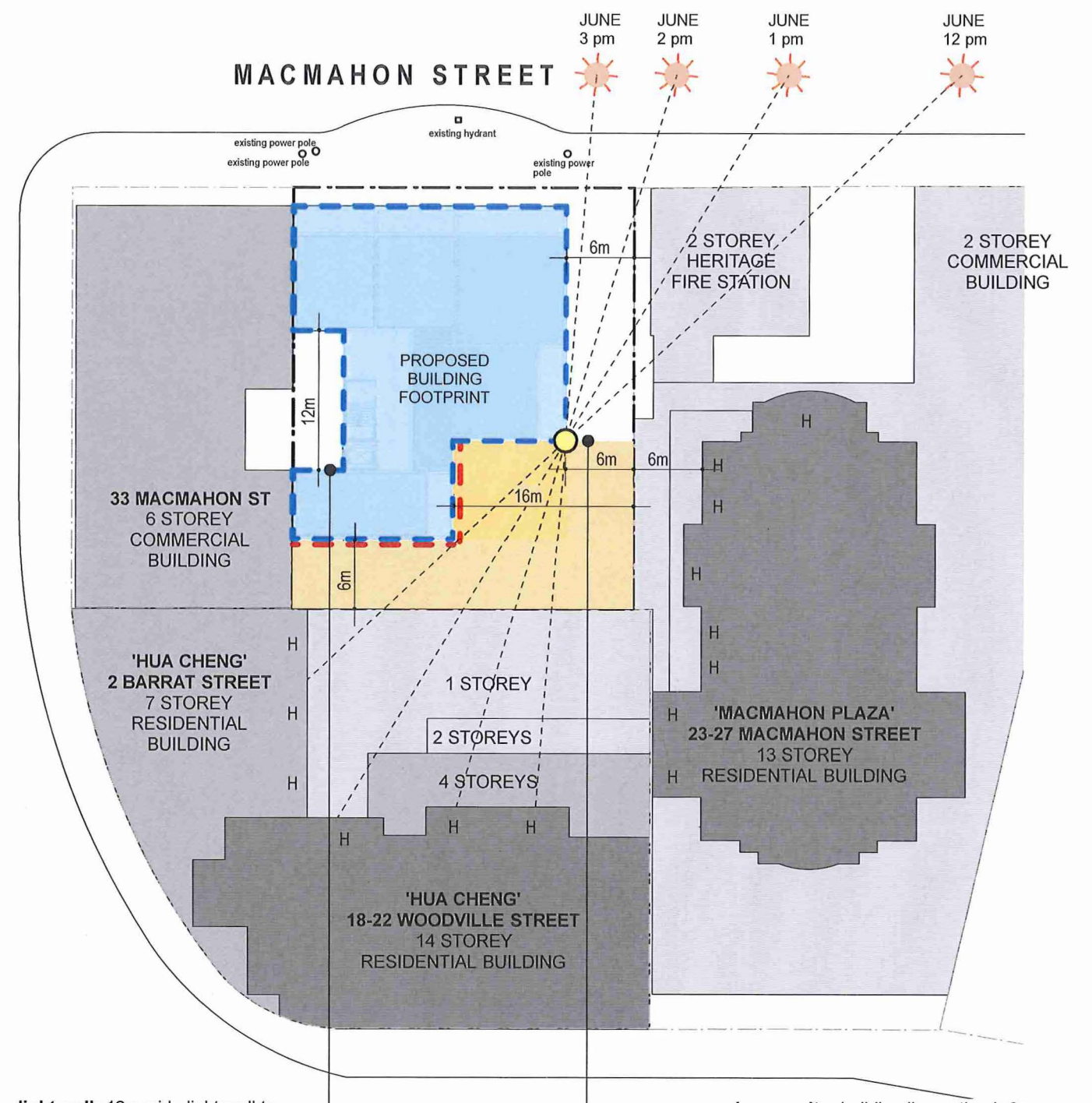
proposed building footprint

## ADG COMPLIANCE - PROPOSED

urban design study

29-31 Macmahon Street, HURSTVILLE

kennedy associates architects level 3 / 1 booth street annandale 2038 p + 61 2 9557 6466 f + 61 2 9557 6477 nominated architect - steve kennedy - registration no. 5828



light well: 12m wide light well to achieve ADG compliance + cross ventilation (P37) for non habitable rooms

solar amenity: building line setback 6m from NE boundary to achieve acceptable amenity to private and communal spaces of residential development at the rear of the subject site

## PROPOSED - UPPER FLOORS

### COMMENT:

upper level massing established by setbacks and solar impacts



proposed building footprint



building separation zone

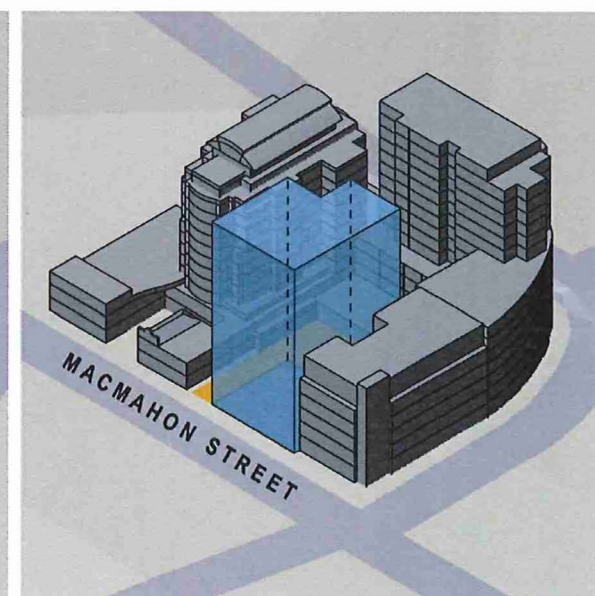
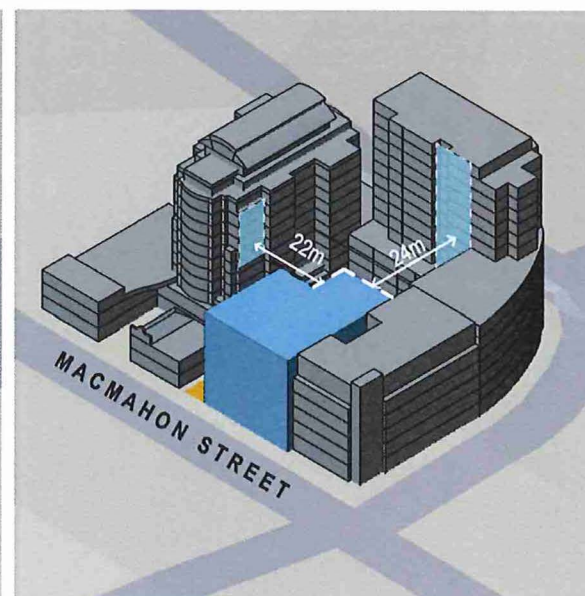
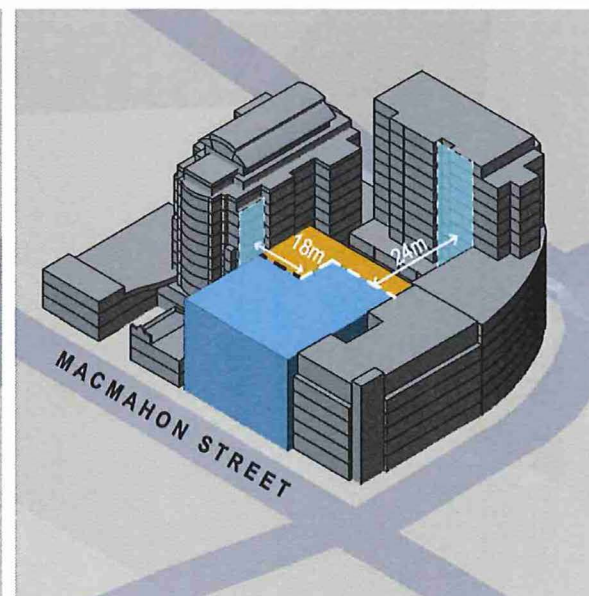
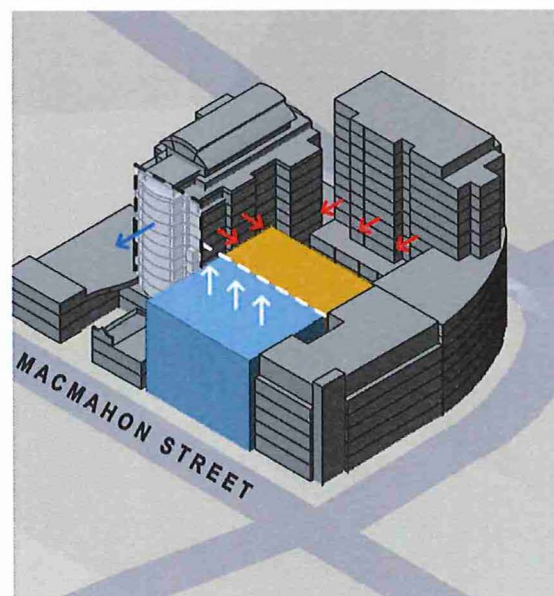
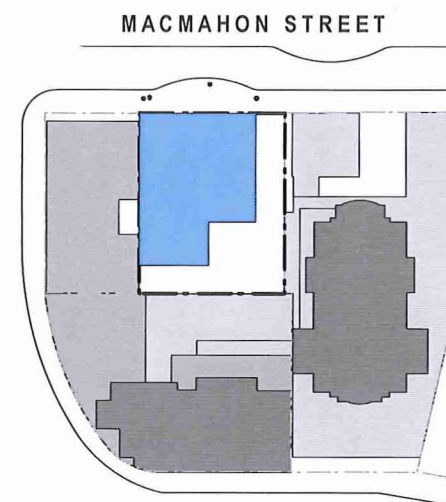
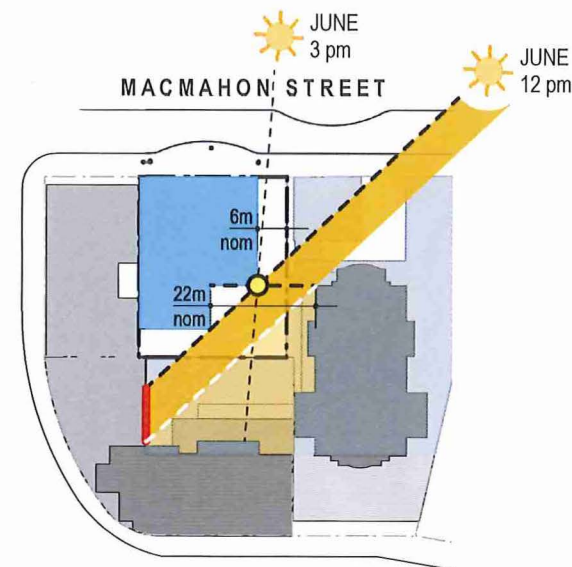
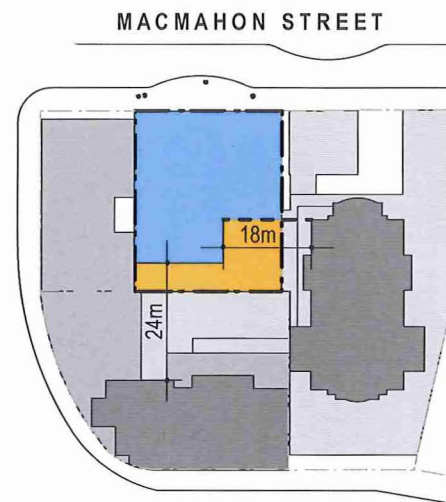
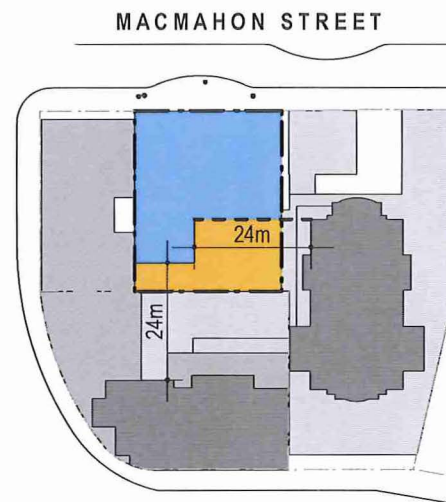
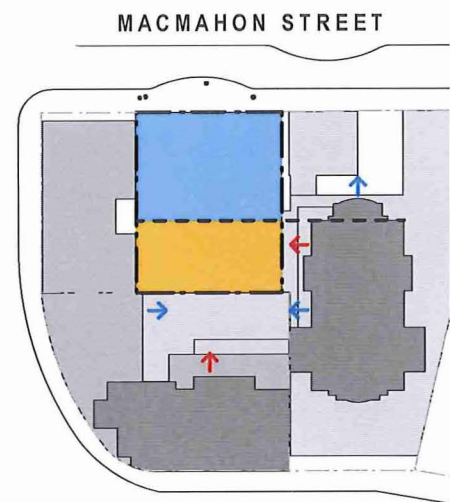


0 5 10 25m  
1:500 @ A3

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ADG AFFECTED AREAS

ADG INTERPRETATION - A

ADG INTERPRETATION - B

ADG COMPLIANCE - PROPOSED

PROPOSED FOOTPRINT / MASSING

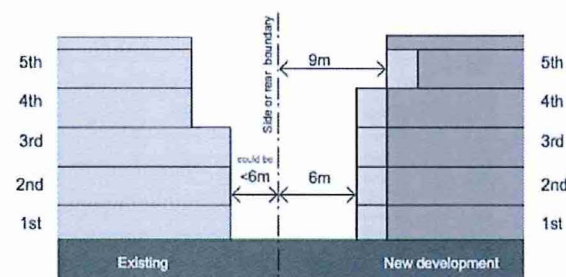


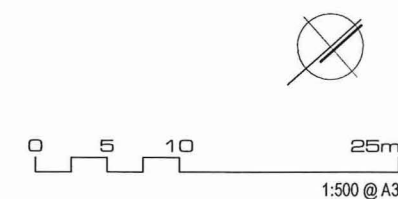
Figure 3F.3 New development adjacent to existing buildings should provide adequate separation distances to the boundary in accordance with the design criteria

## BUILDING SEPARATION SUMMARY

urban design study

29-31 Macmahon Street, HURSTVILLE

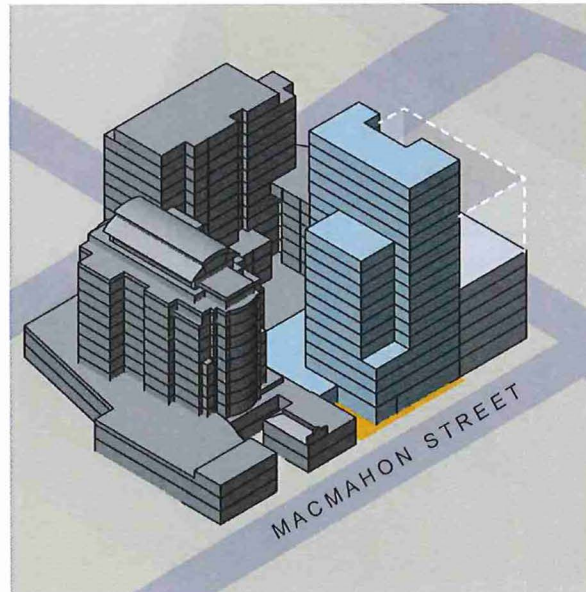
kennedy associates architects level 3 / 1 booth street annandale 2038 p + 61 2 9557 6466 f + 61 2 9557 6477 nominated architect - steve kennedy - registration no. 5828



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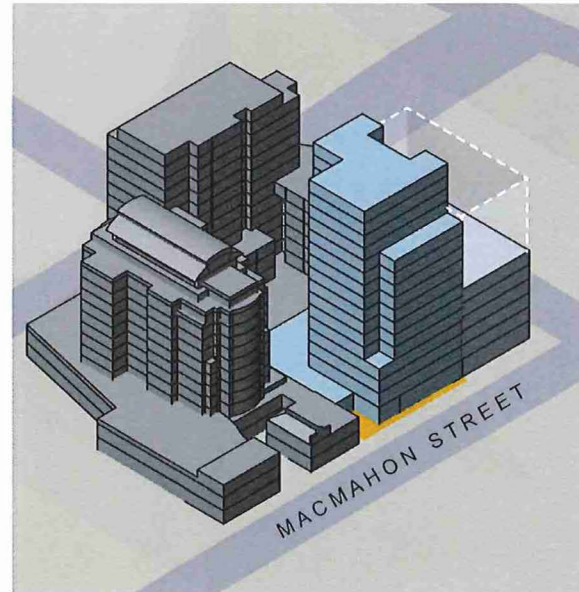




### OPTION A:

Building based on stepped building form at street frontage with:

- 4 storey street facade
- indent above 4 storeys in north east corner stepping back from heritage item
- 15 storey (nom 58m high & 15m wide) tower element on MacMahon Street (excluding lift overrun)
- 12 storey (40m) recessed building mass set back from street



### OPTION B:

Building based on stepped building form at street frontage with:

- 4 storey street facade
- indent above 4 storeys in north east corner stepping back from heritage item
- 12 storey (40m) building on MacMahon Street
- 15 storey (nom 58m high) recessed building mass set back from street (excluding lift overrun)

### COMMENT:

Study shows two potential building envelopes for the site. The options demonstrate that there are a number of acceptable architectural approaches to the development of the site that could successfully address ADG and urban form issues within FSR & Height controls proposed within this study

