URBAN DESIGN REPORT
SHOWGROUND STATION PRECINCT
SITES 2A-2E:

16 - 20 CARRINGTON RD, 2 - 36 MIDDLETON AVE, 3-19 HUGHES AVE
34 + 37 - 45 DAWES AVE, 3 - 7 + 4-6 FISHBURN CRES +25-31 SEXTON AVE,
CASTLE HILL

FOR MIDDLETON VENTURE PTY LTD
APRIL 2018 - ADDENDUM

stanisic architects

SHOWGROUND PRECINCT
SITE 2A-2E
ADDENDUM REPORT

ADDENDUM

This report is a supplement to the Urban Design Report (UDR) prepared by Stanisic Architects, submitted as part of a Planning Proposal to The Hills Shire Council (Council) for the site in September 2017. This UDR comprises: Volume 1 - Site 2A-2C, Volume 2 - Site 2D-2E.

In October 2017, Council released a draft DCP and in December 2017, the Department of Planning and Environment (DP+E) a Finalisation Report with proposed controls for these sites.

Following the release of the DCP and Finalisation Report, there have been numerous discussions between Middleton Venture Pty Ltd, Council and DP+E that have resulted in modifications to the proposed built form and public open spaces for the site.

This Addendum Report outlines the key modifications to the proposal.

ADDENDUM

PROPOSED MODIFICATIONS SITE 2A-2C

The key modifications to Site 2A-2C are outlined below:

1. 5m street dedication + 5m setback added to Carrington Road;
2. 2m street widening added to Sexton Avenue;
3. 5m street dedication + 5m setback confirmed along Middleton Avenue between Partridge Avenue and Ashford Avenue;
4. 5m street dedication + 0m setback confirmed along Middleton Avenue between Carrington Road and Partridge Avenue;
5. 2m street dedication + 3m setback added to north of Fishburn Avenue;
6. 5m setback confirmed along south of Fishburn Avenue;
7. 2m street dedication + 3m setback confirmed to north of Dawes Avenue;
8. The maximum building height has been reduced from 20 storeys to 18 storeys; and
9. The built form along Sexton Avenue has been increased from 8 storeys to 10 storeys; and
10. 1,500m² pocket park along Middleton Walk retained.

These changes are summarised on the following drawings:

- AD01 - Revised site plan
- AD02 - Revised site coverage plan

DESIGN CONTROLS
SITES 2A-2B

HEIGHT
- 14, 16 + 18 storeys (Middleton Avenue)
- 4 storeys (Fishburn Cr)
- 4, 9 storeys (Carrington Road)
- 10 storeys (Sexton Avenue)

SETBACKS
- 5m street dedication to Middleton Avenue + Carrington Road
- 2m street dedication to Fishburn Crescent (north)
- 2m street dedication to Sexton Avenue
- 5m front setback Carrington Road
- 0m front setback corner Carrington Road/ Middleton Avenue
- 5m front setback to Middleton Avenue (excluding corner)
- 3m front setback to Fishburn Cr (north)
- 7m front setback to Sexton Avenue
- 6m side setback (north east boundary)
- 15m wide through site link connecting Sexton + Middleton Avenues

FLOOR PLATE
- Multiple core with through apartments
- 6-8 apartments per core
- Natural light and ventilation to common lobbies
- 700-1100sqm nett floor area per floor

SCALE
- 47-63m street wall height to Middleton Avenue
- 36m street wall height to Sexton Avenue

ACCOMMODATION
- 690 apartments (approximate excluding retail)
- 173 (25%) x 1 bed, 450 (65%) x 2 bed, 67 (10%) x 3 bed

SEPP 65/ ADG
- 70% apartments achieve 2 hours solar access at mid-winter
- 60% apartments achieve natural cross ventilation
- 30% of site area is deep soil (site 2A-2C)
- 24m building separation to courtyard
- 18m building separation to north east (8/9 storey form)

DESIGN CONTROLS
SITE 2C

HEIGHT
- 10 storeys (Middleton Avenue)
- 8 storeys (Through Site Way/ Pocket Park)
- 4, 6 storeys (Dawes Avenue)
- 4 storeys (Fishburn Crescent)

SETBACKS
- 5m street dedication to Middleton Avenue
- 2m street dedication to Dawes Avenue
- 5m front setback to Middleton Avenue
- 5m front setback to Fishburn Crescent
- 3m setback to Dawes Avenue
- 9m side setback to north east boundary
- 6m through site link connecting Fishburn Crescent + Dawes Avenue

FLOOR PLATE
- Multiple core with through apartments
- 6-8 apartments per core
- Natural light and ventilation to common lobbies
- 700-1100sqm nett floor area per floor

SCALE
- 32m street wall height to Middleton Avenue
- 26m street wall height to Pocket Park

ACCOMMODATION
- 320 apartments (approximate)
- 80 (25%) x 1 bed, 208 (65%) x 2 bed, 32 (10%) x 3 bed

SEPP 65/ ADG
- 70% apartment achieve 2 hours solar access at mid-winter
- 60% apartments achieve natural cross ventilation
- 30% of site area is deep soil (site 2A-2C)
- 24m building separation to courtyard

PROPOSED MODIFICATIONS SITE 2D-2E

The key modifications to Site 2A-2C are outlined below:

1. 5,000m² park added to north of site between Middleton Avenue, Dawes Avenue and Hughes Avenue;
2. 5m street dedication + 5m setback confirmed along Middleton Avenue between Partridge Avenue and Ashford Avenue;
3. Side setbacks increased to 9m to southern boundary;
4. Building height increased to north of site adjacent to park to 16 storeys;
5. Built form along Hughes Avenue divided into three separate buildings;
6. 5m setback confirmed to Hughes Avenue;
7. 4 storey built form added along Park, setback 6m from the park; and
8. Pocket park to southern boundary removed.

These changes are summarised on the following drawings:

- AD01 - Revised site plan
- AD02 - Revised site coverage plan

DESIGN CONTROLS
SITES 2D-2E

HEIGHT
- 10, 16 storeys (Middleton Avenue)
- 4 storeys (along Park)
- 8 storeys (Hughes Avenue) with 3m setback above level 6

SETBACKS
- 5m street dedication to Middleton Avenue
- 8m through site link adjacent to Cadman Crescent
- 5m front setback Middleton Avenue
- 6m side setback to Park
- 5m front setback to Hughes Avenue
- 9m side setback along southern boundary
- 15m wide through site link connecting Sexton + Middleton Avenues

FLOOR PLATE
- Multiple core with through apartments
- 5-9 apartments per core
- Natural light and ventilation to common lobbies
- 700-1100sqm nett floor area per floor

SCALE
- 20m street wall height to Hughes Avenue
- 32-57m street wall height to Middleton Avenue

ACCOMMODATION
- 530 apartments (approximate)
- 130 (25%) x 1 bed, 345 (65%) x 2 bed, 55 (10%) x 3 bed

SEPP 65/ ADG
- 70% apartment achieve 2 hours solar access at mid-winter
- 60% apartments achieve natural cross ventilation
- 30% of site area is deep soil planting
- 24m separation to courtyard
- 9m building separation to south boundary adjacent to neighbouring future forms

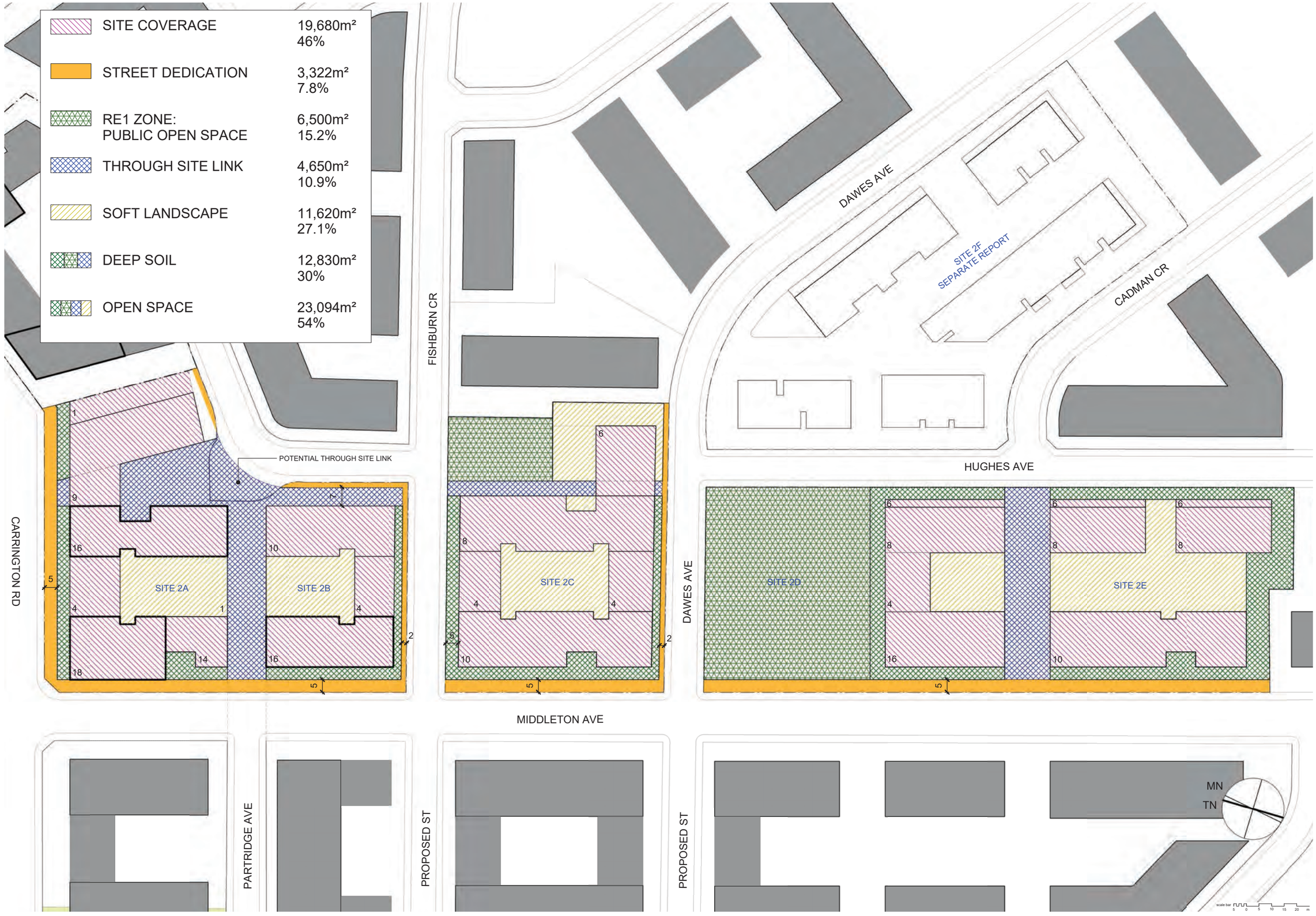
ADDENDUM

ADDENDUM

AD01 - REVISED SITE PLAN

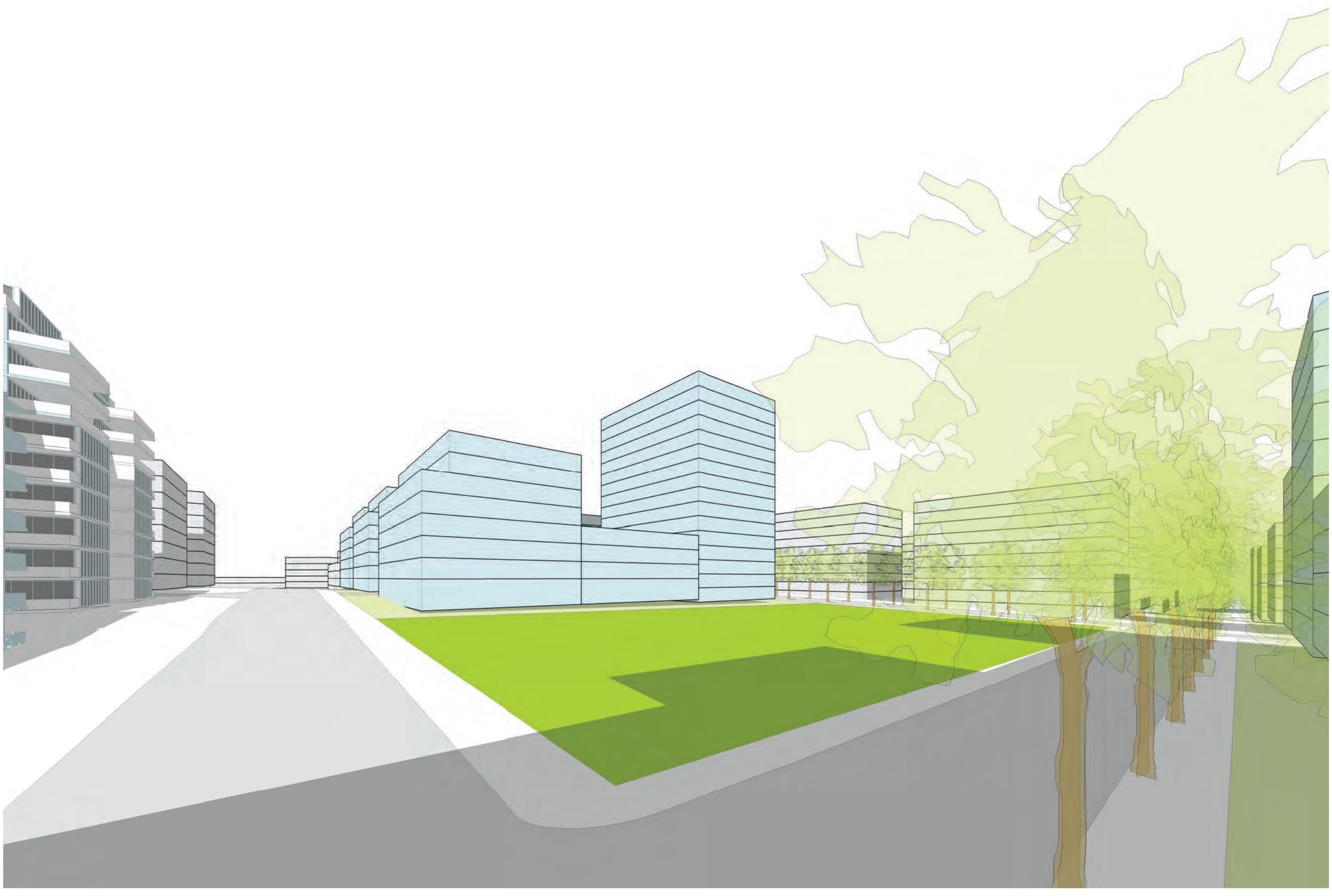
ADDENDUM

	SITE COVERAGE	19,680m² 46%
	STREET DEDICATION	3,322m² 7.8%
	RE1 ZONE: PUBLIC OPEN SPACE	6,500m² 15.2%
	THROUGH SITE LINK	4,650m² 10.9%
	SOFT LANDSCAPE	11,620m² 27.1%
	DEEP SOIL	12,830m² 30%
	OPEN SPACE	23,094m² 54%



VISUALISATION 1: VIEW LOOKING SOUTH EAST ALONG MIDDLETON AVENUE TOWARDS PARK

VISUALISATION 2: VIEW LOOKING SOUTH WEST ALONG HUGHES AVENUE TOWARDS PARK



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NOVEMBER 2017

stanisic architects

URBAN DESIGN REPORT
SHOWGROUND STATION PRECINCT
SITES 2A-2E

CONTENTS

EXECUTIVE SUMMARY

Introduction

This Urban Design Report has been prepared by Stanisic Architects on behalf of Middleton Venture Pty Ltd as part of a Planning Proposal for the subject sites at 16-20 Carrington Road, 2-36 Middleton Avenue, 3-19 Hughes Avenue, 34 + 37-45 Dawes Avenue, 3-7 + 4-6 Fishburn Crescent + 25-31 Sexton Avenue, Castle Hill. The large consolidated landholding extends along Middleton Avenue, from Carrington Road to Ashford Avenue and has been characterised as sites 2A to 2E.

The purpose of the planning proposal is to seek Council's support to revise key statutory development controls for the site: height and floor space ratio.

In undertaking this Urban Design Report, Stanisic Architects has:

- Visited, inspected and photographed the site and its immediate surroundings;
- Reviewed the Showground Station Precinct (Department of Planning and Environment) to determine its suitability for the emerging urban form and structure of the new Showground Station Precinct
- Defined design principles for the site that have been derived from key opportunities and constraints to guide the design options;
- Modelled and tested built form options and selected a preferred option;
- Considered key amenity parameters of SEPP 65/ ADG;
- Considered shadowing of neighbouring sites;
- Selected a concept design and described it with plans, sections and 3D views; and
- Recommended amendments to the proposed development statutory controls for the site made by the Department of Planning and Environment in the Showground Station Precinct Proposal.

This report has been divided into two volumes:

Volume 1 - Sites 2A to 2C
Volume 2 - Sites 2D + 2E

Vision

The vision for the site is to create an environmentally sustainable and high intensity living environment within an existing low-rise residential setting that is transitioning to high density living centred on the new Showground Station. It will be framed by an increased setback and potential street dedication to Middleton Avenue to establish this street as a main avenue, permeable and publicly accessible through site links that connects into the existing street network. It will also include a pedestrian green link, 'Middleton Walk' that runs parallel to Middleton Avenue from Ashford Avenue to Carrington Street and will comprise a pocket park and retail court.

Building forms will be oriented to optimise solar access and breezes. Streets will be activated with retail towards the new Showground Station and 'town house' apartments with direct street access. The site will be a catalyst for the Showground Station Precinct: Residential Sub-Precinct and set benchmark of design excellence.

Key concepts underlying the vision are Diversity, Connectivity and Sustainability.

Diversity applies to the development of a range of building types, diverse streets and communal spaces and housing choice which underpins a vibrant centre that offers complex experiences and social contact.

Connectivity applies to an accessible, genuine and diverse network of publicly accessible spaces which integrates existing and future landscapes and buildings, and which establishes a lasting framework and pattern for the growth of the area.

Sustainability applies to development of a positive environmental, social and economic outcome for the site that maximises natural cross ventilation and sunlight for the amenity of residents, passive thermal design for ventilation, heating and cooling reducing reliance on technology and operation costs as well as deep soil zones for ground water recharge and vegetation.

Goals

The key goals of the vision are to:

- Achieve design excellence;
- Increase housing supply to meet targets projected in the Showground Station Precinct Proposal;
- Create diverse built forms that reinforce the varied street types, building types and orientation;
- Create urban forms within a landscaped setting;
- Create a connected public domain with increased street activation, permeable movement system for pedestrian and bicycles to support higher density development;
- Achieve a high amenity standard to built forms and central courtyard;
- Achieve compliance with SEPP 65/ Apartment Design Guide; and
- Create a diversity of accommodation suited to a variety of lifestyles.

Built Form Modelling

Stanisic Architects has examined the oppportunities and constraints for the site and undertaken built form testing to arrive at a preferred option that achieves the goals of the vision and compliance with the key amenity standards of SEPP 65/ Apartment Design Guide.

Across sites 2A to 2E, the preferred option achieves an FSR of 3.55:1 (42,770m² GFA) within heights transitioning from Xm (20 storeys) at site 2A, to Xm (8 storeys) - Site 2E. Building height has also been reduced to create a green spine that extends from Carrington Road to Ashford Avenue with reduced building heights of Xm (4 storeys).

Concept Design

A concept design has been prepared for the site which validates the preferred option and demonstrates the key concepts and goals of the vision are achieved by:

- Achieving design excellence with a site specific architectural response that exceeds the minimum requirements of SEPP 65/ ADG and sets a benchmark for future developments in the precinct;
- Exceeding the housing targets projected in the Showground Station Precinct Proposal;
- Creating diverse built forms that reinforce Middleton Avenue as the main avenue and Middelton Walk as a pedestrian street;
- Decreasing building heights away from the new Showground Station;
- Creating an active street frontage to site 2A with 2,600m² retail;
- Planning apartments to maximise solar access, cross ventilation and outlook;
- Creating strong urban forms within a landscaped setting with landscaped front setbacks and courtyards with deep soil planting exceeding minimum standards that are suitable for large tree planting. Low level planting and raised terraces are used to activate streets and the courtyard while ensuring visual privacy is achieved to ground floor apartments. Entry lobbies are located level with the adjacent footpath with stairs and accessible platform lifts located within the entry lobby to mediate the variation in topography across the site;
- Creating an accessible through site links suitable for pedestrians and bicycles that connects Middleton and Hughes Avenue as an extension of Cadman Crescent and Sexton Avenue towards Middleton Avenue. The links traverse the site with single 1:20 ramps;
- Achieving compliance with SEPP 65/ Adpartment Design Guide;
- Achieving a high amenity standard to built forms and central courtyard with the courtyard width between 18-22m, 2 hours of solar access to 70% of apartments at mid-winter and natural cross ventilation to 60% of apartments; and
- Creating a diversity of accommodation suited to a variety of lifestyles with 25% x 1 bed/ 1 bed + study, 65% 2 bed and 10% 3 bed apartments. Apartment sizes range in size with 1 bed (50-54sqm), 1 bed + study (55-69sqm), 2 bed (70-89sqm), 3 bed (90-110sqm);
- Creating a high quality publicly accessible through site link between Hughes Avenue and Carrington Road with retail court;
- Creating two pocket parks with a combined area of 2,595m²;
- Achieving a child care centre adjacent to the pocket park (Site 2C).

