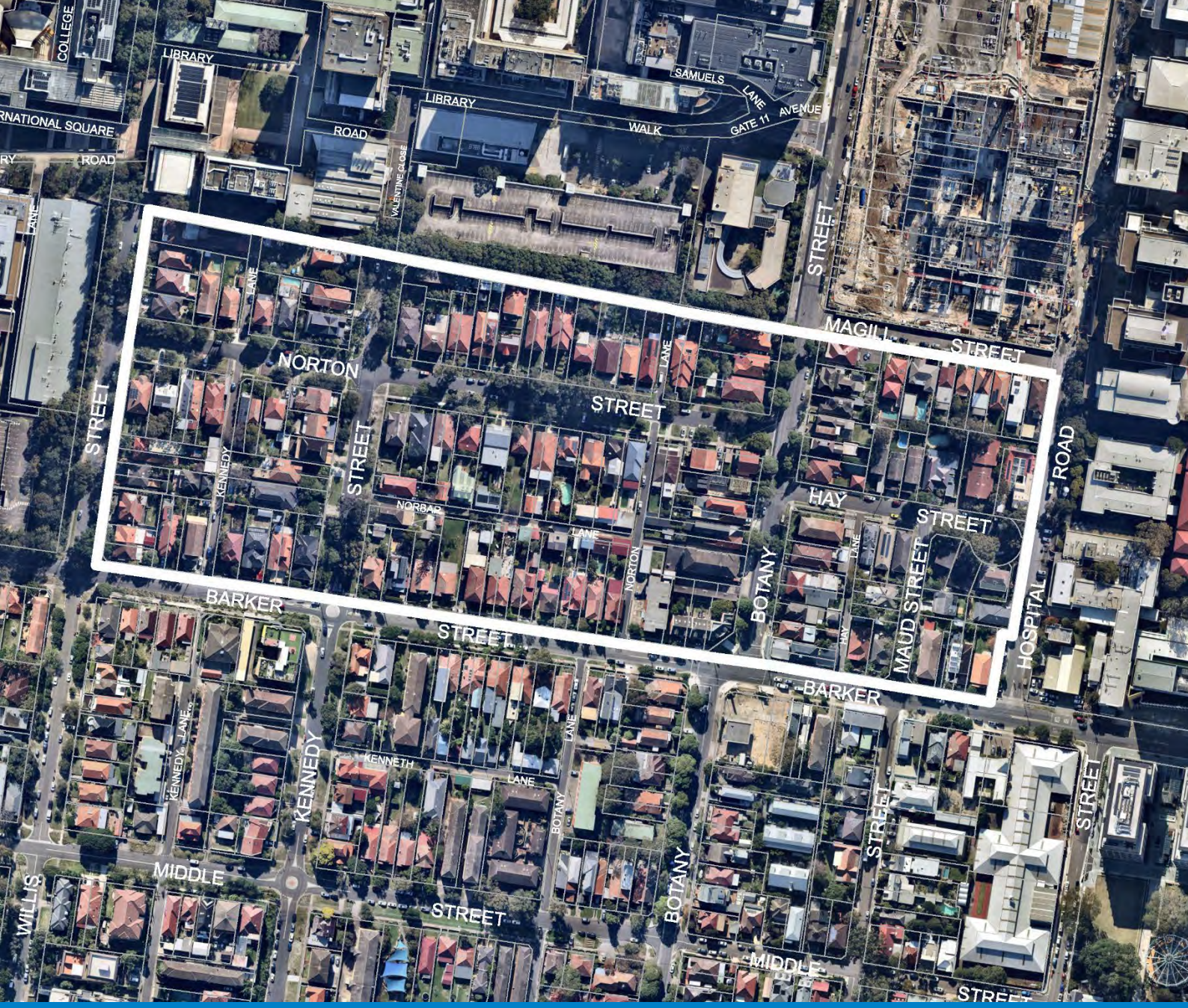
ATTACHMENT H(4)

Draft Magill Street HIA
Urban Design Analysis Report



STRATEGIC PLANNING

Magill Street Housing Investigation Area Urban Design Report

Planning Proposal

May 2022

Randwick City Council
a sense of community

1300 722 542
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Contents

1. Location

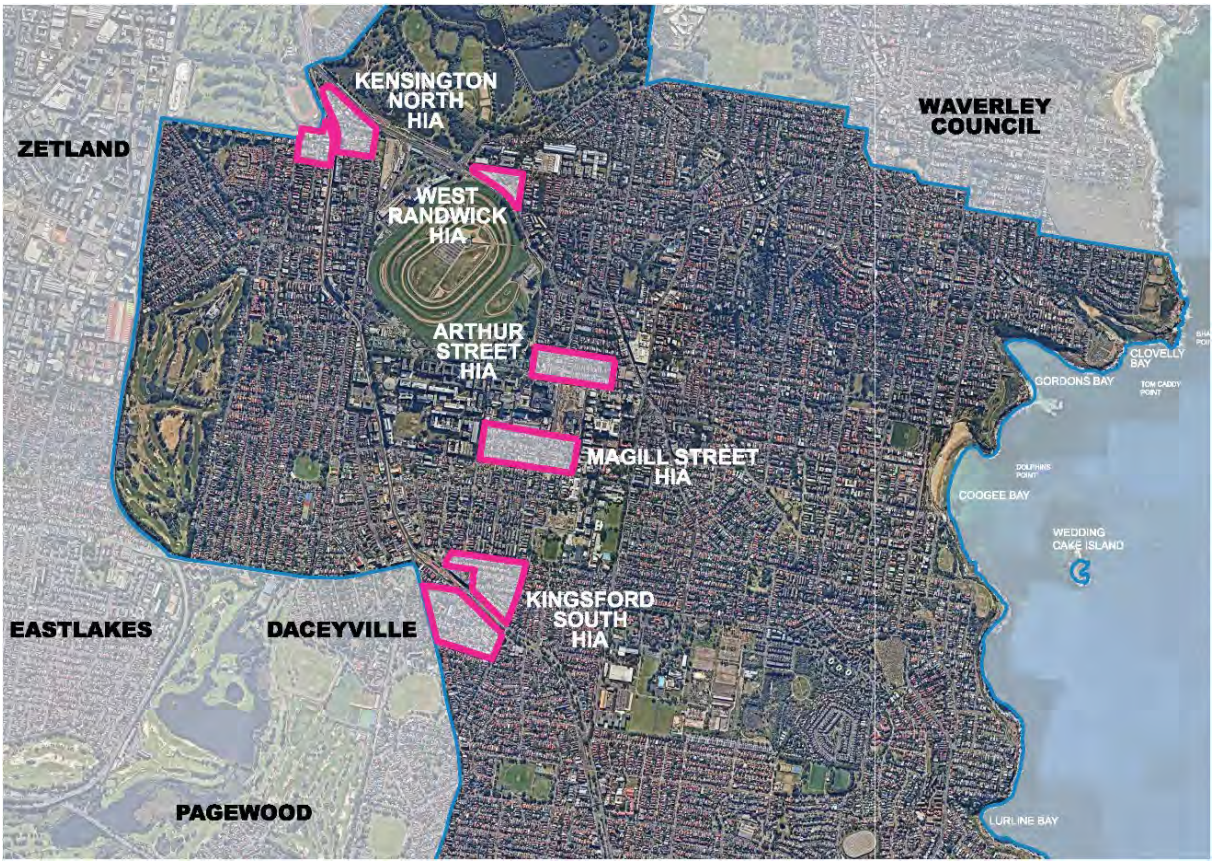
1.1. The HIA

- The Magill Street Housing Investigation Area (HIA) is a rectangular shaped precinct which straddles two suburbs, Kingsford to the west and part Randwick to the east.
- It is bounded by Willis Street to the west, Magill Street to the north, Hospital Road to the east and Barker Street to the south.
- Botany Street runs north to south traversing the HIA.

Map 1: Magill Street Housing Investigation Area

1.2. Local context

- The HIA adjoins the Randwick Health and Education Precinct consisting of UNSW Kensington and the Randwick Hospitals Campuses which are located to the northwest and northeast respectively.
- The Randwick Campus Redevelopment site, currently under construction is located directly to the north of the site, opposite Magill Street.
- The HIA is approximately 800m south-west of the Randwick Junction Town Centre, which is centred on Belmore Road, Avoca Street and Alison Road.
- The HIA is approximately 500m south of the UNSW High Street light rail stop, providing connections to the Sydney CBD.
- The HIA is approximately 100m west of the recently developed Newmarket Randwick site.



Map 2: Local context – location of the five Housing Investigation Areas

2. Existing characteristics

2.1. Description of the investigation area

- The urban character of the HIA is predominantly low density residential, characterised by a number of detached dwellings across the HIA and a few medium density residential land uses.
- There are two retail shops on the corner of Botany and Barker Streets, and a small number of private medical clinics in proximity to the Hospitals Campus.
- The HIA has a network of major roads, residential streets, and back-laneways creating a neat urban form supporting the residential character of the area.
- There is a poor transition from the low-density residential area and the adjacent UNSW and Randwick Hospitals Campuses (particularly the Acute Services Building (ASB), currently under construction) as there is currently an abrupt change in the predominant building height.

