



Sydney2030/Green/Global/Connected

CITY OF SYDNEY  

Danks Street South Urban Design Study

city of villages

November 2016

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Figure 2 – Danks Street Precinct Context



2.0 Site considerations

Redevelopment of the DSS Precinct must consider the following opportunities and constraints:

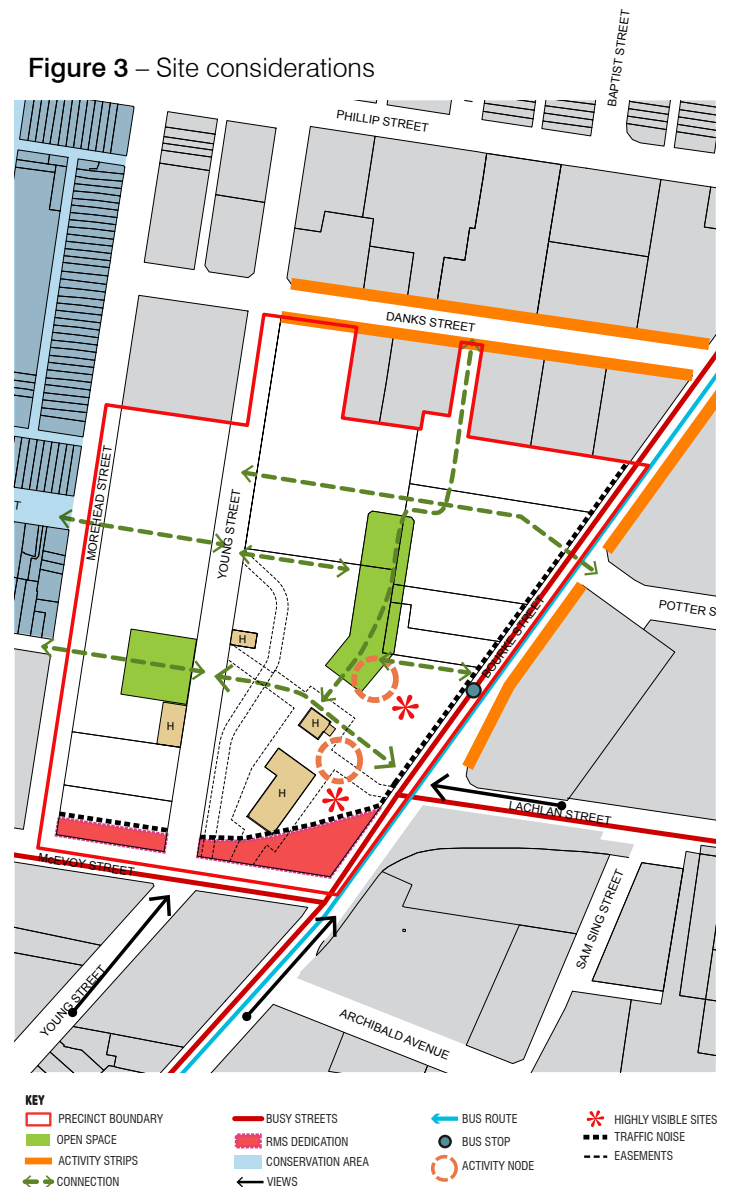
Opportunities

- Respond to scale of existing surrounding built form
- Provide homes for Sydney's growing population
- Reinforce and retain retail and commercial spaces in the inner city
- Provide recreation spaces that encourage and promote healthy living
- Improve access and connectivity
- Reinforce the history of the area
- Define future land uses in the area
- Extend the Bourke Street cycleway
- Complement Danks Street activity street

Constraints

- Existing easements for utility infrastructure
- Reservations for future road upgrade
- Noise and pollution from surrounding roads
- Built form that respects heritage buildings and conservation areas
- Overshadowing of future public open space and development
- 24 hours access for Sydney Water maintenance vehicles to Sydney Water assets

Figure 3 – Site considerations



3.0 Precinct analysis

3.1 The Site

The DDS Precinct is located in the suburb of Waterloo. Approximately 80% of the site is within the Green Square urban renewal area. Waterloo has undergone a significant change in recent years from being a mostly industrial area to a mixed uses and high density residential suburb. The DSS Precinct is one of the few remaining large areas that has not been redeveloped in Green Square. It is approximately a one kilometre walk from the centre of the precinct to Green Square town centre and train station, and approximately a 1.4 kilometre walk from the future Waterloo Station.

The site comprises 11 separate lots, some of which are owned by the same landowner (refer to table 1). The total

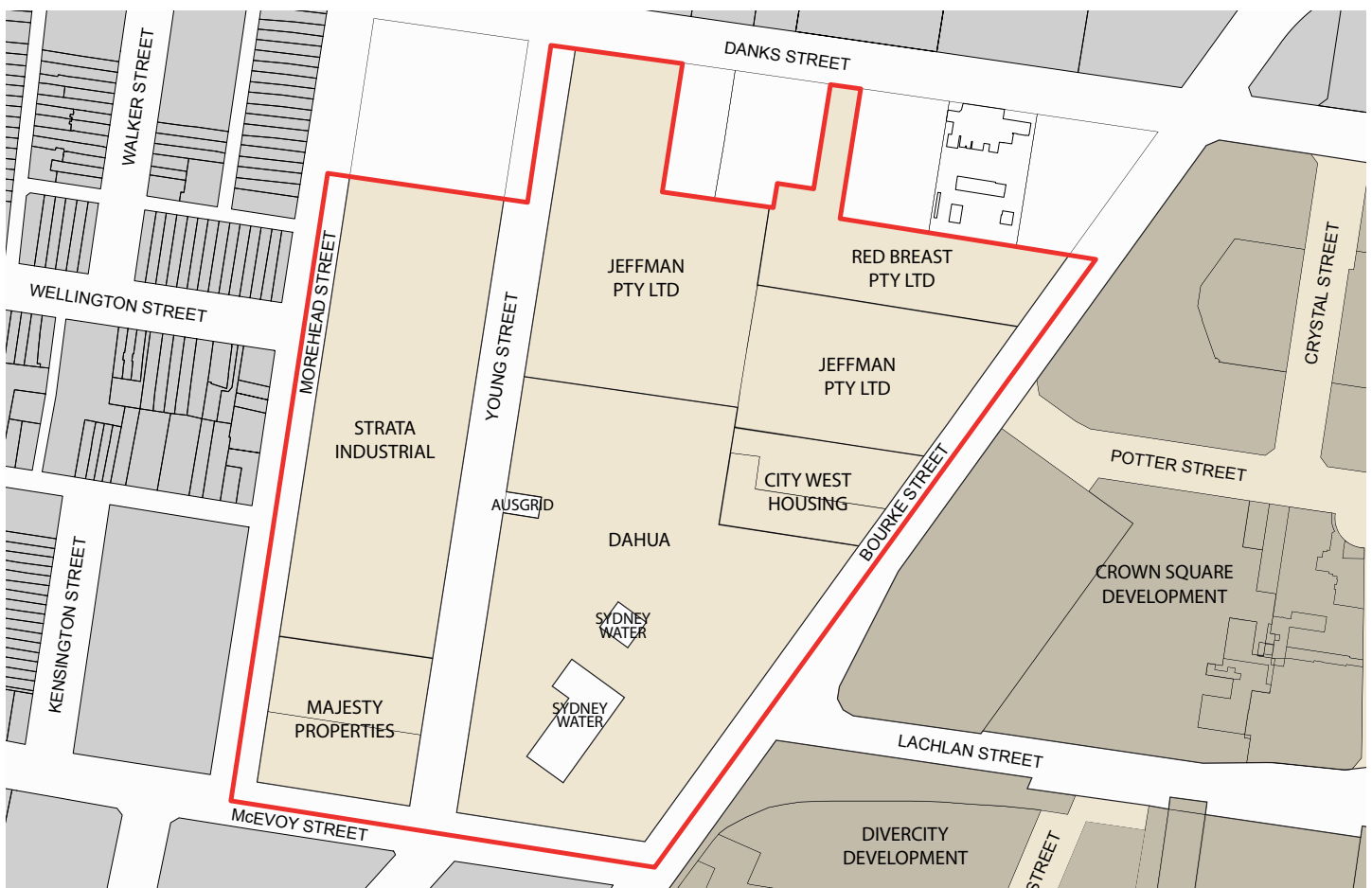
site area is approximately 92,500 square metres. The lots range in size from 19,350 square metres to 140 square metres.