### IMPACTS:

Both options:

- provide a stepped plan form to the rear of the site opening up both sun and vistas to the Hua Cheng development
- result in very similar impacts on the adjoining properties in terms of solar access

## BUILDING TYPE OPTIONS

urban design study

29-31 Macmahon Street, HURSTVILLE

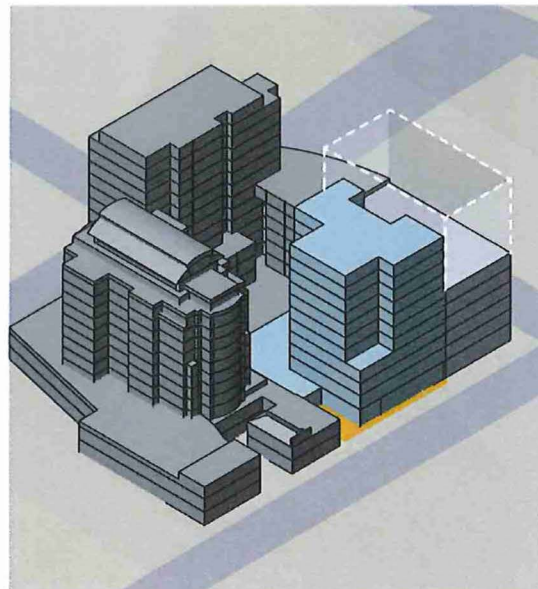
kennedy associates architects level 3 / 1 booth street annandale 2038 p + 61 2 9557 6466 f + 61 2 9557 6477 nominated architect - steve kennedy - registration no. 5828

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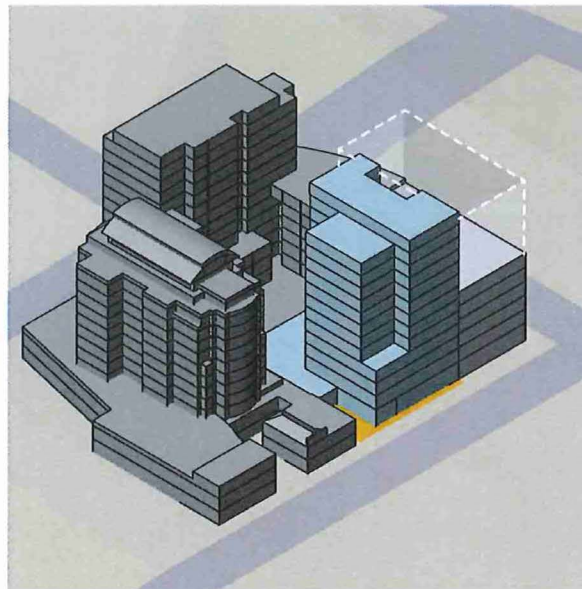
MAY 2016





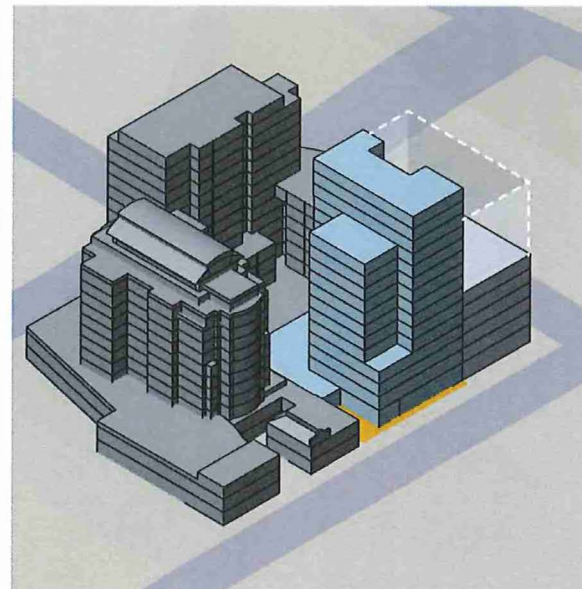
**FSR 4.5:1**  
2 storeys community use  
9 storeys residential

height: nom 39m



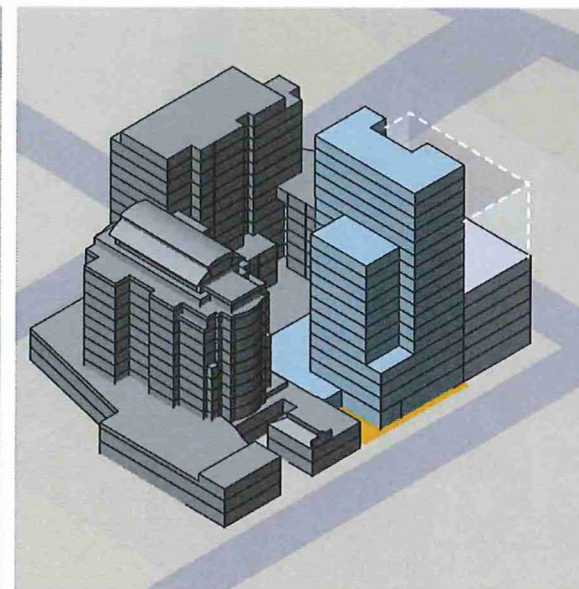
**FSR 5.0:1**  
2 storeys community use  
11 storeys residential

height: nom 45m



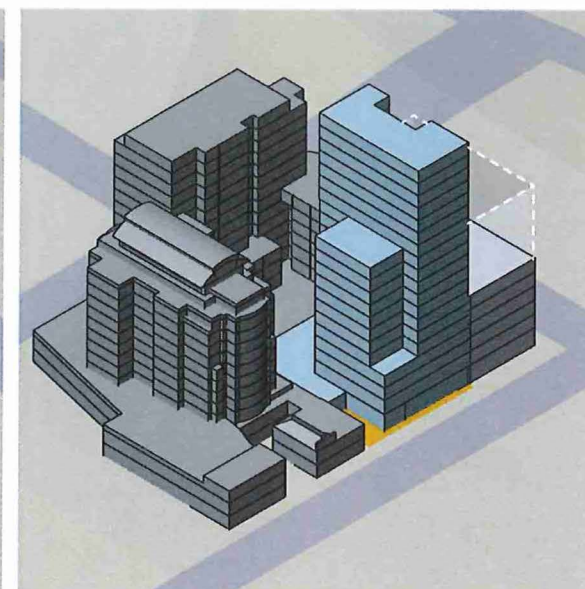
**FSR 5.5:1**  
2 storeys community use  
13 storeys residential

height: nom 51m



**FSR 6.0:1**  
2 storeys community use  
15 storeys residential

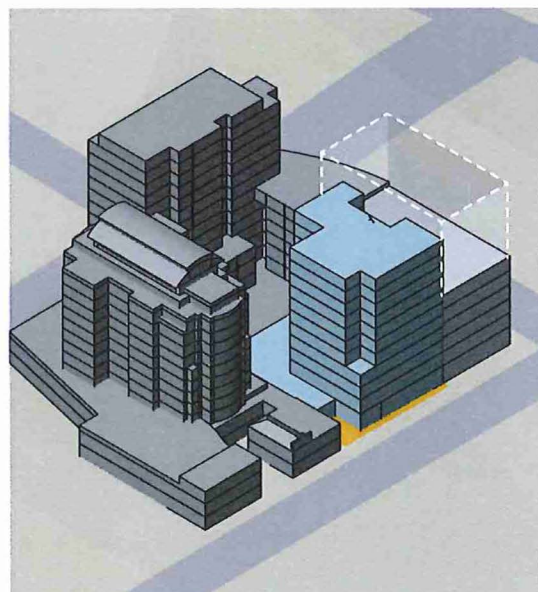
height: nom 58m



**FSR 6.5:1**  
2 storeys community use  
17 storeys residential

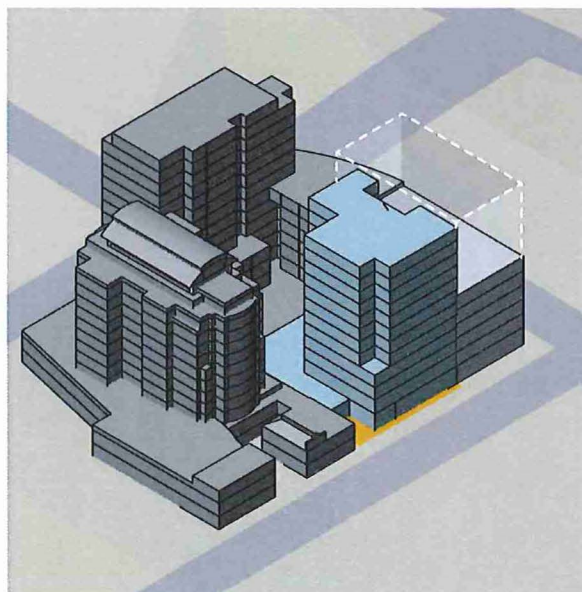
height: nom 64m

## OPTION A



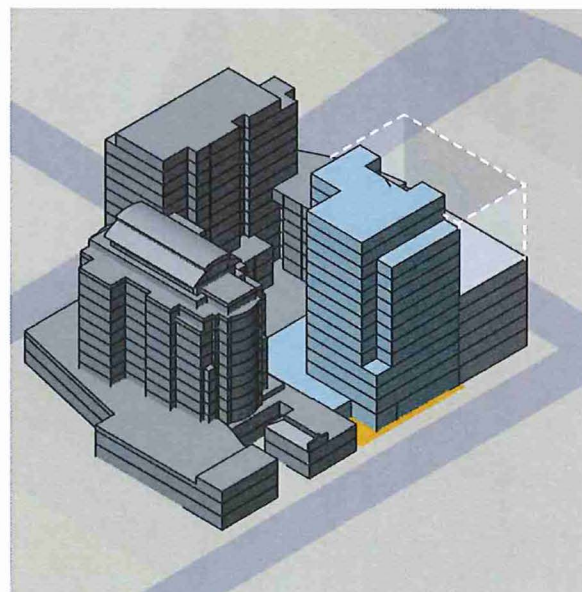
**FSR 4.5:1**  
2 storeys community use  
9 storeys residential

height: nom 39m



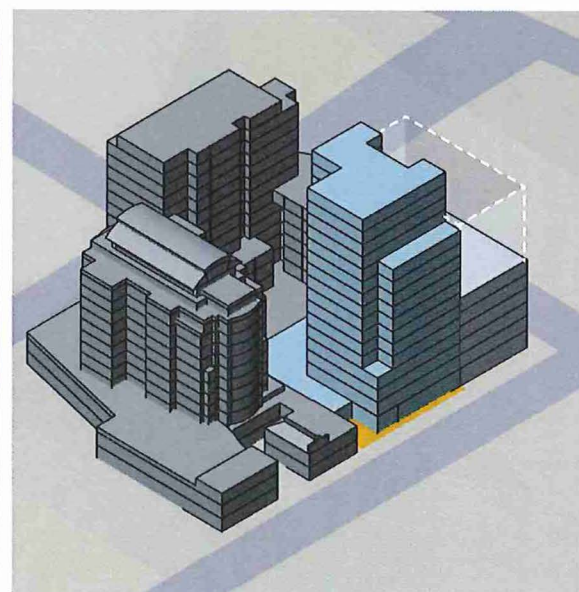
**FSR 5.0:1**  
2 storeys community use  
10 storeys residential

height: nom 42m



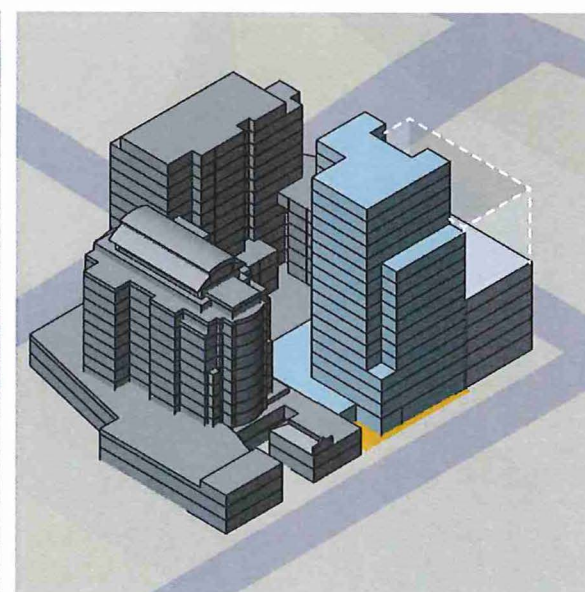
**FSR 5.5:1**  
2 storeys community use  
12 storeys residential

height: nom 48m



**FSR 6.0:1**  
2 storeys community use  
14 storeys residential

height: nom 55m



**FSR 6.5:1**  
2 storeys community use  
15 storeys residential

height: nom 58m

## OPTION B

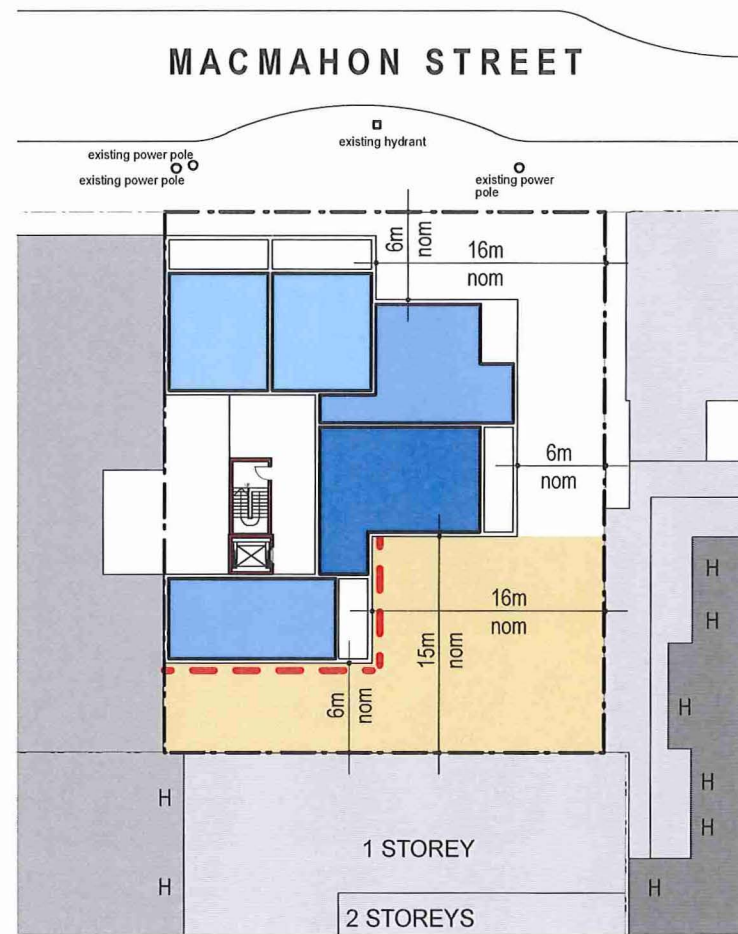
### BUILDING TYPE OPTIONS - COMPARISON

**NOTE:**  
heights indicated include  
parapets and lift over runs





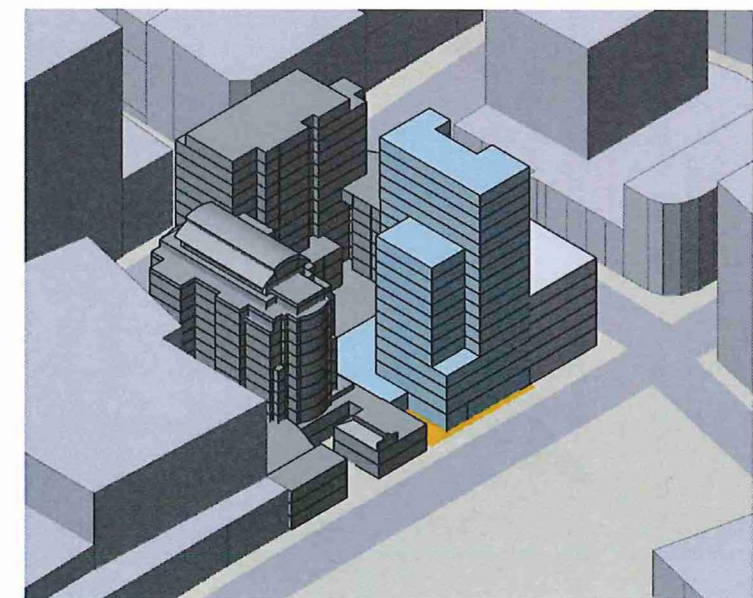
**typical level - 2-3**  
GFA = nom 425m<sup>2</sup> per floor