Photo 1: Corner of Magill Street and Botany Street looking East (Jul 2020)

Photo 2: Corner of Barker Street and Botany Street looking East (Oct 2020)

Photo 3: Hay Street Looking West (Jul 2019)

Photo 4: Barker Street at its highest point, Looking West (Jul 2019)

Photo 5: Corner of Norton Street and Kennedy Street looking East (Jul 2019)

Photo 6: Maud Street looking South (Jul 2019)

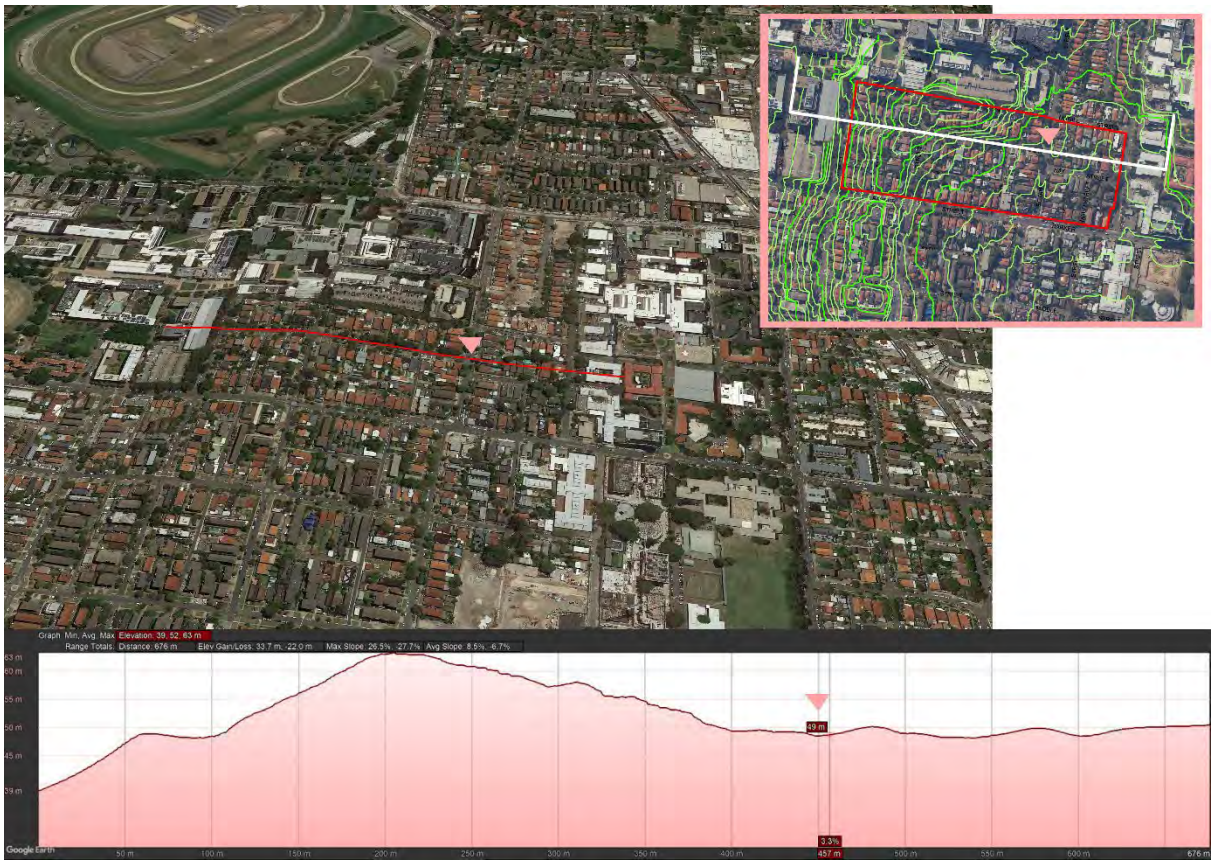
3D Image 1, Overview of the HIA looking North West (Feb 2020)

3D Image 2, The Eastern section of the HIA in relation to adjacent land uses. (Feb 2020)

2.2. Topography

- The topography on the western side of the HIA is varied, with high points on Kennedy St and Barker St.
- There are steep inclines to the east down Oval Lane and Norton Street toward Botany Street and a very steep decline from Willis Street and Oval Lane into the UNSW campus.
- Many of the adjacent UNSW buildings are built from a significantly lower ground level than those within the HIA.
- There is a slight decline from north to south along Hospital Road, however as part of works on the Acute Services Building, Hospital Road is being levelled and used as a service road.

Map 3: Topography



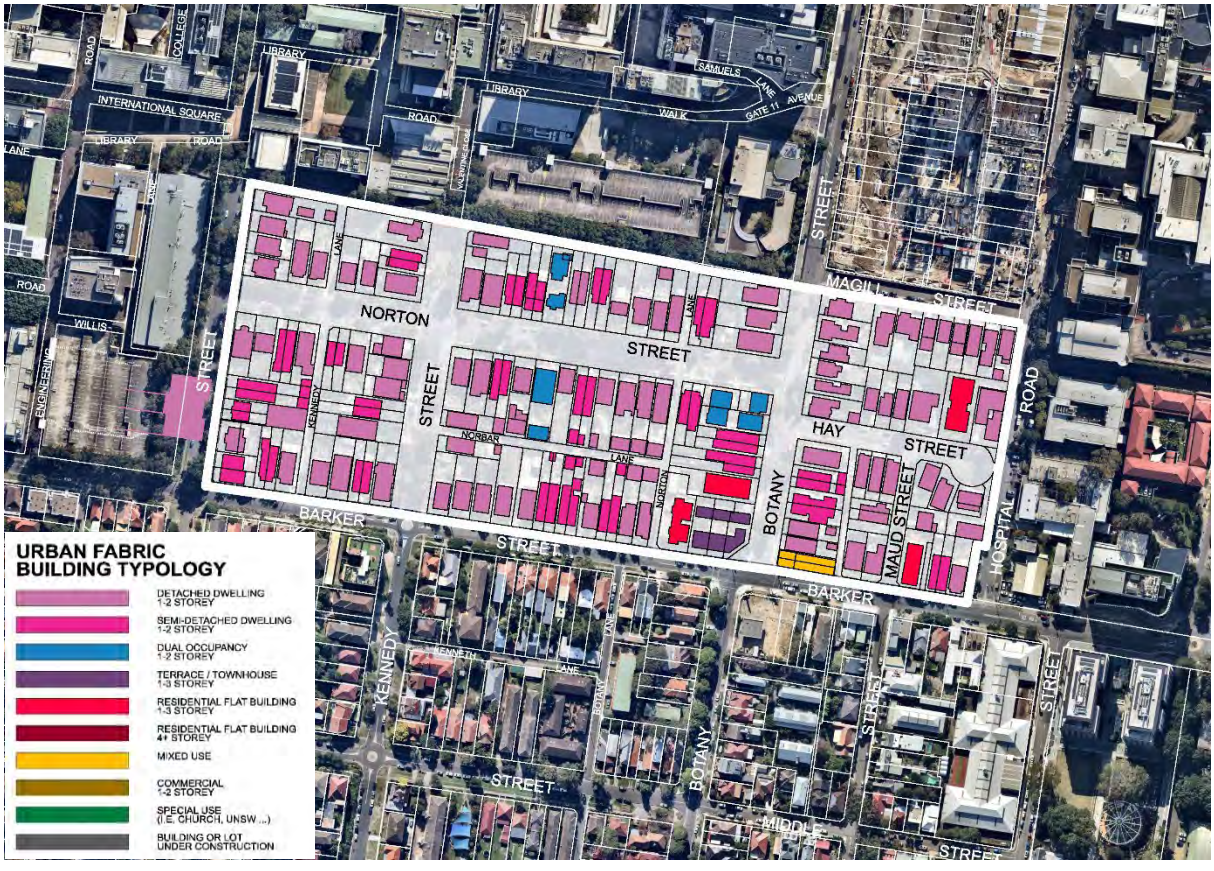
Map 4: Topography

2.3. View corridors

- View corridors within the HIA are minimal, however there is a significant view down Barker Street looking west towards Anzac Parade.