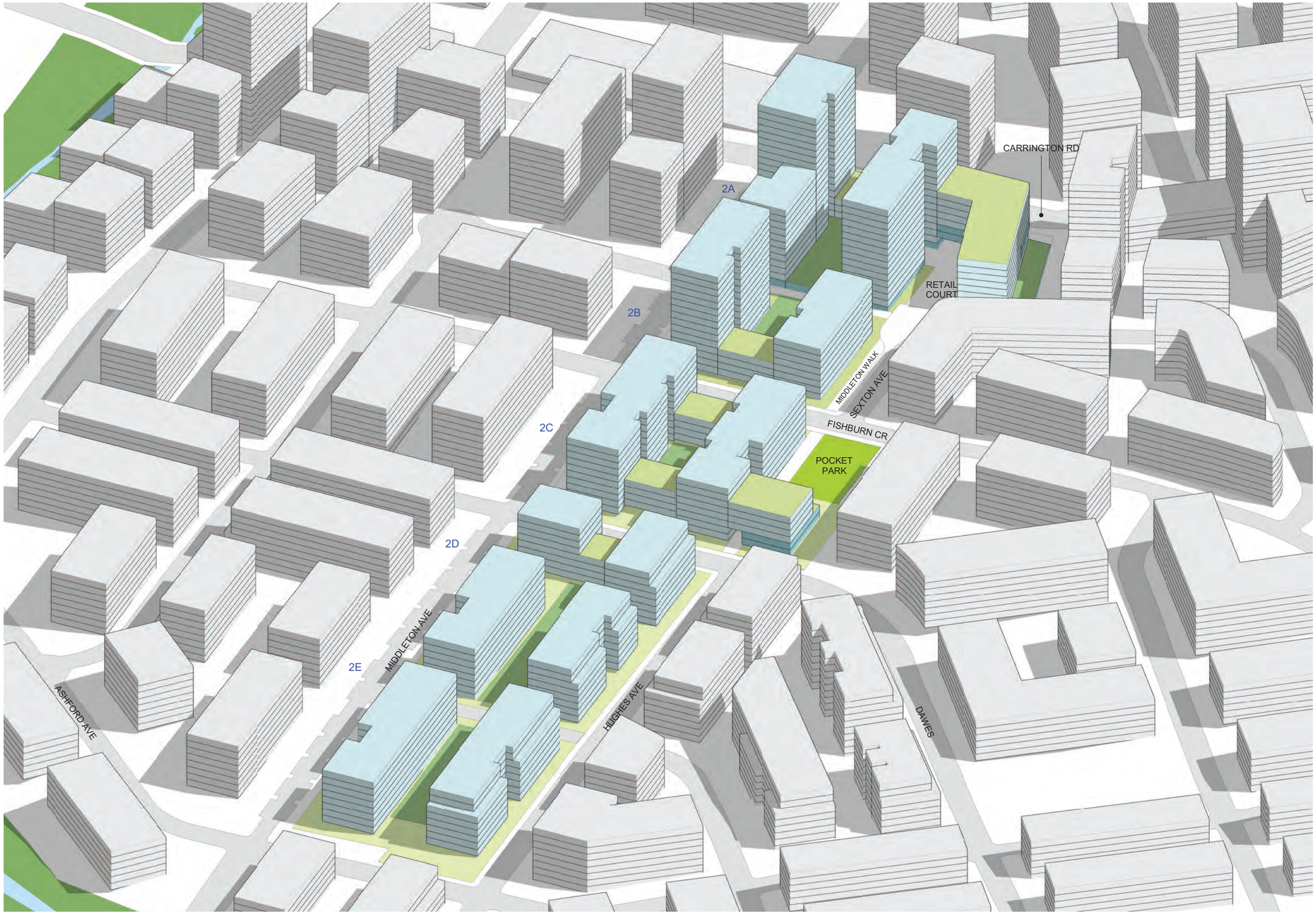
Recommendations

We recommend that preferred option is adopted with the following amendments to the statutory development standards:

Site	Development Standard	Existing*	Proposed
2A	FSR	3.0:1	5.0:1
	Maximum height of building	40m (6 to 12 storeys)	72m (20 storeys)
2B	FSR	2.7:1	5.0:1
	Maximum height of building	27m (6 storeys)	62m (16 storeys)
2C	FSR	2.3:1	3.0:1
	Maximum height of building	27m (6 storeys)	34m (10 storeys)
2D	FSR	2.3:1	2.7:1
	Maximum height of building	21m (6 storeys)	28m (8 storeys)
2E	FSR	2.3:1	2.7:1
	Maximum height of building	21m (6 storeys)	28m (8 storeys)

* *Showground Station Precinct Proposal (Department of Planning and Environment)*

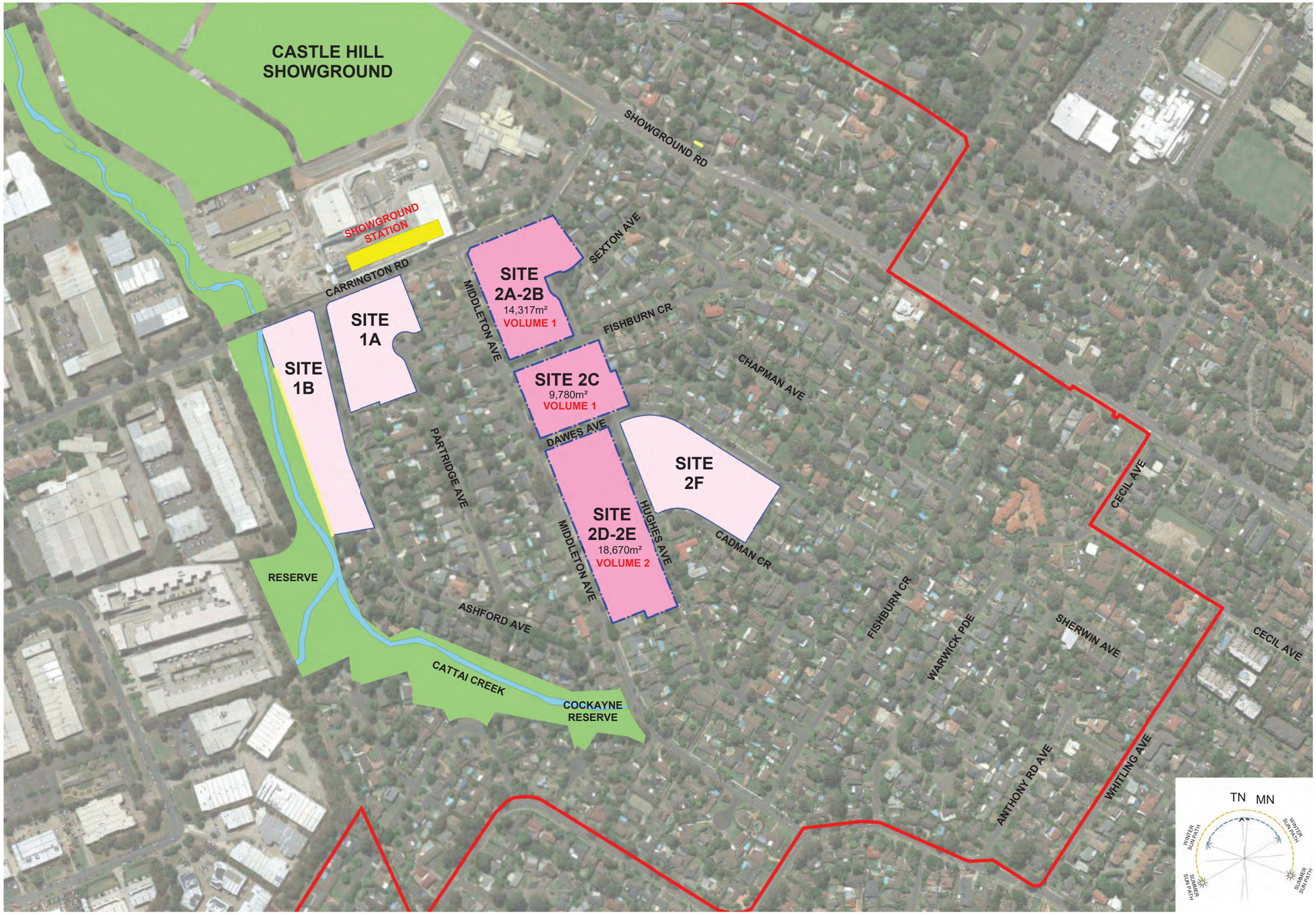
PREFERRED OPTION



EXECUTIVE SUMMARY

RE1 ZONE: PUBLIC OPEN SPACE	2,595m² 6.07%	2,937m²
RE1 ZONE: POTENTIAL PUBLIC OPEN SPACE	342m²	
THROUGH SITE LINK	4,685m² 10.95%	
POTENTIAL STREET DEDICATION	2,800m² 6.55%	

SITE IDENTIFICATION PLAN



CARRINGTON ROAD LOOKING ALONG MIDDLETON AVENUE (SITE 2A)

CARRINGTON ROAD LOOKING TOWARDS MIDDLETON WALK (SITE 2A)

SEXTON AVENUE LOOKING ALONG MIDDLETON WALK TOWARDS CARRINGTON ROAD (SITE 2A)

SEXTON AVENUE LOOKING ALONG MIDDLETON WALK TOWARDS POCKET PARK (SITE 2C)

MIDDLETON AVENUE LOOKING TOWARDS CARRINGTON ROAD (SITES 2D-2E)

MIDDLETON AVENUE LOOKING TOWARDS THROUGH SITE LINK (SITES 2D-2E)

URBAN DESIGN REPORT
SHOWGROUND STATION PRECINCT
VOLUME 1 - SITES 2A-2E:

FOR MIDDLETON VENTURE PTY LTD
NOVEMBER 2017

stanisic architects

1 LOCATION

LOCATION

The subject site is a large consolidate landholding identified as site 2A to 2C that is located in the suburb of Castle Hill, opposite the new Showground Station that is currently under construction and due for completion in early 2019. The site is within 2km of Castle Hill Strategic Centre that includes Castle Towers and is accessed from Showground Road. To the west of the site is the Castle Hill Trading Zone, accessed from Carrington Road, which comprises bulky goods retail, light industrial and commercial uses.

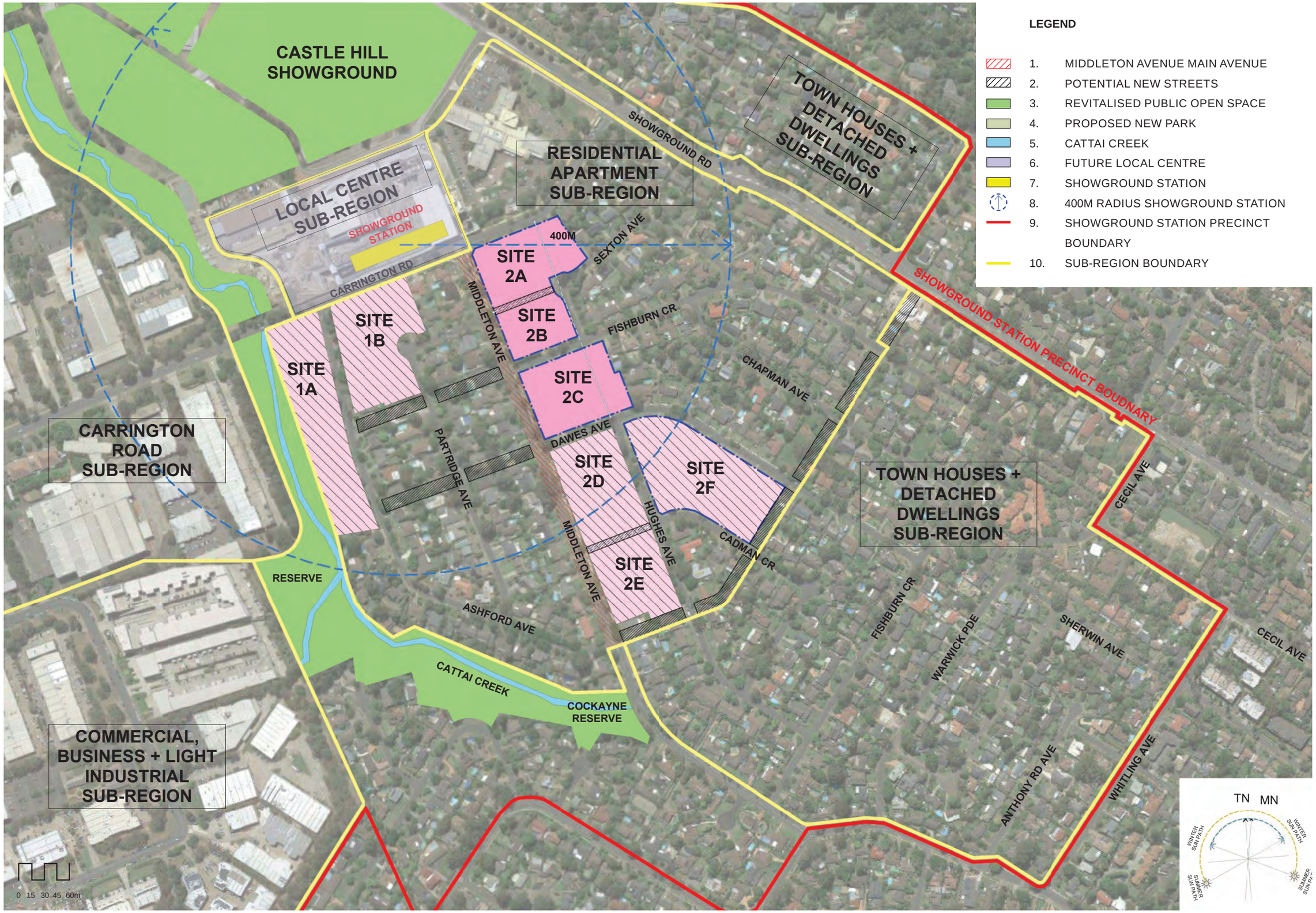
The site has a long frontage to Middleton Avenue, which is a future primary street that connects to Showground Station/ Carrington Road. It also has a frontage to Carrington Road as well as Fishburn Crescent, Sexton Avenue and Dawes Avenue. The site is currently surrounded by existing low-rise detached dwellings but will be redeveloped in the medium term, to high density housing as identified in the Showground Station Precinct Proposal. To the north of the site is the Castle Hill Showground, a significant regional facility. To the west of the site is the Cattai Creek Corridor, which extends from Cockayne Reserve, through the Showground to Showground Road to the north which has the potential to become a revitalised green link and public open space.

LEGEND

1. FUTURE SHOWGROUND STATION
2. CASTLE HILL SHOWGROUND
3. SHOWGROUND ROAD
4. CARRINGTON ROAD
5. CASTLE TOWERS
6. CASTLE HILL RSL
7. CASTLE HILL STRATEGIC CENTRE
8. MIDDLETON AVENUE
9. CATTAI CREEK RESERVE
10. CASTLE HILL TRADING ZONE

SITE

AERIAL VIEW LOOKING SOUTH EAST


CASTLE HILL SHOWGROUND
LOCAL CENTRE SUB-REGION
SHOWGROUND STATION
CARRINGTON RD
RESIDENTIAL APARTMENT SUB-REGION
SHOWGROUND RD
TOWN HOUSES + DETACHED DWELLINGS SUB-REGION
400M
SEXTON AVE
SITE 2A
SITE 2B
SITE 2C
SITE 2D
SITE 2E
SITE 2F
SITE 1A
SITE 1B
MIDDLETON AVE
FISHBURN CR
CHAPMAN AVE
DAWES AVE
PARTRIDGE AVE
HUGHES AVE
CADMAN CR
SHOWGROUND STATION PRECINCT BOUNDNARY
CARRINGTON ROAD SUB-REGION
RESERVE
ASHFORD AVE
CATTAI CREEK
COCKAYNE RESERVE
COMMERCIAL, BUSINESS + LIGHT INDUSTRIAL SUB-REGION
TOWN HOUSES + DETACHED DWELLINGS SUB-REGION
CECIL AVE
WARWICK PDE
SHERWIN AVE
ANTHONY RD AVE
WHITLING AVE
0 15 30 45 60m
LEGEND
1. MIDDLETON AVENUE MAIN AVENUE
2. POTENTIAL NEW STREETS
3. REVITALISED PUBLIC OPEN SPACE
4. PROPOSED NEW PARK
5. CATTAI CREEK
6. FUTURE LOCAL CENTRE
7. SHOWGROUND STATION
8. 400M RADIUS SHOWGROUND STATION
9. SHOWGROUND STATION PRECINCT BOUNDARY
10. SUB-REGION BOUNDARY
TN MN
WINTER SUN PATH
SUMMER SUN PATH

A - VIEW LOOKING WEST ALONG CARRINGTON RD AT SHOWGROUND RD

B - VIEW LOOKING WEST ALONG CARRINGTON RD TOWARDS SITE

C - VIEW LOOKING ALONG EAST BOUNDARY OF SITE

D - VIEW LOOKING NORTH FROM SITE TOWARDS THE SHOWGROUND

E - VIEW LOOKING WEST ALONG CARRINGTON RD AT MIDDLETON AVE

F - VIEW LOOKING EAST TOWARDS SITE FROM CATTAI CREEK

G - VIEW OF CATTAI CREEK

H - VIEW LOOKING EAST ALONG CARRINGTON RD TOWARDS SITE

KEY MAP

SITE PHOTOS - CARRINGTON ROAD

J - VIEW OF SITE FROM FORMER HILLS SHIRE COUNCIL CARPARK AT CARRINGTON ROAD

K - VIEW OF SITE LOOKING SOUTH TOWARDS MIDDLETON AVENUE

L - VIEW LOOKING SOUTH ALONG MIDDLETON AVE AT ASHFORD AVE

M - VIEW LOOKING WEST ALONG ASHFORD AVE AT MIDDLETON AVE

N - VIEW LOOKING NORTH ALONG ASHFORD AVE

O - VIEW LOOKING EAST ALONG ASHFORD AVE TOWARDS MIDDLETON AVE

P - VIEW LOOKING NORTH ALONG MIDDLETON AVE AT ASHFORD AVE

Q - VIEW LOOKING SOUTH ALONG MIDDLETON AVE TOWARDS COCKAYNE RESERVE

R - VIEW LOOKING WEST AT COCKAYNE RESERVE FROM MIDDLETON AVE

S - VIEW LOOKING SOUTH WEST TOWARDS CATTAI CREEK FROM MIDDLETON AVE

KEY MAP

SITE PHOTOS - FISHBURN CRESCENT

T - VIEW LOOKING EAST ALONG FISHBURN CR FROM MIDDLETON AVE

U - VIEW LOOKING EAST ALONG FISHBURN CR

V - VIEW LOOKING ALONG WEST ALONG FISHBURN CR TOWARDS MIDDLETON AVE

W - VIEW LOOKING EAST ALONG FISHBURN CR

X - VIEW LOOKING NORTH FROM FISHBURN CR ALONG SEXTON AVE

Y - VIEW LOOKING WEST ALONG FISHBURN CR

Z - VIEW LOOKING SOUTH WEST ALONG FISHBURN CR FROM SEXTON AVE

AA - VIEW LOOKING SOUTH FROM SEXTON AVE TOWARDS FISHBURN CR

KEY MAP

BB - VIEW LOOKING NORTH WEST FROM FISHBURN CR ALONG SEXTON AVE

CC - VIEW LOOKING NORTH WEST TOWARDS SEXTON AVE COURT

DD - VIEW LOOKING EAST ALONG SEXTON AVE FROM COURT

EE - VIEW LOOKING EAST ALONG SEXTON AVE TOWARDS COURT

FF - VIEW LOOKING EAST ALONG SEXTON AVE TOWARDS COURT

GG - VIEW LOOKING EAST ALONG SEXTON AVE TOWARDS COURT

HH - VIEW LOOKING NORTH WEST FROM SEXTON AVE TOWARDS COURT AND NEW SHOWGROUND STATION

KEY MAP

SITE PHOTOS - DAWES AVENUE

JJ - VIEW LOOKING EAST ALONG FISHBURN CR FROM MIDDLETON AVE

KK - VIEW LOOKING EAST ALONG FISHBURN CR

LL - VIEW LOOKING ALONG WEST ALONG FISHBURN CR TOWARDS MIDDLETON AVE

MM - VIEW LOOKING EAST ALONG FISHBURN CR

NN - VIEW LOOKING NORTH FROM FISHBURN CR ALONG SEXTON AVE

OO - VIEW LOOKING WEST ALONG FISHBURN CR

PP - VIEW LOOKING SOUTH WEST ALONG FISHBURN CR FROM SEXTON AVE

QQ - VIEW LOOKING SOUTH FROM SEXTON AVE TOWARDS FISHBURN CR

KEY MAP

AERIAL VIEW LOOKING WEST WEST

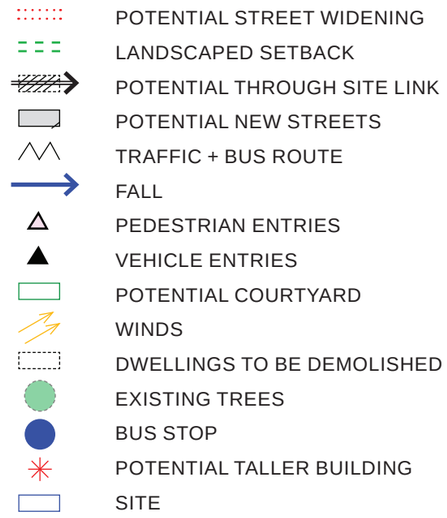
OPPORTUNITIES

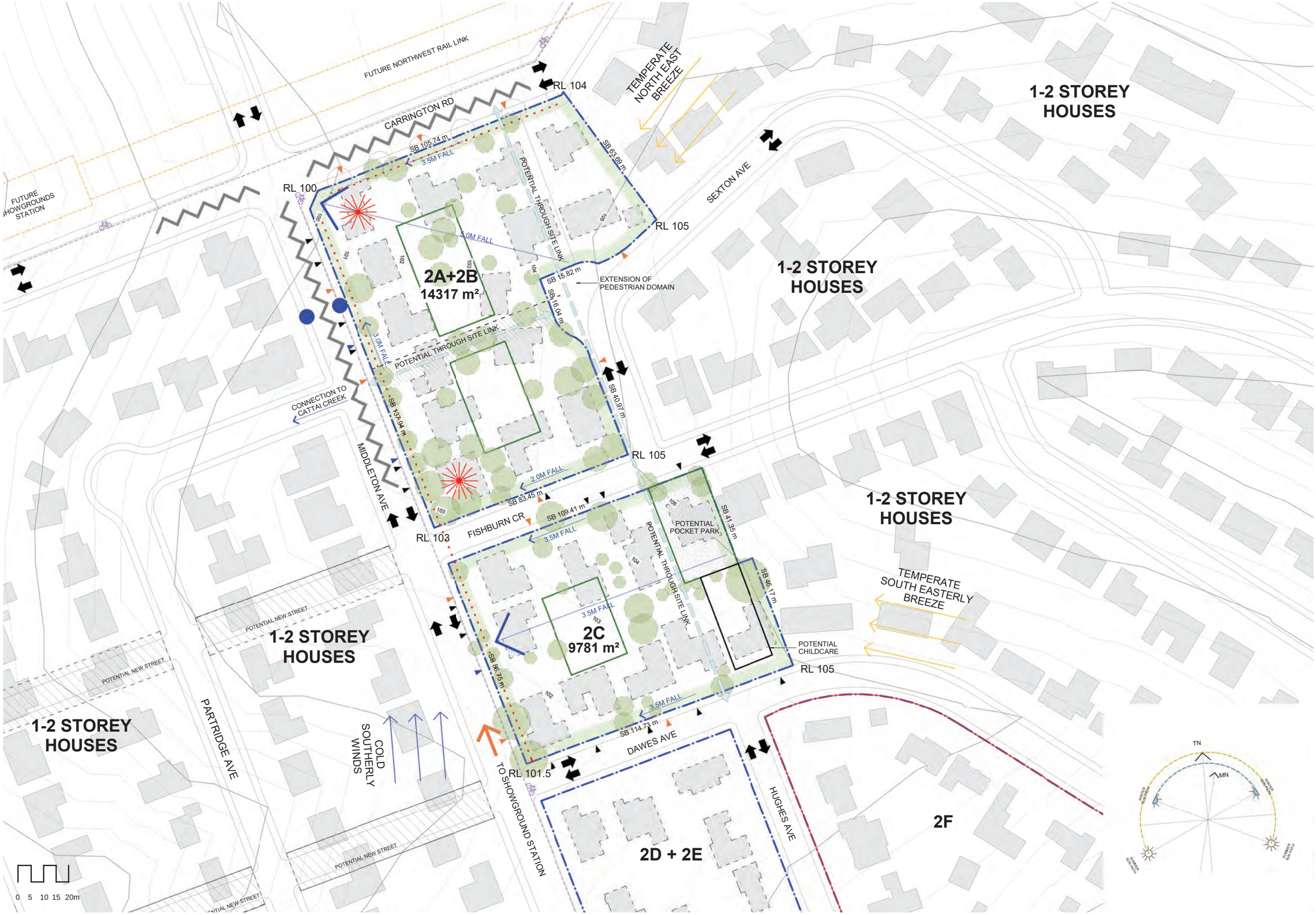
- Location diagonally opposite the new Showground Station;
- Large consolidated area for redevelopment over two sites: 2A+2B (14,317sqm) and 2C (9,781sqm) in a single ownership as a catalyst site along Middleton Avenue;
- Location within the priority precinct of the Showground Station Precinct Proposal which aims to provide new housing and jobs in centres with good existing or planned transport services;
- Proximity to future shops and services at Showground Station and Castle Hill Trading Zone;
- Proximity to Castle Hill Strategic Centre and Castle Towers Shopping Centre 2km to the south-east;
- Proximity to Castle Hill Showground, Cockayne Reserve and future Cattai Creek Reserve to the south and west;
- Long street frontage to Middleton Avenue (225m combined sites) with a westerly aspect with articulated linear forms that are suitable for apartment layouts;
- Potential to increase street width with a street dedication and 5m front setback (dimension to be confirmed) on to eastern side of Middleton Avenue, from 20m to 25m, to facilitate additional street tree planting / and additional turning lane while maximising on-street parking;
- Potential to increase street width along Carrington Road (if required) with dimension to be confirmed;
- Potential for active retail frontages to site 2A along Carrington Road and a through site way;
- Potential child care centre on site 2A+2B as well as a pocket park and child care centre on site 2C;
- Potential to increase height without adverse built form or amenity impacts due to orientation and street widths, including two taller built forms at the corner of Middleton Avenue /Carrington Road and Middleton Avenue/ Fishburn Crescent;
- Potential to include a cycleway along Middleton Avenue that connects to existing bicycle network;
- Create varied building types that respond to different street types and orientations;
- Easy vehicle access from Middleton, Fishburn and Dawes Avenues;
- Favourable north orientation for solar access to communal open spaces;
- Potential through site link for a future connection to Cattai Creek Reserve;
- Removal of existing trees on the site with new trees planted in the courtyard and front setback zones to create a consolidated basement with less excavation;
- Low risk of site contamination from existing residential uses; and
- Minimum 24m wide communal courtyards.