The site's northern boundary has two small frontages to Danks Street in the north, Bourke Street to the east, McEvoy Street to the south and Morehead Street to the west.

The precinct is relatively flat with a small cross fall of approximately 4 metres from north to south. Currently there are no public roads or parks in the area.

The site is not subject to extensive flood inundation, however, Young Street is an overland flowpath during heavy rain events.

Figure 4 – Danks Street South Precinct Site boundary and Landownership



3.2 Current Land Uses and Built Form

The site is currently occupied by warehouse buildings, some industrial strata units, a dry cleaners, and vacant land. The retail/commercial spaces provide predominantly bespoke specialised furniture showrooms, bathrooms fixtures and fitting showrooms, some warehouses, and further bespoke retail, cafes and restaurants on Danks Street.

The industrial strata units between Young and Morehead Street were constructed in approximately 1990. The warehouses at 207-229 Young Street were constructed in the late 1980s, and the warehouses on Bourke Street are significantly older, but are not heritage listed.

The two Sydney Water buildings, the Valve House and the Pump House, and the electricity sub-station are still operational, housing infrastructure that provides electricity to the area and drinking water to the eastern suburbs.

Currently, there are few vacant tenancies across the DSS precinct.

3.3 Heritage

There are four heritage listed buildings in the precinct. Two are owned by Sydney Water and date back to the mid 1920s. The third building is an electricity sub-station owned by Sydney Water and dates back to around 1915. The fourth building is on Young Street, and is part of a larger commercial development. It dates back to early 1900s. Figures 5-9 show these heritage items and their location within the precinct.

Figure 5 – Heritage Building at 222 Young Street (1)



Figure 6 – Heritage listed Electricity Substation (2)



Figure 7 – Heritage Listed Pump House owned by Sydney Water (3)



Figure 8 – Heritage listed Valve House, owned by Sydney Water (4)



Figure 9 – Danks Street South Precinct, location of Heritage listed buildings



3.4 Surrounding development

The site is surrounded by a mix of predominantly residential development. The majority of new development is made up of residential apartment buildings. These vary in scale from four to 15 storeys in the 'Crown Square' development on the east of the precinct, and up to 20 storeys in the 'Moore Park Gardens' development on Phillip Street to the north of Danks Street

Crown Square, was completed by Meriton in 2010. It is predominantly residential with some retail uses including supermarket, childcare, cafes, and serviced apartments.

The Divercity development lies to the south-east of the DSS Precinct, south of Lachlan Street. This development was completed around 2013. It is also a predominantly residential development with building heights ranging from six to 12 storeys. There are some local retail/restaurants at ground floor, mostly concentrated on Bourke Street and a small plaza area.

The sites to the south of McEvoy Street are relatively low scale, predominantly commercial and light industrial warehouses. They provide a varied range of products and services such as hairdressing, car accessories, a service station and film school.

The area to the west of Morehead Street is the Waterloo Conservation Area. This area is predominantly residential, of one and two storey Victorian terraces.

Danks Street to the north provides a range of bespoke retail, including art galleries, fine rugs and furnishings/ designer furniture, and electrical appliances (Winnings), and a timber yard. It also has wholefood shops, some cafes and restaurants. Some smaller scale mixed use and residential redevelopment has occurred on Danks Street, over the past 3-5 years.

A large car showroom is located at the corner of Bourke and Lachlan Streets. The height of the existing building is approximately 3 storeys. This car dealership is one of the few left in the area.

Figure 10 – Commercial/Light Industrial uses (south of McEvoy Street)



Figure 11 – Retail/commercial uses on Jeffman Site – Young Street



Figure 12 – Commercial/retail Uses – Strata Site, Young Street



Figure 13 – Crown Square Development, Bourke Street



Figure 14 – Divercity Development, Bourke Street



3.5 Current Planning Controls

The DSS Precinct is located on land zoned B4 Mixed Use under Sydney LEP 2012. A wide range of uses are permissible with consent in this zone including the commercial and light industrial uses for which the site is currently used. Also permissible within this zone are residential and local retail uses.

A base FSR ranging from 1.5:1 to 2.0:1 is permissible across the DSS precinct under Sydney LEP 2012. The portion of the precinct that lies within the Green Square urban renewal area is eligible for additional floorspace under clause 6.14 of Sydney LEP 2012 subject to the delivery of community infrastructure. Under this clause, those lots to the east of Young Street are eligible for 0.5:1 FSR additional to the base 1.5:1 FSR.

Most sites are also eligible for up to 10% additional height or FSR subject to demonstrating design excellence under clause 6.21 of Sydney LEP 2012.

The height controls that apply across the precinct under Sydney LEP 2012 range from 15 to 22 metres. The predominant permissible height is 15 metres for approximately 90% of the precinct. The site at 224-234 Young Street has a maximum height of 18 metres, and the sites at 881-893 Bourke Street have a street frontage height of 22 metres.