**typical level - 4-11**  
GFA = nom 400m<sup>2</sup> per floor



**typical level - 12+**  
GFA = nom 275m<sup>2</sup> per floor



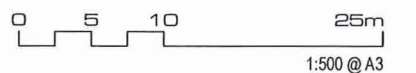
**OPT A - TYPICAL MASSING**

## OPT A - LAYOUT SUMMARY

urban design study

29-31 Macmahon Street, HURSTVILLE

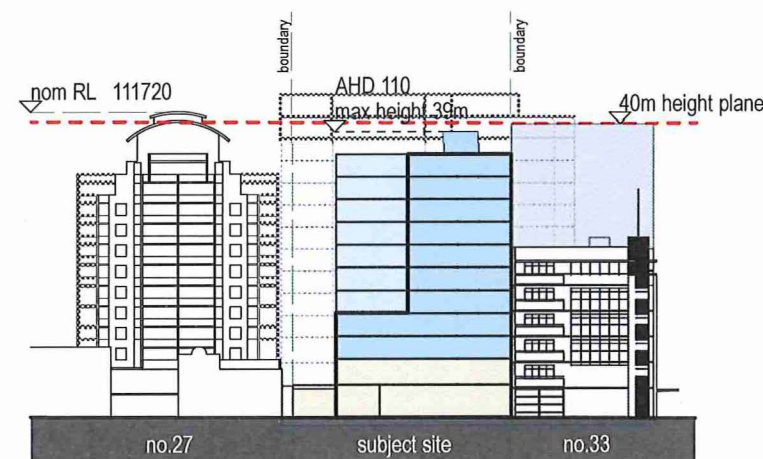
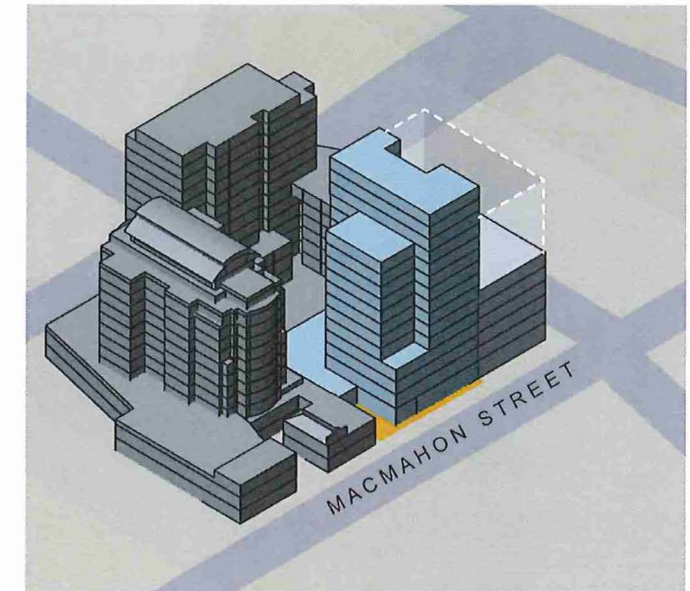
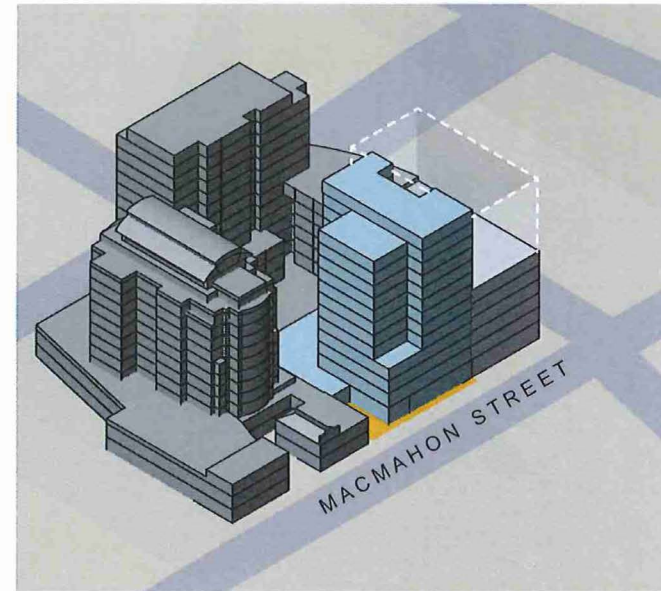
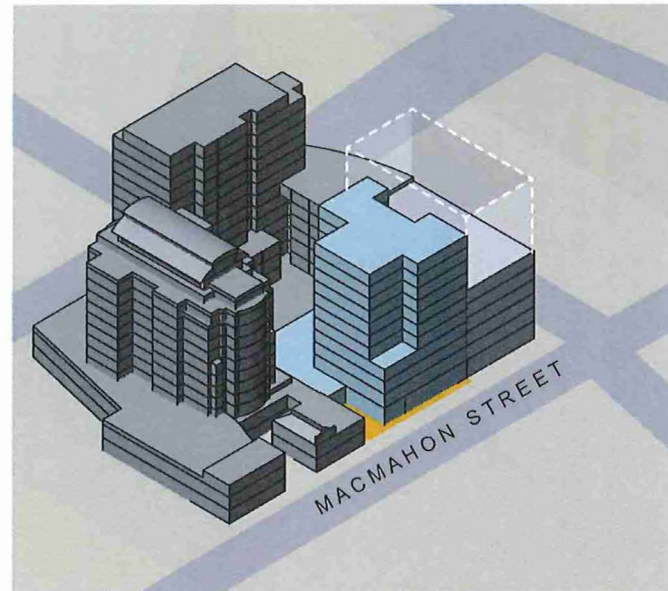
kennedy associates architects level 3 / 1 booth street annandale 2038 p + 61 2 9557 6466 f + 61 2 9557 6477 nominated architect - steve kennedy - registration no. 5828



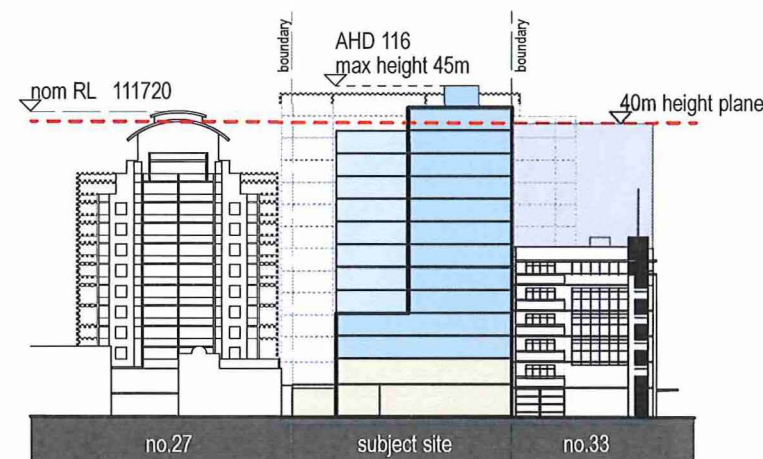
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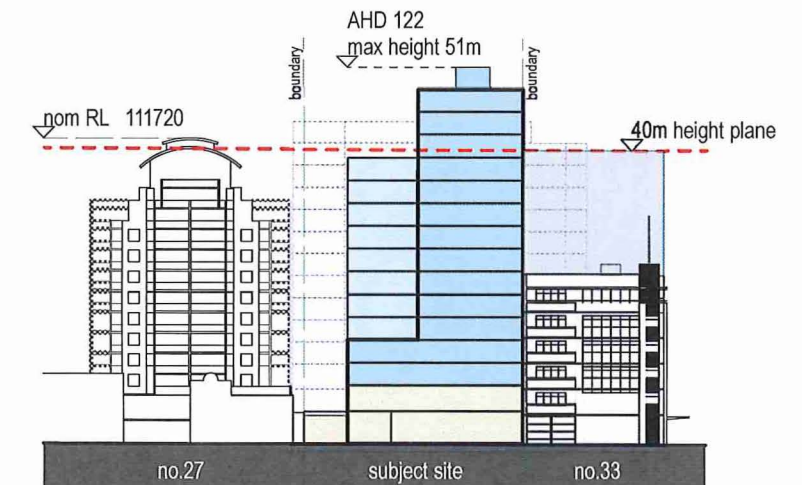




elevation - macmahon street



elevation - macmahon street



elevation - macmahon street

**A**

**FSR 4.5 : 1**  
(OPTA.1)

**SUMMARY**

Site Area 1113 sq m  
LEP permissible FSR 4.5 : 1  
permissible GFA 5008 sq m

GFA proposed 5000 sq m  
FSR proposed 4.5 : 1

**HEIGHT**

height in storeys 11  
height to FCL of upper most floor nom 36m  
max height nom 39m

**FSR 5.0 : 1**  
(OPTA.2)

**SUMMARY**

Site Area 1113 sq m  
LEP permissible FSR 4.5 : 1  
permissible GFA 5008 sq m

GFA proposed 5700 sq m  
FSR proposed 5 : 1

**HEIGHT**

height in storeys 13  
height to FCL of upper most floor nom 42m  
max height nom 45m

**FSR 5.5 : 1**  
(OPTA.3)

**SUMMARY**

Site Area 1113 sq m  
LEP permissible FSR 4.5 : 1  
permissible GFA 5008 sq m

GFA proposed 6096 sq m  
FSR proposed 5.5 : 1

**HEIGHT**

height in storeys 15  
height to FCL of upper most floor nom 48m  
max height nom 51m

**OPT A - FSR / HEIGHT STUDIES A**

urban design study

29-31 Macmahon Street, HURSTVILLE

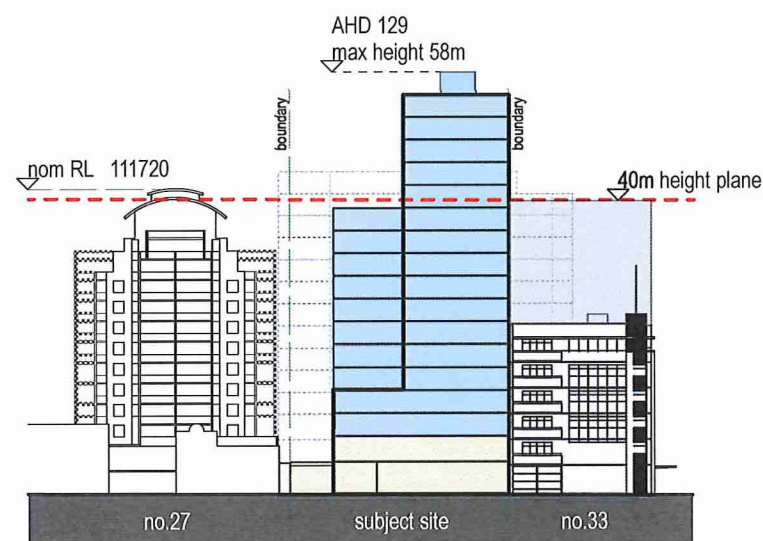
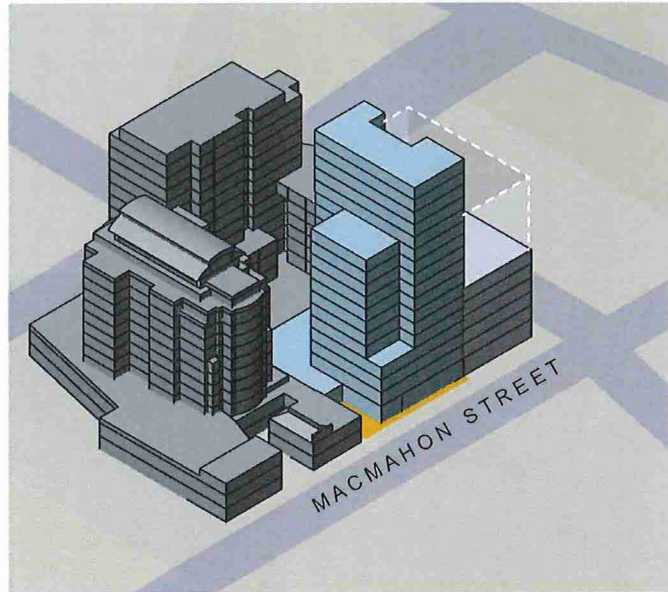
kennedy associates architects level 3 / 1 booth street annandale 2038 p + 61 2 9557 6466 f + 61 2 9557 6477 nominated architect - steve kennedy - registration no. 5828



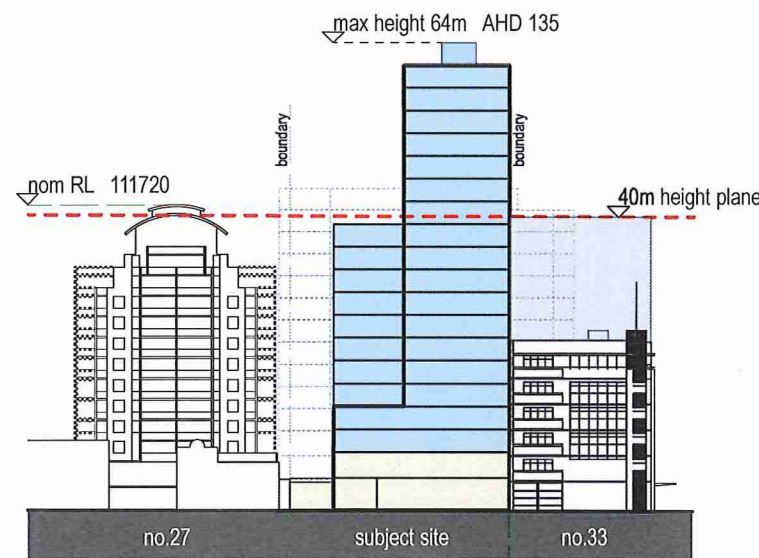
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elevation - macmahon street



elevation - macmahon street

**A**

**FSR 6.0 : 1**  
(OPTA.4)

**SUMMARY**

Site Area 1113 sq m  
LEP permissible FSR 4.5 : 1  
permissible GFA 5008 sq m

GFA proposed 6700 sq m  
FSR proposed 6 : 1

**HEIGHT**

height in storeys 17  
height to FCL of upper most floor nom 55m  
max height nom 58m

**FSR 6.5 : 1**  
(OPTA.5)

**SUMMARY**

Site Area 1113 sq m  
LEP permissible FSR 4.5 : 1  
permissible GFA 5008 sq m

GFA proposed 7200 sq m  
FSR proposed 6.5 : 1

**HEIGHT**

height in storeys 19  
height to FCL of upper most floor nom 61m  
max height nom 64m

**OPT A - FSR / HEIGHT STUDIES B**

urban design study

29-31 Macmahon Street, HURSTVILLE

kennedy associates architects level 3 / 1 booth street annandale 2038 p + 61 2 9557 6466 f + 61 2 9557 6477 nominated architect - steve kennedy - registration no. 5828

0 10 20 50m  
1:1000 @ A3

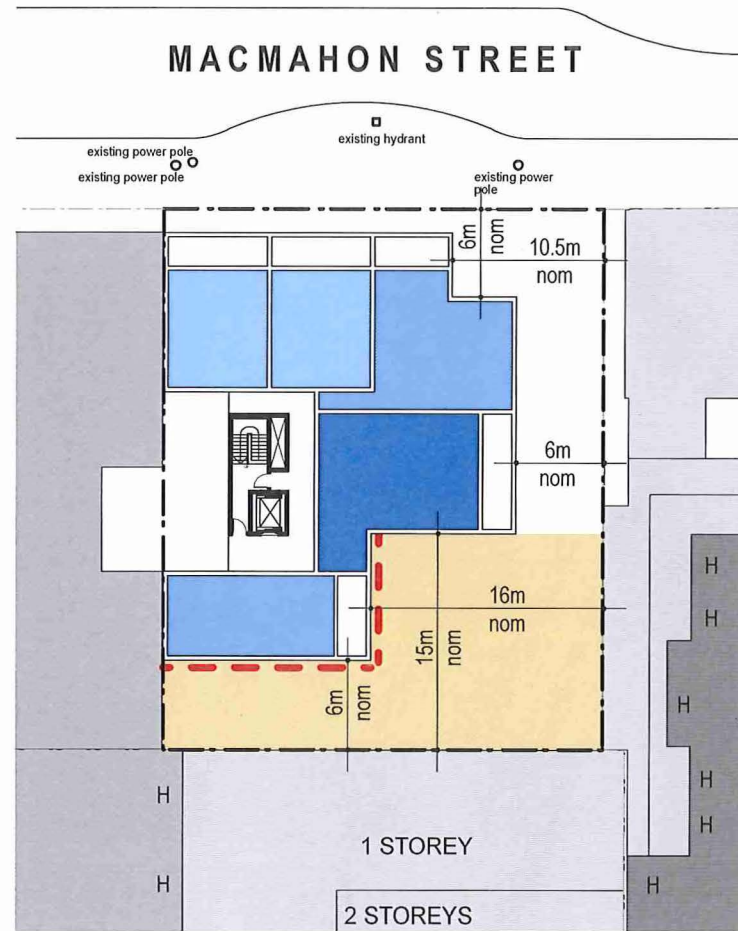
1610 - 210

MAY 2016





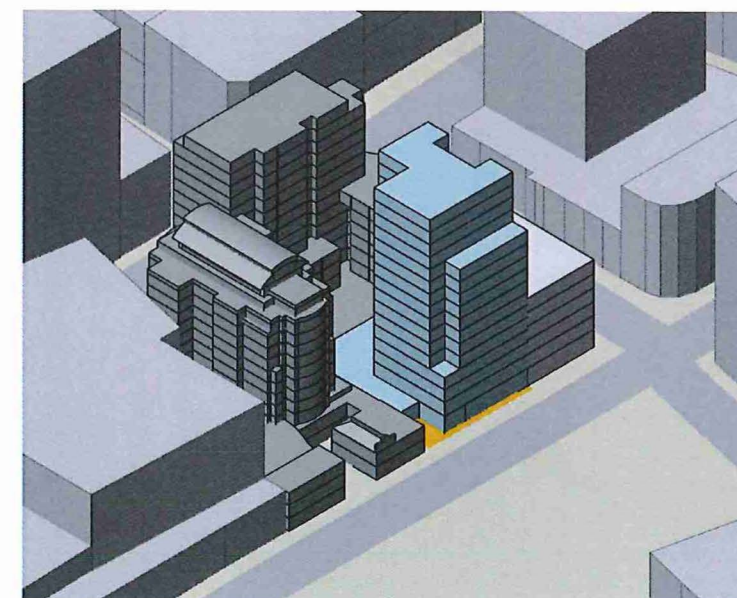
**typical level - 2-3**  
GFA = nom 410m<sup>2</sup> per floor