2.4. Building typology

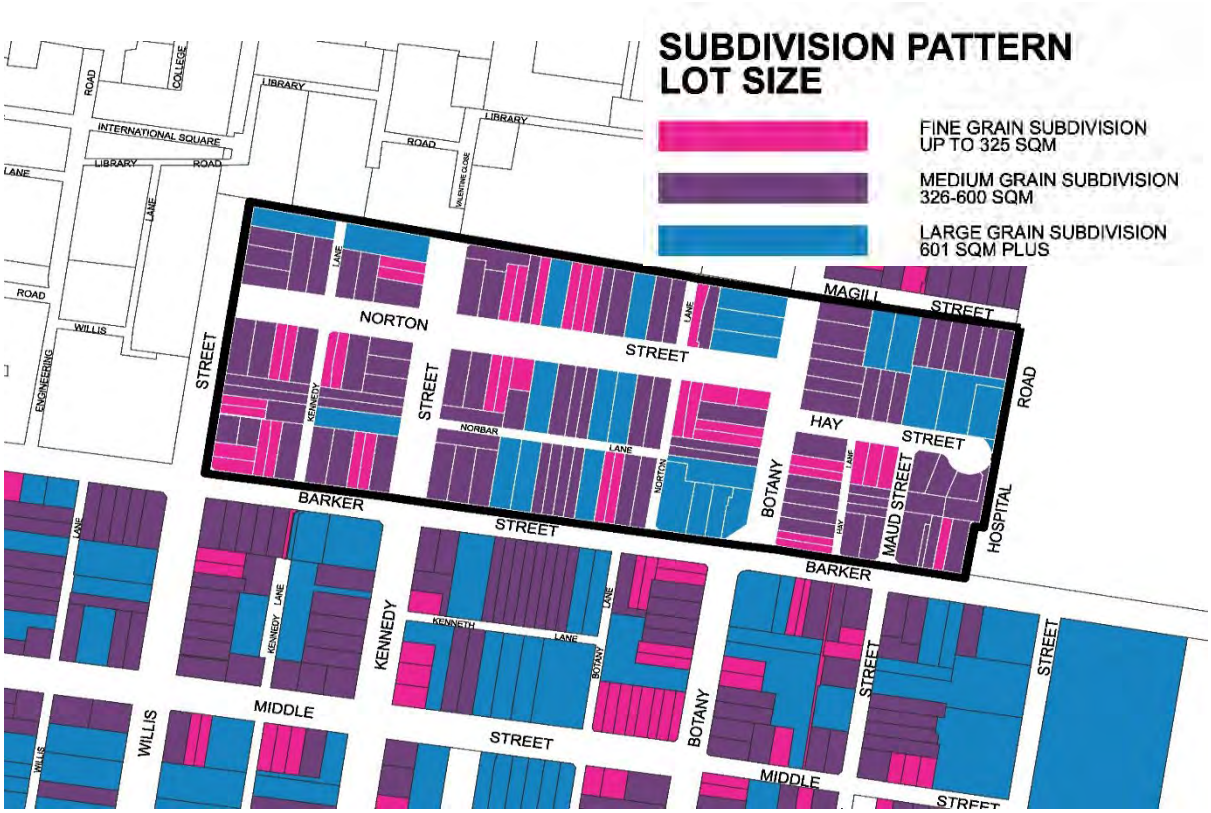
- As shown in Map 5 the building typology of the HIA is predominantly low density residential. The majority of lots are 1-2 storey detached or semi-detached dwellings, often with small garden frontages and backyards.
- The street network of the HIA which consists of a number of laneways means that many lots have rear parking.
- There is also a uniform frontage pattern in each street of the HIA, with the northern side of Norton Street being the noticeable exception.
- The medium density terrace and flat buildings in the HIA are focused to the east of the HIA, around Botany and Barker streets.



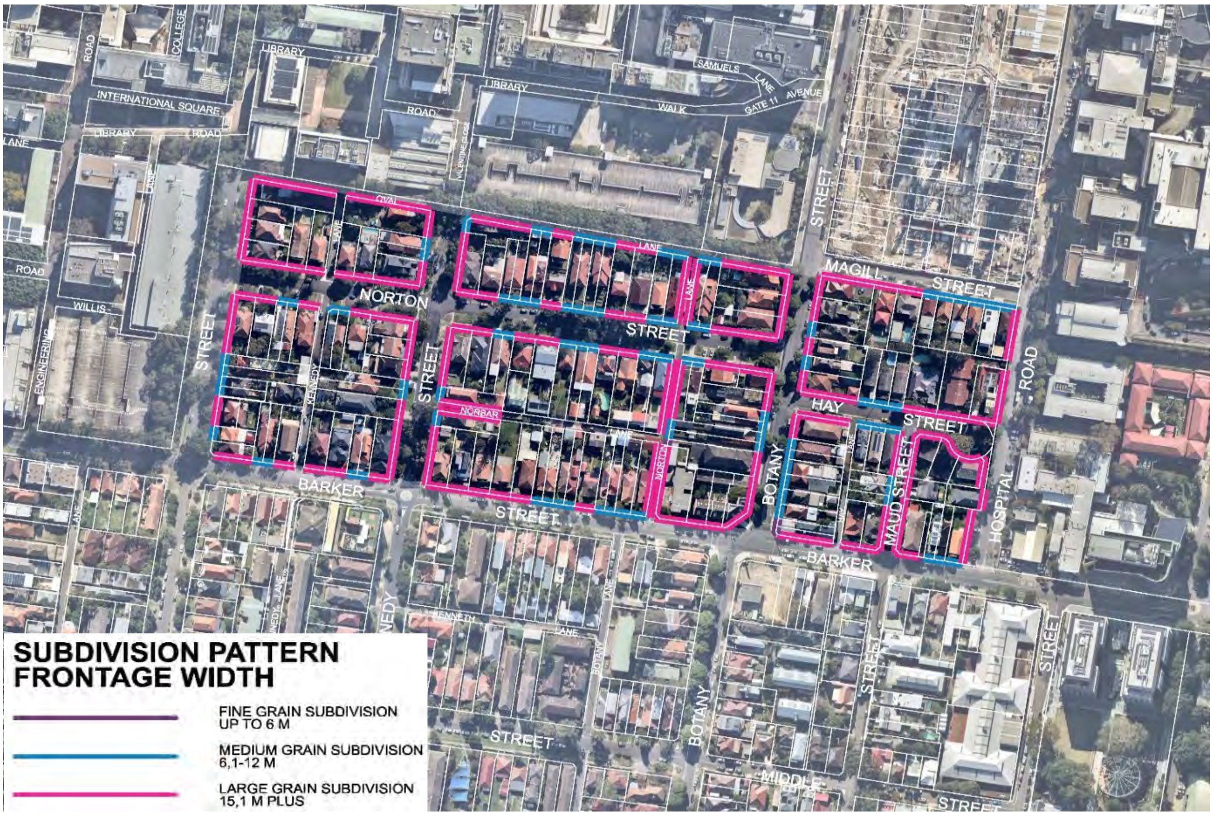
Map 5: Building typology

2.5. Subdivision pattern

- The HIA contains a variety of lot sizes with few clear patterns.
- Frontage widths are predominantly medium and large grain, correlating with the high number of corner lots in the HIA.



Map 6: Lot sizes

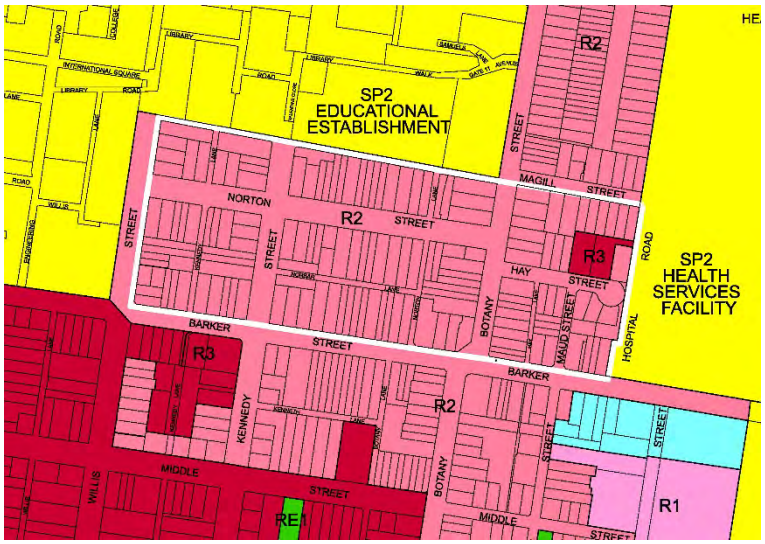


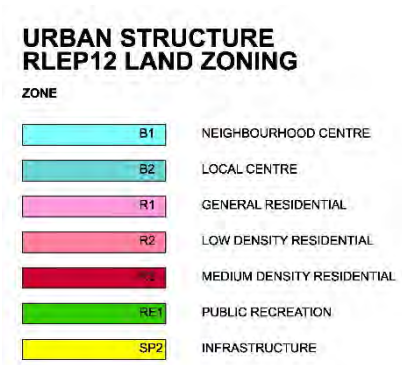
Map 7: Frontage widths

3. Existing planning controls and considerations

3.1. Land use zoning

- All lots within the HIA are zoned R2 under the Randwick LEP 2012, except for 4 & 4A Hay Street, which are zoned R3 Medium Density Residential.