CONSTRAINTS

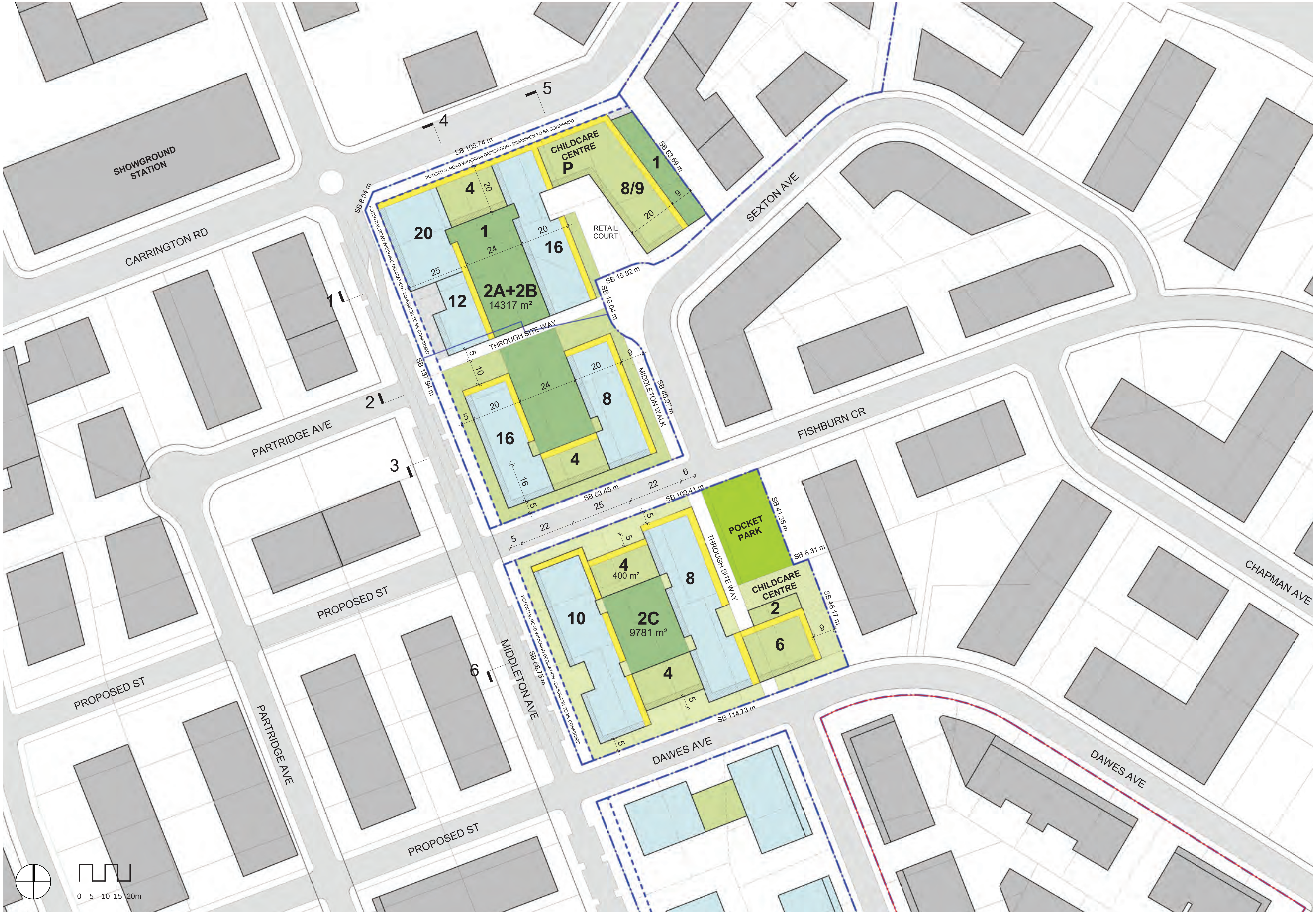
- Existing low density housing requiring extensive site amalgamations;
- Middleton Avenue alignment to the west of true north limiting opportunities for 2 hours solar access to private open spaces and living rooms with a westerly aspect;
- Transition from low rise residential character to high density residential (R4 zone);
- Traffic noise along Carrington Road and Middleton Avenue;
- 3m fall across the site and 5m cross fall from south east corner down to north west;
- Removal of large established trees located within front setback zones and existing rear yards to facilitate basement parking; and
- Opportunities for basement carparking access limited along Carrington Road.

LEGEND

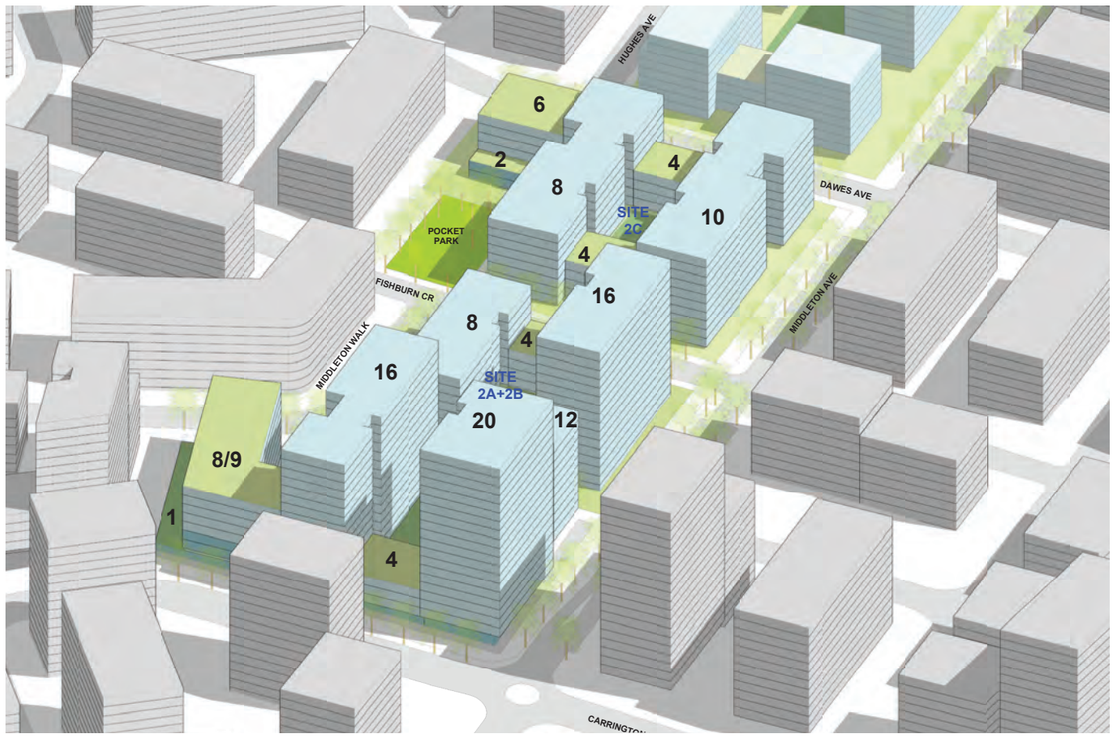



FUTURE NORTHWEST RAIL LINK
FUTURE SHOWGROUNDS STATION
CARRINGTON RD
RL 104
RL 100
SB 105.74 m
3.5M FALL
SB 63.89 m
TEMPERATE NORTH EAST BREEZE
1-2 STOREY HOUSES
SEXTON AVE
POTENTIAL THROUGH SITE LINK
RL 105
5.0M FALL
2A+2B
14317 m²
SB 15.82 m
EXTENSION OF PEDESTRIAN DOMAIN
SB 116.04 m
3.0M FALL
POTENTIAL THROUGH SITE LINK
CONNECTION TO CATTAI CREEK
SB 137.94 m
SB 40.97 m
MIDDLETON AVE
RL 105
2.0M FALL
SB 83.45 m
RL 103
FISHBURN CR
SB 109.41 m
3.5M FALL
POTENTIAL POCKET PARK
SB 41.35 m
POTENTIAL THROUGH SITE LINK
SB 46.17 m
TEMPERATE SOUTH EASTERLY BREEZE
POTENTIAL NEW STREET
1-2 STOREY HOUSES
3.5M FALL
2C
9781 m²
POTENTIAL CHILDCARE
RL 105
SB 86.75 m
3.5M FALL
SB 114.73 m
PARTRIDGE AVE
COLD SOUTHERLY WINDS
DAWES AVE
TO RL 101.5
TO SHOWGROUND STATION
HUGHES AVE
2D + 2E
2F
TN
MN
0 5 10 15 20m

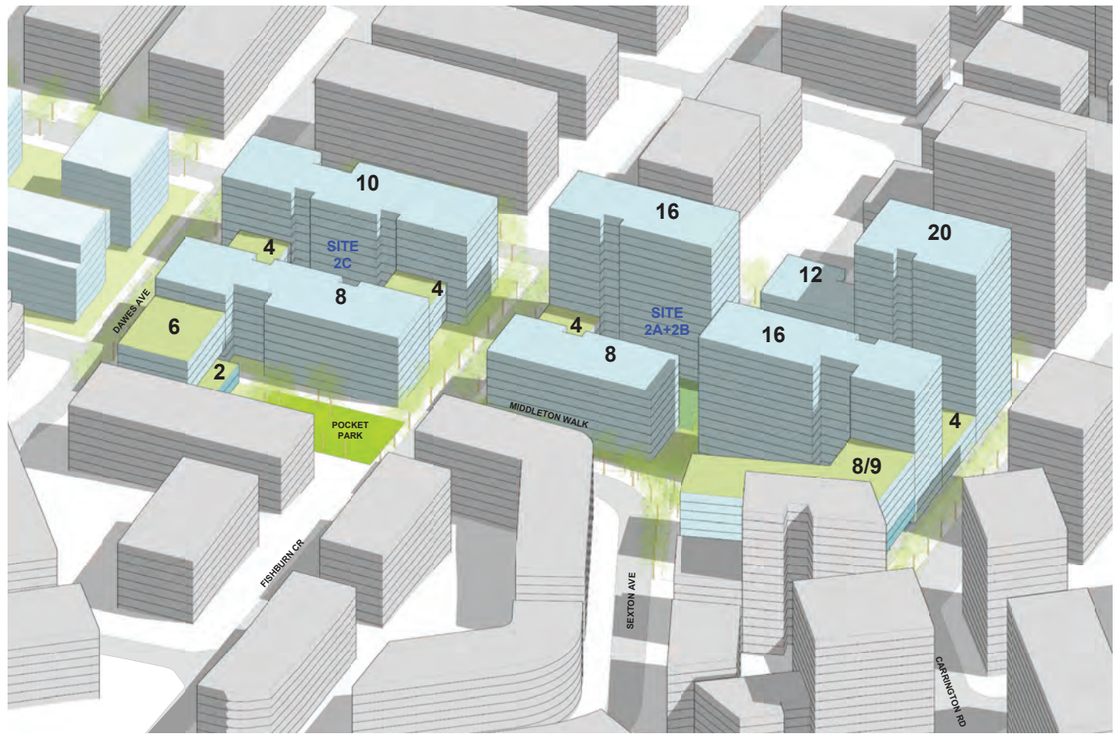
VISUALISATION 1 - VIEW LOOKING NORTH ALONG MIDDLETON AVENUE (PREFERRED OPTION)


SHOWGROUND STATION
CARRINGTON RD
PARTRIDGE AVE
PROPOSED ST
PROPOSED ST
PROPOSED ST
PARTRIDGE AVE
MIDDLETON AVE
MIDDLETON WALK
SEXTON AVE
FISHBURN CR
CHAPMAN AVE
DAWES AVE
DAWES AVE
CHILDCARE CENTRE
P
RETAIL COURT
THROUGH SITE WAY
THROUGH SITE WAY
POCKET PARK
CHILDCARE CENTRE
2A+2B
14317 m²
2C
9781 m²
4
400 m²
8/9
SB 105.74 m
SB 8.04 m
SB 63.69 m
SB 15.82 m
SB 16.04 m
SB 137.94 m
SB 40.97 m
SB 83.45 m
SB 109.41 m
SB 41.35 m
SB 6.31 m
SB 46.17 m
SB 86.75 m
SB 114.73 m
POTENTIAL ROAD WIDENING DEDICATION - DIMENSION TO BE CONFIRMED
0 5 10 15 20m