**typical level - 4-11**  
GFA = nom 400m<sup>2</sup> per floor



**typical level - 12+**  
GFA = nom 345m<sup>2</sup> per floor



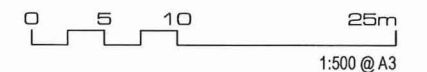
**OPT B - TYPICAL MASSING**

## OPT B - LAYOUT SUMMARY

urban design study

29-31 Macmahon Street, HURSTVILLE

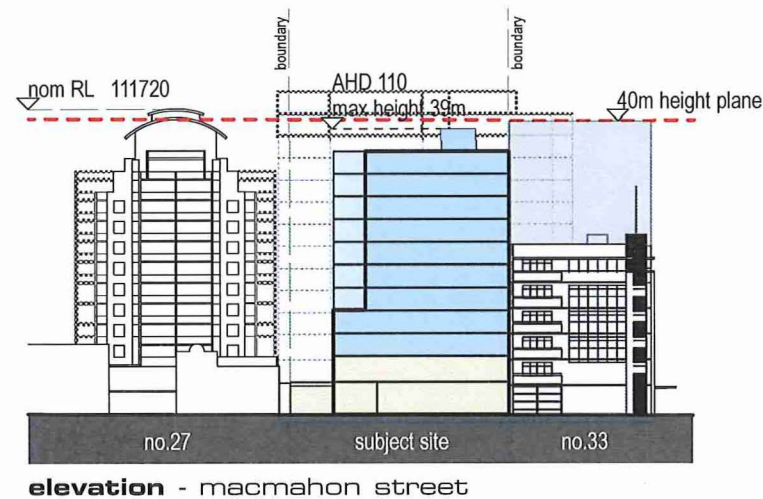
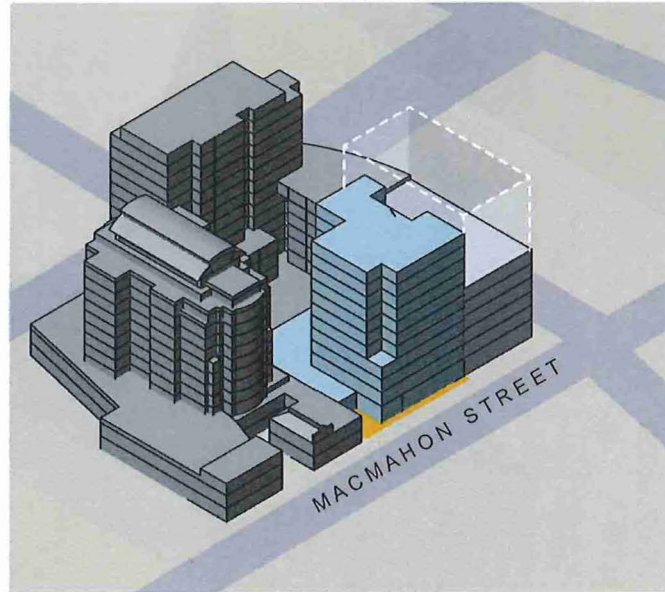
kennedy associates architects level 3 / 1 booth street annandale 2038 p + 61 2 9557 6466 f + 61 2 9557 6477 nominated architect - steve kennedy - registration no. 5828



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**B**

**FSR 4.5 : 1**  
(OPT B.1)

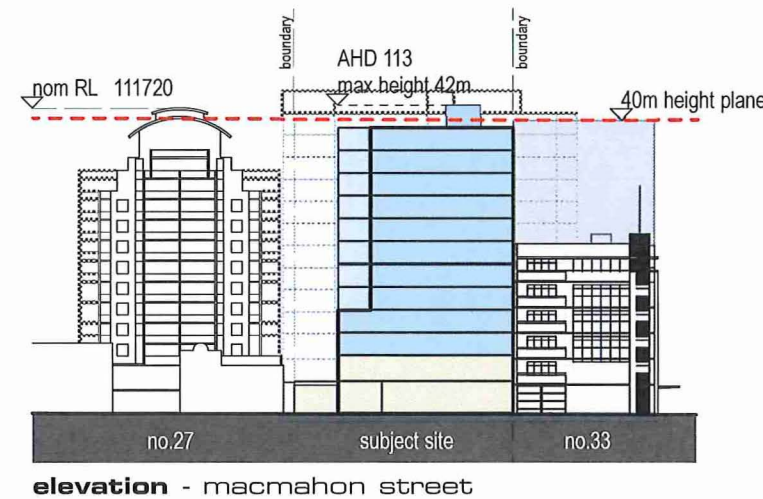
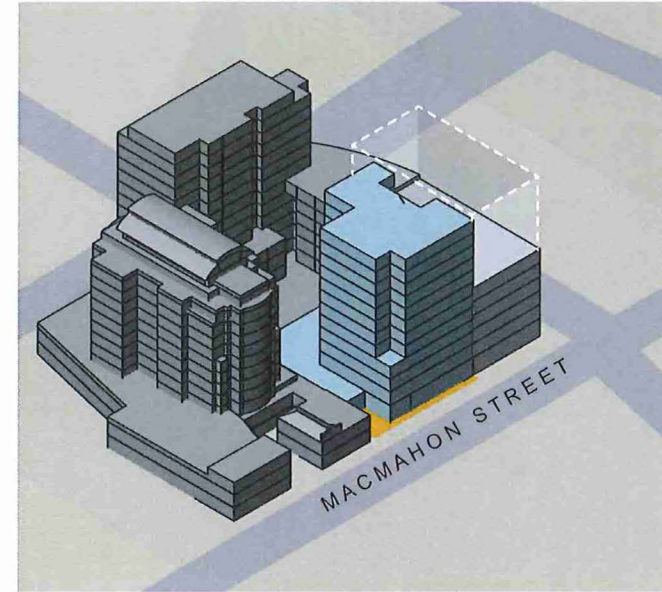
**SUMMARY**

Site Area 1113 sq m  
LEP permissible FSR 4.5 : 1  
permissible GFA 5008 sq m

GFA proposed 5000 sq m  
FSR proposed 4.5 : 1

**HEIGHT**

height in storeys 11  
height to FCL of upper  
most floor nom 36m  
max height nom 39m



**FSR 5.0 : 1**  
(OPT B.2)

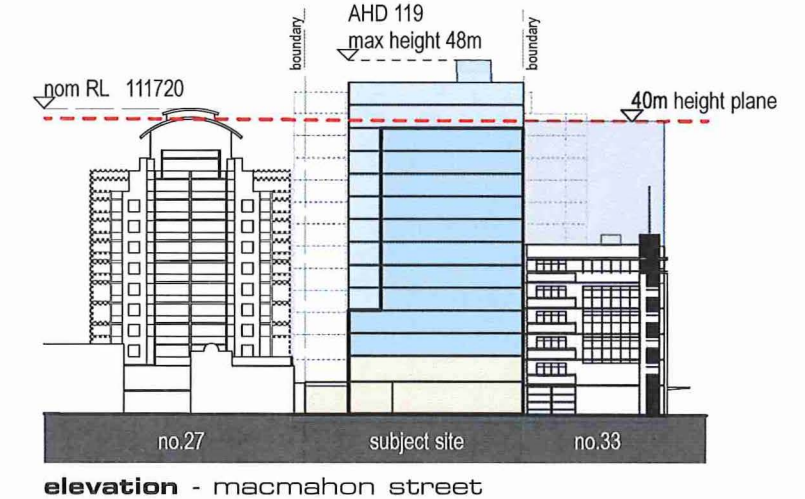
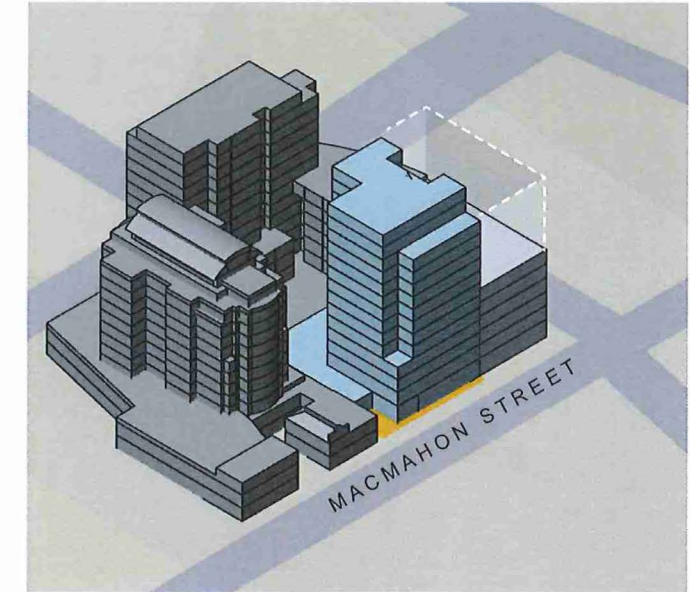
**SUMMARY**

Site Area 1113 sq m  
LEP permissible FSR 4.5 : 1  
permissible GFA 5008 sq m

GFA proposed 5700 sq m  
FSR proposed 5 : 1

**HEIGHT**

height in storeys 12  
height to FCL of upper  
most floor nom 39m  
max height nom 42m



**FSR 5.5 : 1**  
(OPT B.3)

**SUMMARY**

Site Area 1113 sq m  
LEP permissible FSR 4.5 : 1  
permissible GFA 5008 sq m

GFA proposed 6096 sq m  
FSR proposed 5.5 : 1

**HEIGHT**

height in storeys 14  
height to FCL of upper  
most floor nom 45m  
max height nom 48m

**OPT B - FSR / HEIGHT STUDIES A**

urban design study

29-31 Macmahon Street, HURSTVILLE

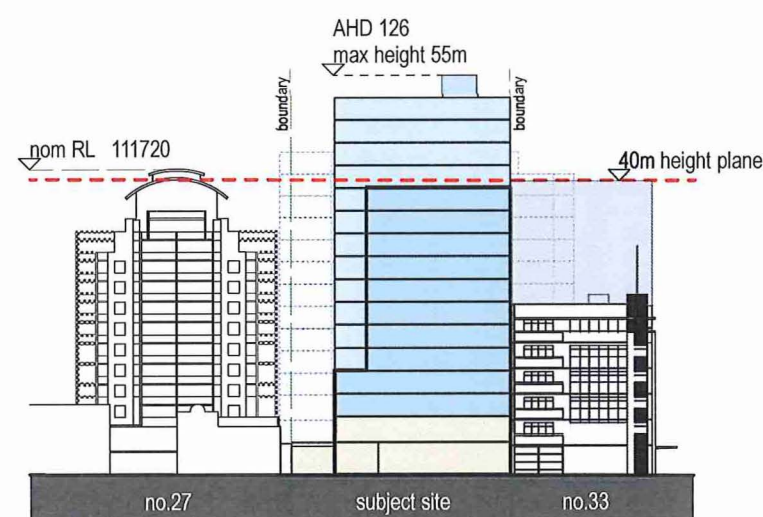
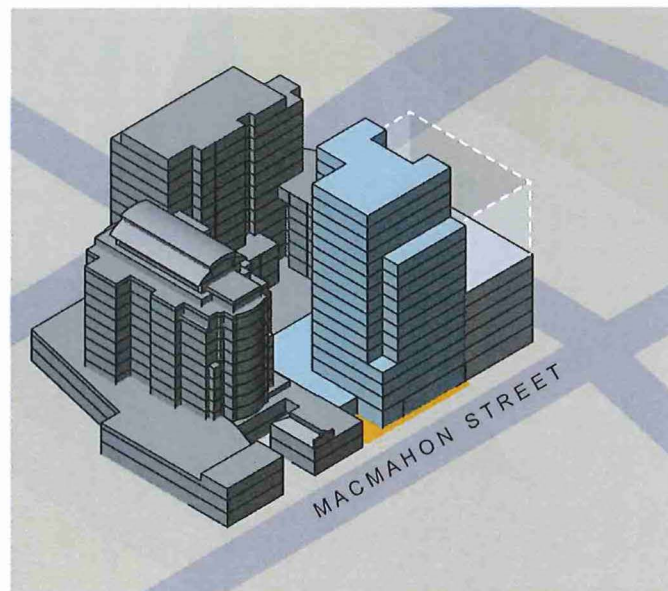
kennedy associates architects level 3 / 1 booth street annandale 2038 p + 61 2 9557 6466 f + 61 2 9557 6477 nominated architect - steve kennedy - registration no. 5828

0 10 20 50m  
1:1000 @ A3

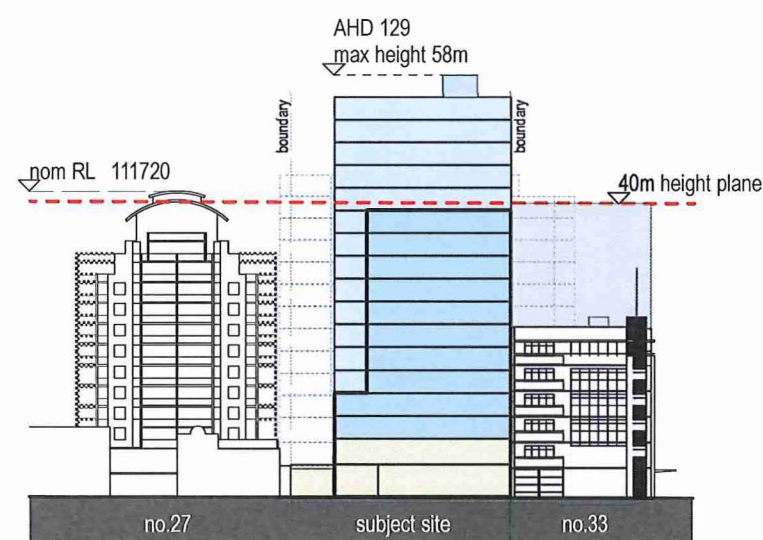
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elevation - macmahon street



elevation - macmahon street

**B**

**FSR 6.0 : 1**  
(OPT B.4)

**SUMMARY**

Site Area 1113 sq m  
LEP permissible FSR 4.5 : 1  
permissible GFA 5008 sq m

GFA proposed 6700 sq m  
FSR proposed 6 : 1

**HEIGHT**

height in storeys 16  
height to FCL of upper  
most floor nom 52m  
max height nom 55m

**FSR 6.5 : 1**  
(OPT B.5)

**SUMMARY**

Site Area 1113 sq m  
LEP permissible FSR 4.5 : 1  
permissible GFA 5008 sq m

GFA proposed 7200 sq m  
FSR proposed 6.5 : 1

**HEIGHT**

height in storeys 17  
height to FCL of upper  
most floor nom 55m  
max height nom 58m

**OPT B - FSR / HEIGHT STUDIES B**

urban design study

29-31 Macmahon Street, HURSTVILLE

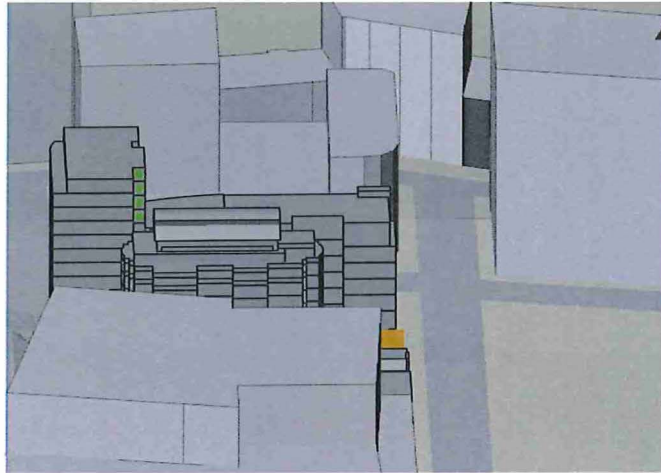
kennedy associates architects level 3 / 1 booth street annandale 2038 p + 61 2 9557 6466 f + 61 2 9557 6477 nominated architect - steve kennedy - registration no. 5828

0 10 20 50m  
1:1000 @ A3

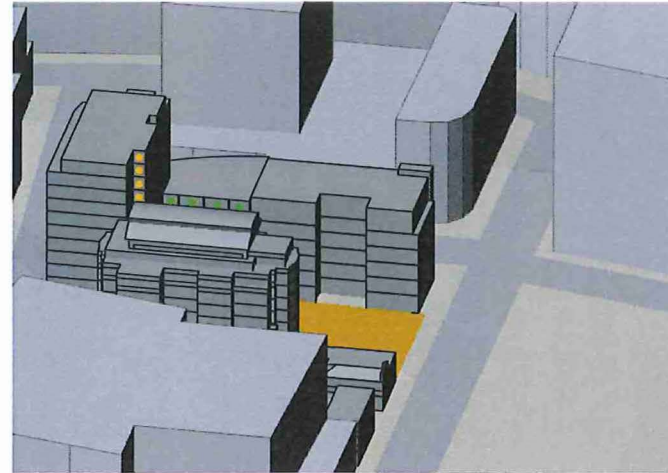
1610 - 213

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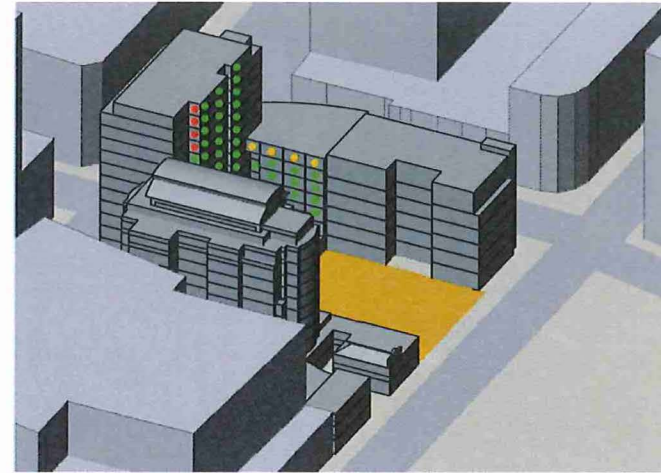