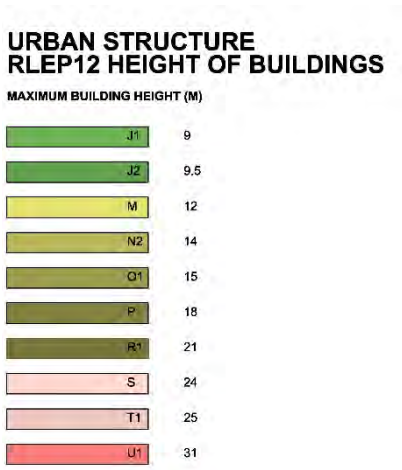




Map 8: Land use zoning under Randwick LEP 2012 *Land use zoning key*

3.2. Height of building

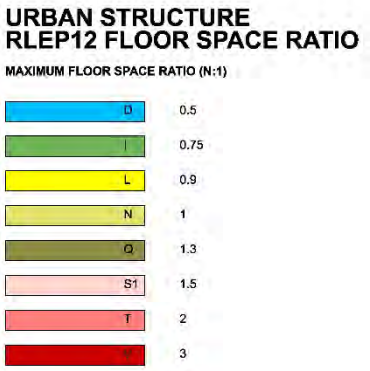
- All lots within the HIA have a Randwick LEP 2012 maximum height limit of 9.5 metres (3 storeys).



Map 9: Maximum height of buildings under Randwick LEP 2012 *Height of buildings key*

3.3. Floor space ratio

- All lots within the HIA have a Randwick LEP floor space ratio (FSR) of 0.5:1 with the exception of 4 & 4A Hay Street which has a floor space ratio of 0.75:1.



Map 10: Maximum floor space ratio under Randwick LEP 2012 *Floor space ratio key*

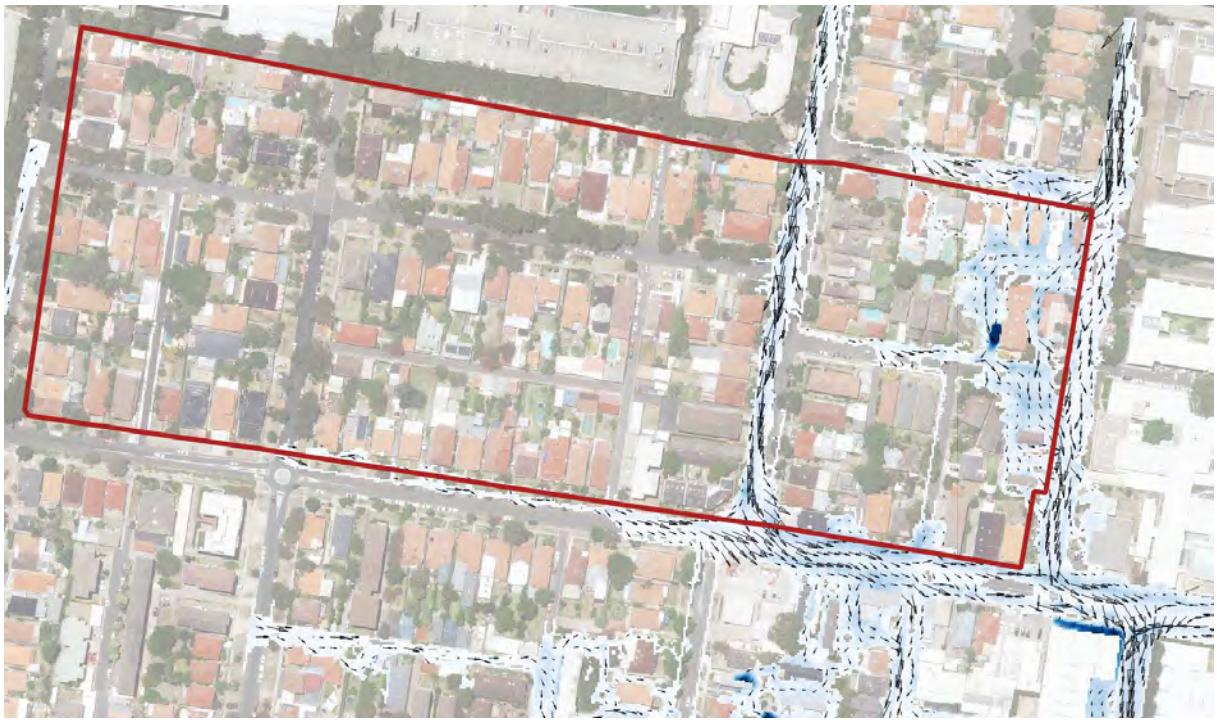
3.4. Heritage

- The HIA contains one heritage listed building under the RLEP 2012 - 4 Hay Street which comprises a late Victorian cottage known as “Cottsworth” (I387).
- The HIA is adjacent to the Struggletown Heritage Conservation Area (HCA) on the opposite side of Barker Street (shown hatched on Map 11).

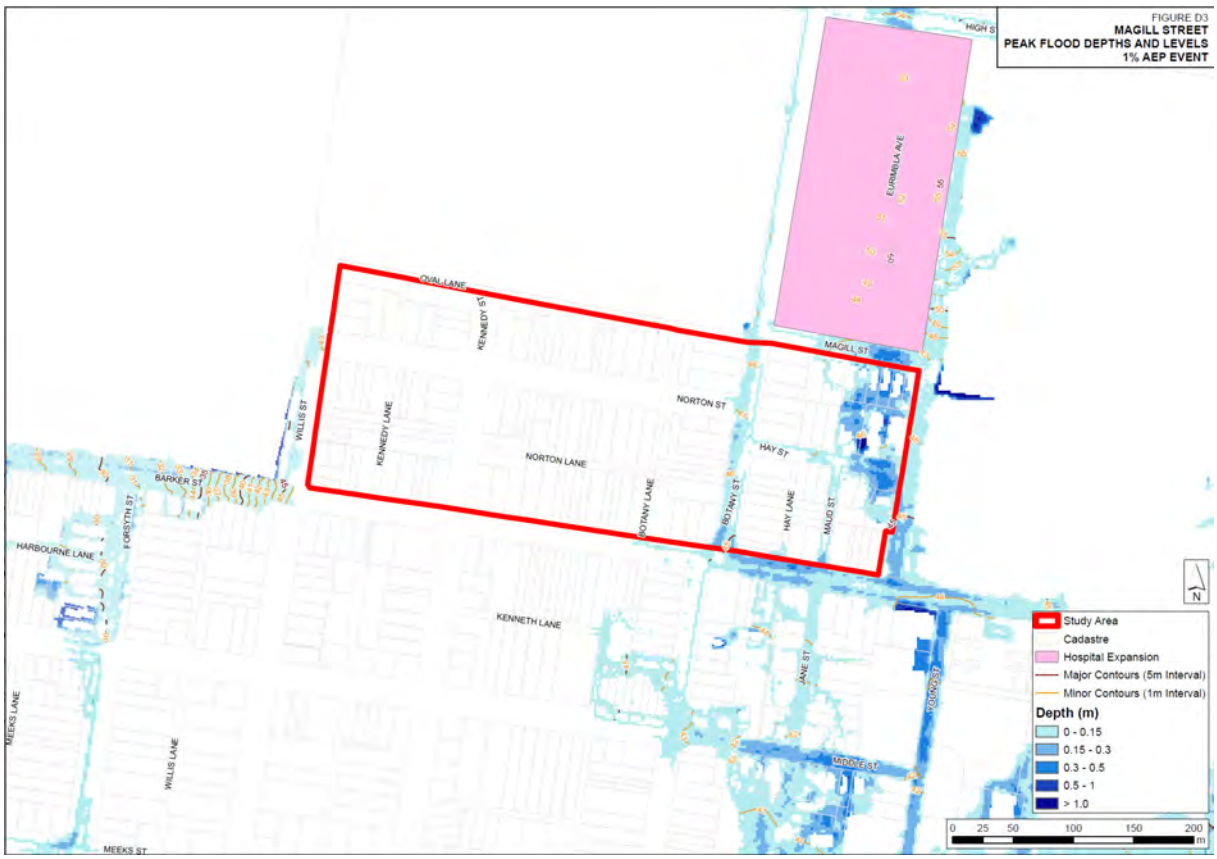
Map 11: Heritage items and conservation areas under Randwick LEP 2012