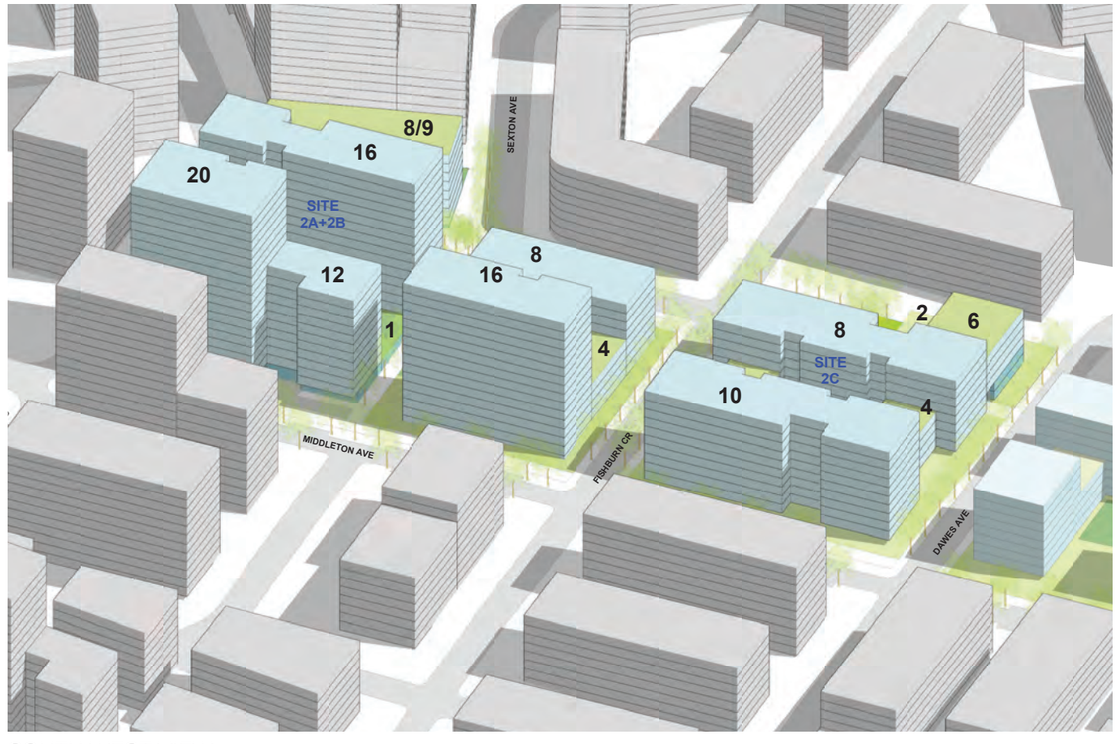
PREFERRED OPTION - SOUTH EAST VIEW



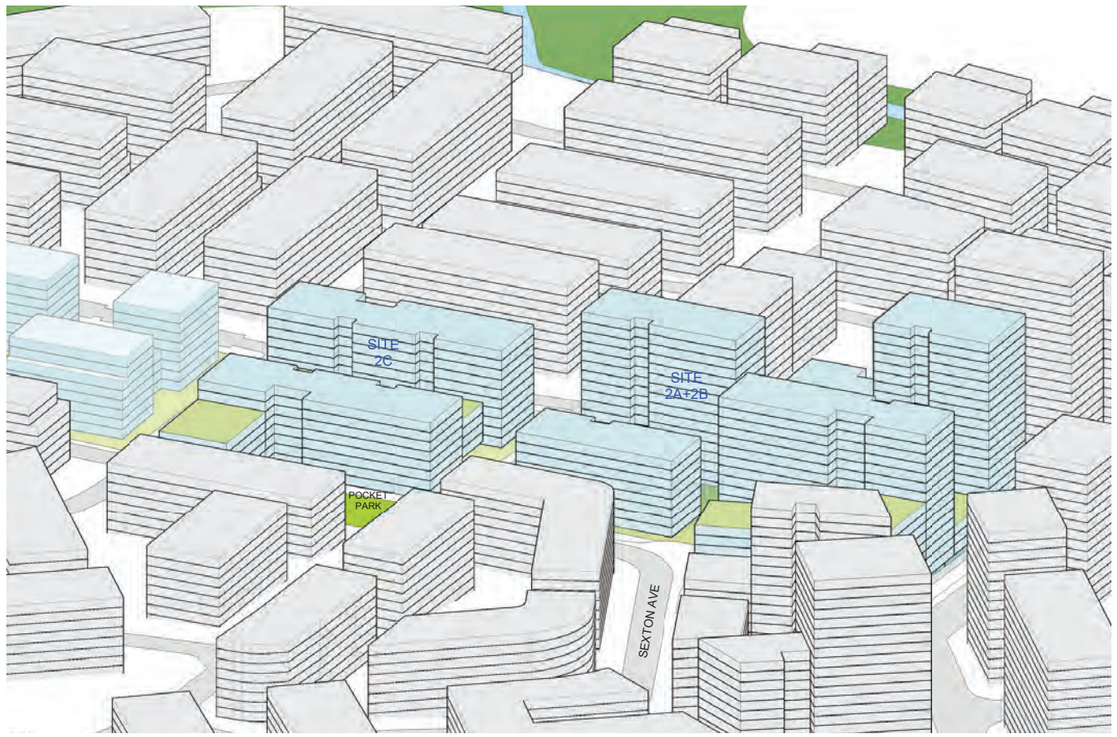
NORTH WEST VIEW



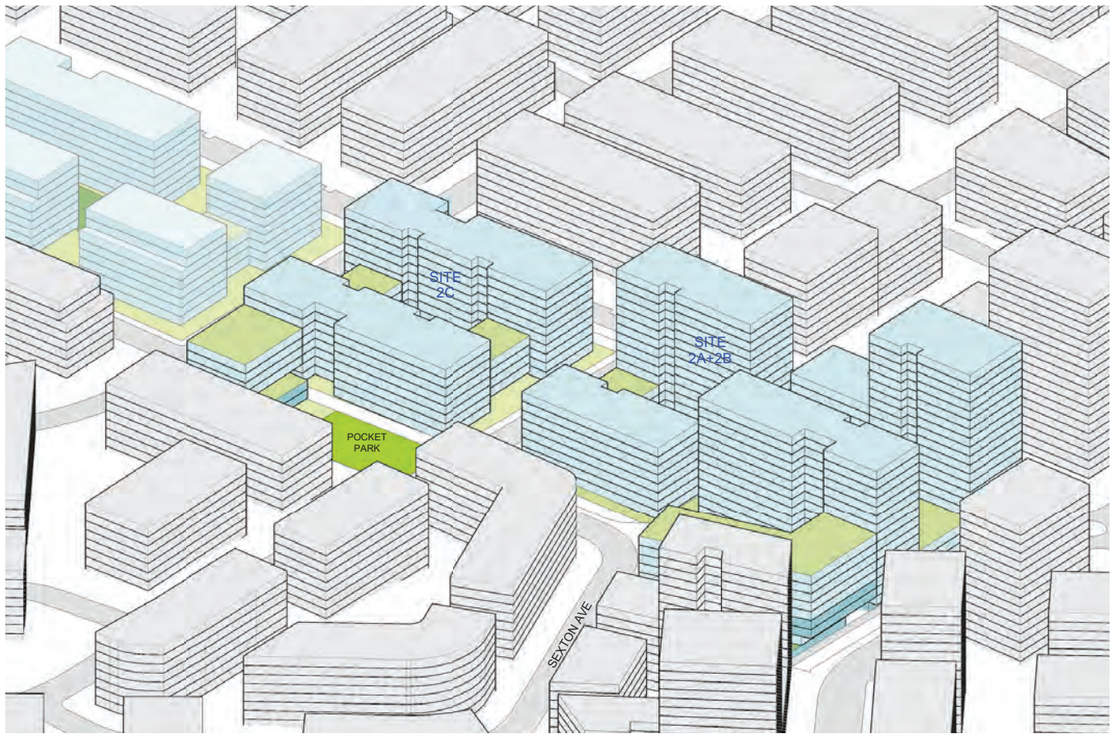
NORTH EAST VIEW



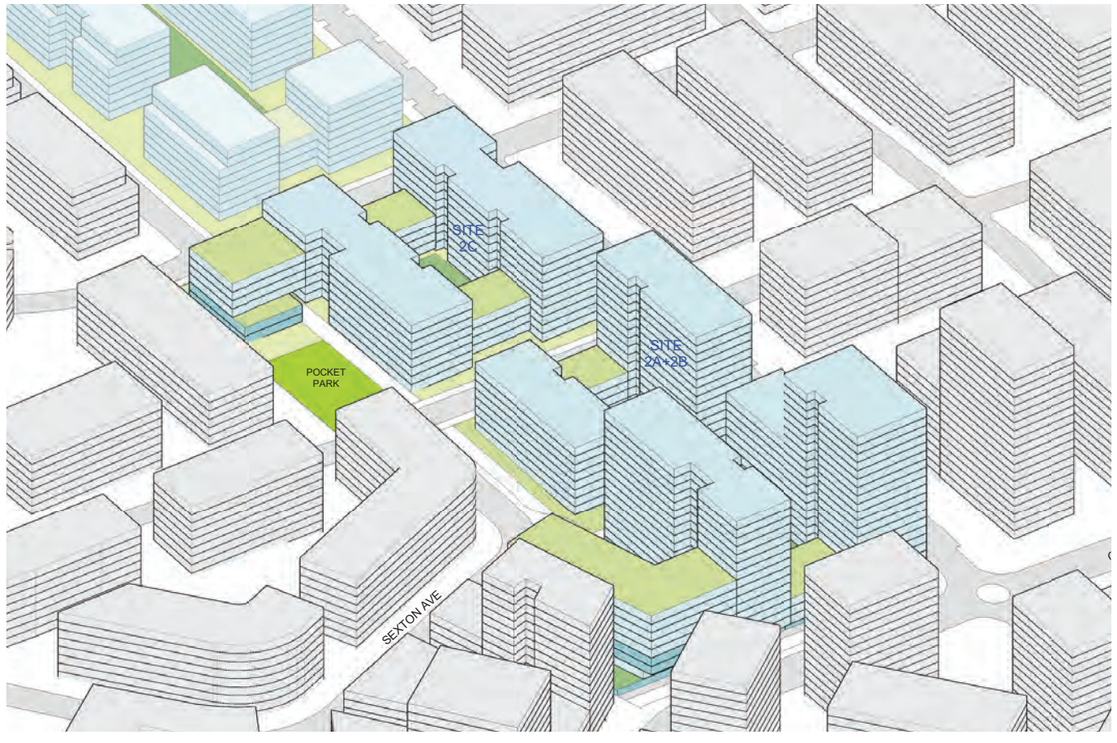
SOUTH WEST VIEW



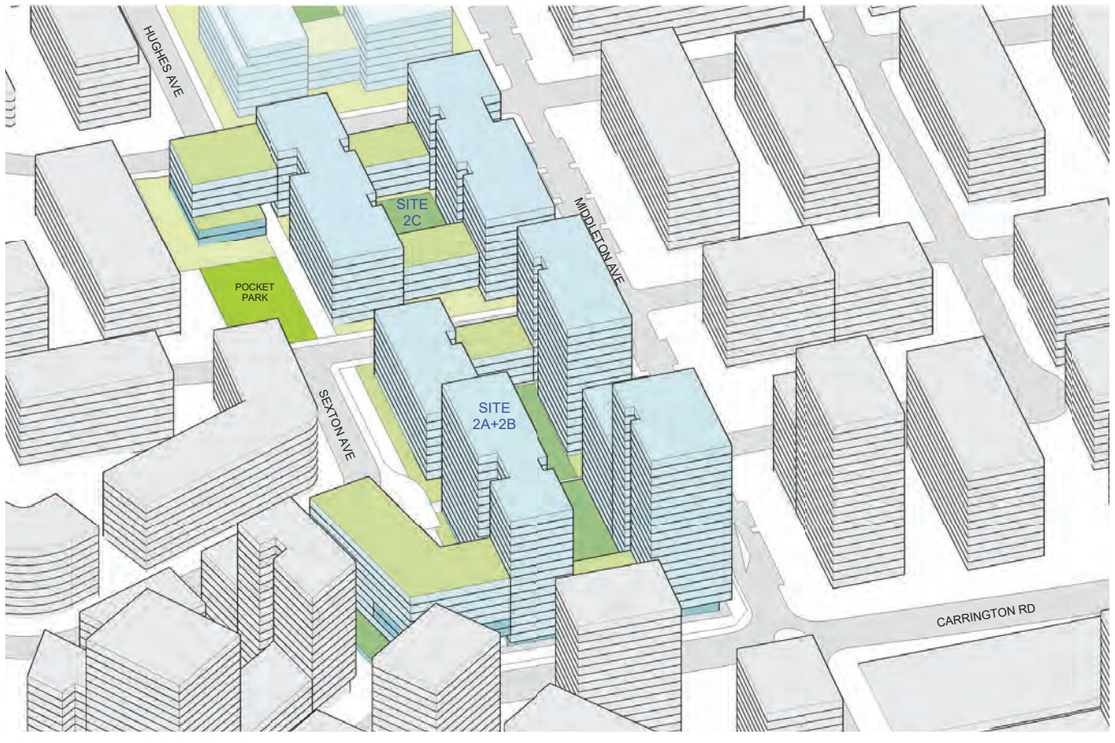
9AM WINTER SOLSTICE



10AM WINTER SOLSTICE

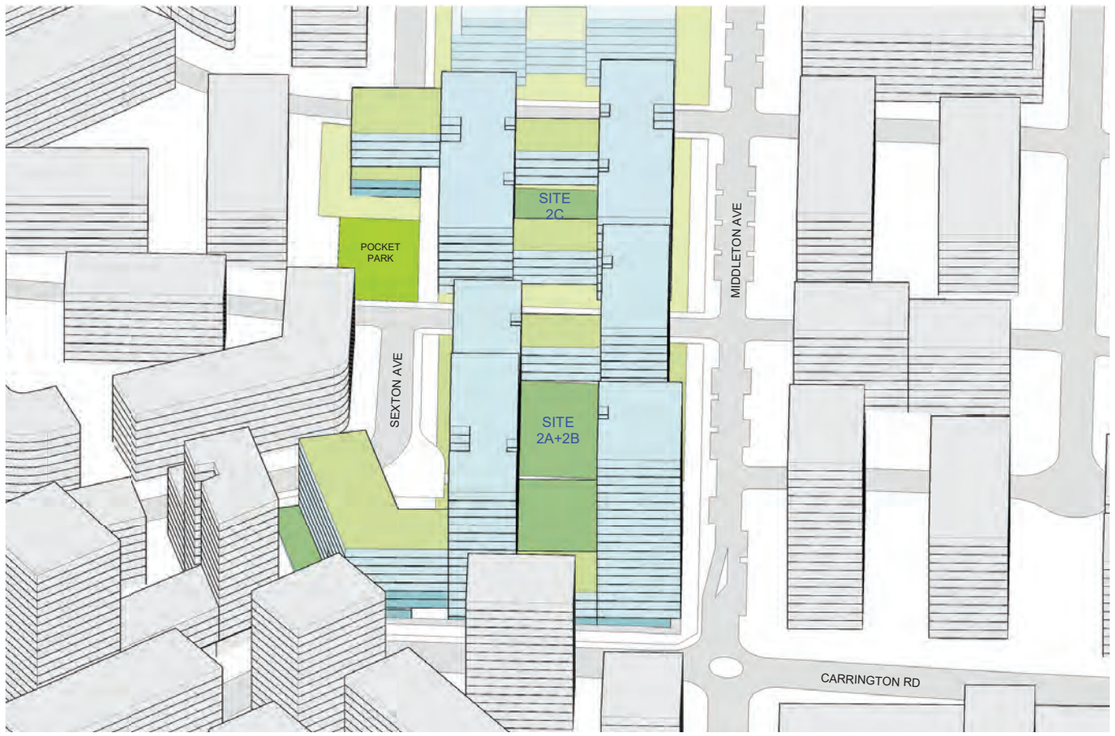


11AM WINTER SOLSTICE

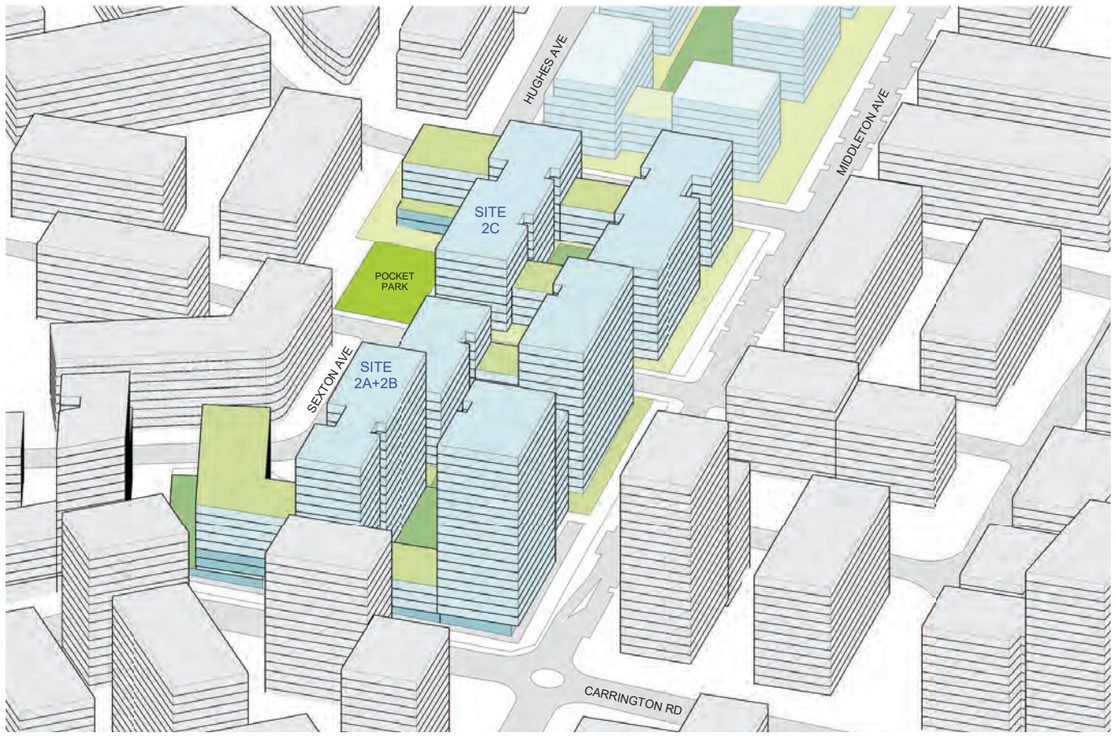


12PM WINTER SOLSTICE

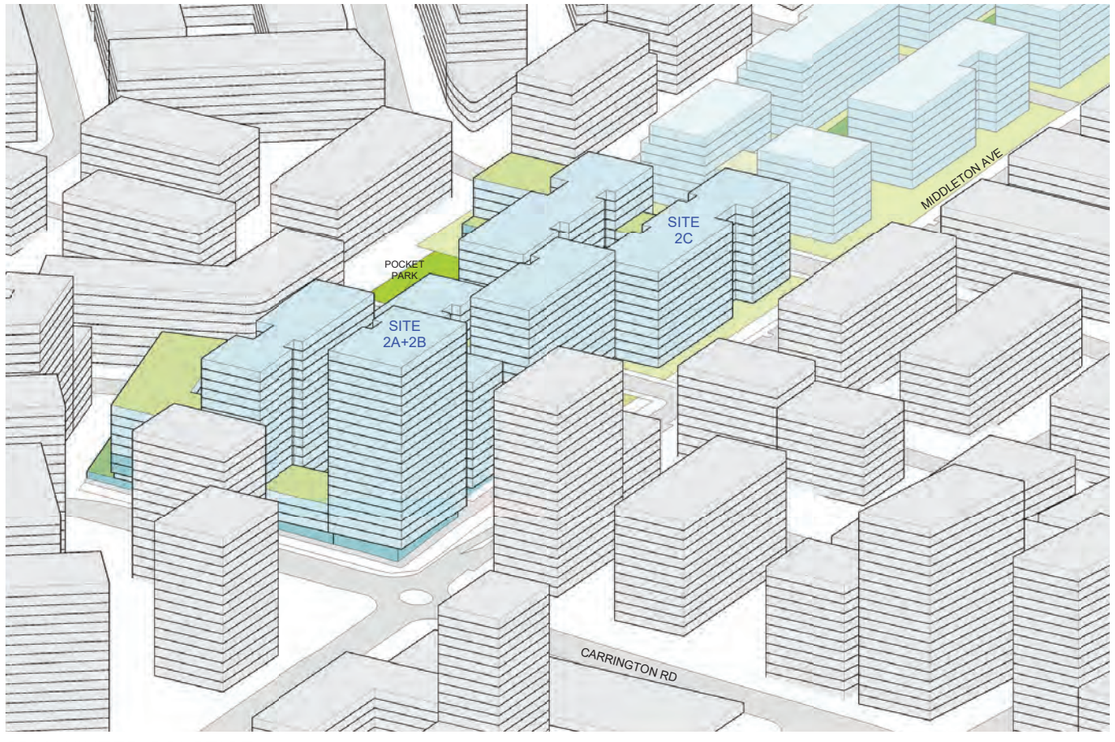
PREFERRED OPTION - SUN EYE VIEW DIAGRAMS



1PM WINTER SOLSTICE



2PM WINTER SOLSTICE



3PM WINTER SOLSTICE

The orientation of Middleton Avenue is biased towards to east, making it difficult for apartments along Middleton Avenue to receive 2 hours of sun at the winter solstice. This means that smaller apartments will be located to the sunny north and east facades and larger apartments to the west and south to take advantage of the perimeter that receives 2 hours of solar access at the winter solstice.

Building heights have been calibrated to ensure that a minimum of 70% of the apartments receive 2 hours of solar access at the winter solstice. The taller 16 storey form at the corner of Middleton Avenue and Fishburn Crescent has has been skillfully located in this location as its shadow will fall on the street - Fishburn Crescent and not future built forms.

Building heights to the sunny north have been reduced to 4 storeys adjacent to courtyards to ensure that courtyards also receive in excess of 2 hours of solar access at the winter solstice. The pocket park and child care centre have also been located to take advantage of the favourable northern orientation.

DESIGN CONCEPT

The concept design comprises articulated and street defining forms with central courtyards. It validates the preferred option by demonstrating that the key concepts and goals of the vision are achieved by:

- Achieving design excellence with a site specific architectural response that exceeds the minimum requirements of SEPP 65/ ADG and sets a benchmark for future developments in the precinct;
- Exceeding the housing targets projected in the Showground Station Precinct Proposal;
- Creating diverse built forms that reinforce Middleton Avenue as the main avenue with street defining forms with no upper level setback and retail activation to Carrington Road, through site way and Middleton Avenue. Apartments have been planned to maximise solar access, cross ventilation and outlook;
- Creating strong urban forms within a landscaped setting with landscaped front setbacks to the south of the through site way and courtyards. Low level planting and raised terraces are used to activate streets and the courtyard while ensuring visual privacy is acheived to ground floor apartments. Entry lobbies are located level with the adjacent footpath with stairs and accessible platform lifts located within the entry lobby to mediate the variation in topography across the site;
- Creating an accessible through site link suitable for pedestrians and bicycles that connects Middleton and Sexton Avenue with the potential to extend to Cattai Creek Reserve. The link is a single 1:20 ramp.
- Achieving a high amenity standard to built forms and central courtyard with the courtyard width between 18-24m, 2 hours of solar access to 70% of apartments at mid-winter and natural cross ventilation to 60% of apartments;
- Creating a diversity of accommodation suited to a variety of lifestyles with 25% x 1 bed/ 1 bed + study, 65% 2 bed and 10% 3 bed apartments. Apartment sizes range in size with 1 bed (50-54sqm), 1 bed + study (55-69sqm), 2 bed (70-89sqm), 3 bed (90-110sqm);
- Creating a pocket park at site 2C and retail court at site 2A-2B providing a pedestrian connection between Carrington Road and Hughes Street; and
- Providing 2 x child care centres: adjacent to the pocket park, level 3 along Carrington Road.

LEGEND

- SOLAR ACCESS
- THROUGH SITE LINK
- POCKET PARK
- PEDESTRIAN ENTRIES
- VEHICLE ACCESS
- PEDESTRIAN WAY + SPACE
- CHILD CARE CENTRE
- SETBACK - DIMENSION TO BE CONFIRMED
- LANDSCAPE
- PARK
- FUTURE FORM
- 8 STOREYS
- ARTICULATION RECESSES
- SITE

4 CONCEPT DESIGN

BUILDING DESIGN PRINCIPLES

After considering the vision for the site within the Showground Station Precinct Proposal (DoPE), the recommondations from the Showground Select Sites Strategic Positioning Report (AJ+C) and built form modelling a number of key design principles have been defined for the project.

The design principles that underpin the building design are:

1. Create building forms that respond to the transformation of the public domain;
2. Potential to provide an increased setback along Middleton Avenue and Carrington Road (dimension to be confirmed) that will be dedicated as a road widening;
3. Create 15m wide pedestrian through site link connecting Sexton Avenue to Middleton Avenue;
4. Create 5m front setbacks to Middleton/ Fishburn/ Dawes Avenues with entry to ground floor units directly from the street;
5. Align through site way that connects Carrington Road and Hughes Avenue;
6. Provide a 9m setback to the north eastern boundary (Site 2A+2B) to facilitate redevelopment of adjacent site;
7. Limit facade lengths to 45m or introduce a recess into the form that presents as a full height break;
8. Create a strong street wall along Middleton Avenue with no upper level setbacks and to reinforce Middleton Avenue as a primary street;
9. Limit forms between linear buildings to 4 storeys in height to provide a finer grain residential character and assist in breaking up the bulk and mass of the tower forms;
10. Decrease building heights from sites 2A to 2C
11. Create linear courtyards with a high level of amenity with tree planting for the enjoyment of residents;
12. Locate carparking in basement levels;
13. Extend basement carparking beneath through site link to limit excavation;
14. Locate carpark entries along Middleton Avenue;
15. Provide clearly defined and accessible entries as addresses for all buildings and provide direct entry from the street to ground floor units;
16. Create continuous retail activation along Carrington Road, Middleton Avenue (up to through site way), along the through site way and within the retail court
17. Provide a mix of dwelling types for all - singles, couples, families, the young and elderly; and
18. Provide internal and external communal open spaces for social engagement and networking.
19. Create a pocket park on site 2C with northern aspect;
20. Locate child care centre adjacent to the pocket park to the east of the through site link;
21. Locate one child care centre at higher level along Carrington Road with simulated external playspace; and
22. Provide communal open spaces on lower roofs for the enjoyment of residents.

4 CONCEPT DESIGN

CARRINGTON RD

SEXTON AVE

FISHBURN CR

DAWES AVE

MIDDLETON AVE

TN

MN

WINTER SUN PATH

SUMMER SUN PATH

DESIGN CONTROLS

SITES 2A-2B

HEIGHT
- 12, 16 + 20 storeys (Middleton Avenue)
- 4 storeys (Fishburn Cr)
- 4, 9 storeys (Carrington Road)
- 8 storeys (Sexton Avenue)

SETBACKS
- Street dedication to Middleton Avenue (dimension to be confirmed)
- 0m front setback Carrington Road
- 0m front setback corner Carrington Road/ Middleton Avenue
- 5m front setback to Middleton Avenue (excluding corner)
- 5m front setback to Fishburn Cr
- 9m front setback to Sexton Avenue
- 9m side setback (north east boundary)
- 15m wide through site link connecting Sexton + Middleton Avenues

FLOOR PLATE
- Multiple core with through apartments
- 6-8 apartments per core
- Natural light and ventilation to common lobbies
- 700-1100sqm nett floor area per floor

SCALE
- 40-65m street wall height to Middleton Avenue
- 30m street wall height to Sexton Avenue

ACCOMMODATION
- 725 apartments (approximate)
- 183 (25%) x 1 bed, 470 (65%) x 2 bed, 72 (10%) x 3 bed

SEPP 65/ ADG
- 70% apartment achieve 2 hours solar access at mid-winter
- 60% apartments acehive natural cross ventilation
- 7.5% of site area is deep soil planting (excluding potential street dedication of 1245m² or 8.7% of the site area)
- 24m building separation to courtyard
- 18m building separation to north east (8 storey form)

GFA/ FSR
- The achieved gross floor area is 71,500m²
- 2600m² retail/ 750m² child care centre/ 68,150 residential
- The achieved FSR is 5:1

SITE 2C

HEIGHT
- 10 storeys (Middleton Avenue)
- 8 storeys (Through Site Way/ Pocket Park)
- 4 storeys (Fishburn + Dawes Avenues)

SETBACKS
- Street dedication to Middleton Avenue (dimension to be confirmed)
- 5m front setback to Middleton Avenue
- 5-10m setback to Fishburn + Dawes Avenues
- 9m side setback to north east boundary
- 6m through site link connecting Fishburn + Dawes Avenues

FLOOR PLATE
- Multiple core with through apartments
- 6-8 apartments per core
- Natural light and ventilation to common lobbies
- 700-1100sqm nett floor area per floor

SCALE
- 32m street wall height to Middleton Avenue
- 26m street wall height to Pocket Park

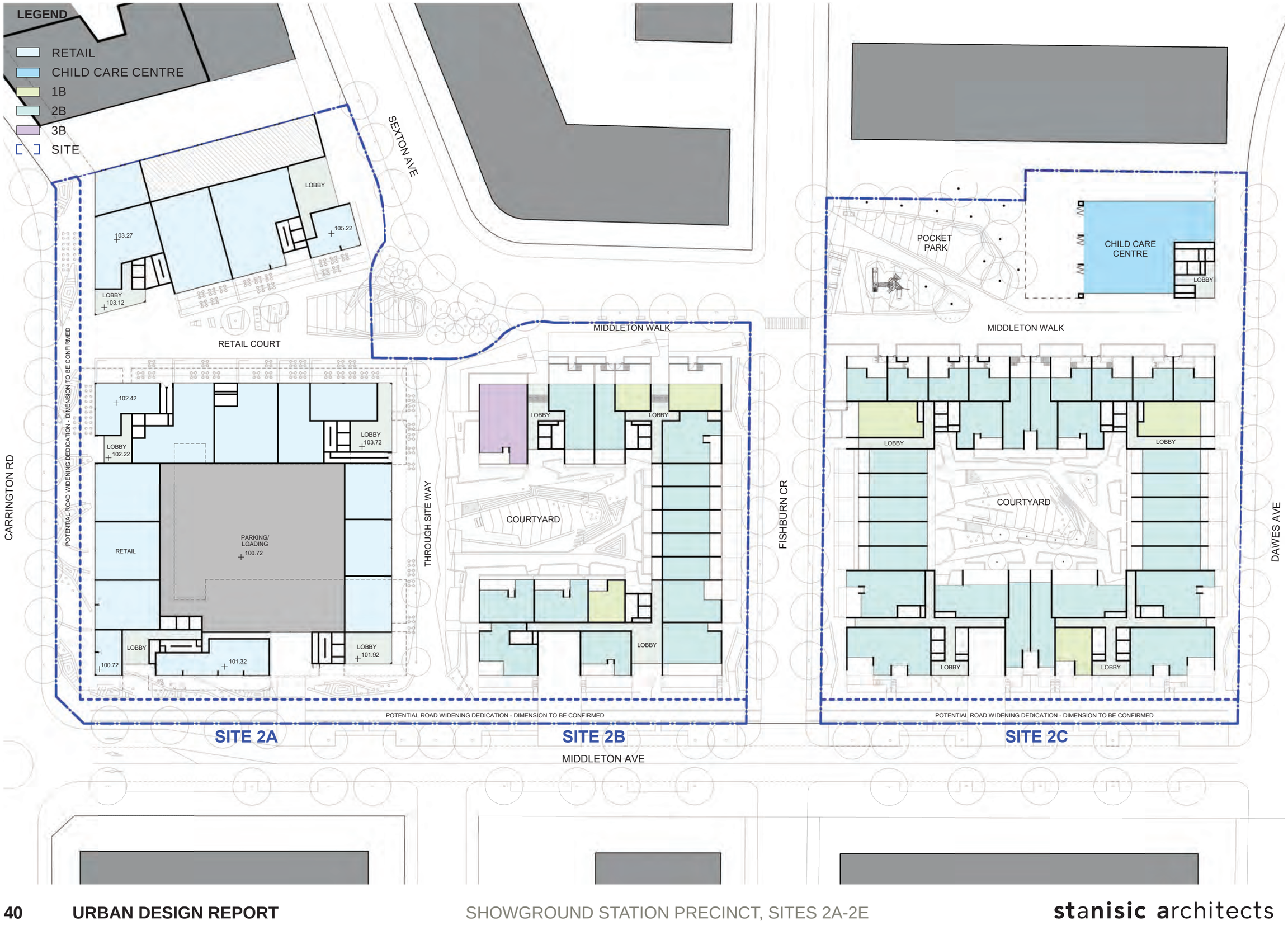
ACCOMMODATION
- 290 apartments (approximate)
- 72 (25%) x 1 bed, 189 (65%) x 2 bed, 29 (10%) x 3 bed