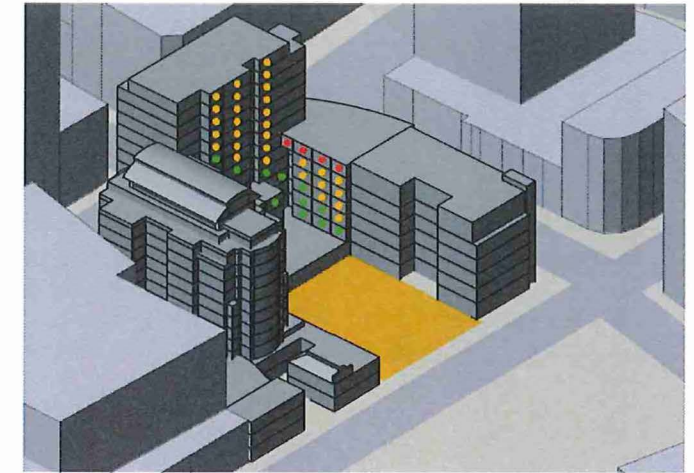
9am - winter sun



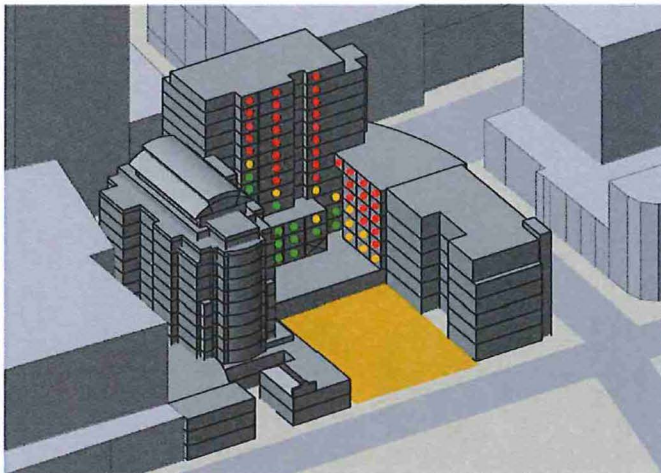
10am - winter sun



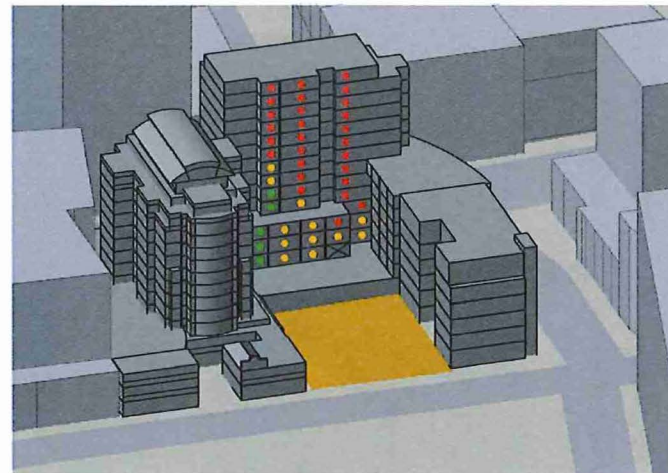
11am - winter sun



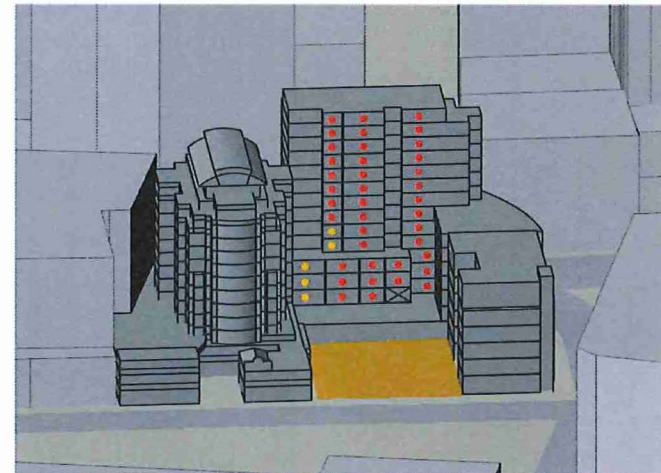
12pm - winter sun



1pm - winter sun



2pm - winter sun



3pm - winter sun

## SOLAR PERFORMANCE

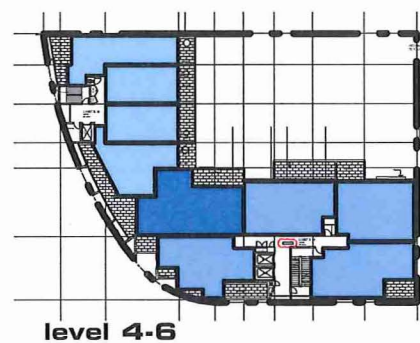
Total No. of Units - nom 98

| SOLAR ACCESS          |   | NO UNITS | %   |
|-----------------------|---|----------|-----|
| less than 15 mins sun |   | 34       | 35% |
| min 15 mins sun       | ● | 1        |     |
| min 1hrs sun          | ● | 11       |     |
| min 2hrs sun          | ● | 52       | 53% |

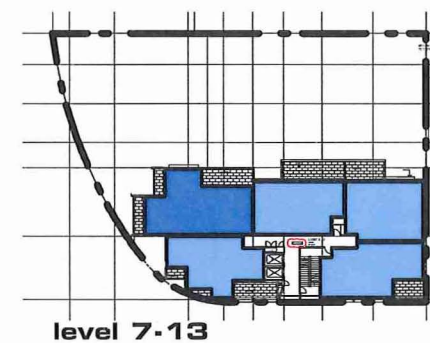
## TYPICAL PLANS - 'HUA CHENG'



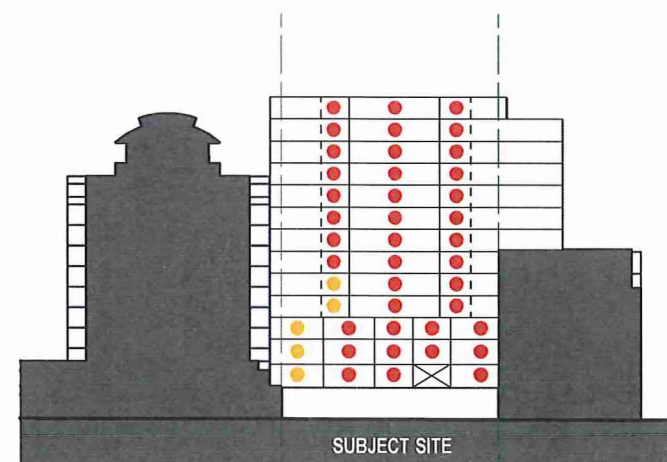
level 1-3



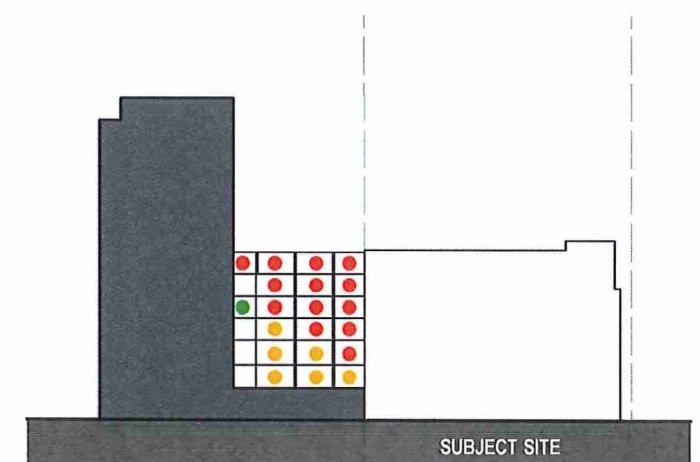
level 4-6



level 7-13



north west elevation



north east elevation

## SHADOW ANALYSIS - UNDEVELOPED SITE

urban design study

29-31 Macmahon Street, HURSTVILLE

kennedy associates architects level 3 / 1 booth street annandale 2038 p + 61 2 9557 6466 f + 61 2 9557 6477 nominated architect - steve kennedy - registration no. 5828

0 10 20 50m  
1:1000 @ A3

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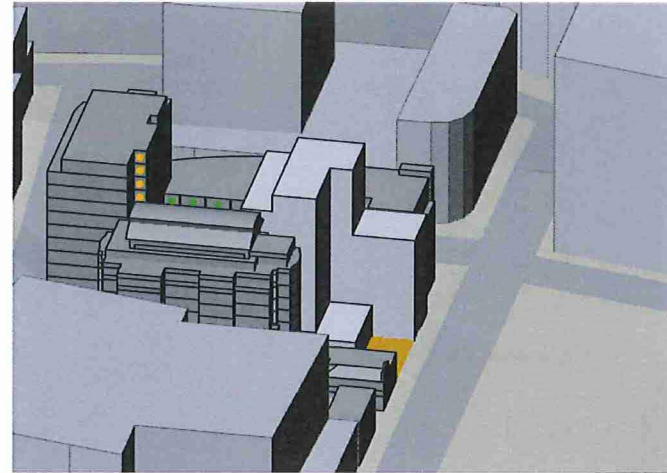


## COMMENT:

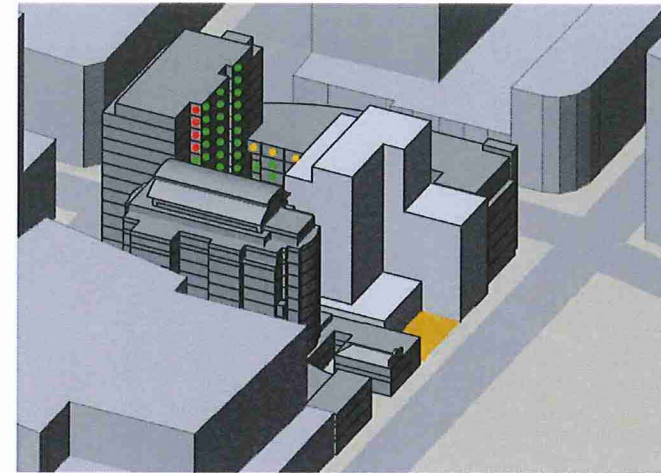
Diagrams show the impacts of the previously proposed building envelope identified in the Hurstville DCP for the subject site. The envelope, which was removed from the current DCP, was based on earlier urban design studies and shows a building which would have resulted in significantly greater impacts on adjoining properties than is now proposed.

Comparison is instructive in that this building form could have been built as a complying development on the site up to 2007 when the new DCP was introduced.

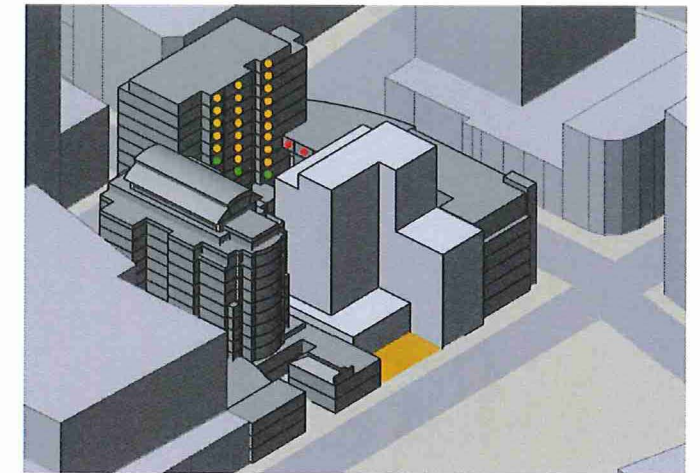
Planning Proposal seeks to improve amenity over that previously anticipated for site.



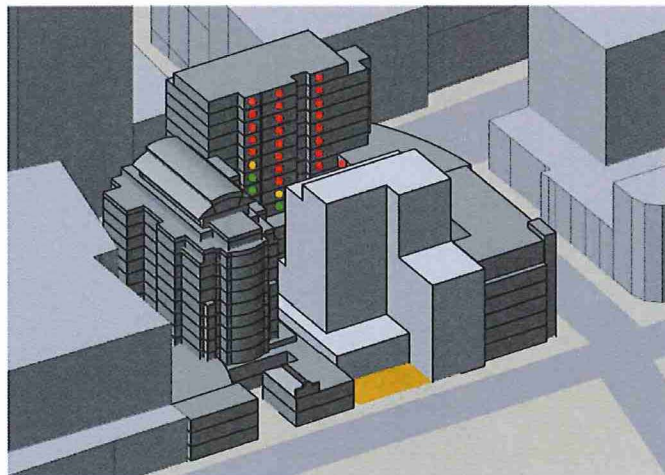
10am - winter sun



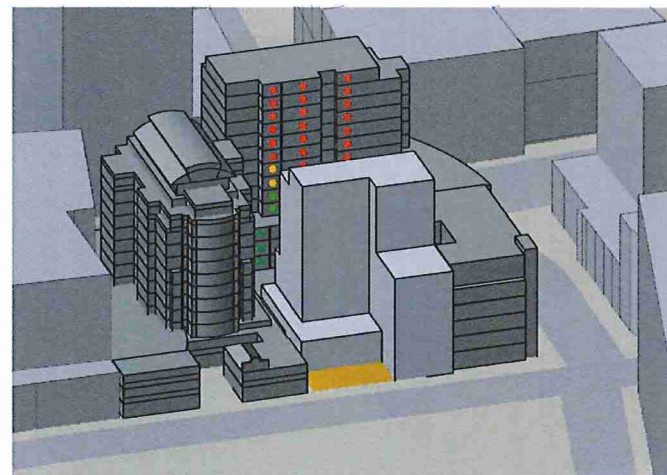
11am - winter sun



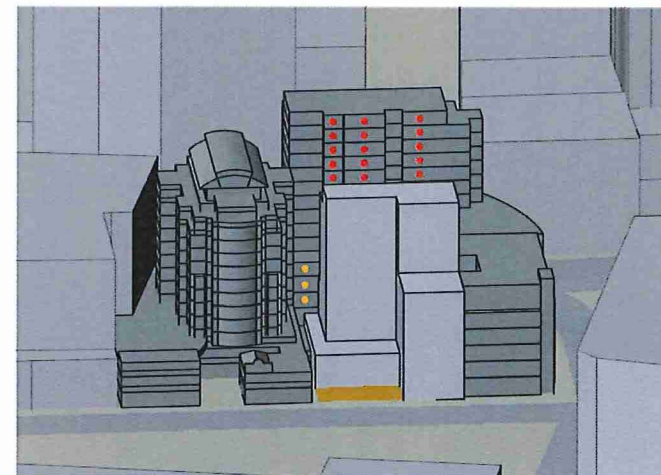
12pm - winter sun



1pm - winter sun



2pm - winter sun



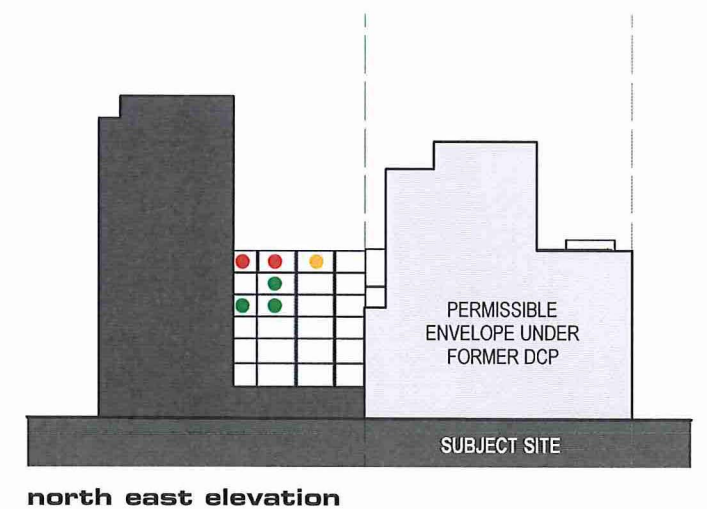
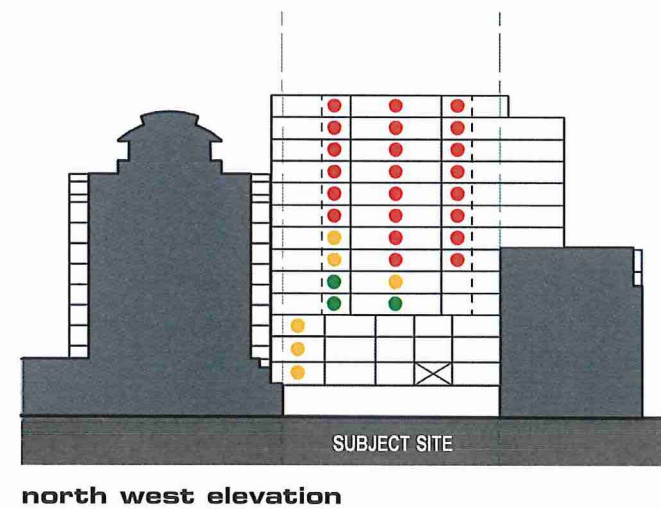
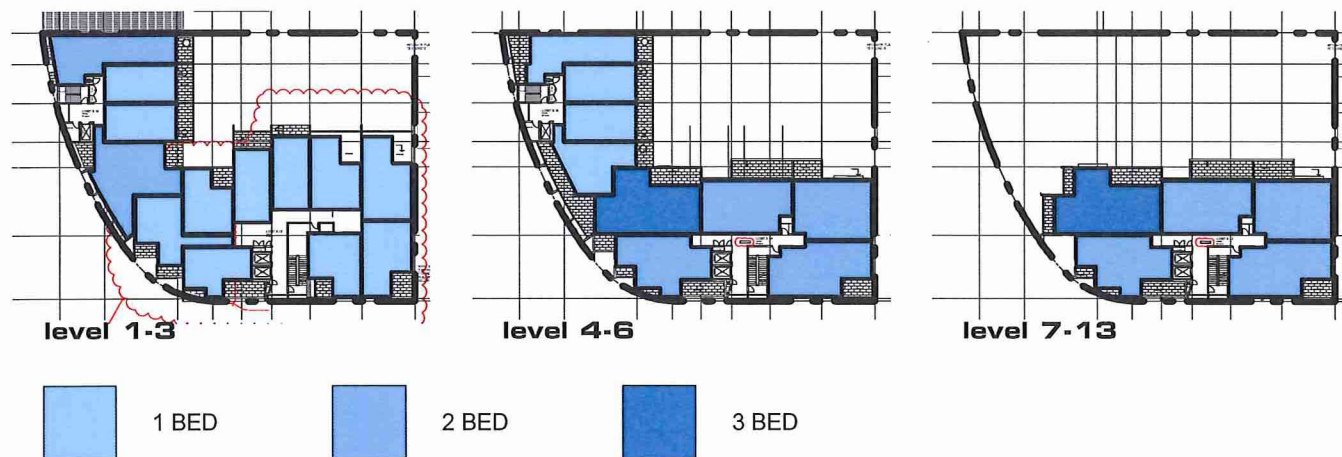
3pm - winter sun