3.5. Flooding

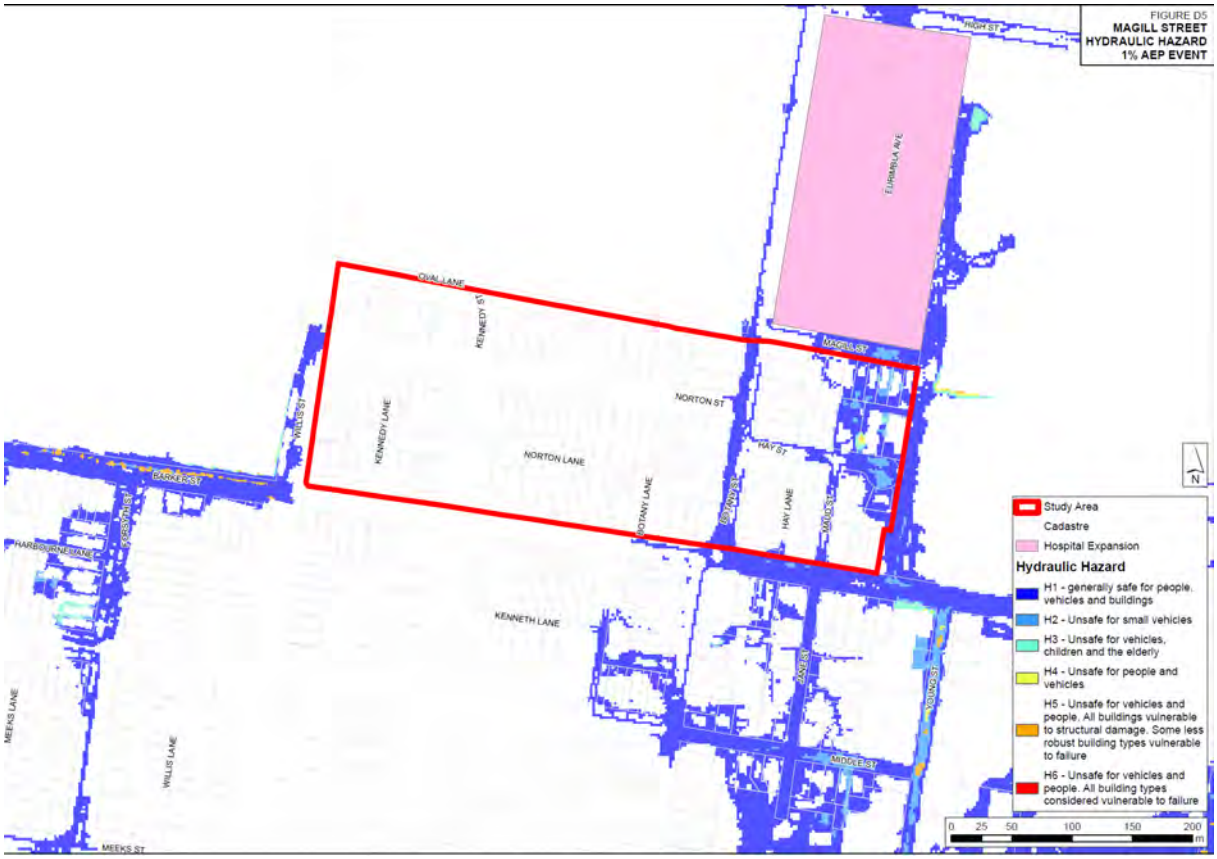
- Council commissioned WMA Water to undertake a Flood Constraints Review of the five HIAs, which was completed in Nov 2021 (refer to Attachment K– Flood Constraints Review). The key conclusions of the report, regarding this HIA, are summarised below.
- Whilst there is an overland flow path in Botany Street, the flood risk in the Magill Street HIA is localised to the overland flow path which runs from north to south along Hospital Road and also impacts Magill Street and Hay Street properties. The direction of flow can be viewed in Map 12.
- The overland flow path through the centre of the HIA in Botany Street, is largely contained within the road reserve and does not impact any of the development lots. The overland flow will occur in intense storm events when runoff from the upstream area exceeds the capacity of the local stormwater network (see Map 13).
- The 1% AEP event does not exceed 0.3-0.5m except for a small section at the eastern side of Hay Street.
- Hydraulic hazards associated with the overland flow path are very low for the 1% Annual Exceedance Probability (AEP) event and are generally low to moderate for the Probable Maximum Flood (PMF) event (see Maps 14 & 15).
- The hazard would be unchanged by Council's proposed strategy and will not limit the feasibility of achieving the proposed built form footprints or FSR within the HIA.
- New developments along flow paths will require raised floor levels to provide above floor inundation of habitable areas as well as provision of open space to prevent obstruction of overland flow. Compliance of these requirements will need to be addressed on a case-by-case basis for each development proposal.
- Flooding impacts will be subject to further detailed assessment at the Development Control Plan (DCP) stage with further controls and design requirements considering the potential impacts of flooding up to the PMF



Map 12: 1% AEP overland flow directions



Map 13: Peak flood depths and levels 1% AEP event

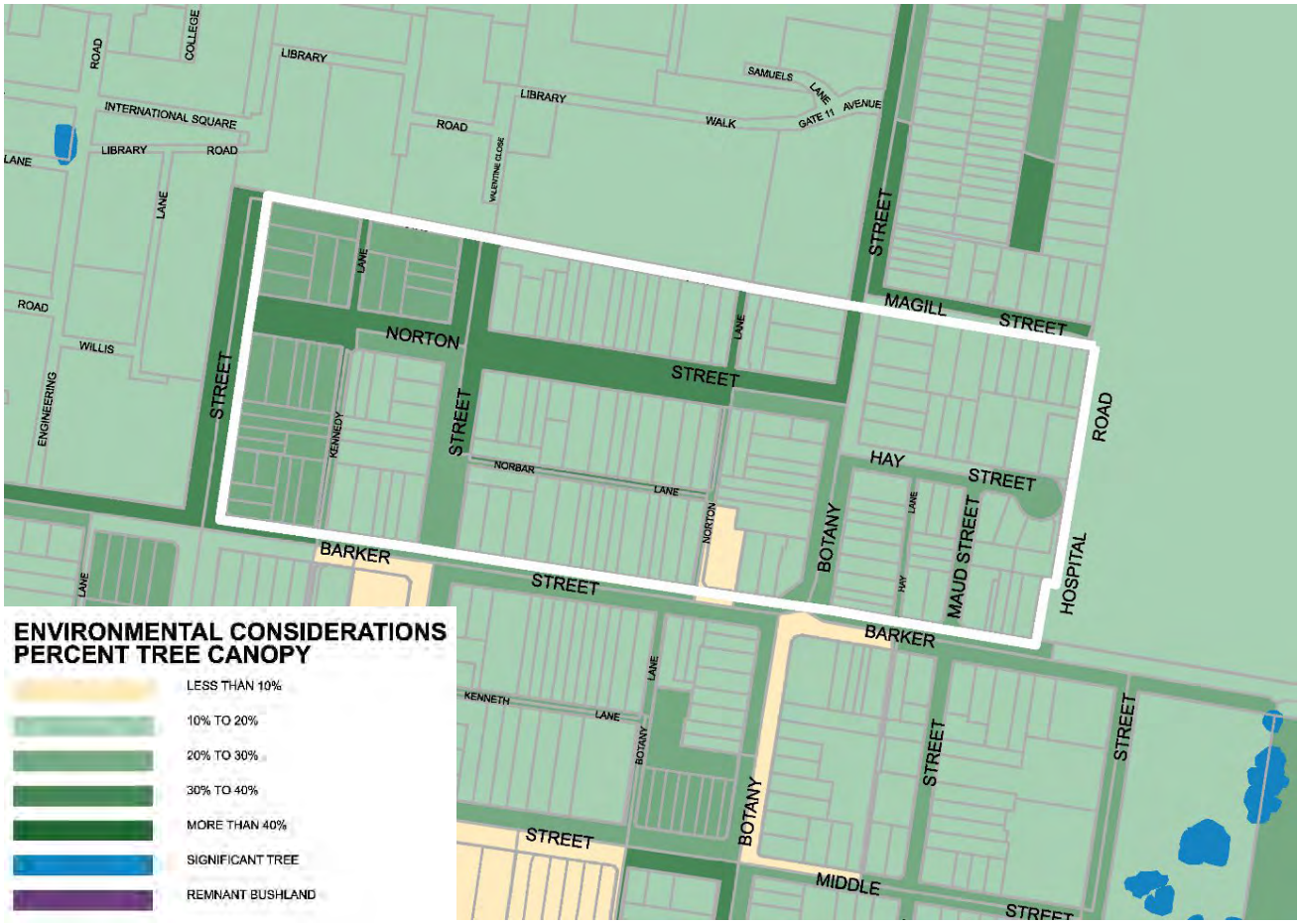


Map 14: Hydraulic hazard 1% AEP event

Map 15: Hydraulic hazard PMF event

3.6. Significant trees

- As shown in Map 16, there are no significant trees within the HIA boundary.
- The HIA consists of 30-40% canopy coverage along Norton, Willis and northern part of Kennedy Streets whilst the remainder of the HIA consists of 20-30% and 10-20% canopy coverage.