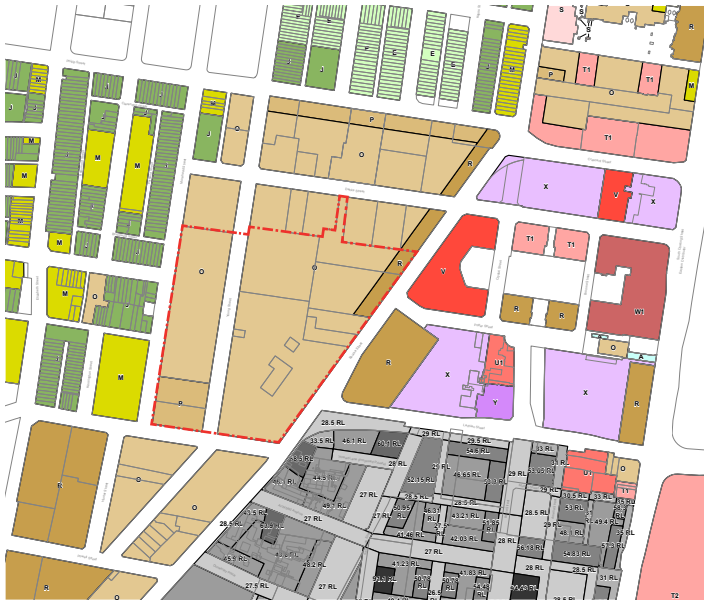


Figure 15 – Height of Building

E 6	S 24
H 7.5	T1 25
I 8	T2 27
J 9	T3 28
L 11	T4 29
M 12	U1 30
O 15	U2 33
P 18	V 35
R 22	W1 40

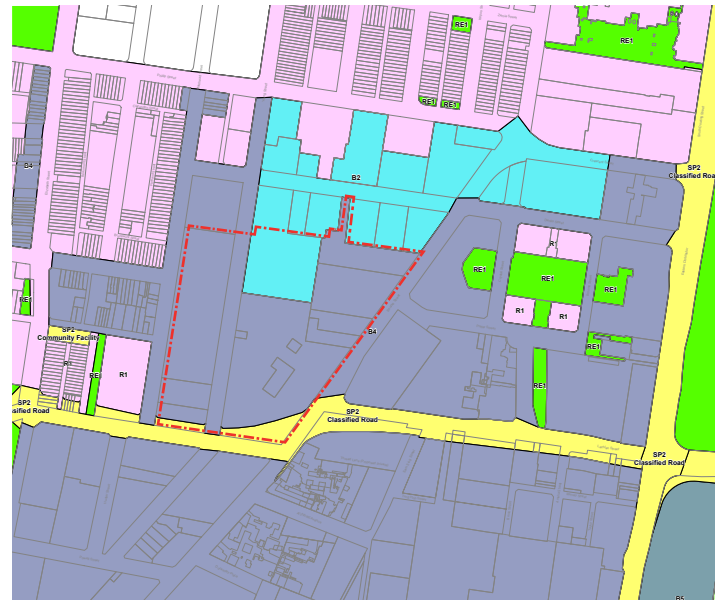


Figure 16 – Land Zoning

B1 Neighbourhood Centre	R1 General Residential
B2 Local Centre	R2 Low Density Residential
B3 Commercial Core	RE1 Public Recreation
B4 Mixed Use	SP1 Special Activities
B5 Business Development	SP2 Infrastructure
B6 Enterprise Corridor	UL Unzoned Land
B7 Business Park	
B8 Metropolitan Centre	
IN1 General Industrial	
IN2 Light Industrial	

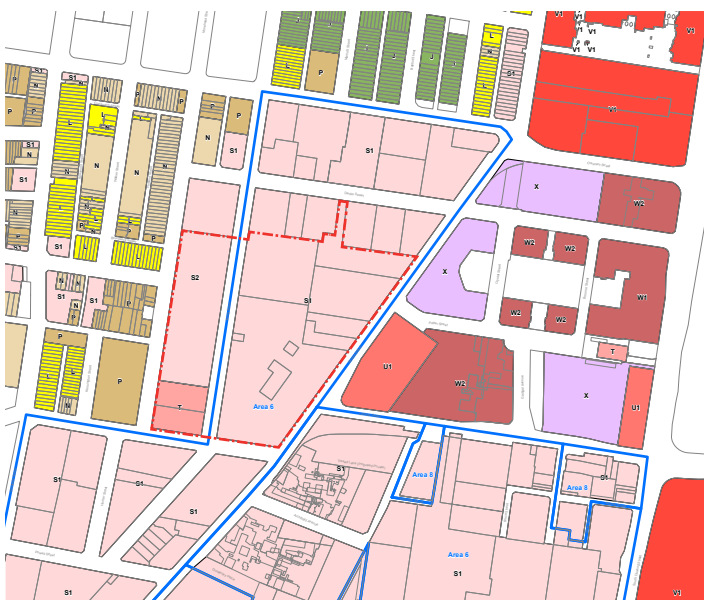


Figure 17 – Floor Space Ratio

F 0.6	S1 1.5	V2 3.25
H 0.7	S2 1.75	W1 3.5
J 0.8	T 2	W2 3.75
L 0.9	U1 2.5	X 4
N 1	U2 2.75	Y 4.5
P 1.25	V1 3	Z 5

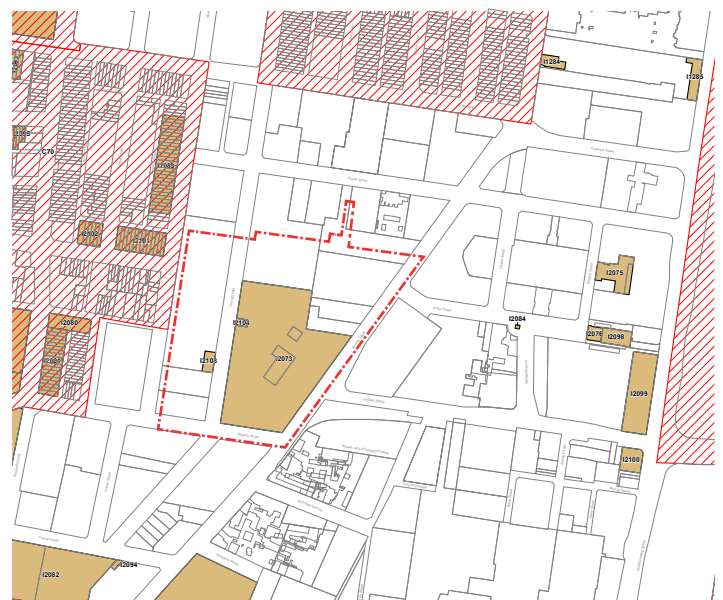


Figure 18 – Heritage

Item - General
Conservation Area - General

3.6 Open Space Network

The DSS Precinct is within 400 metres of:

- Waterloo Oval - 20,600 square metres (North and South)
- Crown Park - 7,600 square metres
- The Rope Walk - 6,250 square metres

It is 900 metres from Moore Park Golf Course (classified as regional open space).