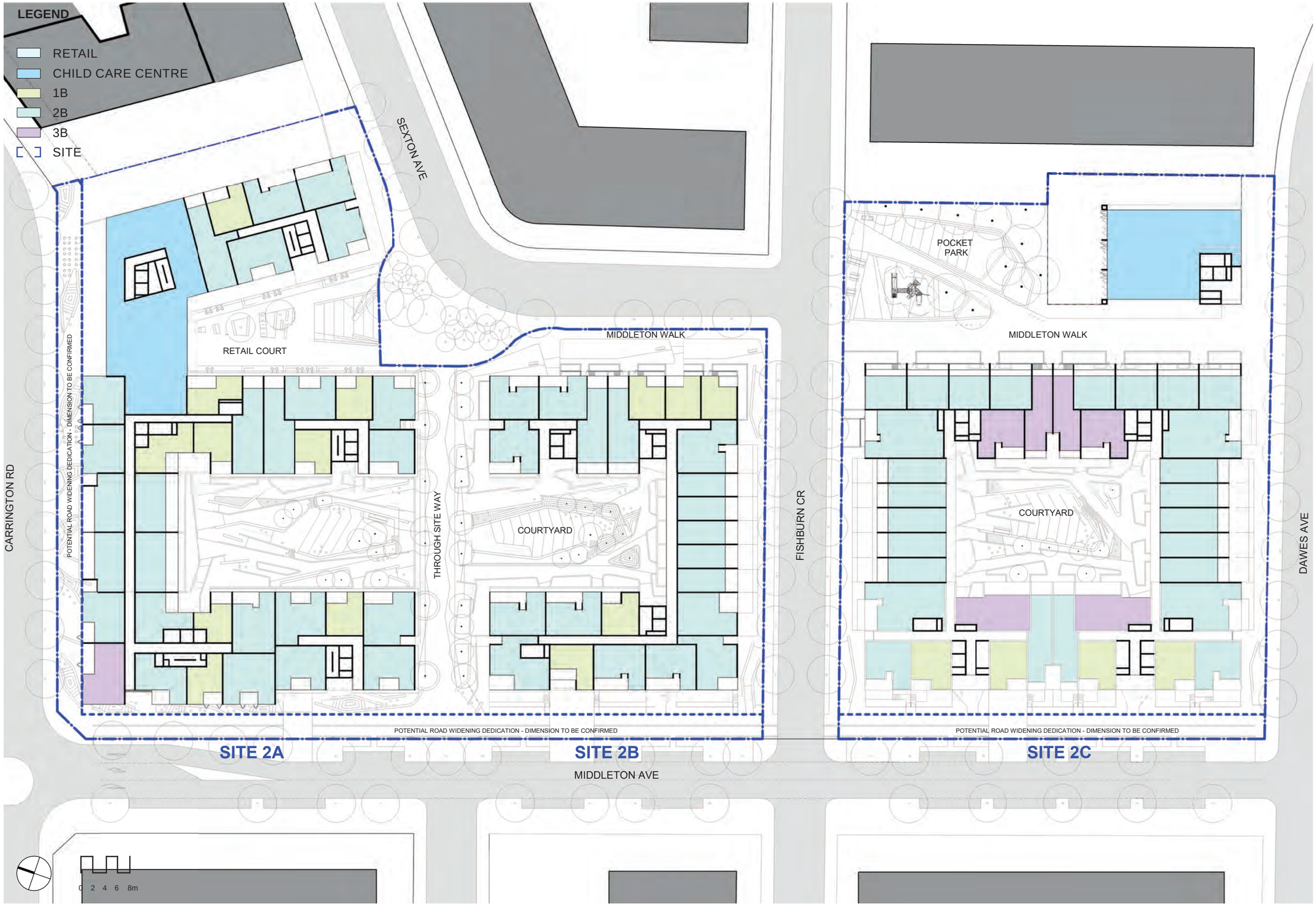
SEPP 65/ ADG
- 70% apartment achieve 2 hours solar access at mid-winter
- 60% apartments acehive natural cross ventilation
- 30% of site area is deep soil planting (excluding potential street dedication of 430m² or 4.4% of the site area)
- 24m building separation to courtyard

GFA/ FSR
- The achieved gross floor area is 29,400m²
- 1000m² child care centre/ 28,400m²
- The achieved FSR is 3.0:1

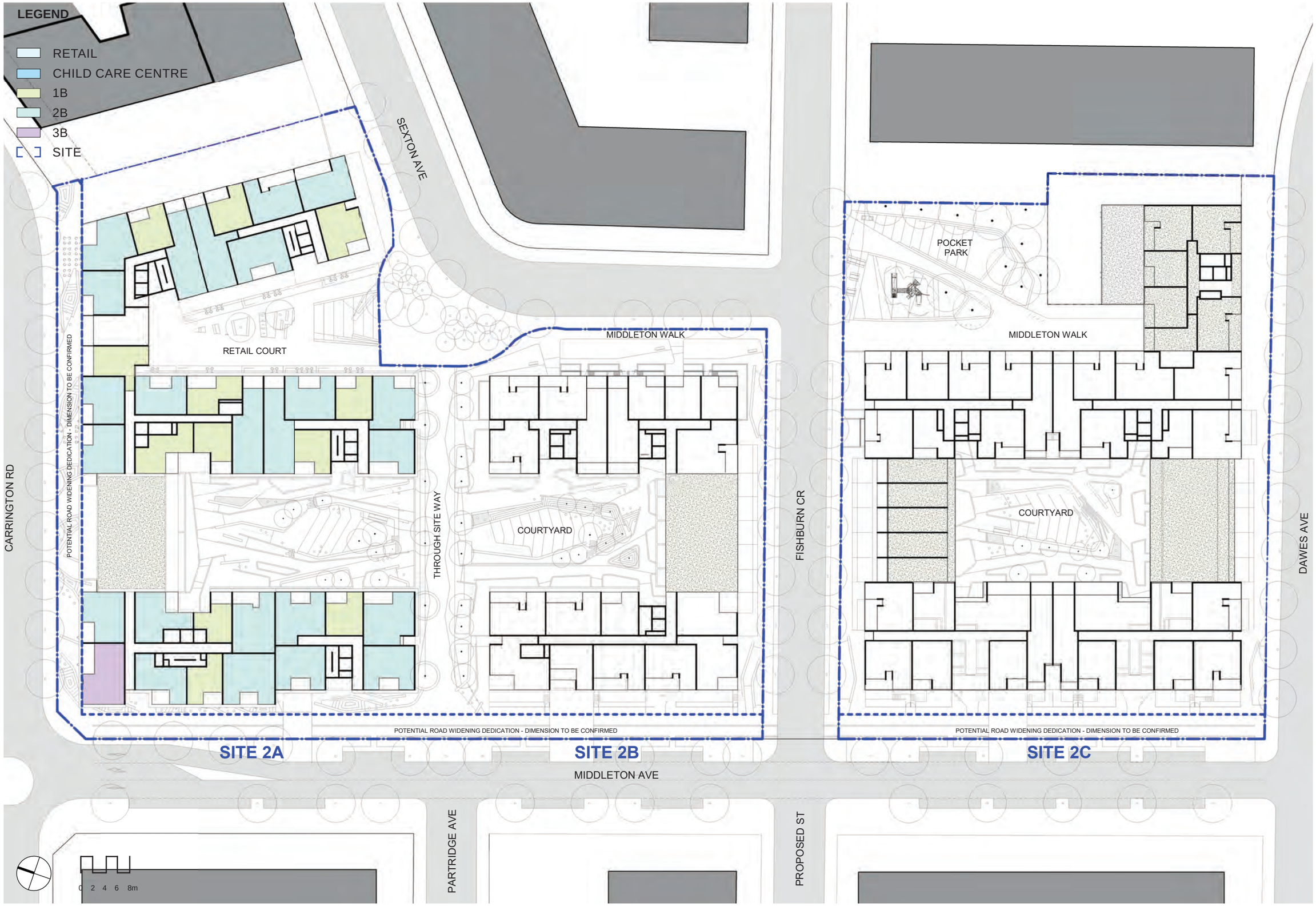
VISUALISATION 2 - VIEW LOOKING TOWARDS MIDDLETON WALK FROM CARRINGTON RD (PREFERRED OPTION)

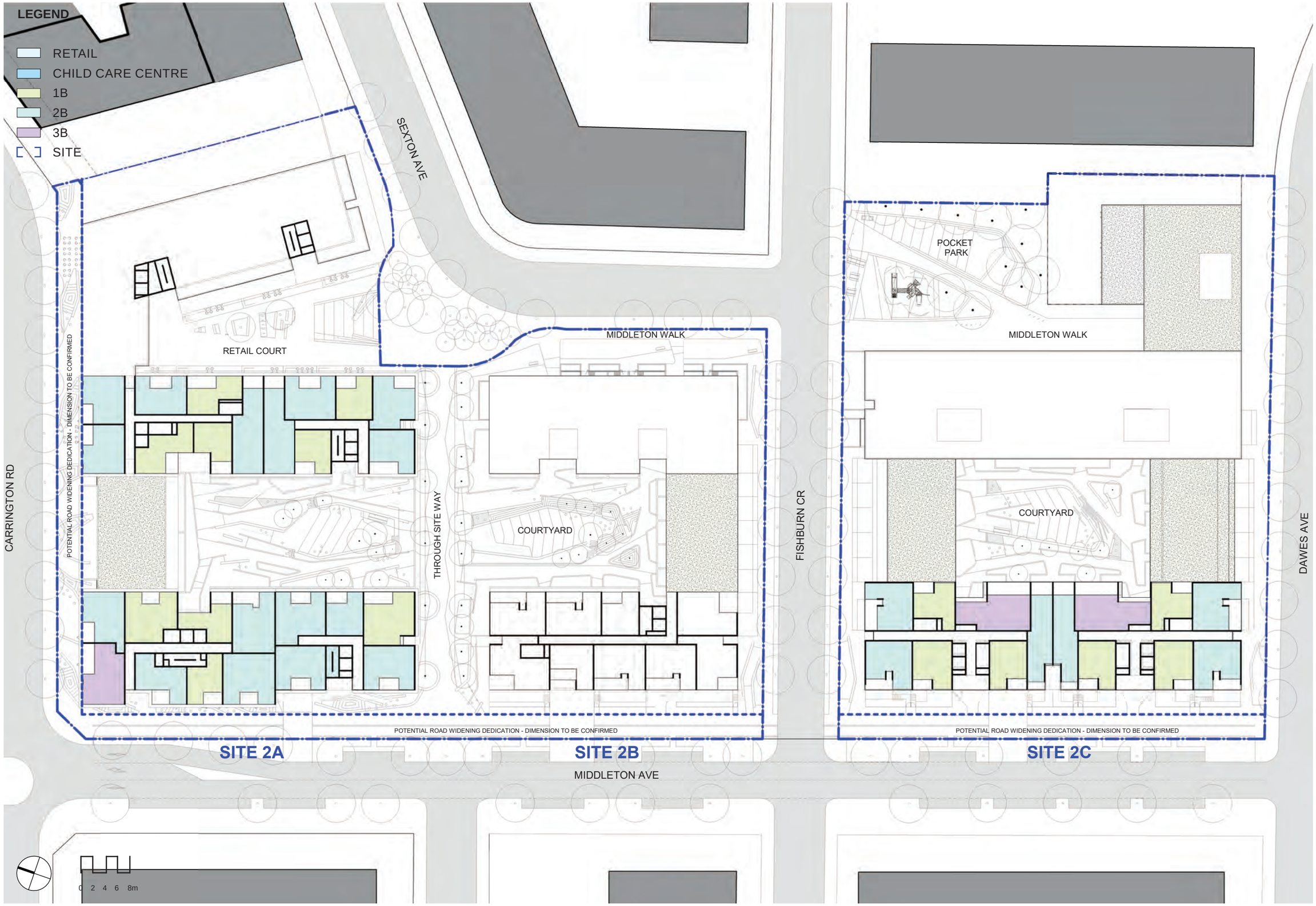
CONCEPT DESIGN - GROUND PLANE PLAN: SEXTON AVE (PREFERRED OPTION)



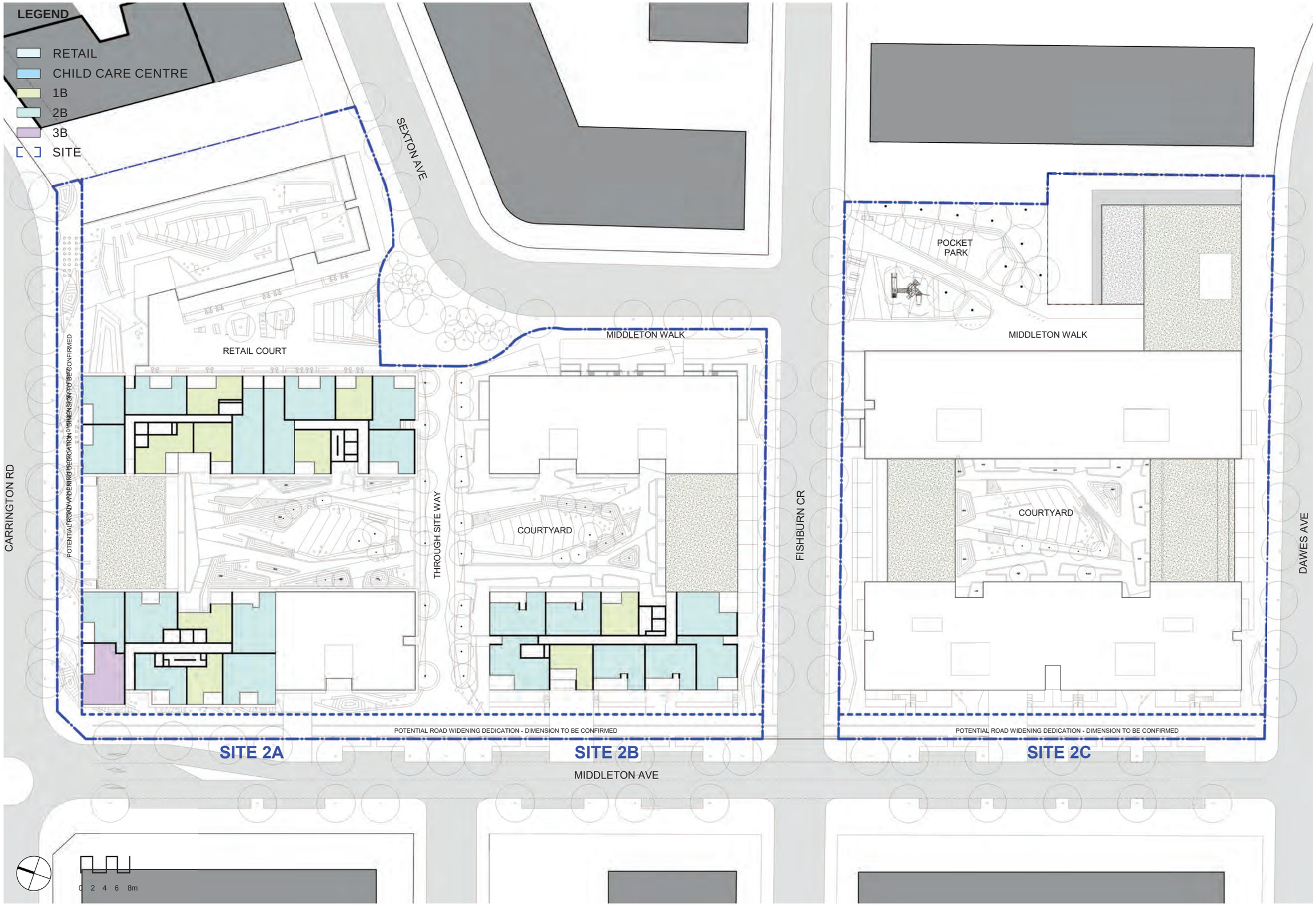

LEGEND
RETAIL
CHILD CARE CENTRE
1B
2B
3B
SITE
SEXTON AVE
RETAIL COURT
MIDDLETON WALK
POCKET PARK
MIDDLETON WALK
CARRINGTON RD
POTENTIAL ROAD WIDENING DEDICATION - DIMENSION TO BE CONFIRMED
THROUGH SITE WAY
COURTYARD
FISHBURN CR
COURTYARD
DAWES AVE
POTENTIAL ROAD WIDENING DEDICATION - DIMENSION TO BE CONFIRMED
POTENTIAL ROAD WIDENING DEDICATION - DIMENSION TO BE CONFIRMED
SITE 2A
SITE 2B
SITE 2C
MIDDLETON AVE
0 2 4 6 8m

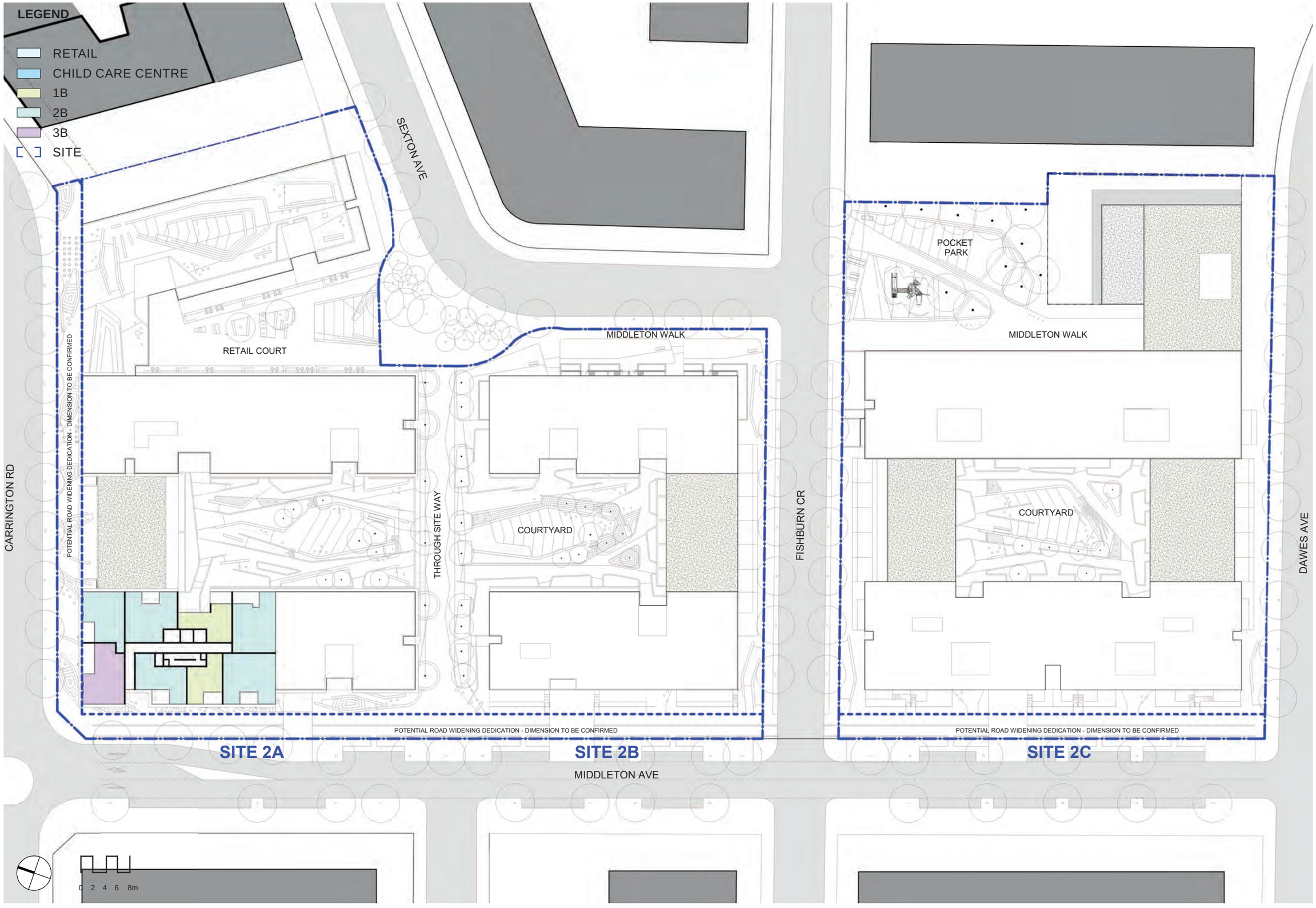
CONCEPT DESIGN - TYPICAL LOWER LEVEL PLAN (L5)



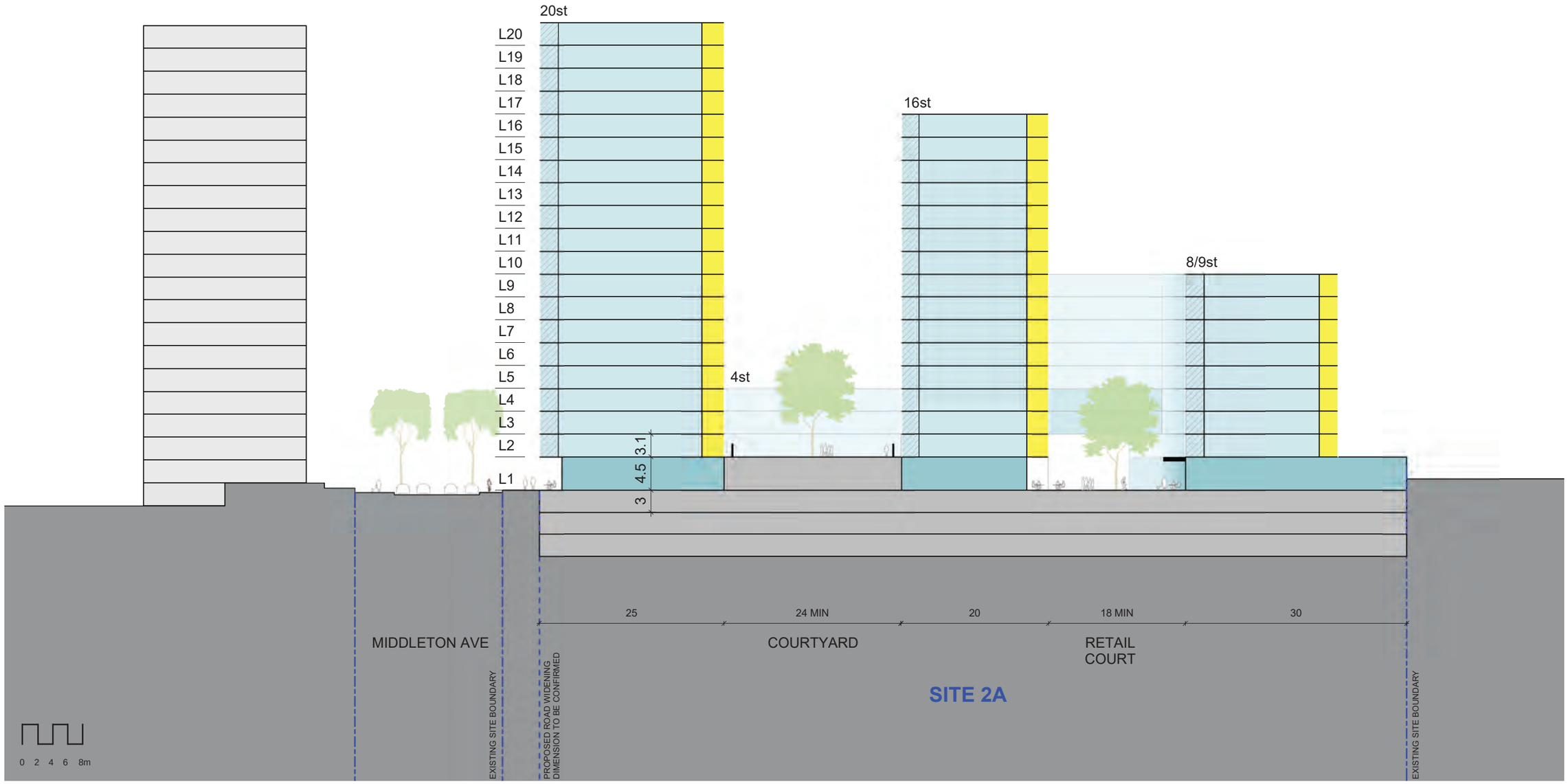

LEGEND
RETAIL
CHILD CARE CENTRE
1B
2B
3B
SITE
SEXTON AVE
RETAIL COURT
MIDDLETON WALK
POCKET PARK
MIDDLETON WALK
CARRINGTON RD
POTENTIAL ROAD WIDENING DEDICATION - DIMENSION TO BE CONFIRMED
THROUGH SITE WAY
COURTYARD
FISHBURN CR
COURTYARD
DAWES AVE
POTENTIAL ROAD WIDENING DEDICATION - DIMENSION TO BE CONFIRMED
POTENTIAL ROAD WIDENING DEDICATION - DIMENSION TO BE CONFIRMED
SITE 2A
SITE 2B
SITE 2C
MIDDLETON AVE
0 2 4 6 8m