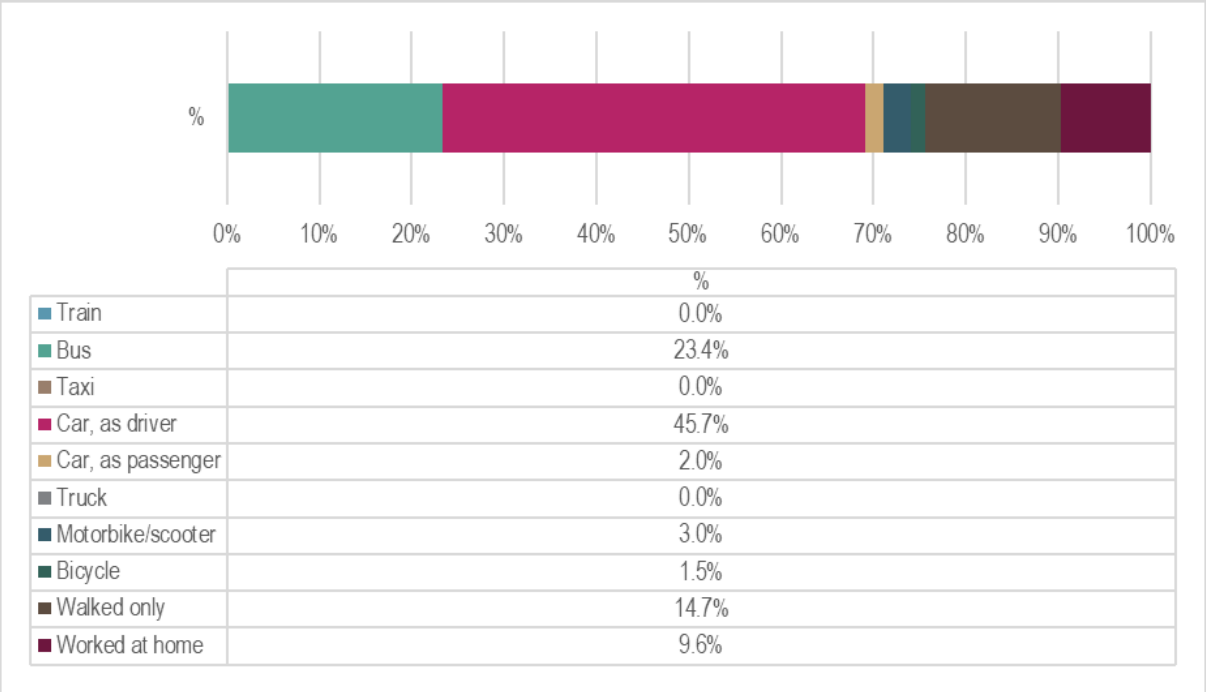


Map 16: Proportion of tree canopy cover

3.7. Transport

Existing travel patterns

- The table below shows the 'Method of Travel to Work' mode share results for residents living in the Magill Street HIA in 2016. Compared to other HIAs, Magill Street has the lowest public transport mode share (23.4%) and the highest private vehicle mode share (50.8%).



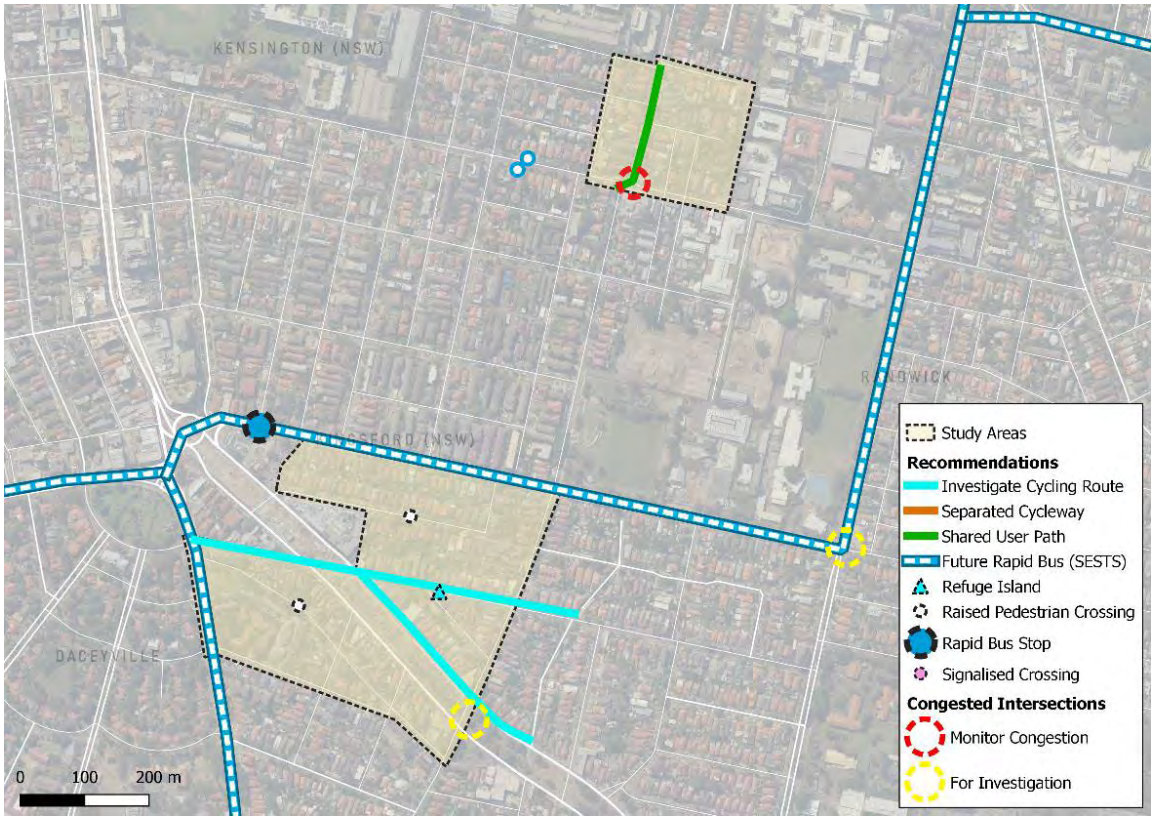
	%
Train	0.0%
Bus	23.4%
Taxi	0.0%
Car, as driver	45.7%
Car, as passenger	2.0%
Truck	0.0%
Motorbike/scooter	3.0%
Bicycle	1.5%
Walked only	14.7%
Worked at home	9.6%

Magill Street HIA – Method of Travel to Work – from Local Transport Study (Stantec 2022)

- Compared to other HIAs, Magill Street also has the highest proportion of households owning two or more motor vehicles (38.7%). Additionally, 42% of households have one motor vehicle whilst 19.3% don't own one.
- Residents in the Magill Street HIA are within a 10-minute walk of the L2 Randwick Light Rail line, providing a convenient access to the Sydney CBD. The study area is also in proximity to the proposed future rapid bus route to Coogee and Rozelle. The proposed north-south rapid bus route on Avoca Street, travelling to Randwick and La Perouse, is likely to have a stop that is no more than a 20 minute walk for residents in the Magill Street HIA. The newly introduced Route 358 heads south on Botany Street and takes passengers to Sydenham via Mascot, while the new Route 303, running east-west on Barker Street, services the Prince of Wales Hospital as its eastern terminus and Sans Souci (via Mascot) as its western terminus.
- The Magill Street HIA pedestrian experience is supported by signalised crossings on all legs of the Botany Street/Barker Street intersection, and refuge islands on all legs of the Kennedy Street/Barker Street intersection. There were two pedestrian crashes on Botany Street in the reporting years of 2015 to 2019. The HIA streets provide a 'local street' function – being low movement and low place.
- The existing and future cycling network within and surrounding the Magill Street HIA is currently not equipped for a safe cycling experience and would not incentivise future residents to choose cycling as a mode. There is an east-west connection through the UNSW Kensington campus. There is also an on-road mixed traffic facility on Magill Street and an on-road shoulder lane on Botany Street, to the south of the HIA.

Future travel and transport study recommendations

- Considering the estimated net increase of 228 dwellings by 2036 (long term) as a result of changes proposed in the Planning Proposal, the 'Do Nothing' scenario in the Local Transport Study, estimates 61 private vehicle trips will be added in the peak hour 'journey to work' traffic – a negligible increase on the existing and forecast traffic volume.
- The 'Do Nothing' scenario also estimates a public transport peak hour net trip increase of 28 people. While the local bus route options within the Magill Street HIA are more limited in comparison to other study areas, given the UNSW High Street light rail is no more than a 10-minute walk (mostly flat topography) for any resident, this means that future residents still have considerable public transport accessibility and coverage. The study also recommends that Council provide a pair of bus stops on Barker Street (between Kennedy Street and Botany Street), as part of the South East Sydney bus network changes.
- To improve the HIA's walkability, it is recommended that a raised pedestrian crossing at the Botany Street/Norton Street intersection is provided. Considering that Botany Street is also a bus route, this raised crossing would need to support bus movements while slowing bus speeds to increase pedestrian safety.
- Council has proposed to deliver a shared user path on Botany Street, between Oval Lane and High Street. Council is also investigating a potential route on Magill Street, Hospital Road and Young Street to connect to surrounding residential areas in the south. The shoulder lane facility on Botany Street currently ends at Barker Street. A continuation of this facility northwards could connect to the existing on-road mixed traffic facility on High Street and the broader Randwick cycling network.