Figure 19 – Danks Street South Precinct, location of local parks



3.7 Easements and Reservations

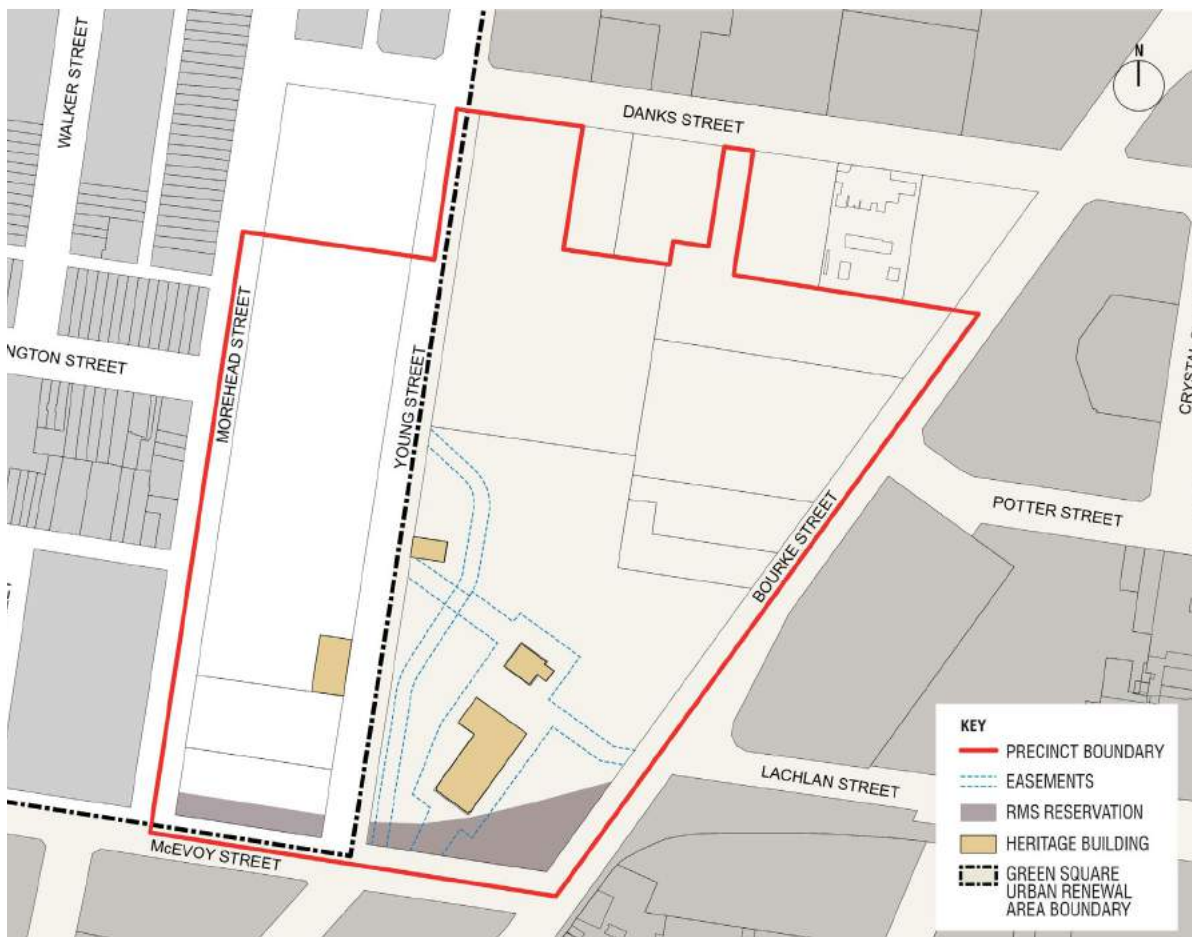
There is a complex arrangement of infrastructure related easements across the Dahua site, shown in Figure 20, including access requirements for Sydney Water. There are also underground pipes associated to the Sydney Water buildings and high voltage electricity cabling. The relevant agencies have confirmed this infrastructure cannot be relocated or removed. Development therefore, will need to be located around it.

Approximately 2,200 square metres of the Dahua site, at the intersection of Bourke Street and McEvoy Street and approximately 600 metres of the McEvoy Street frontage of the Majesty site are zoned for arterial road reservation in the Sydney LEP 2012 as shown in Figure 16. The Roads and Maritime Services are currently developing designs to upgrade this intersection to improve traffic flows between the WestConnex portal and Sydney Park and South Dowling Street.

As a consequence of the increase of vehicular movement sites along these streets will be affected by noise.

To comply with the Apartment Design Guide natural ventilation and noise requirements, future residential development will need to face away from these streets.

Figure 20 – Danks Street South Precinct: Easements and Reservations



4.0

Urban design principles

The opportunities and constraints and the site analysis have helped to inform the following urban design principles:

Social infrastructure

- Create a vibrant neighbourhood with a mix of uses, community facilities and open spaces
- Create a recreation spine within the public domain to facilitate community interaction
- Create opportunities (through key activity areas) that encourage social interaction and relaxation

Heritage

- Respect and integrate heritage into the design of the precinct

Built form

- Provide a variety of building types and scales
- Define appropriate locations for taller buildings and their orientation
- Minimise overshadowing and wind impact to open space and surrounding existing developments
- Provide a permeable built form
- Integrate the precinct with the surrounding neighbourhoods
- Respond to the low scale of the conservation area to the west
- Respond to noise and air quality requirements

Connections

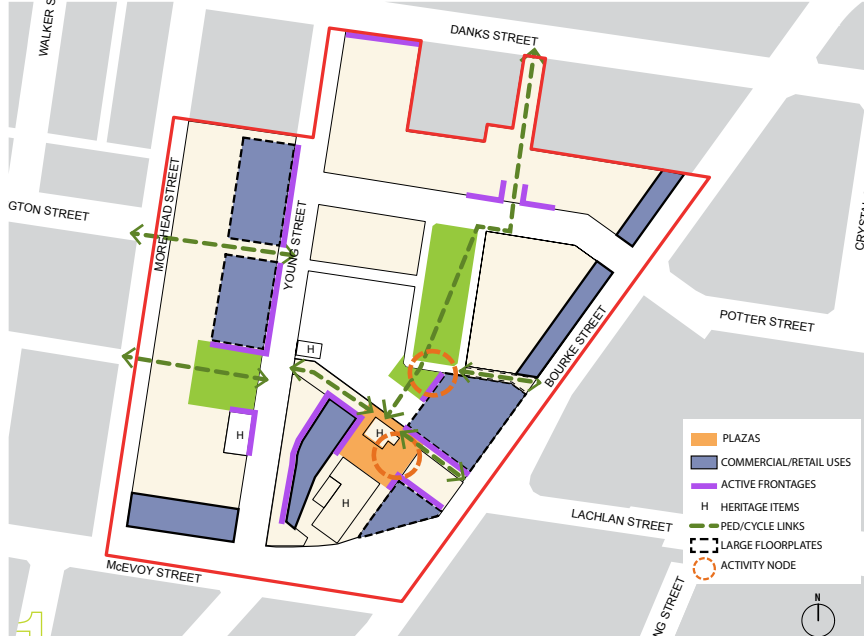
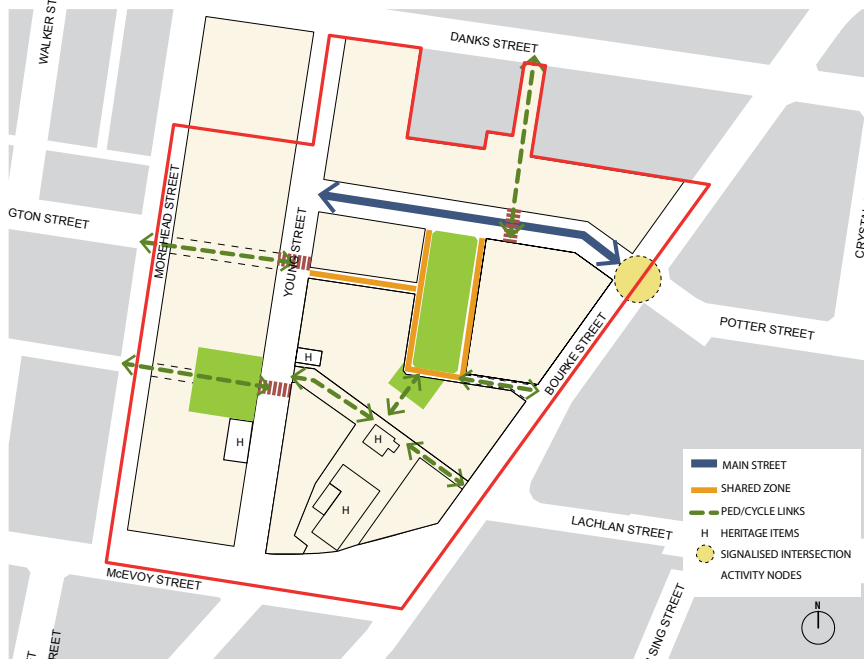
- Provide a network of streets and pedestrian and cycle links to facilitate movement
- Connect to the existing public transport network
- Manage vehicle movements and their access
- Encourage walking and cycling and the use of public transport
- Provide vehicular access to Sydney Water assets and essential servicing