## SOLAR PERFORMANCE

Total No. of Units - nom 98

| SOLAR ACCESS          | NO UNITS | %   |
|-----------------------|----------|-----|
| less than 15 mins sun | 61       | 62% |
| min 15 mins sun       | 6        |     |
| min 1hrs sun          | 7        |     |
| min 2hrs sun          | 24       | 25% |

## TYPICAL PLANS - 'HUA CHENG'



## SHADOW ANALYSIS - FORMER DCP ENVELOPE

urban design study

29-31 Macmahon Street, HURSTVILLE

kennedy associates architects level 3 / 1 booth street annandale 2038 p + 61 2 9557 6466 f + 61 2 9557 6477 nominated architect - steve kennedy - registration no. 5826

0 10 20 50m  
1:1000 @ A3

1610 - 215

MAY 2016

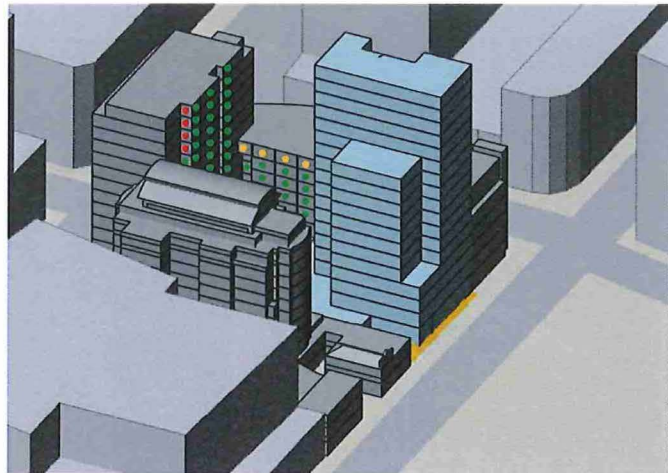




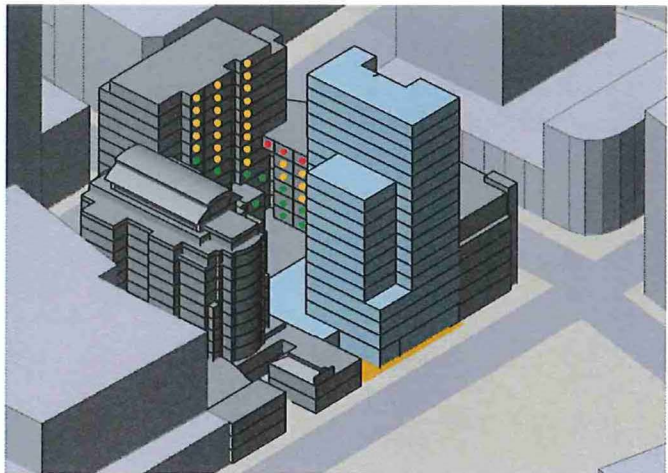
9am - winter sun



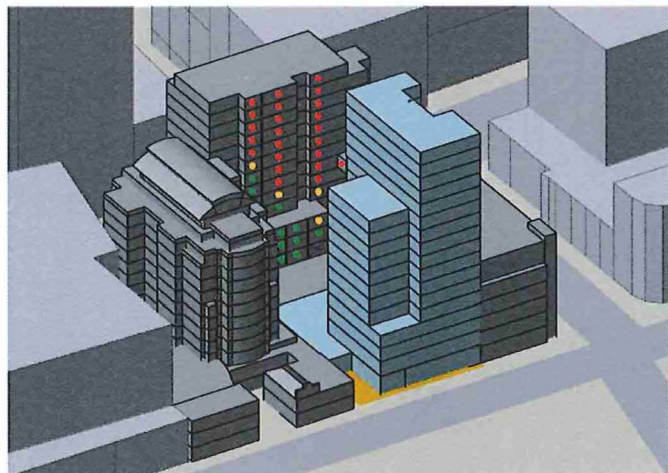
10am - winter sun



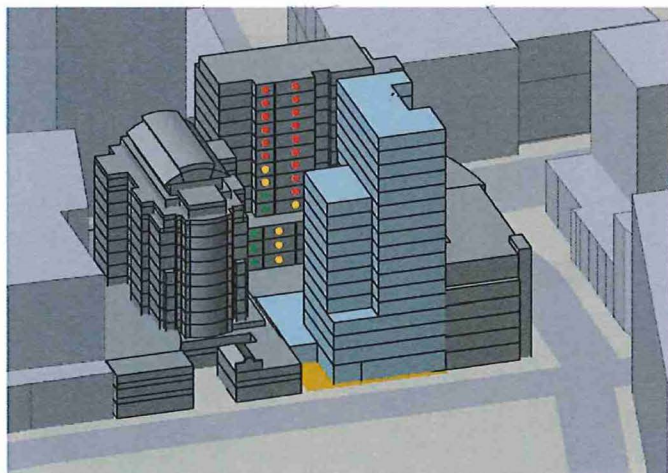
11am - winter sun



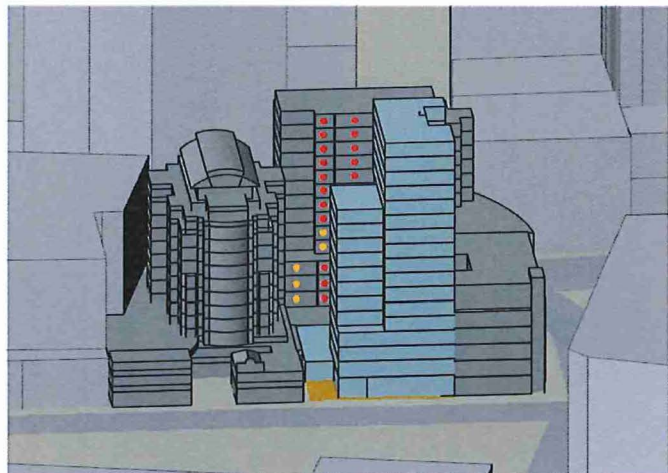
12pm - winter sun



1pm - winter sun



2pm - winter sun



3pm - winter sun

### SOLAR PERFORMANCE

Total No. of Units - nom 98

| SOLAR ACCESS          |   | NO UNITS | %   |
|-----------------------|---|----------|-----|
| less than 15 mins sun |   | 42       | 42% |
| min 15 mins sun       | ● | 7        |     |
| min 1hrs sun          | ● | 16       |     |
| min 2hrs sun          | ● | 33       | 34% |

### TYPICAL PLANS - 'HUA CHENG'



level 1-3



level 4-6



level 7-13



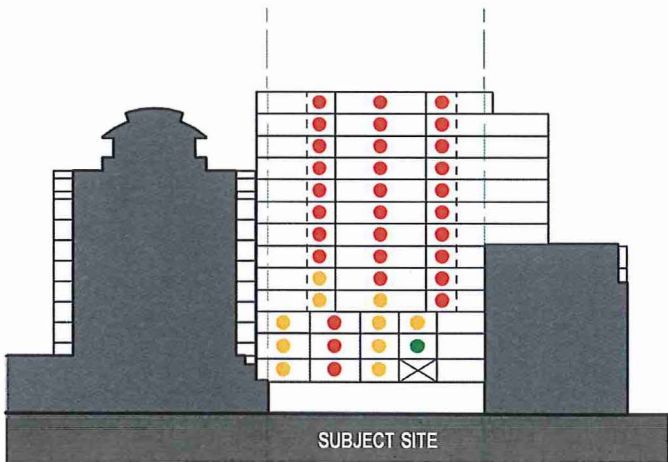
1 BED



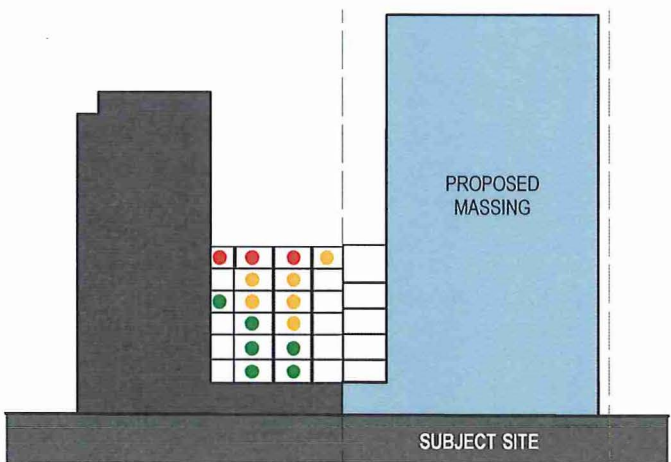
2 BED



3 BED



north west elevation



north east elevation

### SHADOW ANALYSIS - MASSING OPT A.4

urban design study

29-31 Macmahon Street, HURSTVILLE

kennedy associates architects level 3 / 1 booth street annandale 2038 p + 61 2 9557 6466 f + 61 2 9557 6477 nominated architect - steve kennedy - registration no. 5828