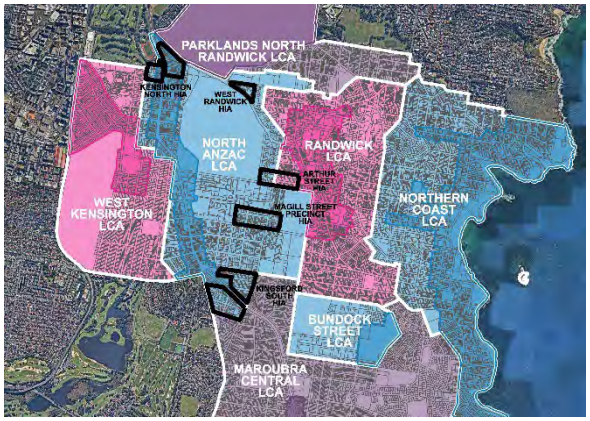


Map 17: Magill Street and Kingsford South – Recommendations Map

4. Draft local character area

4.1. Description of the investigation area

- As shown in Map 18, the Magill Street HIA is located within the draft North Anzac Local Character Area.
- The draft North Anzac LCA comprises Randwick City's major Health, education, transport and economic infrastructure as well as the residential and commercial precincts adjacent to them. These include the Randwick Health and Education Precinct, Randwick Boys and Girls High Schools, Kensington and Kingsford town centres, Randwick Racecourse, TAFE and bus depot.
- Future draft North Anzac LCA character principles include:
  - Greater activation along Anzac Parade through new high-quality contemporary development.
  - Increased active transport connections and infrastructure for a growing population.
  - Reinstating Anzac Parade as a tree-lined boulevard and increased street tree canopy across the LCA.
  - Greater interaction between the community and the key institutions within the LCA Improvements to the public domain.
  - Increase in arts and cultural facilities to support the local population and visitors.
  - Improvements to the economic vibrancy in the Kingsford and Kensington town centres via activations of the day and night-time economies.



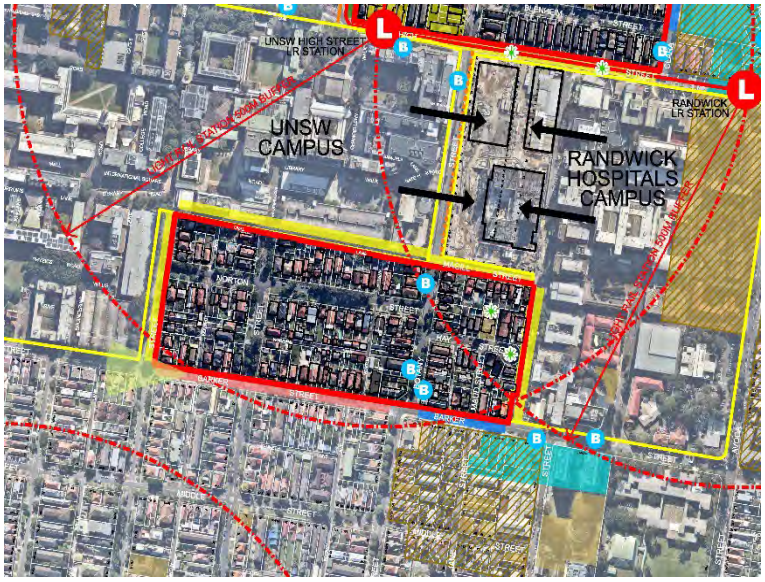
Map 18: Excerpt of draft local character areas (northern part of the LGA)

Location of Kensington North HIA within North Anzac LCA

5. Analysis

5.1. Opportunities and constraints

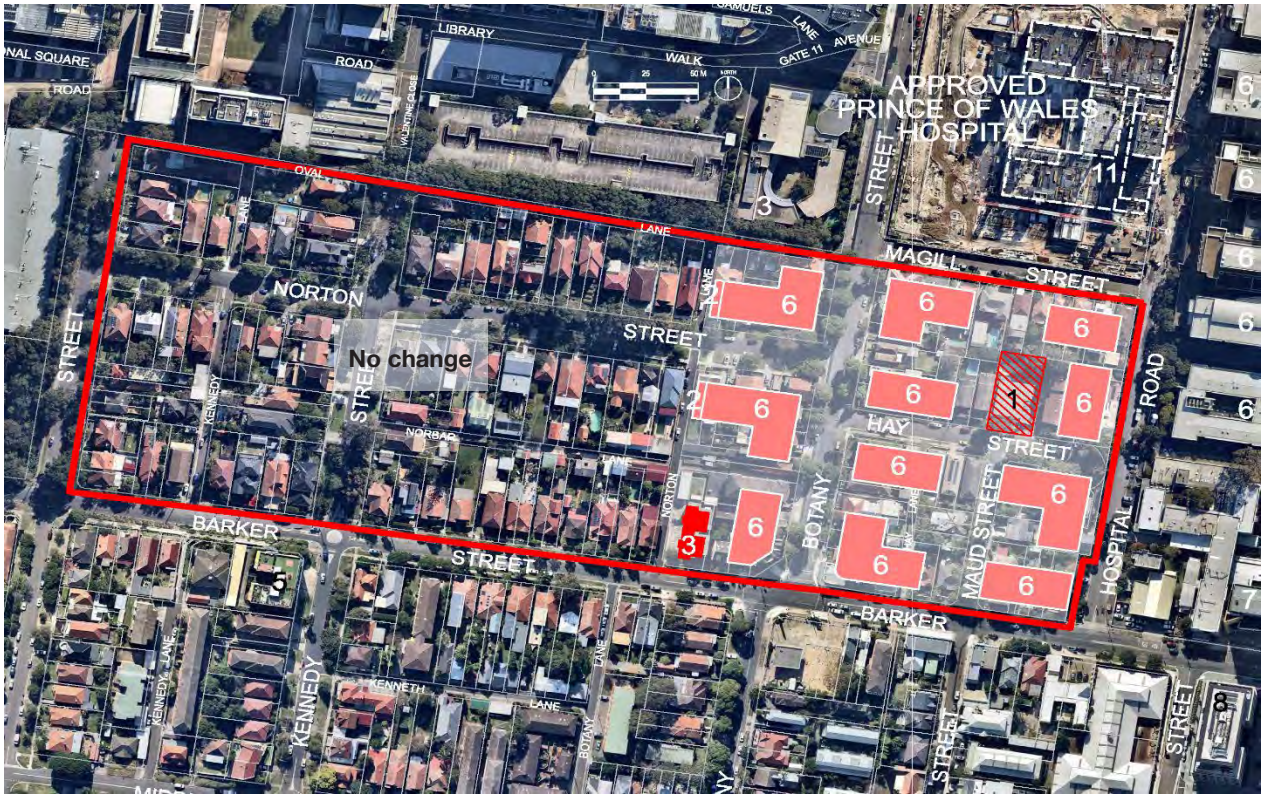
- The large-scale hospital redevelopment will change the character of this part of Botany Street and Magill Street. This HIA has direct frontage to the new campus. A suitable built form transition would be appropriate to provide a better relationship to the redeveloped campus and the mixed commercial development to the east.
- The site is in proximity to the recently completed Newmarket Randwick development on Barker Street which has a height of 8 storeys fronting Barker Street and business uses at ground level.
- Redevelopment of the HIA will result in transit-oriented development that supports transport infrastructure. The L2 Light rail route station at UNSW High Street and Randwick is within proximity to the HIA. In conjunction with local bus routes, the HIA is also well supported by public transport.
- Compact residential development will create a more walkable neighbourhood where people can easily access services, education, jobs, and business activities.
- Redevelopment of the HIA will create an opportunity for a holistic urban design approach within the precinct.



Map 19: Opportunities and constraints

Opportunities and constraints key

6. Strategic justification



Map 20: Proposed built form and height diagram (heights shown in storeys)

The HIA is a suitable precinct to provide additional uplift given its strategic location to key health and education infrastructure and employment, the Randwick Junction and Kingsford Town centres, The Spot neighbourhood centre and being in walkable distance to frequent public transport including the Sydney CBD to South East Light Rail and bus services to Sydney CBD.

The urban design and built form analysis has established that rezoning the precinct to R3 Medium Density Residential, with a new maximum height of six storeys (from a maximum of three storeys under the current controls) and FSR of 1.8:1, would ensure that new development sits comfortably within the urban context, while providing a renewed urban residential quarter with potential through-block pedestrian links to be investigated.

The Magill Street HIA is a suitable location to provide medium density residential apartment development and associated facilities and services:

- Within easy walking distance of the UNSW High Street light rail station and public bus services.
- Adjoining the important employment hubs of UNSW and Randwick Hospital (Collaboration Area) within walking distance of Randwick Junction Town Centre and the Newmarket development.
- Within walking distance of entertainment and social venues including NIDA, The Spot and the Newmarket development.
- Within walking distance of recreational open spaces including Paine Reserve and Randwick Community Organic Gardens.
- With access to major streets – Barker Street, Botany Street and Hospital Road; facilitating vehicular and general access.

- The proposed uplift can be utilised to incentivise an improved urban built form outcome potentially comprised of permeable residential blocks, pedestrian friendly urban streets with front and rear gardens; providing access to light, natural ventilation and green space. A scale transition to heritage listed properties through setbacks and landscape buffer zones is subject to further investigation.

7. Planning strategy

7.1. HIA areas of no change

Residential blocks in the Magill Street HIA, to the east of Norton Lane, and excluding a heritage property and a strata apartment building, have been assessed to be appropriate for redevelopment. This would be achieved through rezoning this area to R3 Medium Density Residential and permitting additional building height and density, to contribute towards the overall dwelling target for Randwick LGA.

Through Council's urban design analysis in the preparation of the Planning Proposal, it is recommended that no change occurs for the properties west of Norton Lane, as most of this area is characterised by a fine grain and coherent small-scale residential neighbourhood that warrants preservation.