Public domain

- Identify a public domain structure that provides identity and sense of place
- Provide safe places that prioritise walking and cycling
- Provide a central local park and plaza area for passive recreation uses
- Create a new park where the design provides opportunities for social interaction and relaxation
- Provide a strong landscape character
- Maximise passive surveillance to the open space

Land Uses

- Provide a mix of uses throughout the precinct
- Locate commercial/retail uses along busy roads and around plazas
- Provide larger building footprints to accommodate a variety of uses

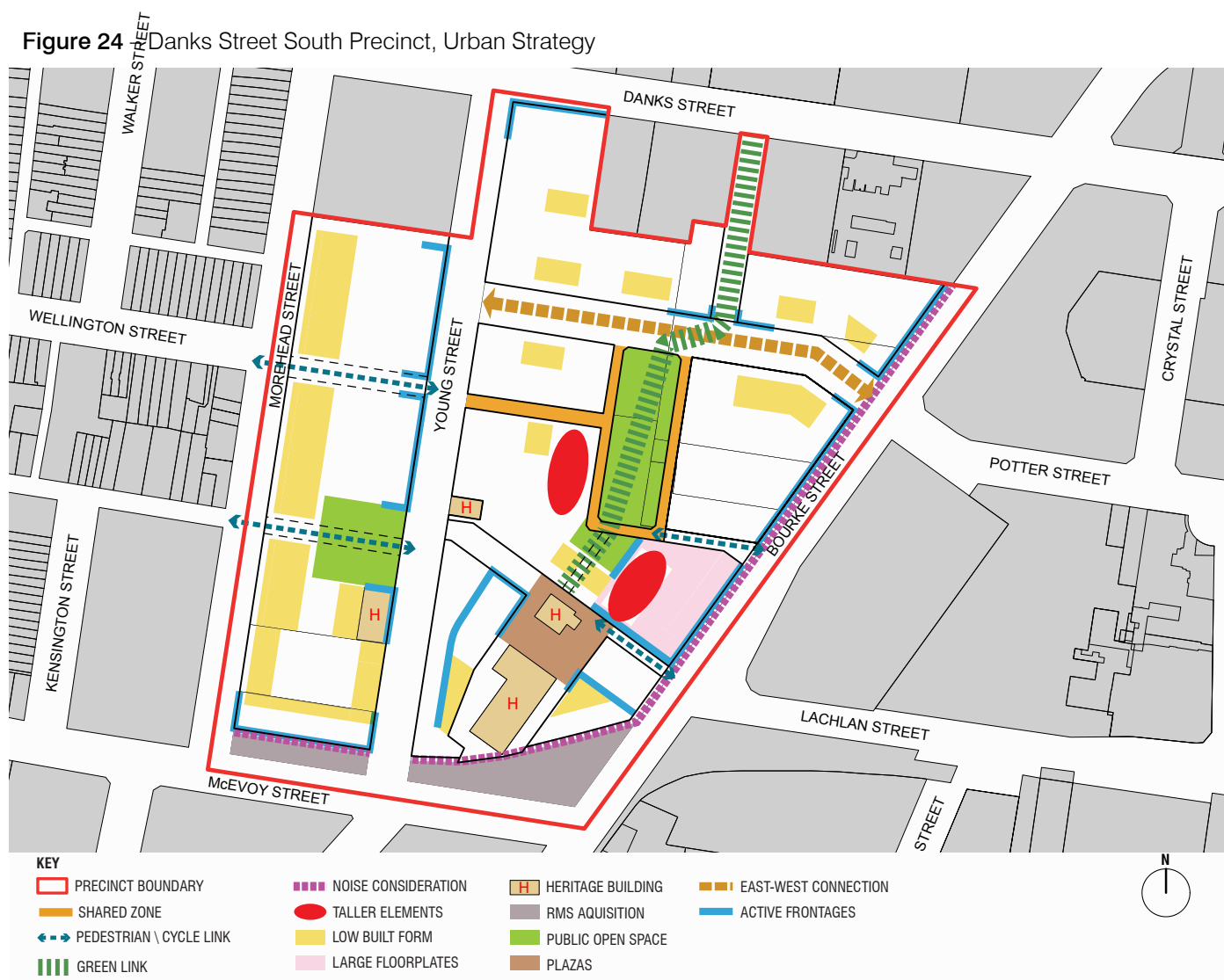


5.0 Urban strategy

Underpinned by the urban design principles, the following objectives have been developed to inform the strategy for the DSS Precinct.

- Ensure that future development is of the highest quality, and sympathetic to the existing surrounding local character and history of the DSS Precinct and its former industrial uses
- Provide appropriate transition between new development and the conservation area to the west
- Redevelopment should be coordinated to be effectively managed and provide appropriate community facilities and services as required
- Introduce a mix of dwelling types to provide flexibility and choice and to reflect the needs of a diverse community
- Ensure building heights respond to developments in the surrounding areas
- Locate taller buildings in the centre of precinct to reduce overshadowing of open space and surrounding existing developments
- Introduce a network of streets, shared zones and pedestrian cycle links that connect to the existing street network
- Ensure opportunities for walking and cycling are maximised
- Create an attractive public domain for pedestrians and cyclists with high quality landscaping and native street trees
- Links to public transport are to be clear and legible, and are to prioritise pedestrians with slow speed traffic lanes
- Provide one main park that caters for passive recreation
- Provide a new plaza that is designed to encourage social interaction and small scale community events
- All new streets will provide trees for shade and amenity and incorporate water sensitive urban design where appropriate
- Introduce an appropriate mix of land uses with commercial/retail uses at ground level on Bourke, Young, McEvoy Streets and around the plaza
- Ensure noise impact is addressed in the design of the precinct to maximise amenity