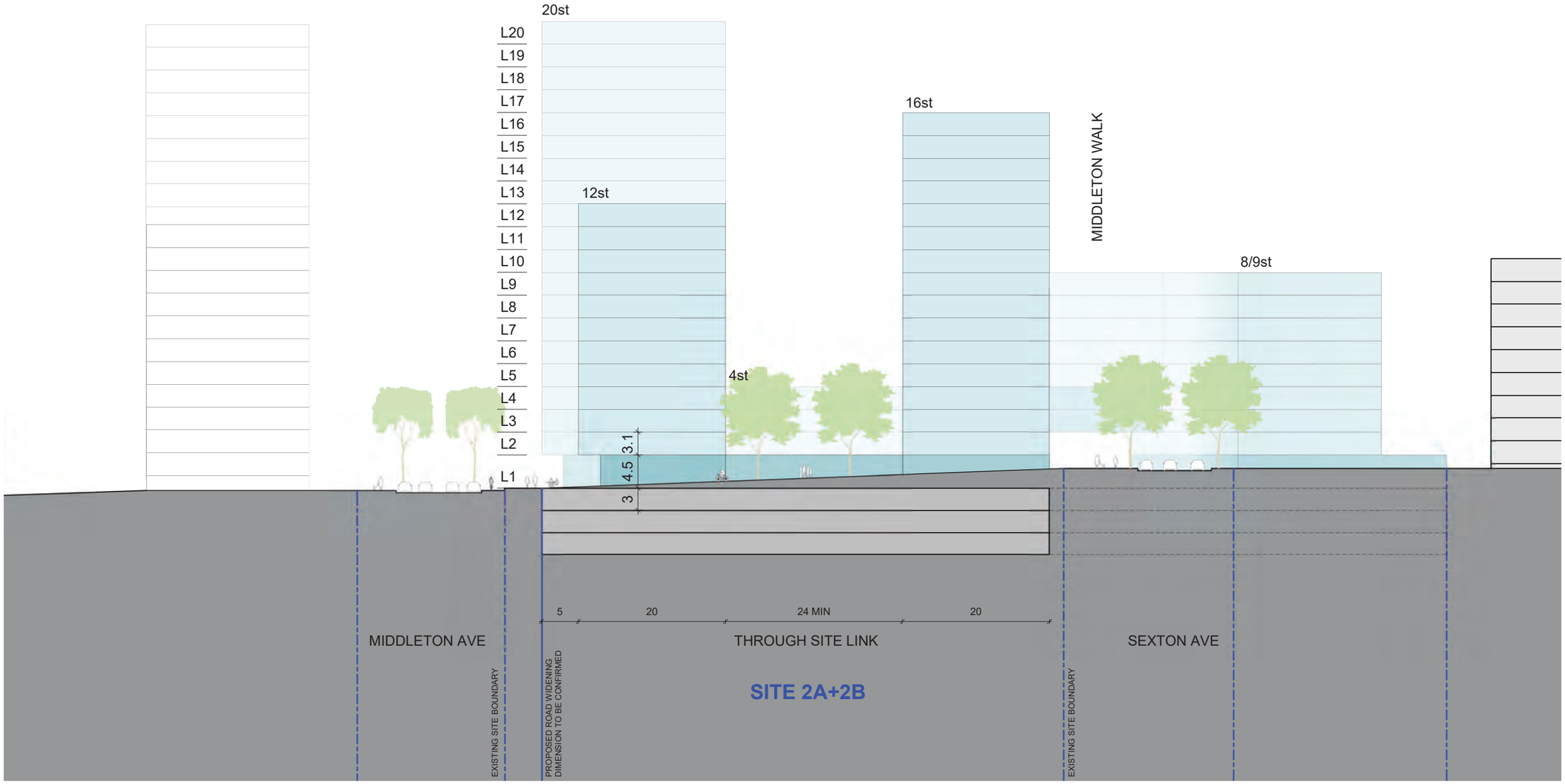
CONCEPT DESIGN - TYPICAL MID LEVEL PLAN (13-16)



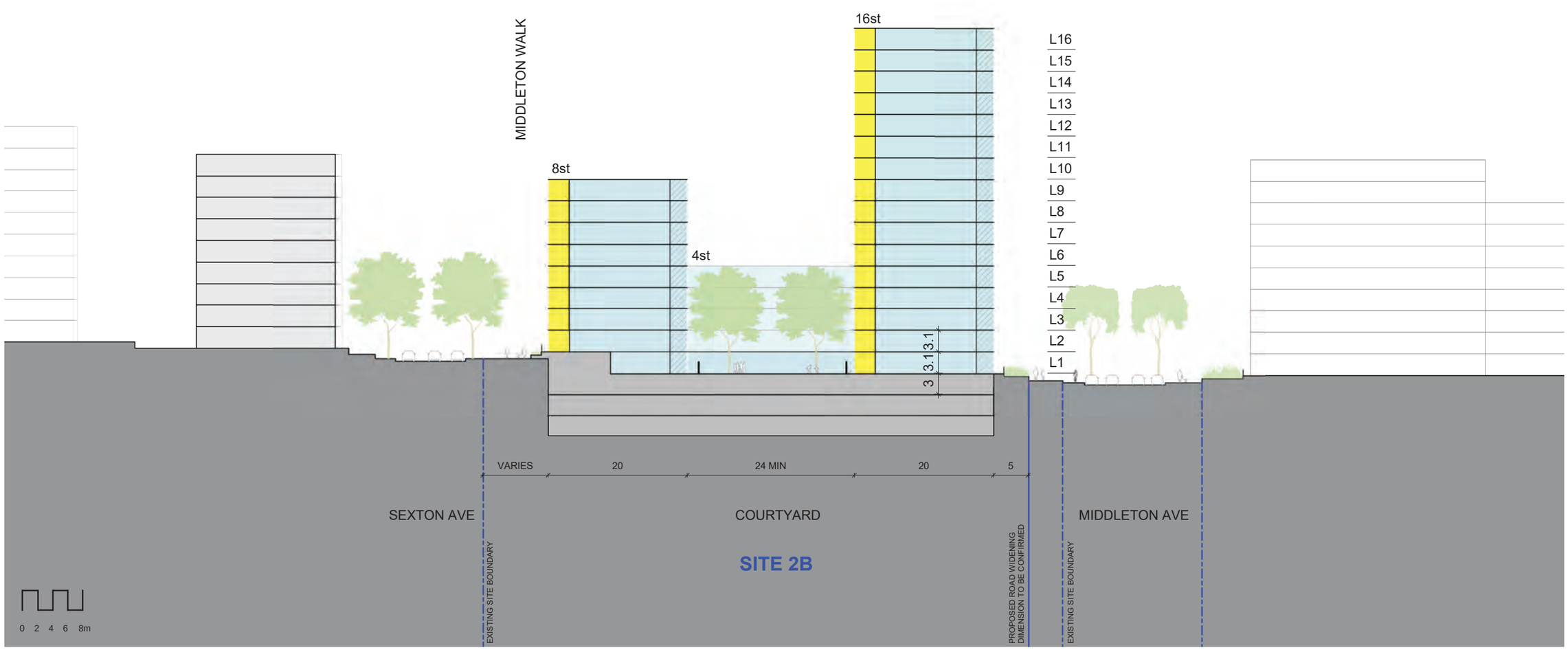

LEGEND
RETAIL
CHILD CARE CENTRE
1B
2B
3B
SITE
SEXTON AVE
RETAIL COURT
MIDDLETON WALK
POCKET PARK
MIDDLETON WALK
CARRINGTON RD
POTENTIAL ROAD WIDENING DEDICATION - DIMENSION TO BE CONFIRMED
THROUGH SITE WAY
COURTYARD
FISHBURN CR
COURTYARD
DAWES AVE
POTENTIAL ROAD WIDENING DEDICATION - DIMENSION TO BE CONFIRMED
POTENTIAL ROAD WIDENING DEDICATION - DIMENSION TO BE CONFIRMED
SITE 2A
SITE 2B
SITE 2C
MIDDLETON AVE
0 2 4 6 8m

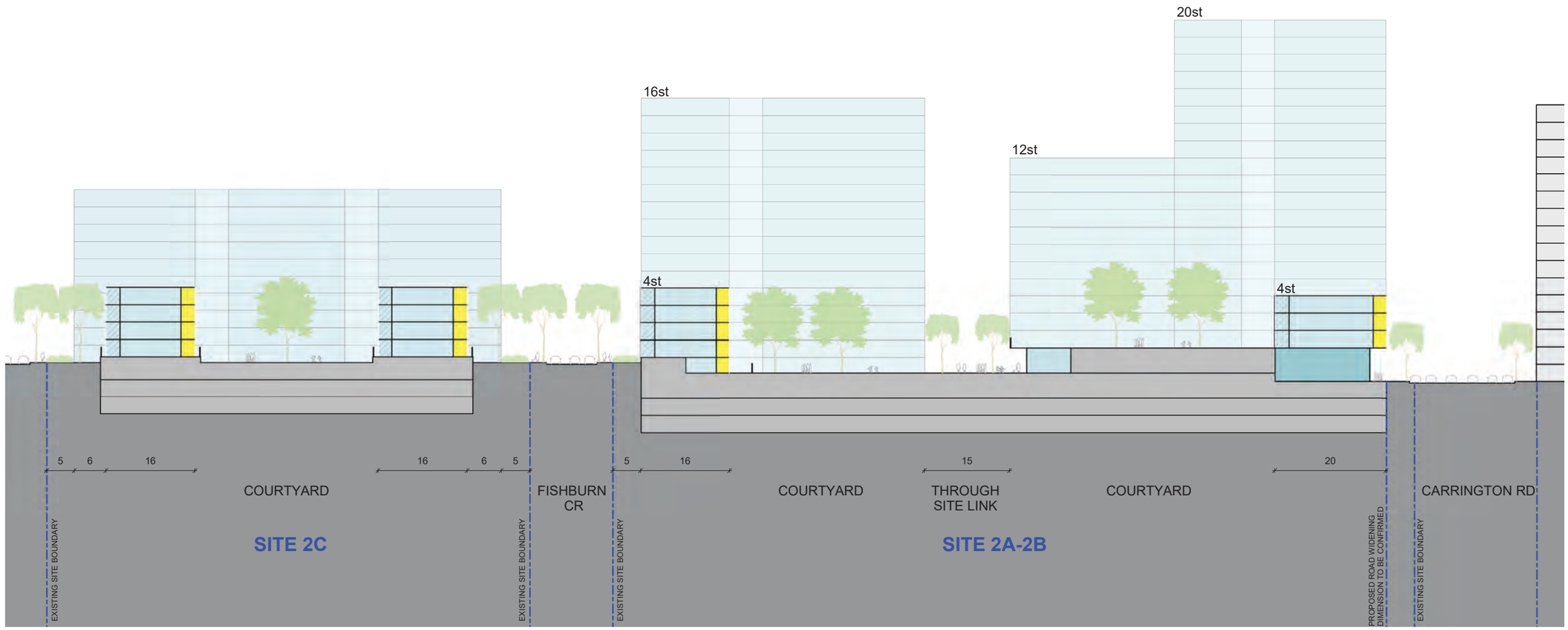
PREFERRED OPTION - SECTION 1

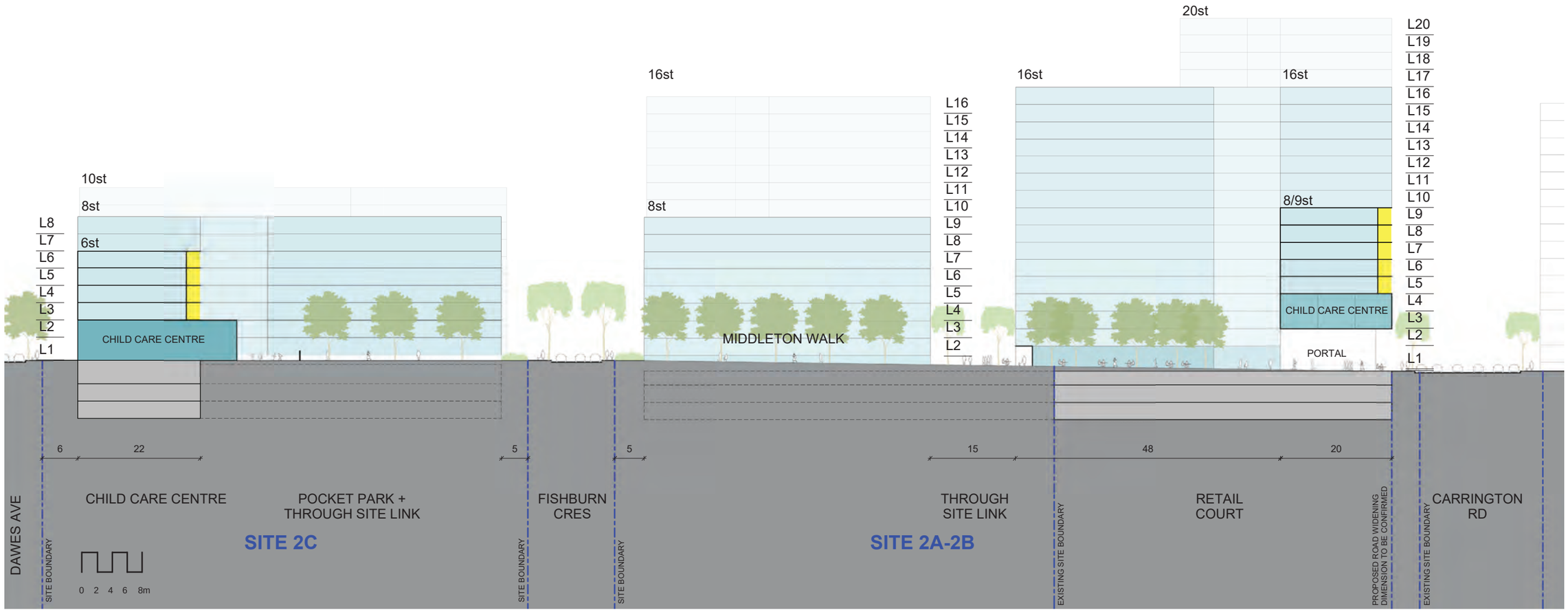



20st
L20
L19
L18
L17
L16
L15
L14
L13
12st
L12
L11
L10
L9
L8
L7
L6
L5
4st
L4
L3
L2
L1
16st
MIDDLETON WALK
8/9st
3.1
4.5
3
5
20
24 MIN
20
MIDDLETON AVE
THROUGH SITE LINK
SEXTON AVE
SITE 2A+2B
EXISTING SITE BOUNDARY
PROPOSED ROAD WIDENING DIMENSION TO BE CONFIRMED
EXISTING SITE BOUNDARY

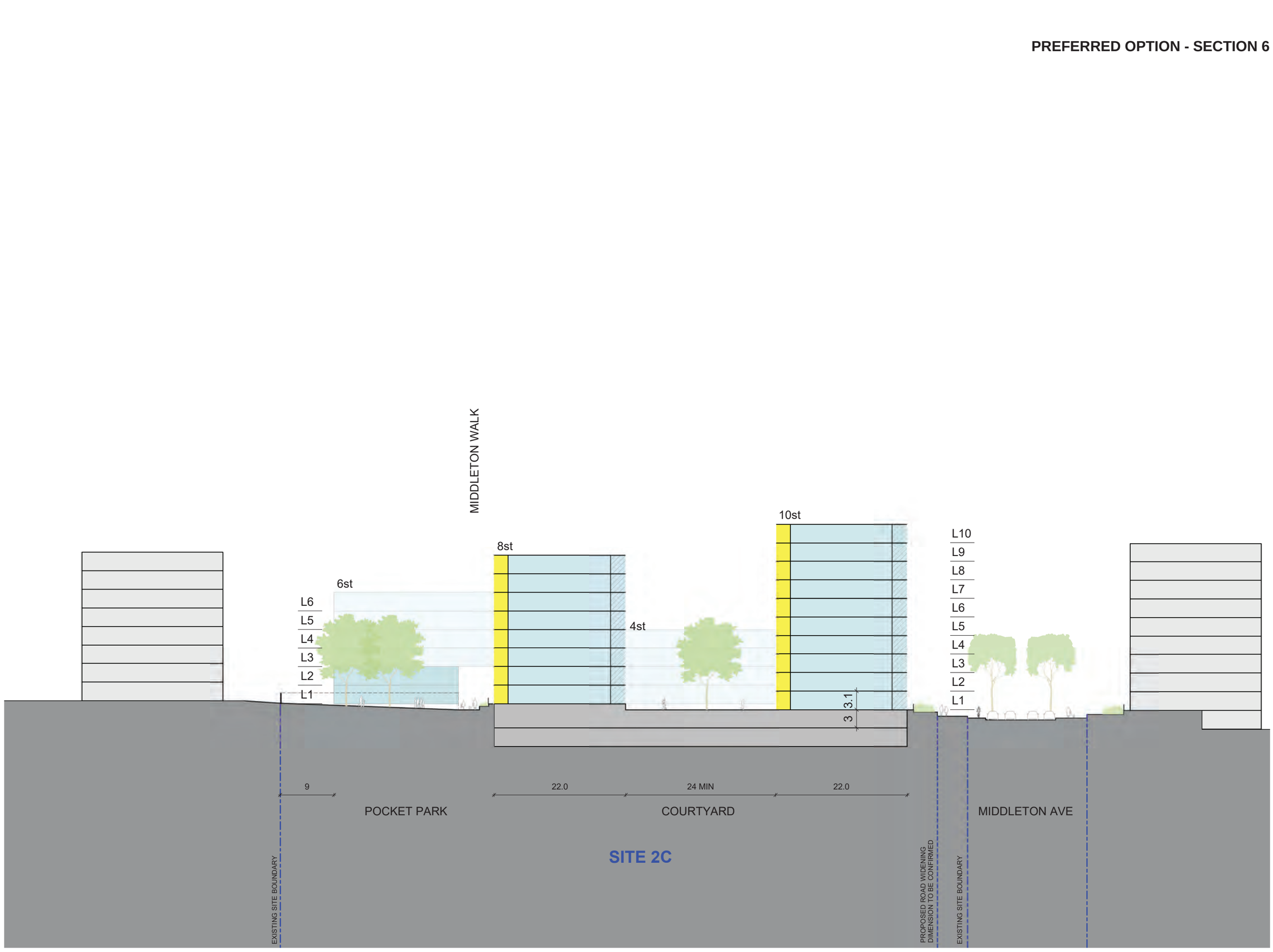
PREFERRED OPTION - SECTION 3




20st
16st
12st
4st
4st
5
6
16
16
6
5
5
16
15
20
COURTYARD
FISHBURN CR
COURTYARD
THROUGH SITE LINK
COURTYARD
CARRINGTON RD
SITE 2C
SITE 2A-2B
EXISTING SITE BOUNDARY
EXISTING SITE BOUNDARY
EXISTING SITE BOUNDARY
PROPOSED ROAD WIDENING DIMENSION TO BE CONFIRMED
EXISTING SITE BOUNDARY


20st
L20
L19
L18
16st
16st
16st
L17
L16
L15
L14
L13
L12
L11
L10
L9
L8
L7
L6
L5
L4
L3
L2
L1
10st
8st
6st
8st
8/9st
CHILD CARE CENTRE
MIDDLETON WALK
CHILD CARE CENTRE
PORTAL
6
22
5
5
15
48
20
DAWES AVE
SITE BOUNDARY
CHILD CARE CENTRE
POCKET PARK + THROUGH SITE LINK
SITE 2C
FISHBURN CRES
SITE BOUNDARY
SITE BOUNDARY
THROUGH SITE LINK
SITE 2A-2B
EXISTING SITE BOUNDARY
RETAIL COURT
PROPOSED ROAD WIDENING DIMENSION TO BE CONFIRMED
EXISTING SITE BOUNDARY
CARRINGTON RD
0 2 4 6 8m

4 CONCEPT DESIGN



VISUALISATION 3 - VIEW LOOKING NORTH TOWARDS RETAIL COURT FROM SEXTON AVE (PREFERRED OPTION)

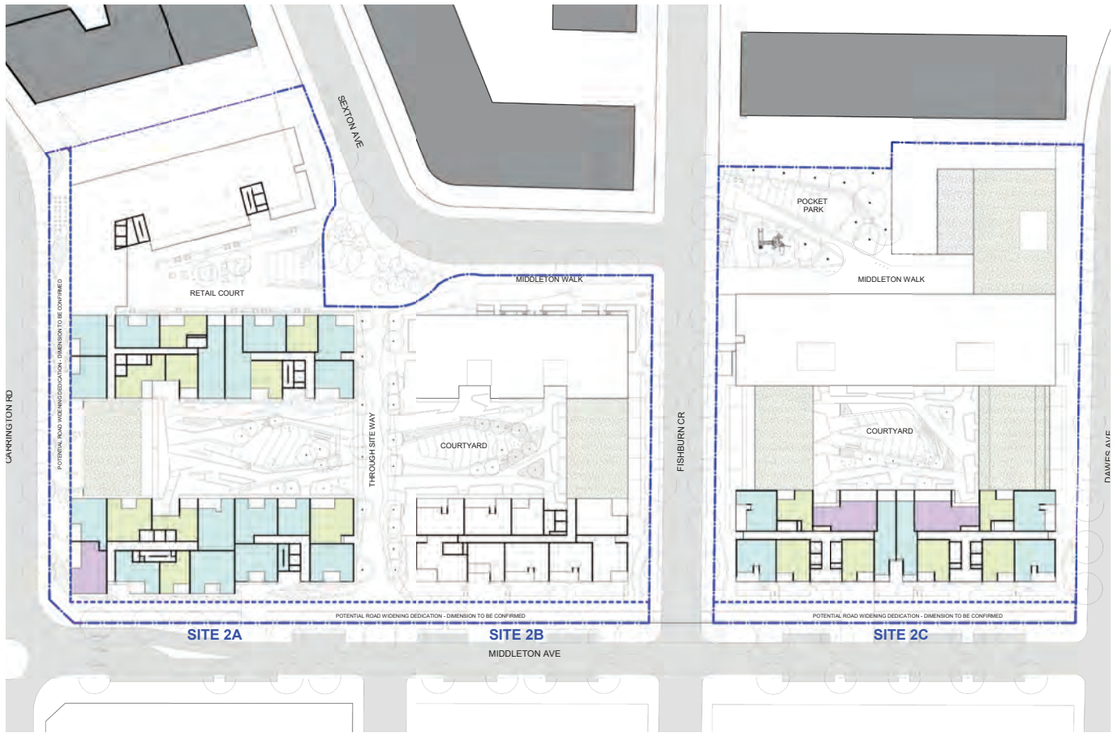
VISUALISATION 4- VIEW LOOKING ALONG MIDDLETON WALK (SEXTON AVE) TOWARDS POCKET PARK (PREFERRED OPTION)