7.2. Desired future built form character

The future desired character of the HIA is for new development to be consistent with the aims of the R3 Medium Density Residential zone, that provides for a variety of medium density housing types. The proposed mid-rise typology (generally 6 storey) can enhance the character of the neighbourhood by encouraging high quality design outcomes in an area of high amenity - close to public transport (light rail), the UNSW Kensington Campus, the Randwick Hospital Campus, the Randwick Junction Town Centre and the Newmarket development.

The proposed new built form would be a consistent 6 storeys (increased by three storeys from current controls), with a two-storey transition down to the lower scale residential neighbourhood to the east. The proposed built form would define the Botany Street 'spine', and the key HIA residential street frontages and street corners.

The mid-rise residential apartment buildings would generally be setback 6m from the primary street frontage to allow ground floor level apartments to have private front gardens. The block layout will support buildings with rear common gardens, with deep soil tree planting, set back from the main street frontages.

The heritage property and the existing strata apartment building would be integrated within the new residential precinct. The fine urban 'grain' of the city blocks would be preserved by retaining the series of smaller streets and laneways.

7.3. Site consolidation

A level of site consolidation would be necessary to achieve the desired optimum urban design and feasibility outcomes. Provisions addressing minimum frontage width and discouraging isolation of sites (which may be difficult to develop on their own) are recommended to be included in the Randwick DCP to ensure that future redevelopment achieves the desired urban design built form outcome, ensure residents have good access to natural light and ventilation, and achieve reasonable efficiencies in building structure and parking configuration can be achieved.

7.4. Transition to surrounding areas

The Randwick Hospital Expansion area is immediately north of the HIA and the first building is under construction and will be 11 storeys in height. It will be setback approx. 30m from Magill Street. The new residential precinct will provide a transition in height from the hospital and university buildings to the north, down to the lower scale residential areas to the west and south

of the area with new development controls. The proposed built form would provide a consistent building frontage height along Botany Street and Barker Street.

There is a transition to the residential neighbourhood to the west of Norton Lane where no change to development controls is proposed. A step down to two storeys adjoining Norton Lane is proposed. Transitions in height to the heritage property at 4 Hay Street has been considered. The proposed new building envelopes to the west and east have been carefully laid out and are set back to provide a transition in building height and an appropriate setting for the heritage residence.

7.5. Landscape character

The street tree planting along Botany Street and Barker Street, and the other local streets of the HIA is inconsistent. There are several sections of streets with healthy mature trees, whilst other streets are treeless, and therefore exposed and lacking shade and green. Interplanting new street trees, following a consolidated theme, would enhance these streetscapes. Encouraging mid-block communal gardens, including mature tree planting would create a refuge from busy surrounding streets, such as Botany Street and Barker Street.

7.6. HIA Feasibility Assessment (Hill PDA)

Following Council's place-based analysis of the five HIAs and investigations into suitable planning controls to increase development capacity, Council engaged economic planning consultants to assess the redevelopment feasibility and undertake a review of officers' built form scenarios in terms of the resulting yield achieved in each HIA. The assessment identified the likely 'tipping point' for redevelopment to occur considering the application of affordable housing contributions of 0%, 3% and 5%.

The assessment estimates the potential land value of several sites within each of the HIAs based on comparable land sale evidence. Through market research, the end sale values for new development in each of the HIAs has also been identified. It is important that any proposed controls ensure future development is feasible, otherwise turnover of sites for development may not occur and Council may not be able to meet the community's need for new housing in accessible areas.

The assessment sets a target project Internal Rate of Investment of 16% to 18% p.a. as the primary indicator for the modelling*. The results for the Magill Street HIA are outlined below:

Zone	FSR required with a 3% affordable housing contribution	Proposed height (storeys) 3%	FSR required with a 5% affordable housing contribution	Proposed height (storeys) 5%
R3 Medium Density Residential	1.8:1	19.5m (6)	2.5:1	26m (8)
R3 Medium Density Residential	N/A	7m (2)	N/A	7m (2)

The assessment found that development of the proposed R3 Medium Density Residential zoned land with a 3% and 5% affordable housing contribution would be viable at an FSR of 1.8:1 and 2.5:1 respectively. To achieve a 5% affordable housing contribution in this HIA requires an

increase in the height/number of storeys from six storeys to eight storeys, when compared to a 3% affordable housing contribution.

*The Internal Rate of Investment is a developer's actual return on investment on an annualised basis and expressed as a percentage. The approach considers the cost of time in its calculation and indicates the average return for a developer over a period of time.

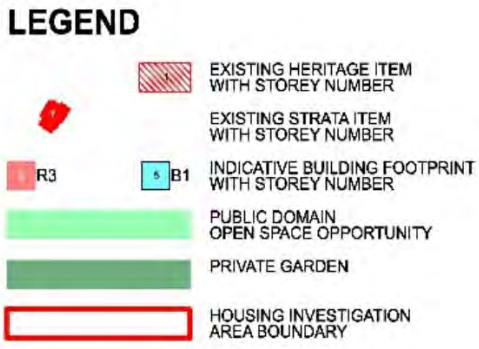
8. Conclusion

8.1. 3D built form testing

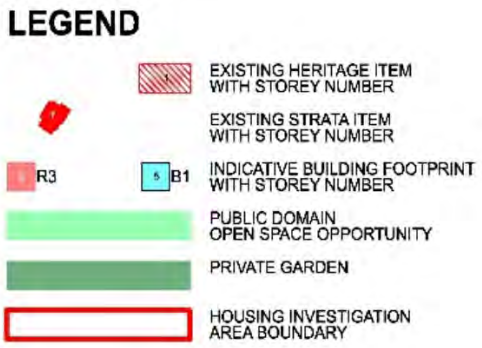
Two building density and height options, representing a 3% and 5% Affordable Housing (AH) contribution, were modelled by computer in 3D to illustrate the maximum building envelopes and assess their urban design merit. The two options tested in 3D were:

- Option 1 - 3% AH - Maximum 6 storey height
- Option 2 – 5% AH - Maximum 8 storey height

Map 21: Option 1 – Plan View – Maximum 6 Storeys



Map 22: Option 2 – Plan View – Maximum 8 Storeys



Map 23: Option 1 – 6 Storey – View Northwest – 3D modelling of building envelope scenario

Map 24: Option 2 – 8 Storey – View Northwest – 3D modelling of building envelope scenario

Map 25: Option 1 – 6 Storey – View Southeast – 3D modelling of building envelope scenario

Map 26: Option 2 – 8 Storey – View Southeast – 3D modelling of building envelope scenario

8.2. Indicative Envelopes

The 3D aerial views of the HIA illustrate proposed indicative block 'envelopes' and address the Apartment Design Guide (ADG) requirements. The envelopes comply with ADG minimum building-to-building separation guidelines and take into consideration best practice maximum building width to ensure apartments have good access to sunlight and natural cross ventilation.

As recommended in the ADG, a 70% factor has been applied in converting the building 'footprint' (and envelopes) to Gross Floor Area (GFA) and Floor Space Ratio (FSR) to account for overall building articulation, unenclosed balconies, building structure, services and circulation (lifts, stairs, common corridors). Setbacks and height transitions to heritage properties and to sensitive adjoining low-density residential areas have been considered and addressed in the urban planning and yield calculations. Properties constrained by strata ownership (20 or more apartments), established church buildings and an electricity substation (if relevant) are likely to remain undeveloped in the medium term and have been removed from the calculation of dwelling yield.

In developing the building envelopes, the minimum heights recommended for residential and non-residential uses in the ADG has been applied, whereby extra floor-to-ceiling height is needed for the ground floor and a minimum height (3.1m floor-to-floor) is set for the residential upper levels of buildings. Some additional height is included (generally 1m) to allow for roof level articulation.

Reasonable assumptions have been made regarding the optimum amalgamation of sites for redevelopment that would realise good urban design outcomes. The planning of the HIAs incorporates building setbacks, building-to-building separation, new pedestrian through block links, plaza, and green spaces. The envelopes illustrate potential development scenarios for site amalgamation that avoids isolated sites and provides access to sunlight and natural ventilation, reasonable efficiencies in structure, vehicular access, and parking provision.

8.3. Recommendation

It is recommended that the optimum urban design outcome (building massing and height) for the Magill Street HIA, taking into consideration the existing and future surrounding built form context, is Option 1 (maximum 6 storeys) noting 3 storeys is permitted under the current controls. Feasibility testing has demonstrated that this built form scenario is viable with a 3% Affordable Housing contribution.

The remainder of the HIA study area is not recommended for uplift and excluded from this Comprehensive LEP Planning Proposal. If a significant shortfall in the delivery of new dwellings in the LGA occurs in the short to medium term, the excluded areas of the HIA study area may be reviewed for its potential to contribute to the overall LGA dwelling shortfall. This review would be undertaken at the same time as the 7 year review of the Randwick Housing Strategy.

Randwick City Council
30 Frances Street
Randwick NSW 2031

1300 722 542
council@randwick.nsw.gov.au
www.randwick.nsw.gov.au

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