Figure 24 Danks Street South Precinct, Urban Strategy

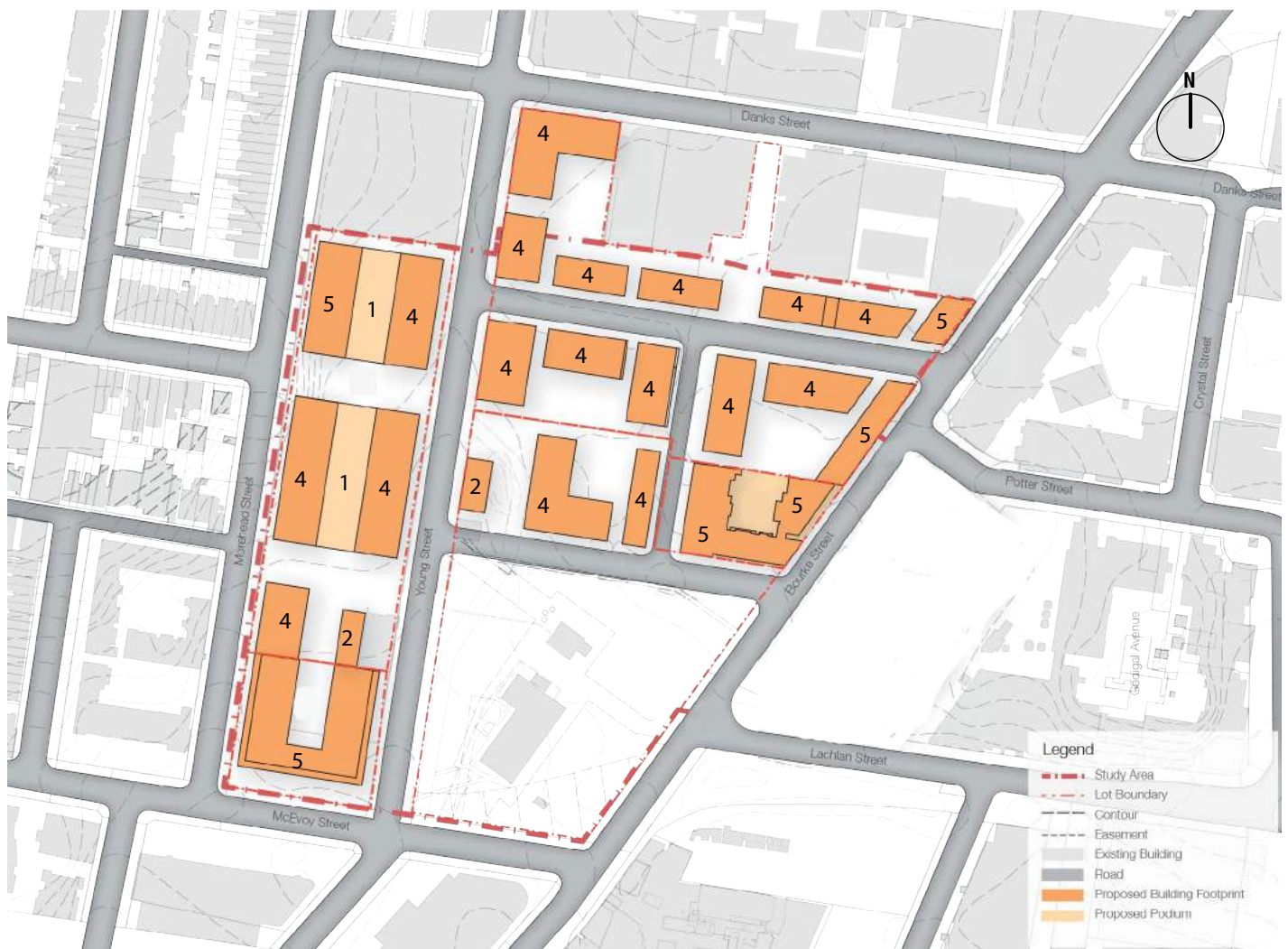


Built Form Options – Analysis

5.1 Current height controls

- Respects current maximum height in metres in Sydney LEP 2012 (18m to 22m)
- Built form aligns with DCP identified streets
- Concludes that most sites cannot achieve the current maximum FSR under existing height controls

Figure 25 – Danks Street South Precinct, DCP Option_ Current Controls



Pros

- Follows DCP identified street pattern
- Street defines open space
- Provides a consolidated open space area

Cons

- Street pattern does not respond to existing connections and easements
- Reduced developable blocks
- Does not maximise development capacity
- Street pattern conflicts with the location of the Ausgrid heritage item

Table 1 – FSRs achieved under current permissible height controls

Site	Achieved FSR	Permissible FSR
Strata	1.21:1	1.75:1
Majesty Properties	2.1:1	2:1
Jeffman/Red Brest	1.24:1	2:1 *
Dahua Group	0.32:1	2:1 *
City West Housing (approved development application)	1.78:1	2:1 *

Note: Site area calculation includes the areas that cannot be built over and is consistent with the site area definition in Sydney LEP 2012, but excludes areas affected by the arterial road reservation.

* Includes additional 0.5:1 FSR for Green Square Community Infrastructure.

Built Form Options – Analysis

5.2 Scenario 1 – Consolidated open space + towers

- Increases heights to accommodate current maximum potential FSR
- Consolidates open space within Sydney Water Site.
- Provides a variety of building heights + 4 towers

Figure 26 – Danks Street South Precinct, Scenario 1



Pros

- Provides a large open space
- Sites maximise development capacity
- Buildings define plaza area
- Integrates heritage items with the open space
- Provides access to Dahua site
- Variety of building heights

Cons

- Increased traffic through the southern plaza and park
- Number and heights of towers
- Open space affected by noise from traffic
- Solar access to park reduced by towers
- Ambiguous definition of edge between open space and private development
- Reduced developable areas
- Public open space is heavily encumbered by easements

5.3 Scenario 2– Central Park + buildings over easements

- Provides a variety of lower scale buildings
- Locates open space away from traffic
- No towers

Figure 27 – Danks Street South Precinct, Scenario 2



Pros

- Maximises developable blocks
- Sites maximise development capacity
- Buildings define park and plaza
- Integrates heritage items to plaza
- Provides central local park

Cons

- Relies on buildings over easements
- Requires relocation of stormwater culvert
- Homogenous building heights
- Access to Dahua site is compromised

Built Form Options – Analysis

5.2 Scenario 3 – Recommended option

- Reduces building heights and maximises development capacity
- Improved solar access to buildings and local park
- Reduces the number and heights of towers
- Provides a central park away from traffic and noise

Figure 28 – Danks Street South Precinct, Recommended Option



Pros

- Maximises developable blocks
- Sites can maximise development capacity
- Buildings define parks and plaza
- Integrates heritage items into plaza
- Provides access to Sydney Water assets
- Open space defined by streets
- No buildings over easements
- Buildings buffer noise and pollution from roads