0 10 20 50m  
1:1000 @ A3

1610 - 216

MAY 2016

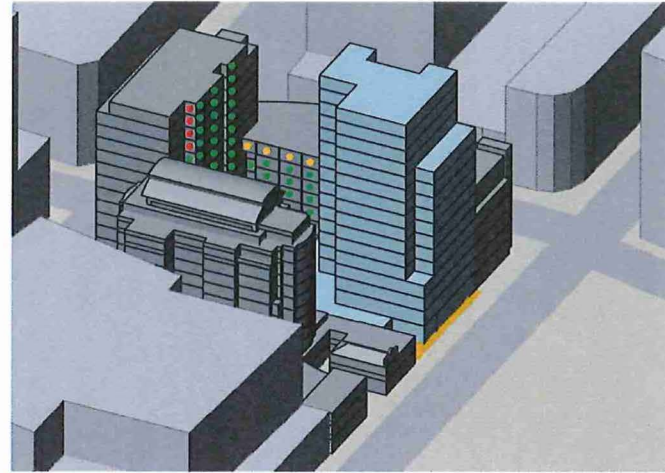




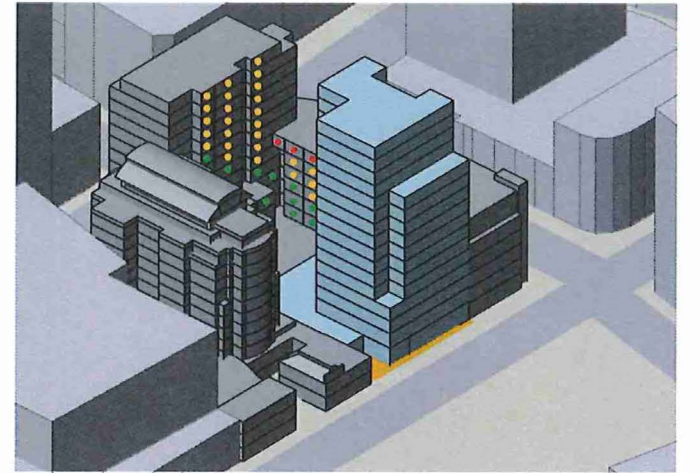
9am - winter sun



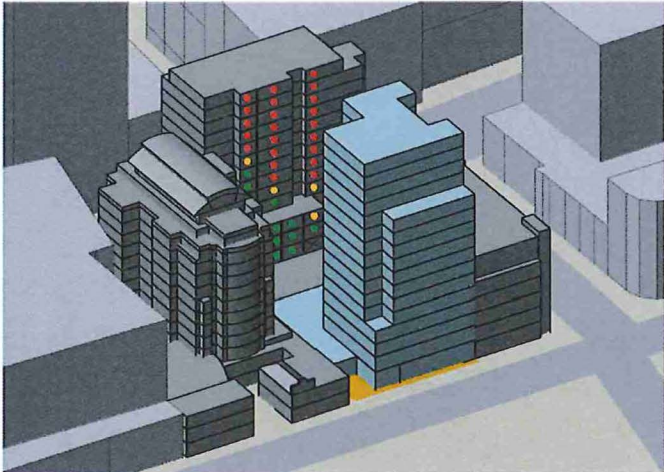
10am - winter sun



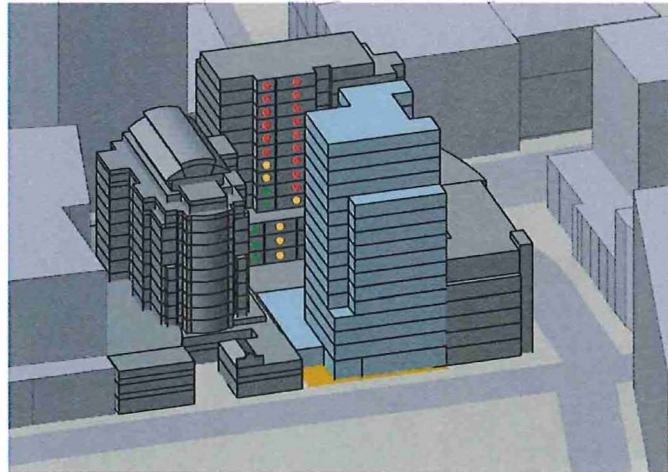
11am - winter sun



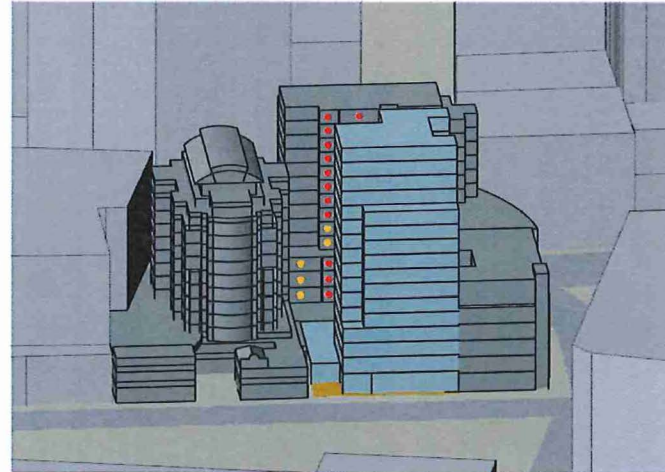
12pm - winter sun



1pm - winter sun



2pm - winter sun



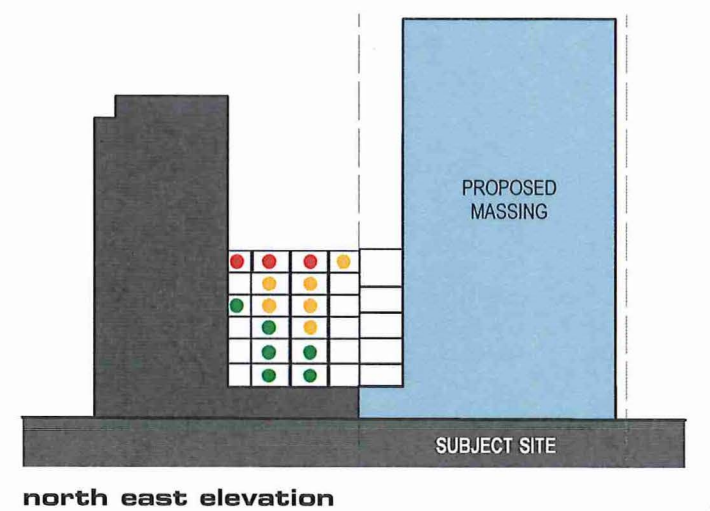
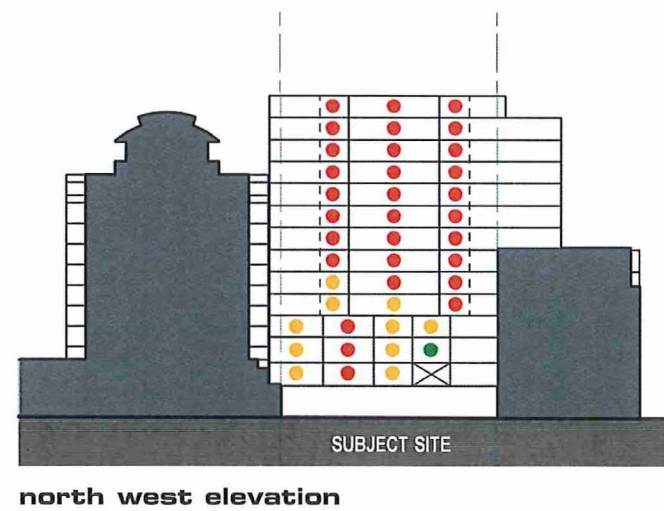
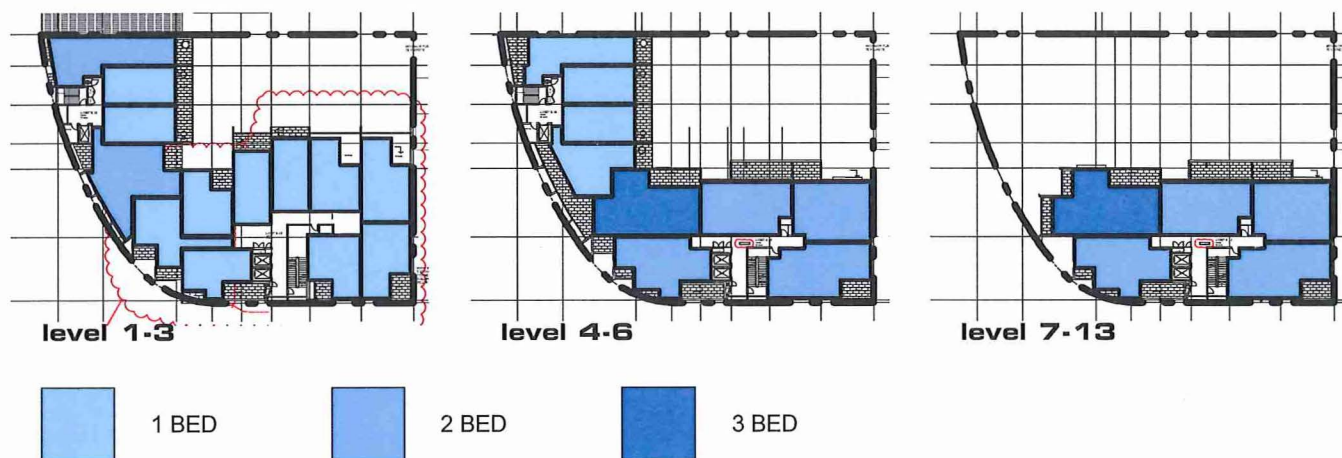
3pm - winter sun

## SOLAR PERFORMANCE

Total No. of Units - nom 98

| SOLAR ACCESS          | NO UNITS | %   |
|-----------------------|----------|-----|
| less than 15 mins sun | 42       | 42% |
| min 15 mins sun       | 7        |     |
| min 1hrs sun          | 16       |     |
| min 2hrs sun          | 33       | 34% |

## TYPICAL PLANS - 'HUA CHENG'



## SHADOW ANALYSIS - MASSING OPT B.4

urban design study

29-31 Macmahon Street, HURSTVILLE

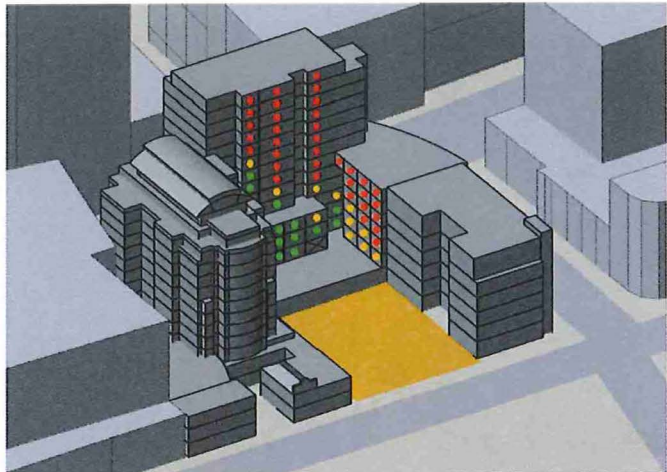
kennedy associates architects level 3 / 1 booth street annandale 2038 p + 61 2 9557 6466 f + 61 2 9557 6477 nominated architect - steve kennedy - registration no. 5828

0 10 20 50m  
1:1000 @ A3

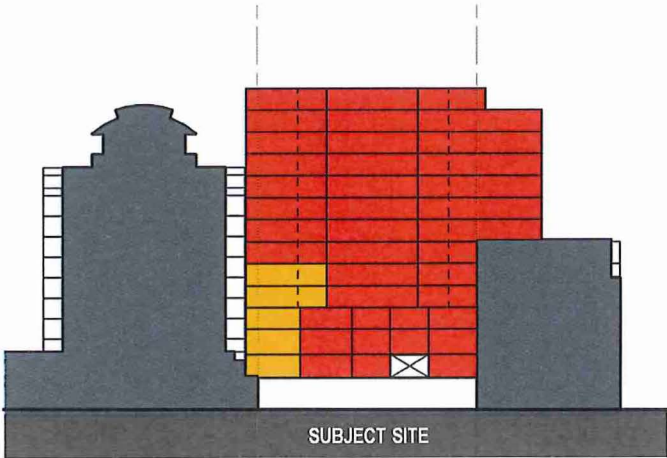
1610 - 217

MAY 2016

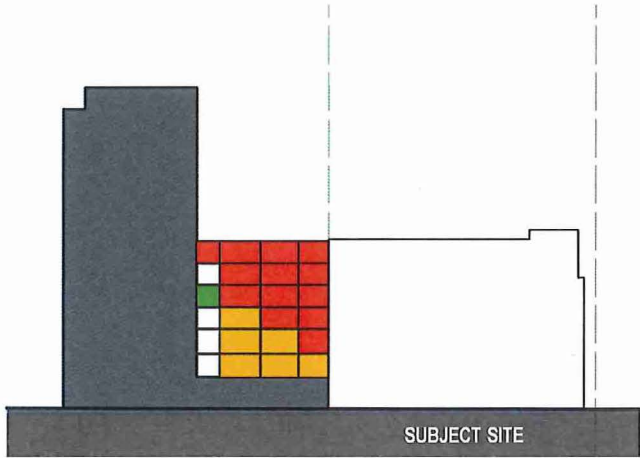




**SUBJECT SITE UNDEVELOPED**



**north west elevation**  
88% receive 2hrs sun

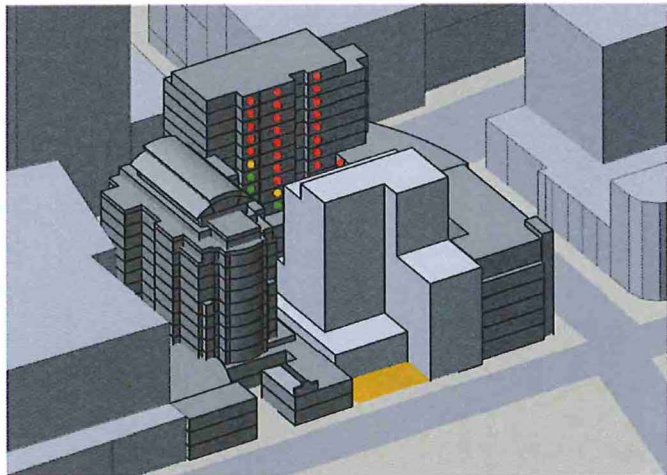


**north east elevation**  
54% receive 2hrs sun

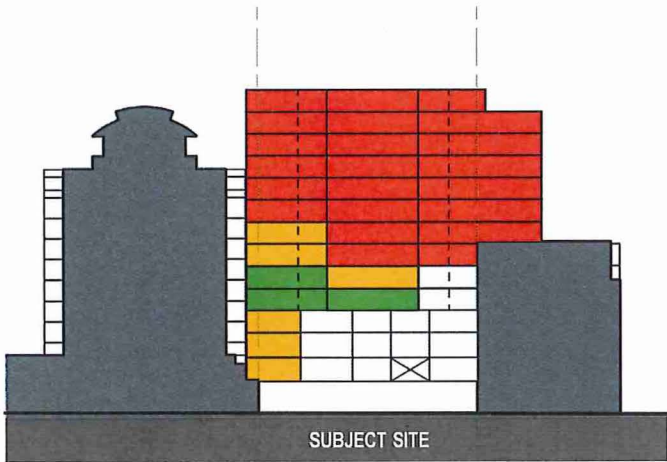
### 29-31 MACMAHON ST UNDEVELOPED

Total No. of Units - nom 98

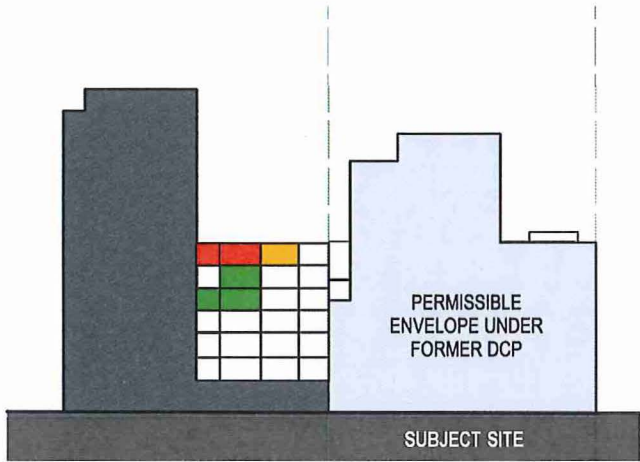
| SOLAR ACCESS          |  | NO UNITS | %   |
|-----------------------|--|----------|-----|
| less than 15 mins sun |  | 34       | 35% |
| min 15 mins sun       |  | 1        |     |
| min 1hrs sun          |  | 11       |     |
| min 2hrs sun          |  | 52       | 53% |



**PERMISSIBLE ENVELOPE  
UNDER FORMER DCP**



**north west elevation**  
50% receive 2hrs sun

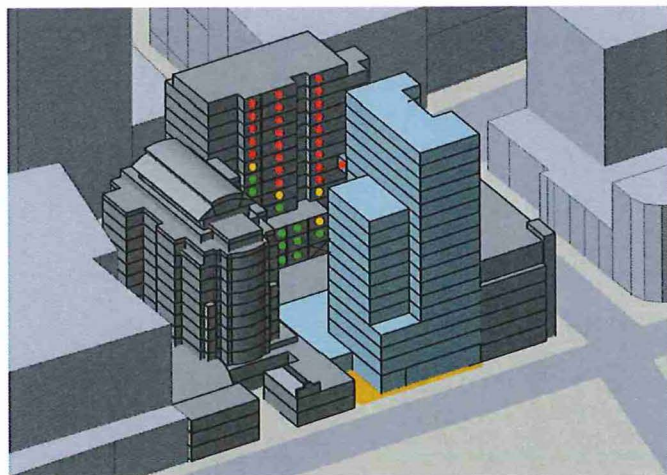


**north east elevation**  
8% receive 2hrs sun

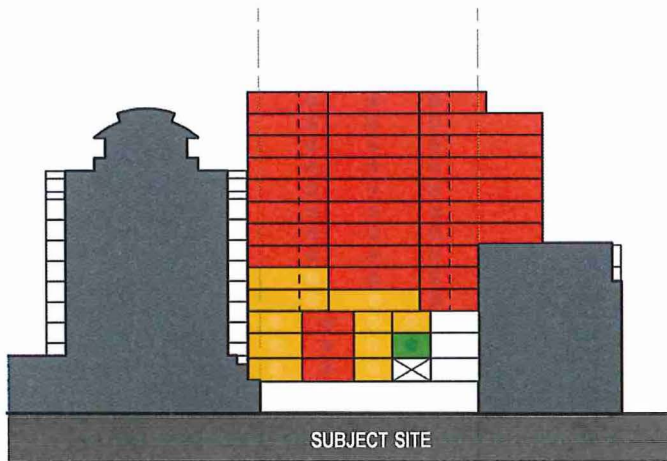
### PERMISSIBLE ENVELOPE UNDER FORMER DCP

Total No. of Units - nom 98

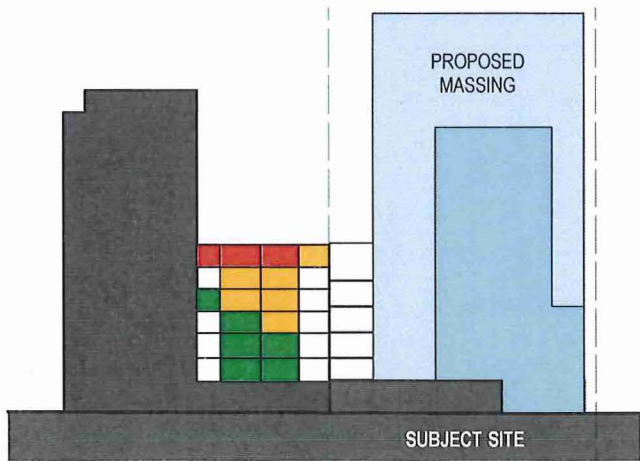
| SOLAR ACCESS          |  | NO UNITS | %   |
|-----------------------|--|----------|-----|
| less than 15 mins sun |  | 61       | 62% |
| min 15 mins sun       |  | 6        |     |
| min 1hrs sun          |  | 7        |     |
| min 2hrs sun          |  | 24       | 25% |



**PROPOSED MASSING A.4**



**north west elevation**  
68% receive 2hrs sun



**north east elevation**  
12% receive 2hrs sun

### PROPOSED MASSING

Total No. of Units - nom 98

| SOLAR ACCESS          |  | NO UNITS | %   |
|-----------------------|--|----------|-----|
| less than 15 mins sun |  | 42       | 42% |
| min 15 mins sun       |  | 7        |     |
| min 1hrs sun          |  | 16       |     |
| min 2hrs sun          |  | 33       | 34% |

### SHADOW ANALYSIS - SUMMARY

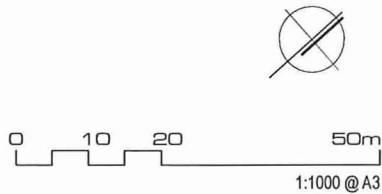
urban design study

29-31 Macmahon Street, HURSTVILLE

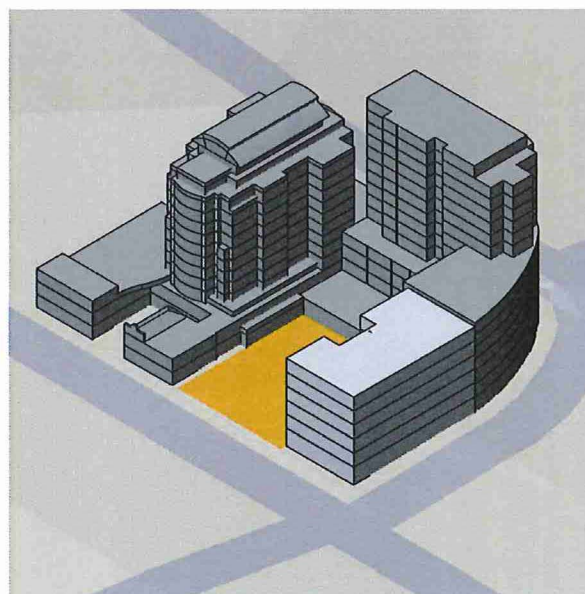
kennedy associates architects level 3 / 1 booth street annandale 2038 p + 61 2 9557 6466 f + 61 2 9557 6477 nominated architect - steve kennedy - registration no. 5828