CONCEPT DESIGN - SEPP 65 SOLAR ACCESS + CROSS VENTILATION

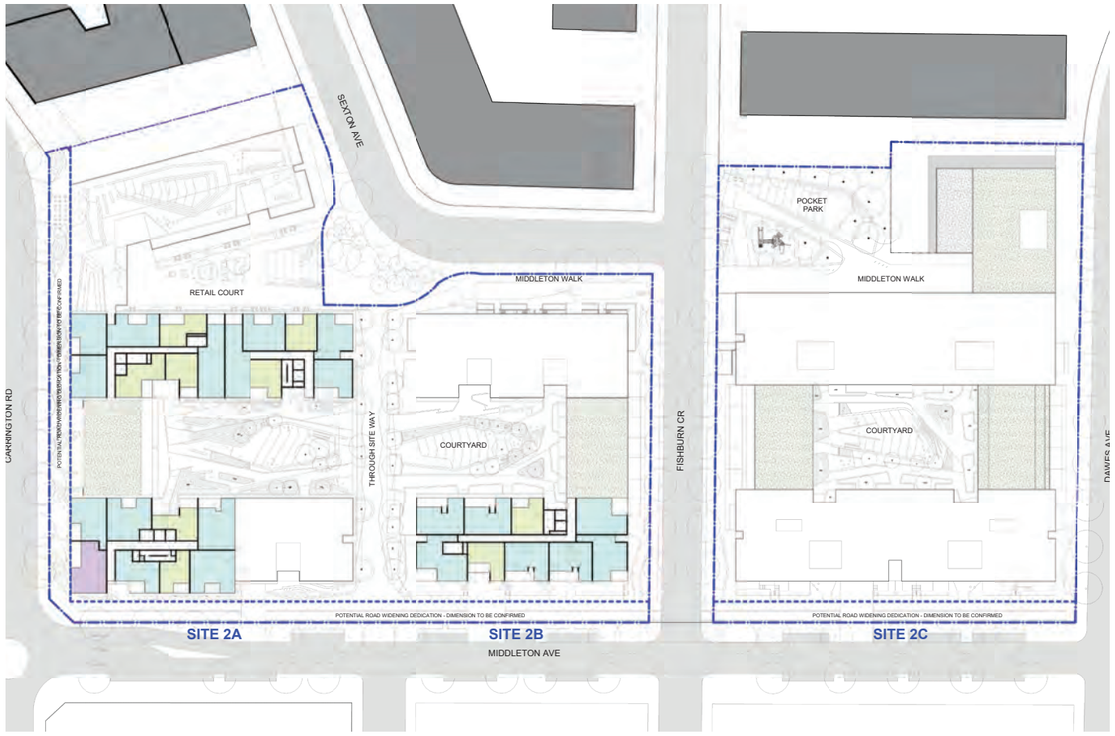
SEPP 65 SOLAR ACCESS + CROSS VENTILATION: LEVEL 1 (GROUND) PLAN - SEXTON AVE

CONCEPT DESIGN - SEPP 65 SOLAR ACCESS + CROSS VENTILATION: LEVEL 3 PLAN (CHILD CARE CENTRE)

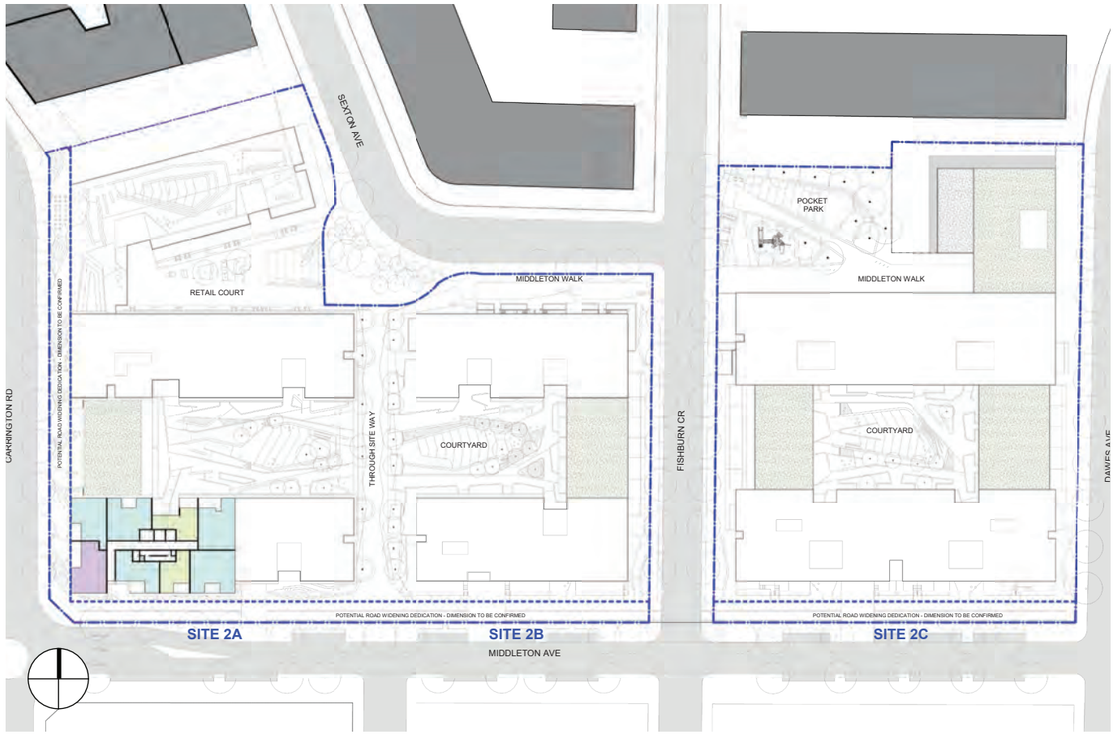
CONCEPT DESIGN - SEPP 65 SOLAR ACCESS + CROSS VENTILATION: TYPICAL LOWER LEVEL (L5)



CONCEPT DESIGN - SEPP 65 SOLAR ACCESS + CROSS VENTILATION: LEVEL 10 (ROOF TERRACE)



CONCEPT DESIGN - SEPP 65 SOLAR ACCESS + CROSS VENTILATION: TYPICAL MID LEVEL PLAN (L13)



CONCEPT DESIGN - SEPP 65 SOLAR ACCESS + CROSS VENTILATION: TYPICAL UPPER LEVEL PLAN (L17-20)

RECOMMENDATIONS

The concept design demonstrates a clear vision for the site - to create an environmentally sustainable and high intensity living environment within an existing low-rise residential setting that is transitioning to high density living centred on the new Showground Station. It is framed by an increased setback and potential street dedication to Middleton Avenue that establishes this street as a main avenue, with permeable and publicly accessible through site links that connect into the existing street network. It also priorities a publicly accessible pedestrian green link, 'Middleton Walk' that runs parallel to Middleton Avenue from Ashford Avenue to Carrington Street and comprises a pocket park and retail court within a high quality streetscape design suited to families.

Building forms have been oriented to optimise solar access and breezes. and streets activated with retail towards the new Showground Station and 'town house' apartments with direct street access. The concept design has set a high benchmark for the Showground Station Precinctand for design excellence.

Built form testing has confirmed that the preferred option can achieve an FSR of 4.2:1 (100,870sqm GFA) across sites 2A-2C within a maximum height of building of 72m (20 storeys - Site 2A), 62m (16 storeys - Site 2B) and 34m (10 storeys - Site 2C) without adverse built form or amenity impacts. This equates to an FSR of 5.0:1 for sites 2A+2B and 3.0:1 for site 2C reducing in scale further away from the station.

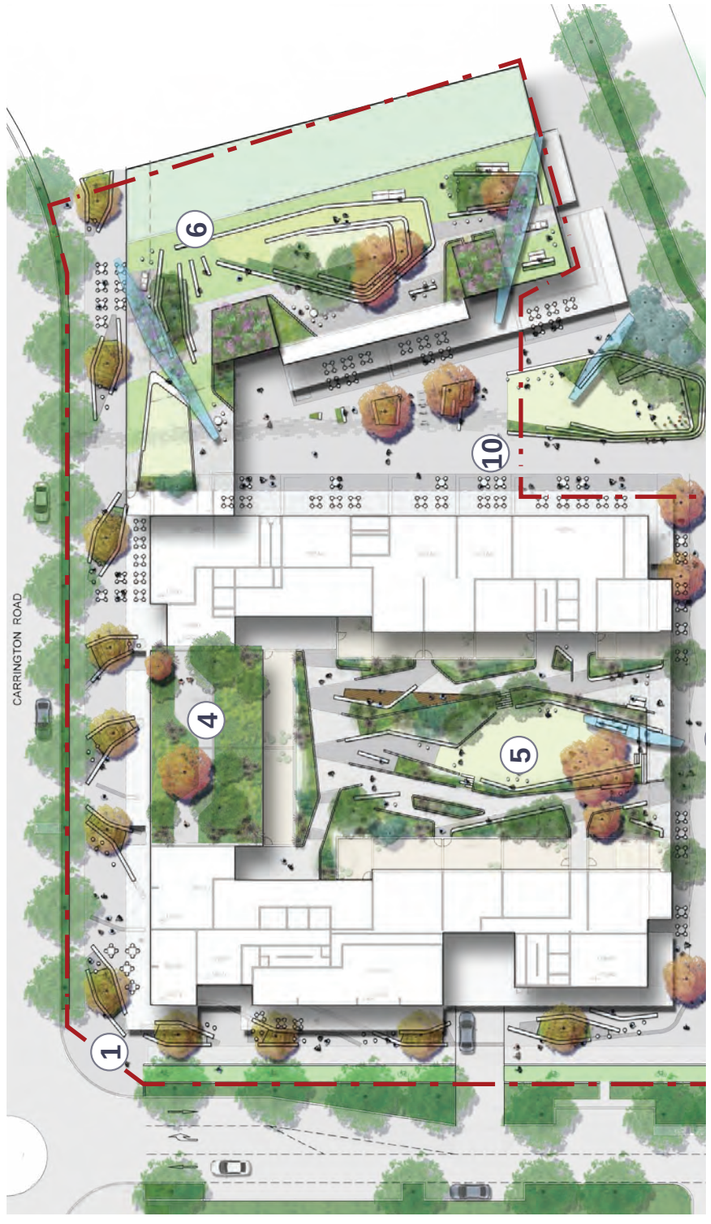
Key concepts underlying the vision are Diversity, Connectivity and Sustainability. The concept design has demonstrated the key concepts and goals of the vision are achieved by:

- Achieving design excellence with a site specific architectural response that exceeds the minimum requirements of SEPP 65/ ADG and sets a benchmark for future developments in the precinct;
- Creating diverse built forms that reinforce Middleton Avenue as the main avenue with an 10-12 storey street wall height with two tower forms towards the new station. Building heights are reduced in adjacent street between 6-8 storeys and to the north building heights have been reduced to 4 storeys in height to facilitate solar access into the communal courtyards.
- Apartments have been planned to maximise solar access, cross ventilation and outlook;
- Creating strong urban forms within a landscaped setting with landscaped front setbacks and courtyards with approximately 7.5% of the site area (7% min ADG) to sites 2A+2B and 30% of the site area for site 2C, as deep soil planting suitable for large tree planting. Low level planting and raised terraces are used to activate streets and the courtyard while ensuring visual privacy is achieved to ground floor apartments. Entry lobbies are located level with the adjacent footpath with stairs and accessible platform lifts located within the entry lobby to mediate the variation in topography across the site;
- Creating accessible through site links suitable for pedestrians and bicycles that connects Carrington Road to Hughes Avenue and Sexton Avenue to Middleton Avenue. The links are single 1:20 ramps and are accessible;
- Achieving compliance with SEPP 65/ Adpartment Design Guide;
- Achieving a high amenity standard to built forms and central courtyard with the courtyard width between 18-22m, 2 hours of solar access to 70% of apartments at mid-winter and natural cross ventilation to 60% of apartments; and
- Creating a diversity of accommodation suited to a variety of lifestyles with 25% x 1 bed/ 1 bed + study, 65% 2 bed and 10% 3 bed apartments. Apartment sizes range in size with 1 bed (50-54sqm), 1 bed + study (55-69sqm), 2 bed (70-89sqm), 3 bed (90-110sqm).

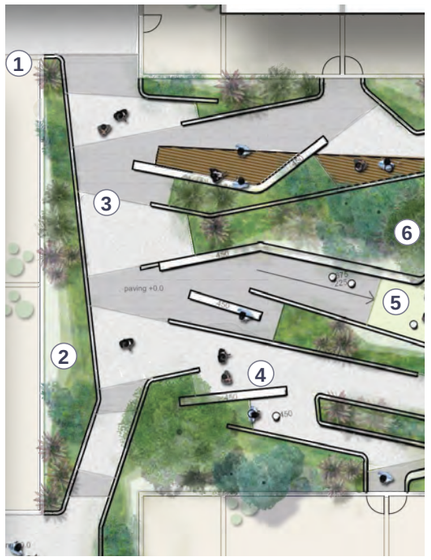
Therefore, we recommend that the preferred option is adopted with the following amendments to the statutory development standards:

Development Standard	Existing*	Proposed
FSR (Site 2A)	3.0:1	5.0:1
FSR (Site 2B)	2.7:1	5.0:!
FSR (Site 2C)	2.3:1	3.0:1
Maximum height of building (Site 2A)	40m (6 to 12 storeys)	72m (12 storeys)
Maximum height of building (Site 2B)	27m (6 storeys)	62m (16 storeys)
Maximum height of building (Site 2C)	27m (6 storeys)	34m (10 storeys)

* *Showground Station Precinct Proposal (Department of Planning and Environment*


9
10
CARRINGTON ROAD
4
5
1

SITE D1 - COMMUNAL PODIUM COUI



PRECENDENT IMAGES

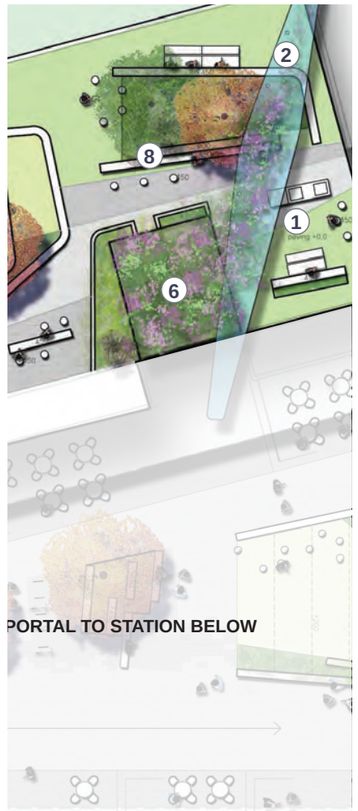
Pergola

Deck flus

NOTES

1. Access gate to communal courtyard areas fr
2. Raised planted beds as layered buffer to pri
3. Two tone paving layout to reinforce forms ar
4. Multiple small group social spaces. Allow p better sense of connection to gardens.
5. Equal access to graded lawn up to raised la
6. Extensive wide island garden beds to gener
7. Midway concrete finger access through plan
8. Main central raised lawn areas.
9. Long Board pergolas, painted steel and harc
10. Painted steel palisade fences to podium cou

SHOWGROUND STATION PRECINCT
CASTLE HILL MASTERPLAN



Scale 4m 8m 12m 16m

Artificial turf

roofs to lift and fire stair access and overrun.

tive open lawn area and planting and to private unit courtyard.

situ concrete benches/ retaining edges to soil for garden and tree planting.

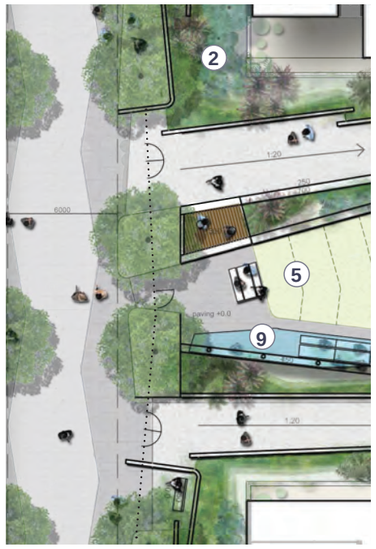
steel palisade fences to roof boundary.

ornamental flowering shade trees for a of activity areas depending on climate.

Scale 1:400 @ A4

Sturt Noble Associates
Suite 01, L5, 330 Wattle St. Ultimo NSW 2007
T. 02 9211 3744
W. www.sturtnoble.com.au
landscape architecture environmental & urban design

SITE D2 - COMMUNAL COURTYA



Scale 4m 8m 12m 16m

PRECENDENT IMAGES

Raised planter

Raised timber deck against planting

NOTES

1. Access gate to communal courtyard a
2. Raised planted beds as layered buffer
3. Two tone paving layout to reinforce for
4. Multiple small group social spaces. All sense of connection to gardens.
5. Equal access to graded lawn up to rais
6. Extensive wide island garden beds to
7. Midway concrete finger access throug
8. Main central raised lawn areas.
9. Long Board pergolas, painted steel an
10. Raised and paved informal seating are

edge between separated walls to create better

ng elements.

on and layered depth of planting

ıg.

SHOWGROUND STATION PRECINCT
CASTLE HILL MASTERPLAN

Scale 1:400 @ A4

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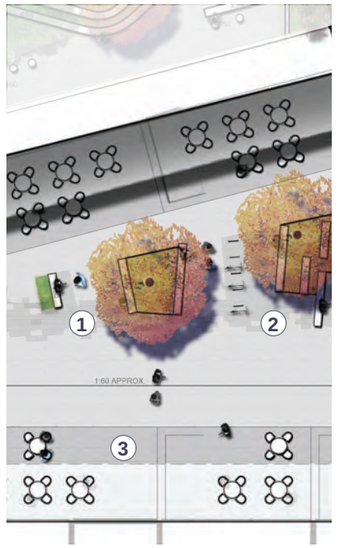
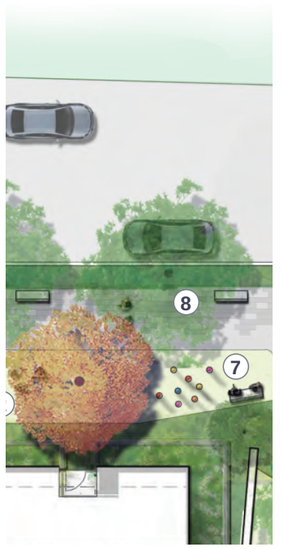
PEDESTRIAN WALK - PORTA





PRECENDENT IMAGES

Raised lawn

eature tree planting

NOTES

1. Define generous cross site acces
2. Bicycle parking and other utilitie pedestrian public walkway.
3. Breakout café/ retail seating and
4. Equal access to graded lawn up t
5. Long Board Pergola providing ad view lines to and through the cen
6. Public art installation provides at
7. Three 450mm (seating height) c planting. Terraces provide views
8. Grand street trees in a dense low
9. Densely planted groves of orname with concrete barrel seating stool

Planted in ground and interspersed

walkway.

eas.

north south public walkway.

orth south walkway.

to south linking the length of the

SHOWGROUND STATION PRECINCT
CASTLE HILL MASTERPLAN

400 @ A4

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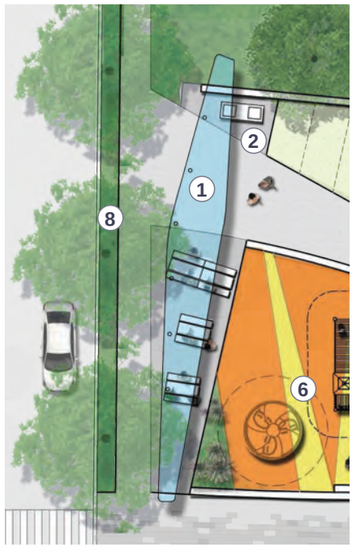
PEDESTRIAN WALK - POCKET



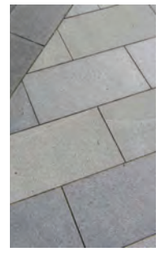
PRECENDENT IMAGES

Colourful softfall

NOTES

1. Long Board pergolas, painted steel
2. Communal BBQ areas with dedicat
3. Equal access to graded lawn up to
4. Grove of large seasonally changing
5. Public art installation provides atmo
6. Children's public play facility with pr
7. Bicycle parking and other utilities pedestrian public walkway.
8. Grand street trees in a dense low m
9. Layered low maintenance understo and childcare centre. Can include n

IMAGES



through site link from north south walkway.
ak out seating areas extending under
d building edge.

ting bays addressing the public walkway at
lobby entry areas.

central paving layout allows unimpeded
flow and spill out from adjoining retail while
r emergency vehicle access requirements.
ncrete footpath to be retained and made
e required

d operated gate access to private communal
reas.

e tree planting to paved areas on north side
to generate summer shade and a sense of
ia partial canopy overhead.

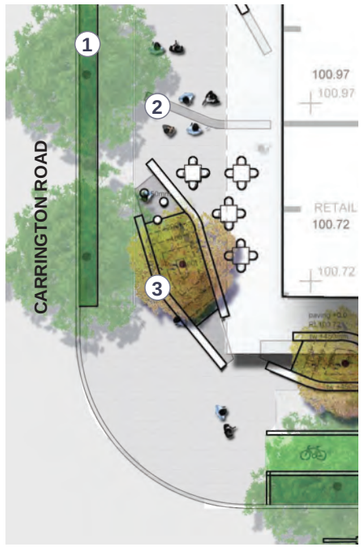
ating areas of in situ concrete benching
t planting at the western egress from the
link.

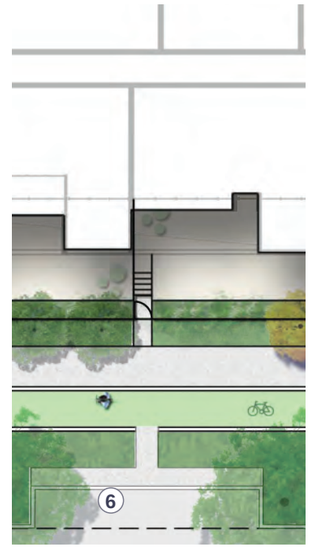
SHOWGROUND STATION PRECINCT
CASTLE HILL MASTERPLAN

Scale 1:400 @ A4

Sturt Noble Associates

STREETSCAPE- RETAIL TO STF





PRECENDENT IMAGES

Designated bike lane

Planting and concrete bench

NOTES

1. Grand street trees in a dense low ma
2. Paving pattern/ detail in coordination
3. Planting and bench seating installatic better. Planted islands also support s
4. Dedicated bicycle lane.
5. Grand street trees in a dense low ma
6. Low maintenance planting creates a
7. Decomposed granite path provides a
8. Multiple casual seating areas of fixec

.

enerate interest and present planting
efine dedicated retail seating areas.

ts.

SHOWGROUND STATION PRECINCT
CASTLE HILL MASTERPLAN

ale 1:400 @ A4

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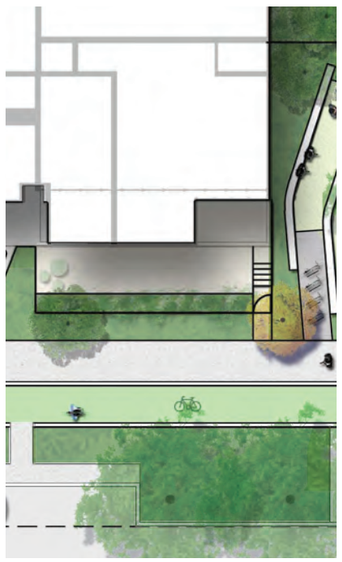
STREETSCAPE- TYPICAL ST



PRECENDENT IMAGES

300mm concrete hob wall

NOTES

1. Access gate to streetscape areas fr
2. Grand street trees in a dense low m
3. Lawn and in situ concrete bench se
4. Roadway.
5. Smaller ornamental trees to generat

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URBAN DESIGN REPORT
SHOWGROUND STATION PRECINCT
VOLUME 2 - SITES 2D-2E:

FOR MIDDLETON VENTURE PTY LTD
NOVEMBER 2017

stanisic architects

1 LOCATION

LOCATION

The subject site is a large consolidate landholding identified as site 2D to 2E that is located in the suburb of Castle Hill, approximately 400m from the new Showground Station that is currently under construction and due for completion in early 2019. The site is within 2km of Castle Hill Strategic Centre that includes Castle Towers and is accessed from Showground Road. To the west of the site is the Castle Hill Trading Zone, accessed from Carrington Road, which comprises bulky goods retail, light industrial and commercial uses.