Cons

- Provides passive recreation only

Figure 28 – Danks Street South Precinct, recommended option_looking north-west

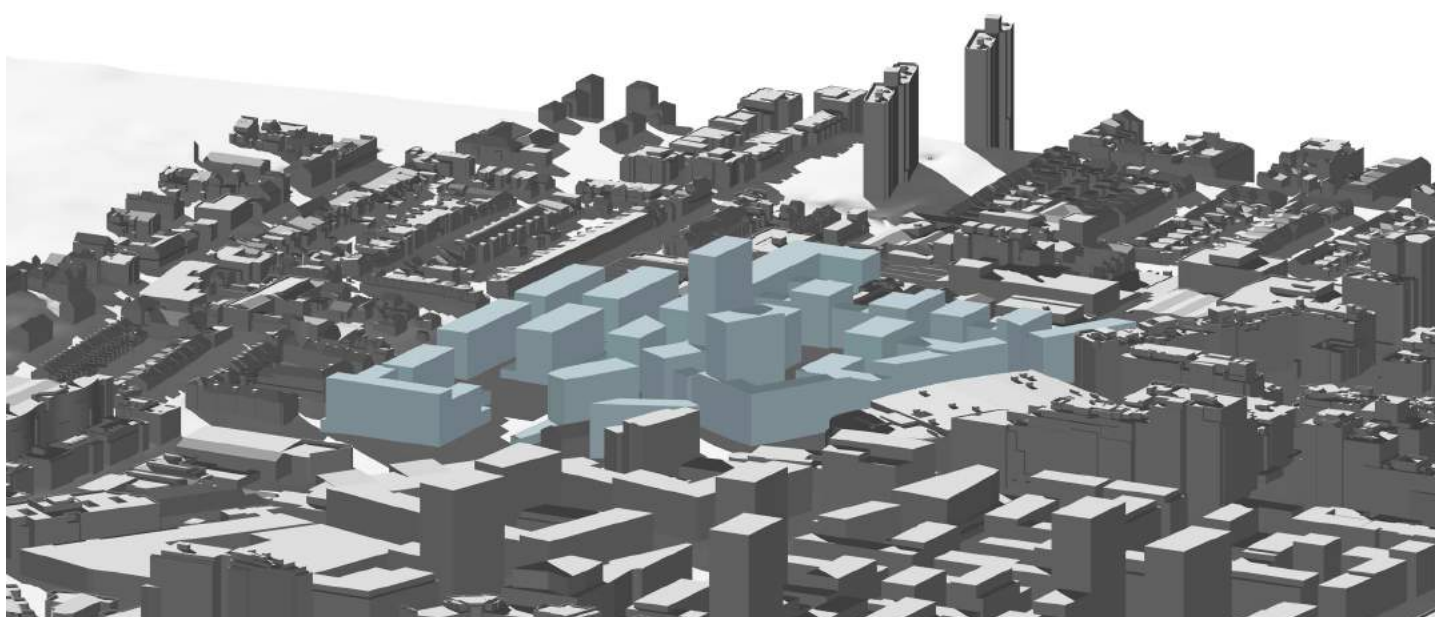
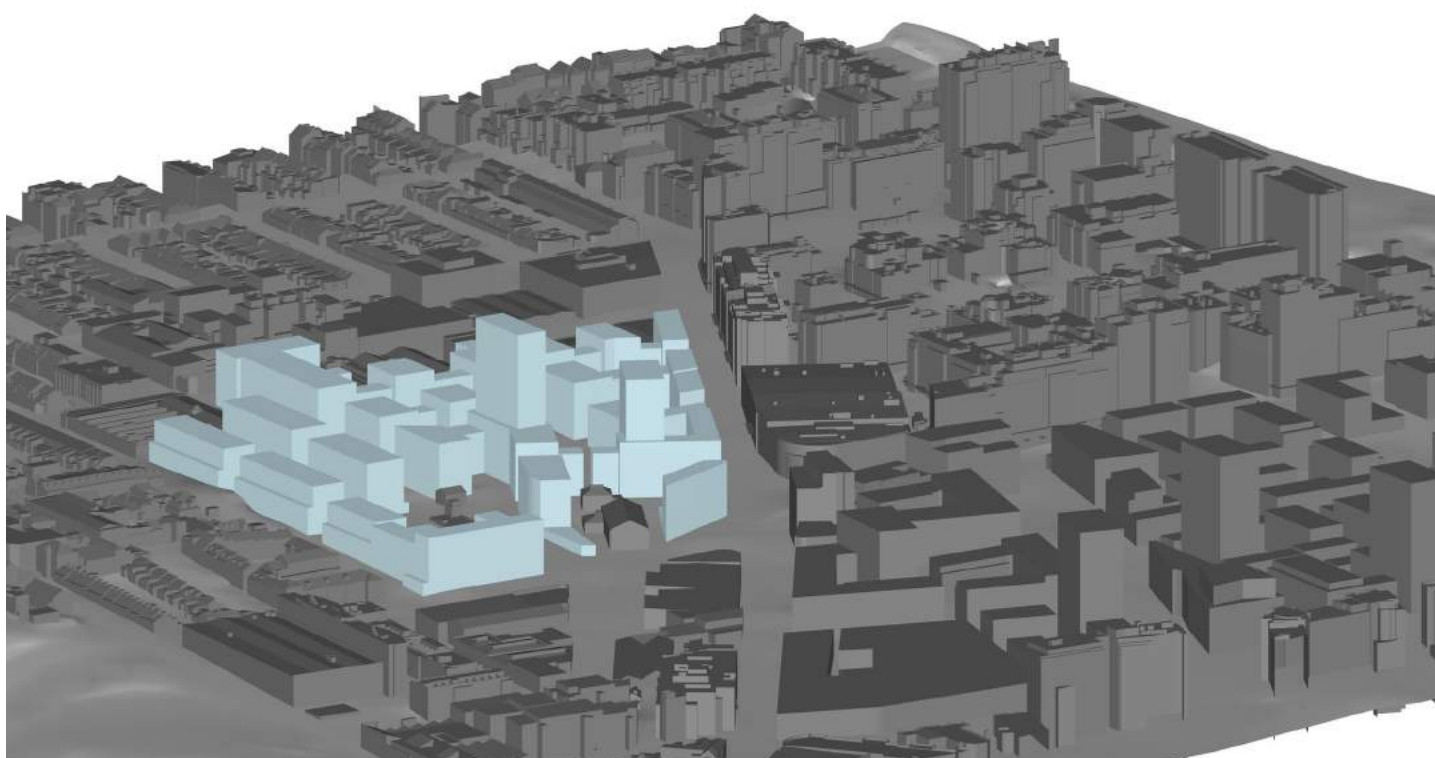


Figure 29 – Danks Street South Precinct, recommended option_looking north-east



Overshadowing analysis

A key consideration in the developing of the built form options is understanding the overshadowing impact on the site and surrounding developments.

The figures below detail the shadow impact for the recommended option.

Key aspects are:

- Recommended option complies with the City's requirements for solar access to parks.
- Small footprints for the towers results in less impact and shadow moves quickly.
- Minimum overshadowing of Divercity and Crown Square developments. ADG compliance.