1610 - 218

MAY 2016

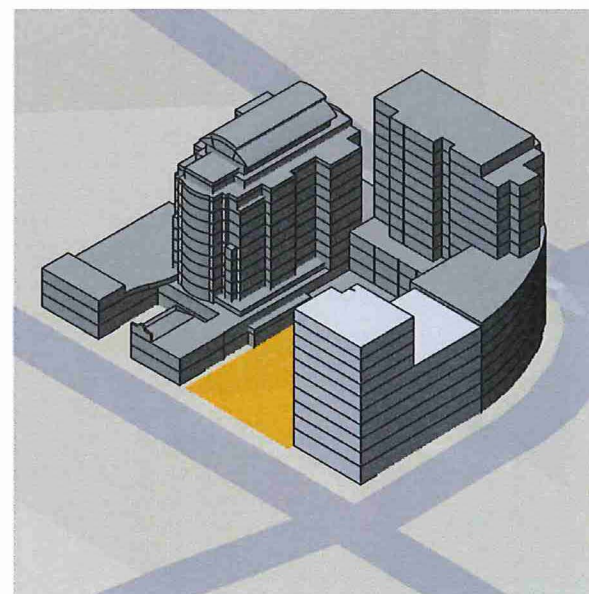






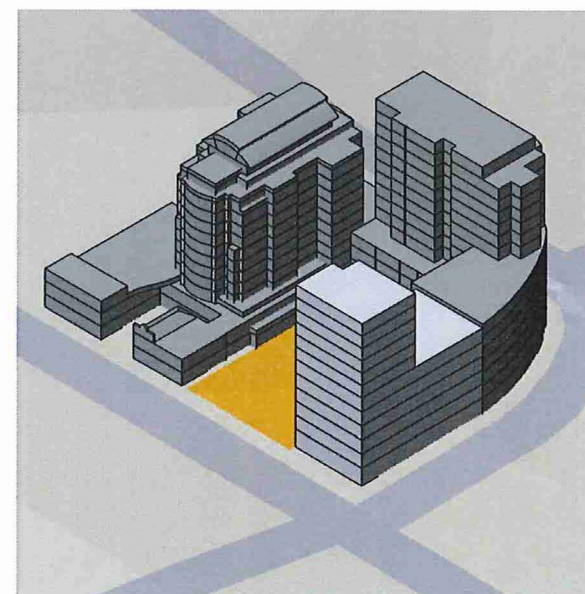
**EXISTING - FSR 4.5:1**  
6 storeys commercial

height: nom 24m



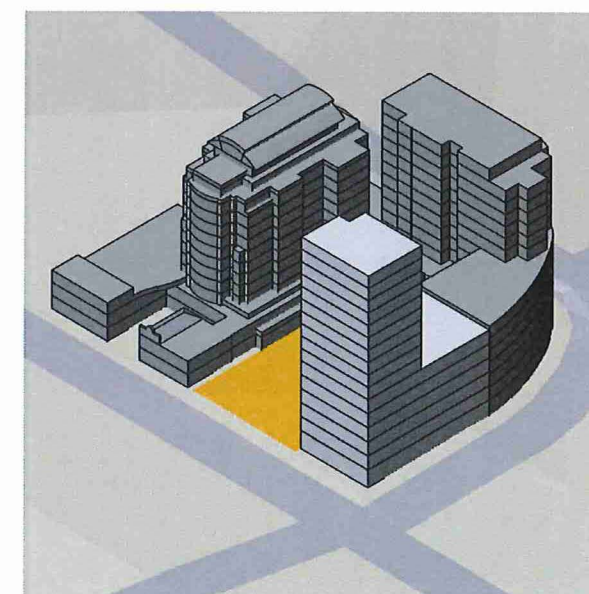
**FSR 6.0:1**  
6 storeys commercial  
4 storeys residential

height: nom 37m



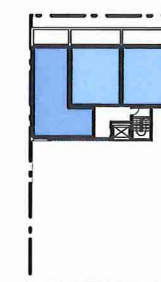
**FSR 6.5:1**  
6 storeys commercial  
6 storeys residential

height: nom 42m



**FSR 7.5:1**  
6 storeys commercial  
10 storeys residential

height: nom 55m



**typical plan**  
residential levels

**NOTE:**

heights indicated **exclude** parapets and lift over runs

**COMMENT:**

33 MacMahon Street is an existing 6 storey commercial building on the corner of MacMahon and Barratt Streets

The building was built in 2001  
The existing building has a height of 24m and an FSR of approximately 4.5:1 being the maximum currently permissible.

If the site were to be redeveloped to increase its overall height, it is assumed that only the corner portion of the building would be lifted.

On this basis:

- an increase in height to 40m would achieve an FSR of approximately 6.5:1
- an increase to say 58 / 60mm would achieve an FSR of approximately 7.5:1

## No.33 MACMAHON STREET - FSR ANALYSIS

urban design study

29-31 Macmahon Street, HURSTVILLE

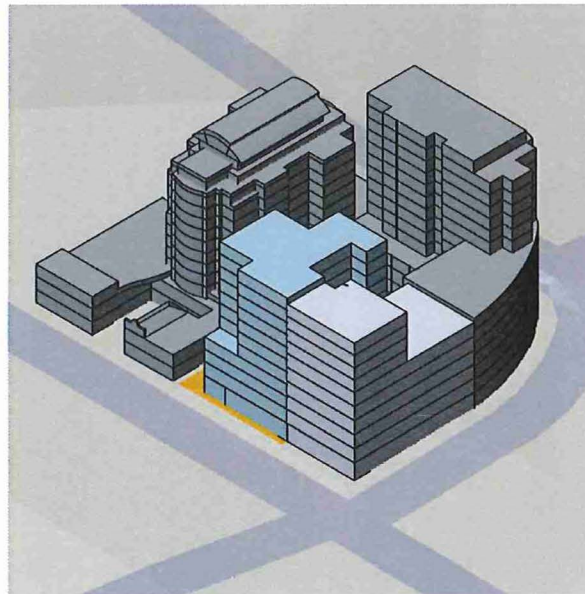
kennedy associates architects level 3 / 1 booth street annandale 2038 p + 61 2 9557 6466 f + 61 2 9557 6477 nominated architect - steve kennedy - registration no. 5828

1610 -

219

MAY 2016



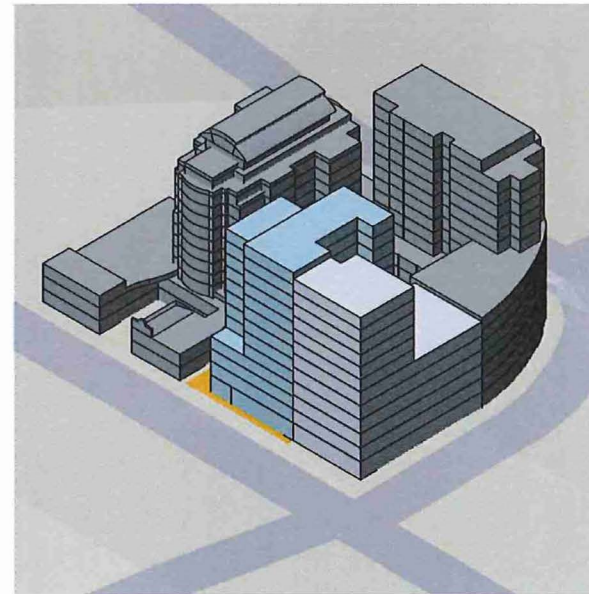


**DEVELOPMENT HEIGHT - 40m**

SUBJECT SITE 33 MACMAHON ST

FSR 4.5:1 2 storeys community use  
9 storeys residential

FSR 6.0:1 6 storeys commercial  
4 storeys residential

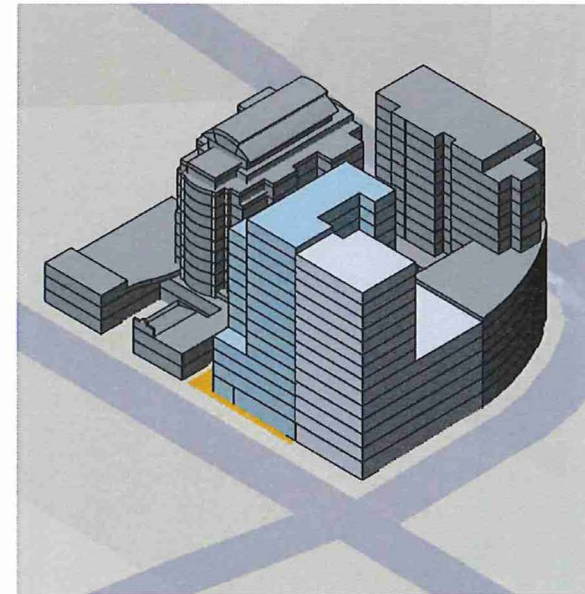


**DEVELOPMENT HEIGHT - 45m**

SUBJECT SITE 33 MACMAHON ST

FSR 5.0:1 2 storeys community use  
11 storeys residential

FSR 6.5:1 6 storeys community use  
6 storeys residential

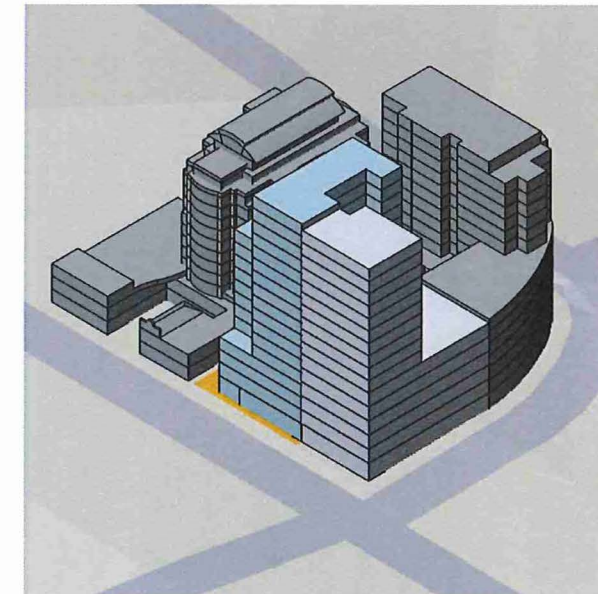


**DEVELOPMENT HEIGHT - 51m**

SUBJECT SITE 33 MACMAHON ST

FSR 5.5:1 2 storeys community use  
13 storeys residential

FSR 7.0:1 6 storeys commercial  
8 storeys residential



**DEVELOPMENT HEIGHT - 58m**

SUBJECT SITE 33 MACMAHON ST

FSR 6.0:1 2 storeys community use  
15 storeys residential

FSR 7.5:1 6 storeys commercial  
10 storeys residential

**NOTE:**

heights indicated include parapets and lift over runs

## DEVELOPMENT HEIGHT ANALYSIS

urban design study

29-31 Macmahon Street, HURSTVILLE

kennedy associates architects level 3 / 1 booth street annandale 2038 p + 61 2 9557 6466 f + 61 2 9557 6477 nominated architect - steve kennedy - registration no. 5828

1610 -

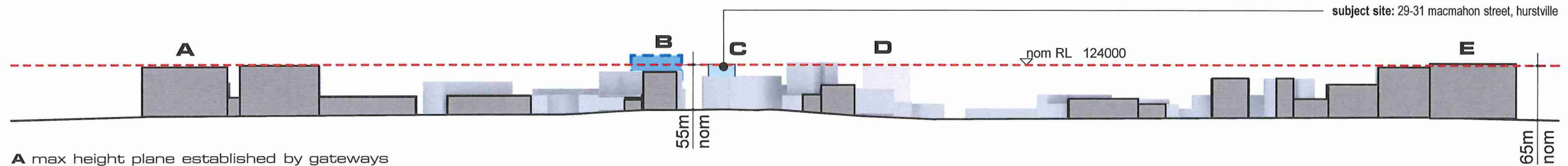
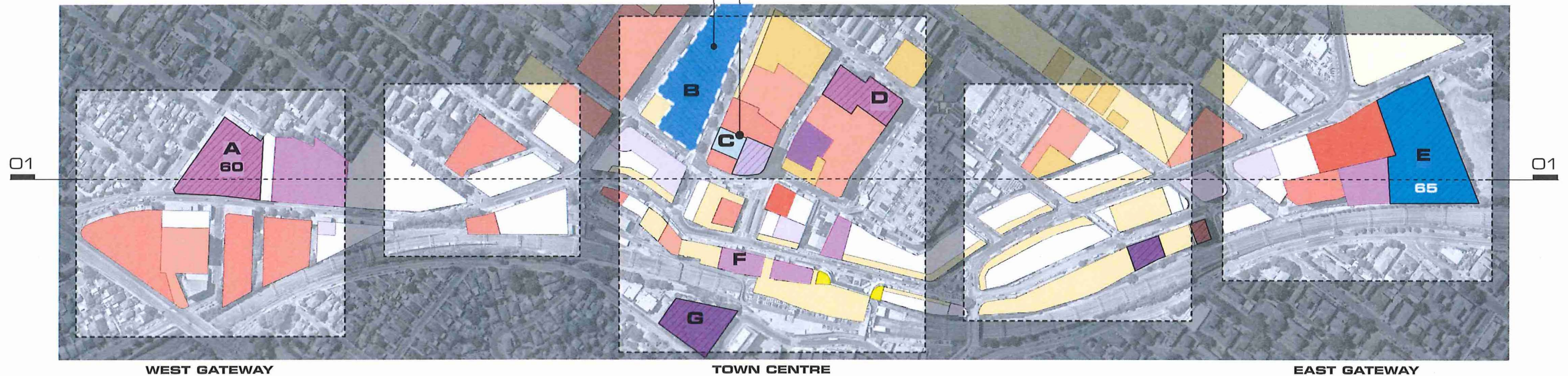
220

MAY 2016

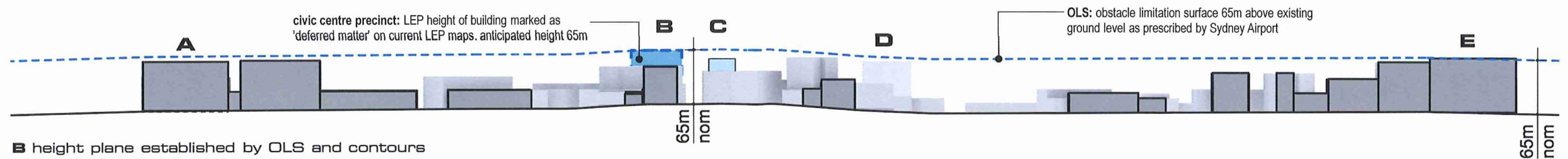


civic centre precinct: LEP height of building marked as 'deferred matter' on current LEP maps. anticipated height 65m

subject site: 29-31 macmahon street, hurstville



**A** max height plane established by gateways  
(refer section line 01)



**B** height plane established by OLS and contours  
(refer section line 01)

## COMMENT:

### Obstacle Limitation Surface (OLS)

The Obstacle Limitation Surface (OLS) defines the airspace surrounding an airport that must be protected from obstacles so aircraft flying in good weather during the initial and final stages of flight, or in the vicinity of the airport, can do so safely. Our understanding is that with respect to Hurstville Town Centre the relevant OLS is 65m above the ground level. This height can be exceeded but only through a complex approval process.

Accordingly, it can be argued that in urban design terms the OLS becomes the default benchmark maximum building height for the Town Centre. This is evidenced in the current and recent approvals of buildings, including the gateway developments of up to but not exceeding 65m in height

### Building Height in Hurstville Town Centre

The existing context, built form and OLS requirements suggest two approaches to establishing the appropriate long term height plane for the Town Centre associated with MacMahon Street

### A:

Make the overall height of the town centre equal to the top of the existing gateway developments.  
Given the ground level of MacMahon Street (the highest point in Hurstville) is approximately 10m higher than the ground level of the East Gateway this would mean that building heights in MacMahon Street, including those of the council site opposite the subject site, would be limited to an overall height of approximately 55m

### B:

Use the OLS and height of the gateway developments to establish the benchmark for the height of the buildings in the Town Centre but allow the building heights to also respond to the changing topography. This would mean that building heights in MacMahon Street, including those of the council site opposite the subject site, would be limited to an overall height of approximately 65m.

## NOTE:

heights of building shown as permissible and as approved

proposed massing  
anticipated massing

### Maximum Building Height (m)

|   |    |    |    |
|---|----|----|----|
| J | 9  | S  | 23 |
| K | 10 | T  | 28 |
| L | 11 | U  | 30 |
| M | 12 | V  | 35 |
| N | 13 | W  | 40 |
| O | 15 | X  | 45 |
| P | 18 | Z  | 55 |
| Q | 19 | AA | 60 |
| R | 21 |    | 65 |

## HEIGHT CONTEXT A

urban design study

29-31 Macmahon Street, HURSTVILLE

kennedy associates architects level 3 / 1 booth street annandale 2038 p + 61 2 9557 6466 f + 61 2 9557 6477 nominated architect - steve kennedy - registration no. 5828

1610 - 221

MAY 2016



civic centre precinct: LEP height of building marked as 'deferred matter' on current LEP maps. anticipated height 65m

subject site: 29-31 macmahon street, hurstville

01

01



WEST GATEWAY

TOWN CENTRE

EAST GATEWAY



section 01 - anticipated heights across hurstville town centre based on existing development patterns

### COMMENT:

The analysis in this study identifies that:

- Hurstville has an identifiable development pattern based on the East and West Gateway locations & the Town Centre
- the Commercial Precinct and Hurstville Town Centre already contain a significant range of development
- this range includes both the type and scale of development and buildings of up to 60m in height
- Hurstville Town Centre is the location most appropriate for a continuing intensification of urban form within the Precinct
- Hurstville Town Centre is the location most likely to continue to experience an increase in height
- this height is likely to be up to 65m
- the height of the future development on the council owned civic centre site opposite the subject site is likely to be up to 65m
- the subject site is located at the core of Hurstville Town Centre
- the subject site is well placed to accommodate redevelopment that would be of 'strategic and site-specific merit'
- the subject site is well placed to accommodate an uplift in height of some form above that currently permitted
- given the existing and anticipated context, a building height on the subject site of 60m has the capacity to fit within the existing and anticipated urban context of MacMahon Street

### Maximum Building Height (m)

|   |    |    |    |
|---|----|----|----|
| J | 9  | S  | 23 |
| K | 10 | T  | 28 |
| L | 11 | U  | 30 |
| M | 12 | V  | 35 |
| N | 13 | W  | 40 |
| O | 15 | X  | 45 |
| P | 18 | Z  | 55 |
| Q | 19 | AA | 60 |
| R | 21 |    | 65 |



proposed location of new park under former DCP. marked as 'deferred matter' on current LEP maps

## HEIGHT CONTEXT B

urban design study

29-31 Macmahon Street, HURSTVILLE

kennedy associates architects level 3 / 1 booth street annandale 2038 p + 61 2 9557 6466 f + 61 2 9557 6477 nominated architect - steve kennedy - registration no. 5828

1610 -

222

MAY 2016