Figure 30 – Overshadowing analysis 10am June 21

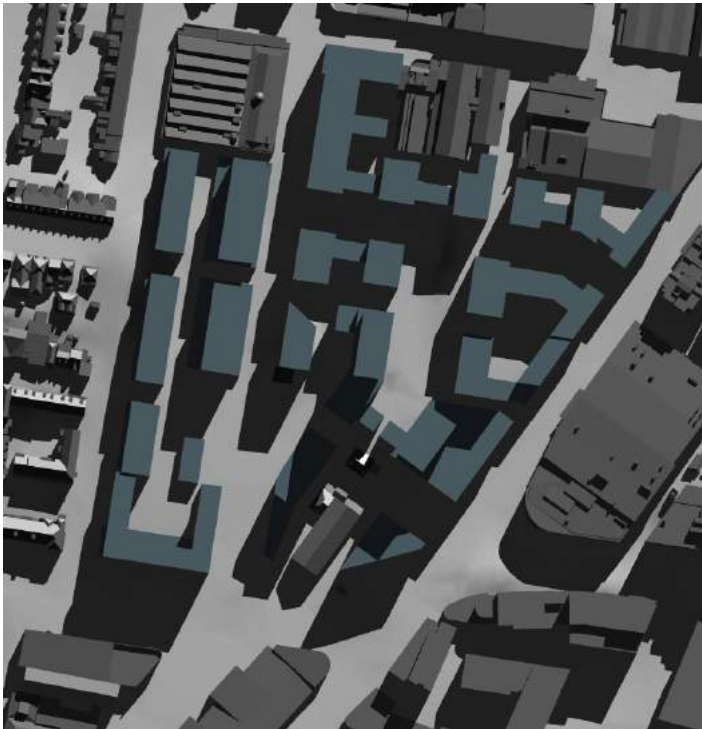


Figure 31 – Overshadowing analysis 11am June 21



Figure 32 – Overshadowing analysis 1pm June 21



Figure 33 – Overshadowing analysis 2pm June 21

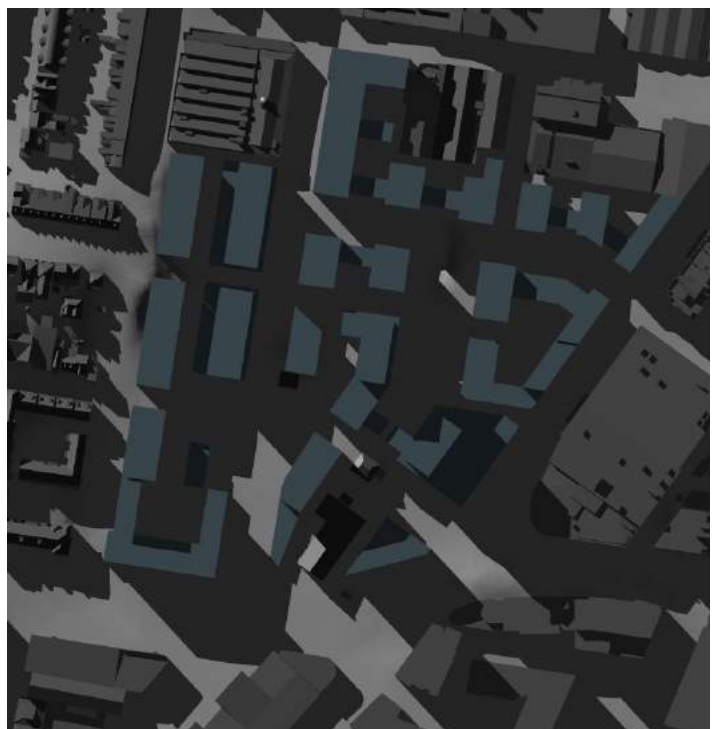


Figure 34 – Overshadowing analysis 10am September 21



Figure 35 – Overshadowing analysis 11am September 21

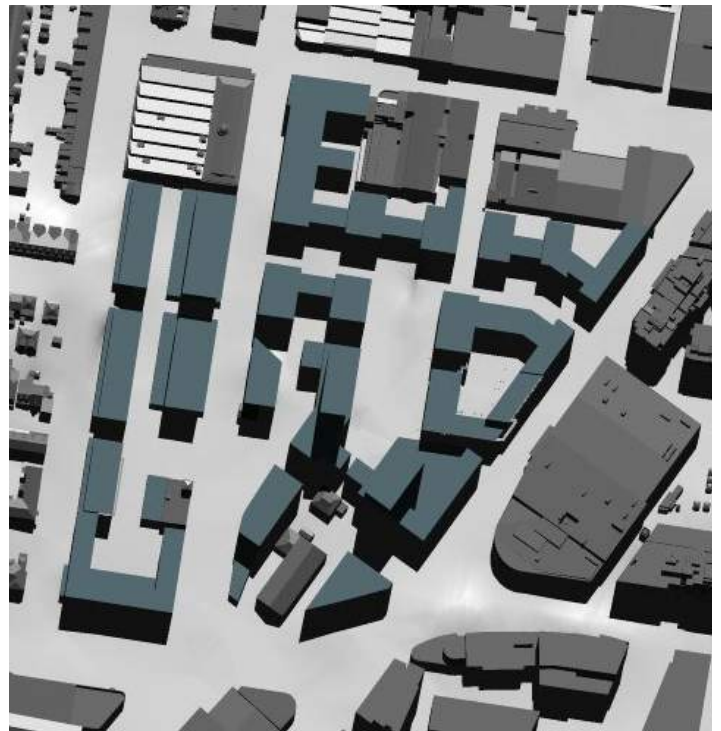


Figure 36 – Overshadowing analysis 1pm September 21

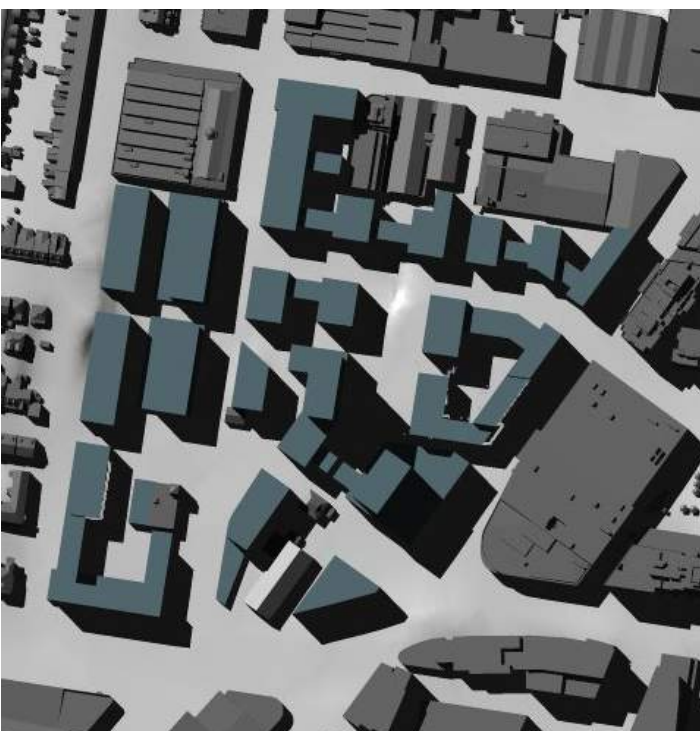
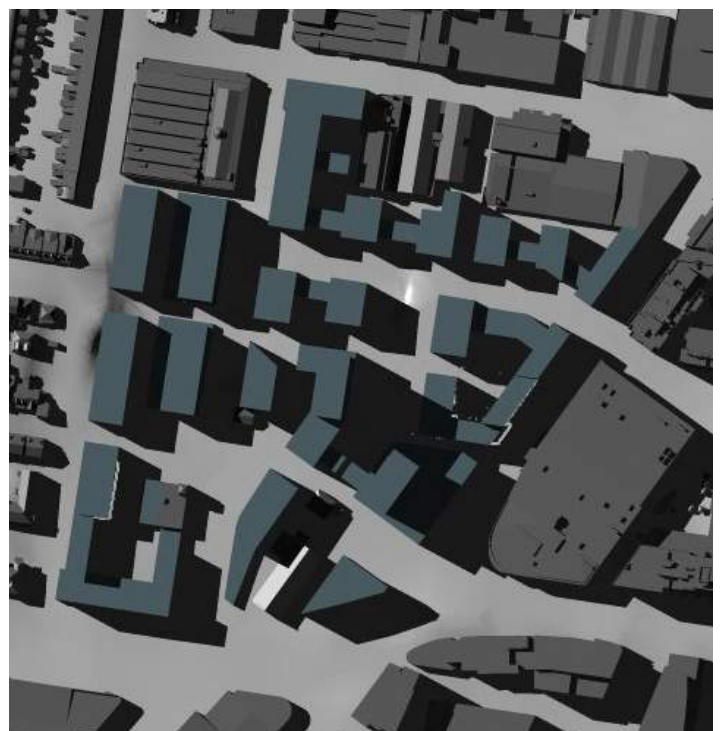


Figure 37 – Overshadowing analysis 2pm September 21



6.0

Conclusions

- The recommended option will deliver 5850 square meters of publicly accessible parks and plaza and new local streets including shared zones for improved connectivity through the area
- The new street network will ensure each site can develop independently and staging can be accommodated
- Solar access to the future open space has been maximised and building heights have been carefully positioned to provide a variety of scale that responds to the existing context
- The recommended option has been tested to ensure negative impact to the surrounding neighbourhoods, existing and future are minimised
- The proposed building heights will allow each site to maximise their development capacity
- A variety of uses will service the future and existing community and create a vibrant precinct