The site has a long frontage to Middleton Avenue, which is a future primary street that connects to Showground Station/ Carrington Road. It also has a long frontage to Hughes Street and short frontage to Dawes Avenue. The site is currently surrounded by existing low-rise detached dwellings which will be redeveloped in the medium term, to high density housing as identified in the Showground Station Precinct Proposal. To the north of the site is the Castle Hill Showground, a significant regional facility. To the west of the site is the Cattai Creek Corridor, which extends from Cockayne Reserve, through the Showground to Showground Road to the north which has the potential to become a revitalised green link and public open space.

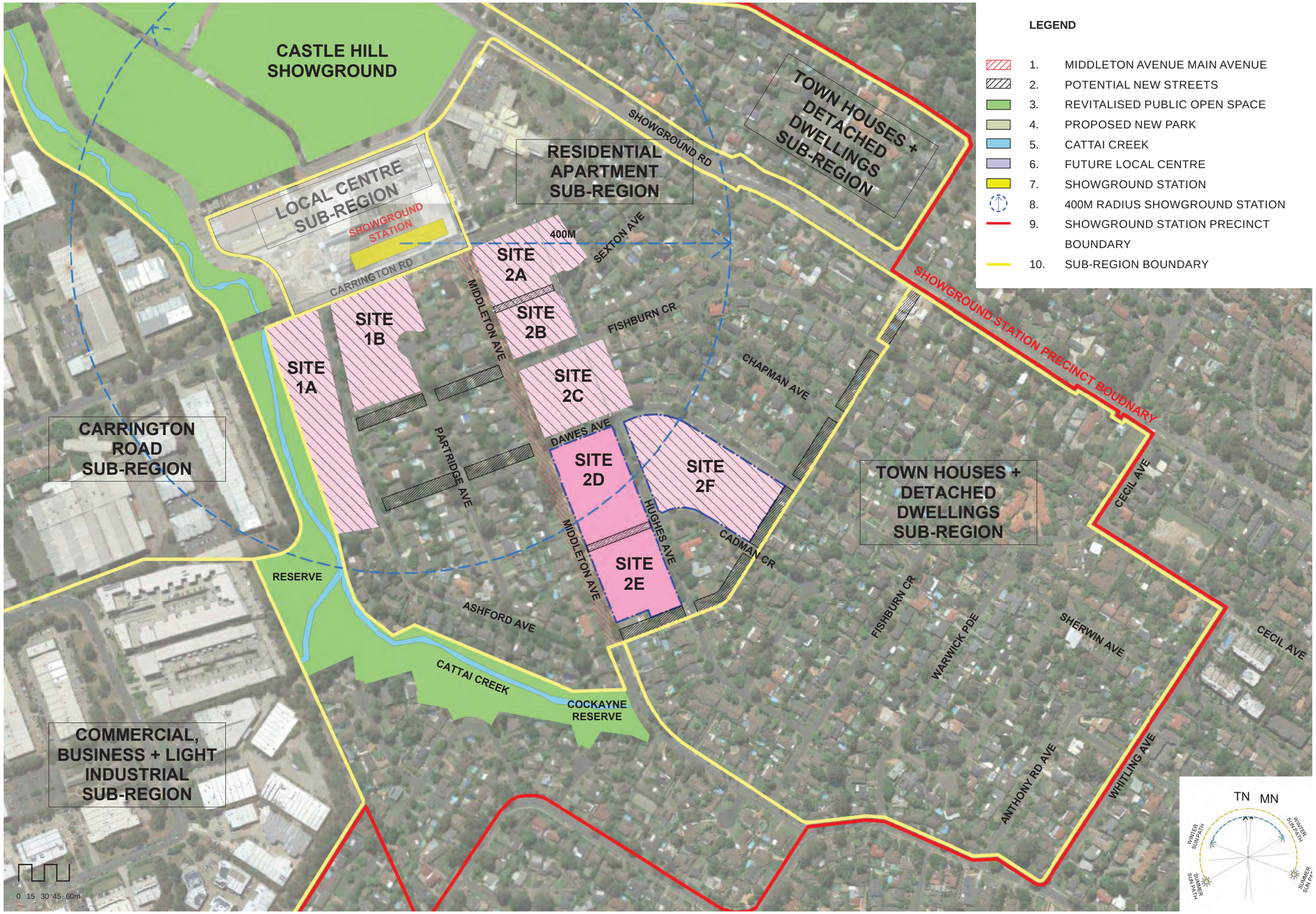
LEGEND

1. FUTURE SHOWGROUND STATION
2. CASTLE HILL SHOWGROUND
3. SHOWGROUND ROAD
4. CARRINGTON ROAD
5. CASTLE TOWERS
6. CASTLE HILL RSL
7. CASTLE HILL STRATEGIC CENTRE
8. MIDDLETON AVENUE
9. CATTAI CREEK RESERVE

SITE

AERIAL VIEW LOOKING SOUTH EAST

CONTEXTUAL ANALYSIS



A - VIEW LOOKING SOUTH ALONG MIDDLETON AVE FROM DAWES AVE

B - VIEW LOOKING EAST ALONG DAWES AVE FROM MIDDLETON AVE

C - VIEW LOOKING SOUTH EAST ALONG MIDDLETON AVENUE TOWARDS SITE

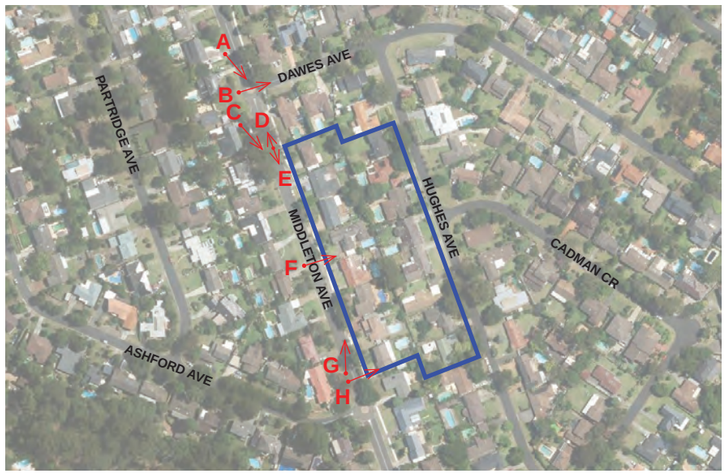
D - VIEW LOOKING NORTH TOWARDS SHOWGROUND STATION ALONG MIDDLETON AVENUE AT NORTHERN BOUNDARY OF SITE

E - VIEW LOOKING SOUTH ALONG MIDDLETON AVENUE AT NORTHERN BOUNDARY OF SITE

F - VIEW LOOKING EAST ACROSS SITE OPPOSITE CADMAN CR

G - VIEW LOOKING NORTH EAST ALONG MIDDLETON AVE AT SOUTHERN BOUNDARY OF SITE AT NORTHERN BOUNDARY OF SITE

H - VIEW LOOKING ALONG SOUTHERN BOUNDARY OF SITE ON MIDDLETON AVE



KEY MAP

SITE PHOTOS - HUGHES AVENUE

J - VIEW LOOKING SOUTH WEST ALONG HUGHES AVE FROM DAWES AVE

K - VIEW LOOKING SOUTH TOWARDS SITE ALONG HUGHES AVE FROM DAWES AVE

L - VIEW LOOKING ALONG NORTHERN BOUNDARY FROM HUGHES AVE

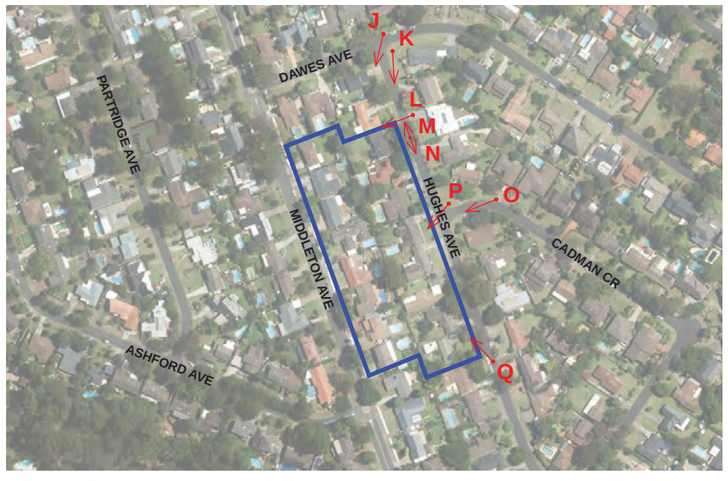
M - VIEW LOOKING SOUTH ALONG HUGHES AVE FROM NORTHERN BOUNDARY OF SITE

N - VIEW LOOKING NORTH ALONG HUGHES AVE FROM NORTHERN BOUNDARY OF SITE

O - VIEW LOOKING WEST TOWARDS SITE ALONG CADMAN CR

P - VIEW LOOKING SOUTH WEST ACROSS SITE TO EXISTING TALL STAND OF TREES IN REAR YARD OF 13 HUGHES STREET

Q - VIEW LOOKING NORTH WEST ALONG HUGHES AVE FROM SOUTHERN BOUNDARY OF SITE



KEY MAP

R - VIEW LOOKING SOUTH ALONG MIDDLETON AVE AT ASHFORD AVE

S - VIEW LOOKING WEST ALONG ASHFORD AVE AT MIDDLETON AVE

T - VIEW LOOKING NORTH ALONG ASHFORD AVE

U - VIEW LOOKING EAST ALONG ASHFORD AVE TOWARDS MIDDLETON AVE

V - VIEW LOOKING NORTH ALONG MIDDLETON AVE AT ASHFORD AVE

W - VIEW LOOKING SOUTH ALONG MIDDLETON AVE TOWARDS COCKAYNE RESERVE

X - VIEW LOOKING WEST AT COCKAYNE RESERVE FROM MIDDLETON AVE

Y - VIEW LOOKING SOUTH WEST TOWARDS CATTAI CREEK FROM MIDDLETON AVE

KEY MAP

AERIAL VIEW LOOKING WEST WEST

BENCHMARK SURVEYS Pty Ltd
PO BOX 942, KENSINGTON, 2033
enquiry@bmsurveys.com.au
www.bmsurveys.com.au
MOB: 0403 007 593
TEL: 9662 2831
ABN 79 105 078 951

SURVEY DESCRIPTION: DETAIL SURVEY
PROPERTY ADDRESS: 22-36 MIDDLETON AVE, 5-19 HUGHES AVE, 2-10 CADMAN CRES 4-8 HUGHES AVE, 16-30 DAWES AVE
LOT: SECTION: DEPOSITED PLAN NUMBER:
LOCAL GOVERNMENT AREA: THE HILLS SHIRE

CLIENT DETAILS: CADMAN PROPERTY GROUP
SCALE: 1:500 (A0)
DATE OF SURVEY: 08/08/2016
LEVEL DATUM: AHD

SHEET 1 OF 1 SHEETS
FIELD PARTY: MM
DRAWN: MM
REFERENCE: 160801

LEGEND:
A.C. ACCESS CHAMBER
I.C. INSPECTION CAP
VENT SEWER VENT
BM BENCHMARK
HYD HYDRANT
SV STOP VALVE
GM GAS METER
WM WATER METER
PP POWER POLE
V WATER VALVE
LP LIGHT POLE
WASHING LINE
TEL TELSTRA PIT
STORMWATER PITS
SIGN

NOTES:
1) NO BOUNDARIES HAVE BEEN MARKED OR SURVEYED. BOUNDARIES POSITION BASED ON FENCING ONLY
2) ALL AREAS AND DIMENSIONS HAVE BEEN COMPILED FROM PLANS MADE AVAILABLE AT THE LAND TITLES OFFICE AND MAY BE SUBJECT TO REDEFINITION
3) ORIGIN OF LEVELS TAKEN FROM SSM 62669, RL 103.090 AHD
4) SPOT LEVELS SHOULD BE USED FOR CALCULATIONS OF QUANTITIES WITH CAUTION.
5) ONLY ADJOINING WINDOWS FACING THE SUBJECT SITE ARE SHOWN & MAY BE APPROXIMATE
6) THIS PLAN REMAINS THE PROPERTY OF BENCHMARK SURVEYS P/L
7) SERVICES THAT ARE NOT SHOWN ON THE PLAN WERE NOT VISIBLE AT THE TIME OF SURVEY.
8) NO INVESTIGATION OF UNDERGROUND SERVICES HAS BEEN MADE. ALL RELEVANT AUTHORITIES SHOULD BE NOTIFIED PRIOR TO ANY EXCAVATION ON OR NEAR THE SITE.
9) SHOULD THERE BE ANY DISCREPANCIES ON SURVEY PLAN PLEASE CONTACT BENCHMARK SURVEYS PTY LTD IMMEDIATELY BEFORE WORK COMMENCES.
10) ONLY SIGNIFICANT TREES ARE SHOWN
11) TREE DIMENSIONS ARE APPROXIMATE ONLY
12) PLAN FOR ARCHITECTURAL, DRAINAGE AND D.A. PURPOSES ONLY
13) SUBJECT PROPERTY IS AFFECTED BY: RESERVATIONS & CONDITIONS IN THE CROWN GRANT(S) NOT INVESTIGATED

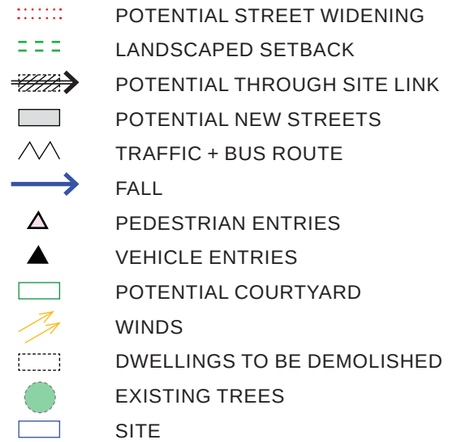
OPPORTUNITIES

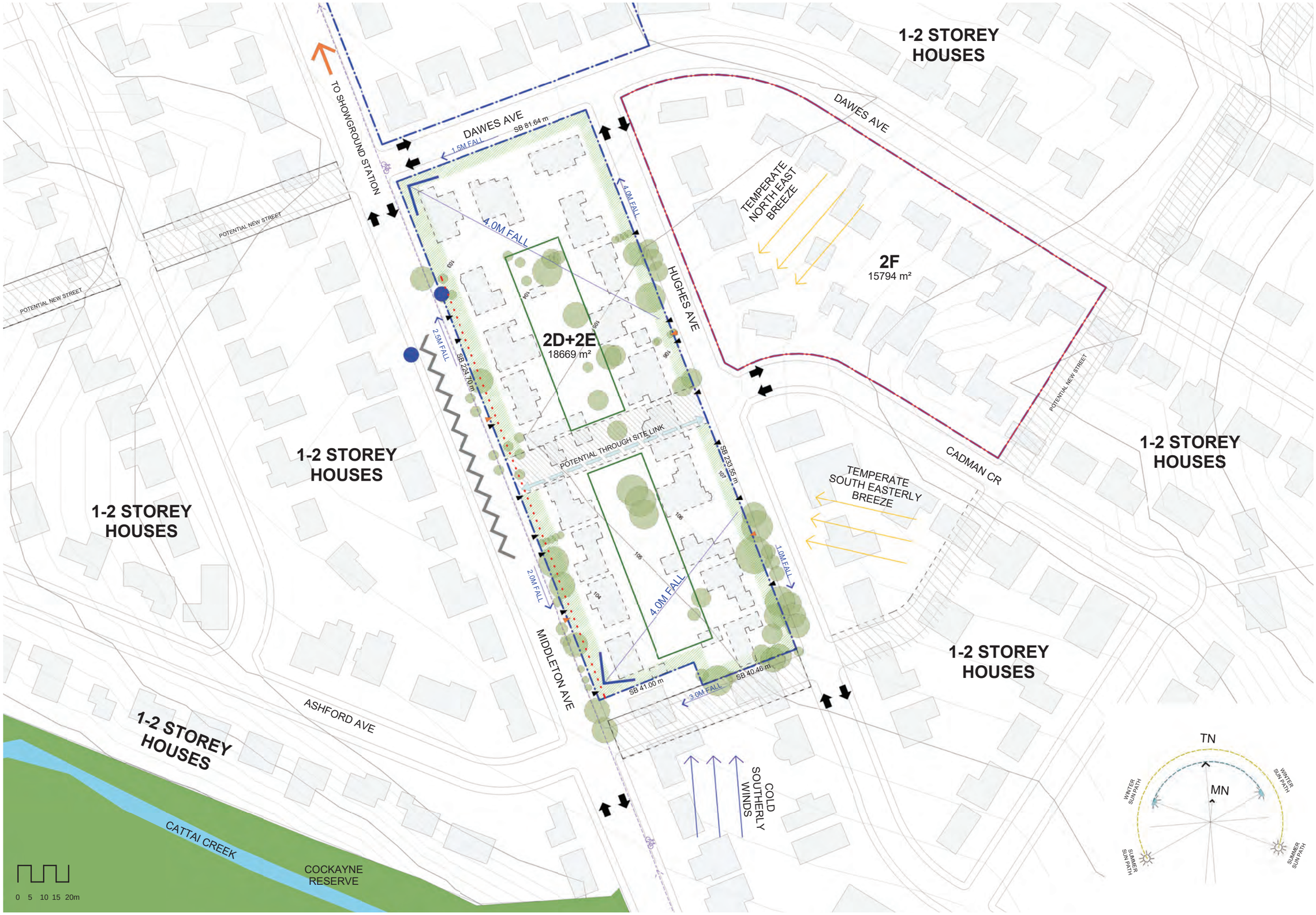
- Location within 400m of the new Showground Station;
- Large consolidated area for redevelopment (14,939sqm) in a single ownership as a catalyst site along Middleton Avenue;
- Location within the priority precinct of the Showground Station Precinct Proposal which aims to provide new housing and jobs in centres with good existing or planned transport services;
- Proximity to future shops and services at Showground Station and Castle Hill Trading Zone;
- Proximity to Castle Hill Strategic Centre and Castle Towers Shopping Centre 2km to the south-east;
- Proximity to Castle Hill Showground, Cockayne Reserve and future Cattai Creek Reserve to the south and west;
- Long (182m) street frontage to Middleton Avenue with a westerly aspect and Hughes Avenue with a easterly aspect suited to articulated linear forms that are suitable for apartment layouts;
- Potential to increase street width (2.5m dedication on each side of the street) from 20m to 25m along Middleton Avenue with a number of options available to facilitate additional street tree planting or provide an additional lane while maximising on-street parking.. This will create width / height ratio of 1/ 0.8 along Middleton Avenue which is appropriate for a residential setting and will create a grand avenue.
- Potential to increase height without adverse built form or amenity impacts due to orientation and street widths;
- Potential to include a cycleway along Middleton Avenue that connects to existing bicycle network;
- Create varied building types that respond to different street types and orientations;
- Easy vehicle access from Middleton and Hughes Avenues;
- Favourable north orientation for solar access to communal open spaces;
- Potential through site link with courtyard access;
- Removal of existing trees on the site with new trees planted in the courtyard and front setback zones to create a consolidated basement with less excavation;
- Low risk of site contamination from existing residential uses; and
- Minimum 18m wide communal courtyard.

CONSTRAINTS

- Existing low density housing requiring extensive site amalgamations;
- Middleton Avenue alignment to the west of true north limiting opportunities for 2 hours solar access to private open spaces and living rooms with a westerly aspect;
- Transition from low rise residential character to high density residential (R4 zone);
- 3m fall across the site and 5m cross fall from south east corner down to north west;
- Removal of large established trees located within front setback zones and existing rear yards to facilitate basement parking; and
- Isolated single lot to the south of the site along Middleton Avenue;

LEGEND




1-2 STOREY HOUSES
DAWES AVE
TO SHOWGROUND STATION
SB 81.64 m
1.5M FALL
4.0M FALL
HUGHES AVE
POTENTIAL NEW STREET
POTENTIAL NEW STREET
2D+2E
18669 m²
2F
15794 m²
TEMPERATE NORTH EAST BREEZE
2.5M FALL
SB 224.70 m
POTENTIAL THROUGH SITE LINK
SB 233.55 m
CADMAN CR
1-2 STOREY HOUSES
1-2 STOREY HOUSES
TEMPERATE SOUTH EASTERLY BREEZE
2.0M FALL
4.0M FALL
1.0M FALL
MIDDLETON AVE
SB 41.00 m
3.0M FALL
SB 40.46 m
1-2 STOREY HOUSES
ASHFORD AVE
1-2 STOREY HOUSES
COLD SOUTHERLY WINDS
CATTAI CREEK
COCKAYNE RESERVE
0 5 10 15 20m
TN
MN
WINTER SUN PATH
WINTER SUN PATH
SUMMER SUN PATH
SUMMER SUN PATH

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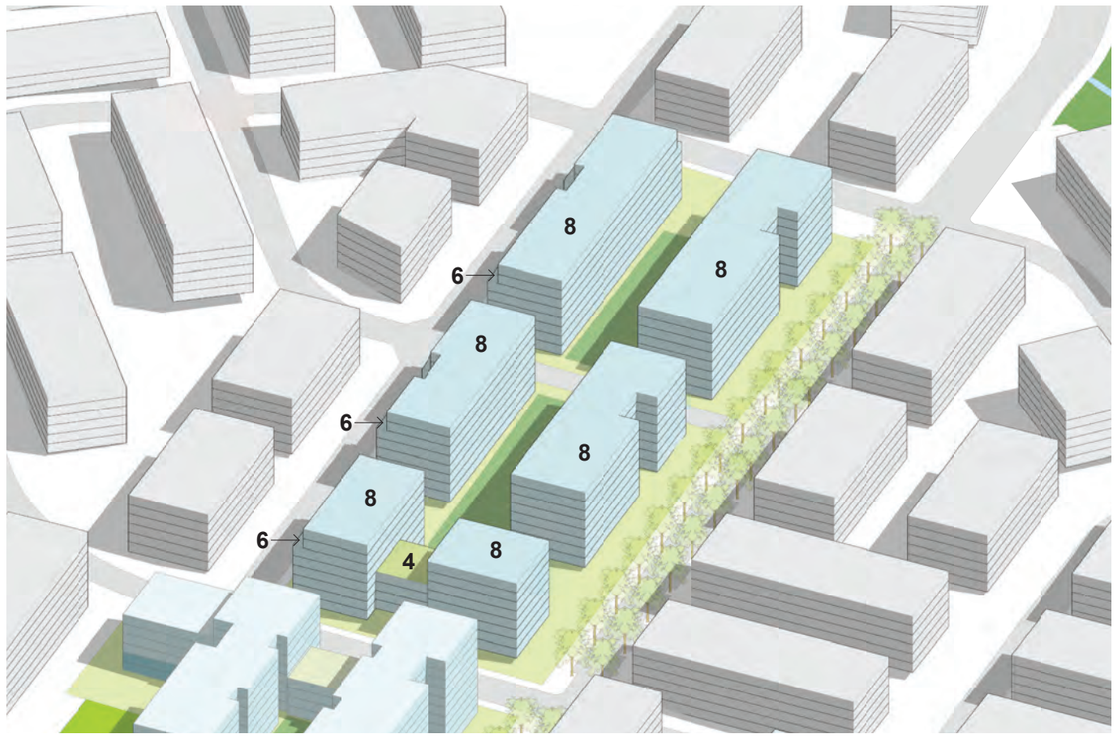
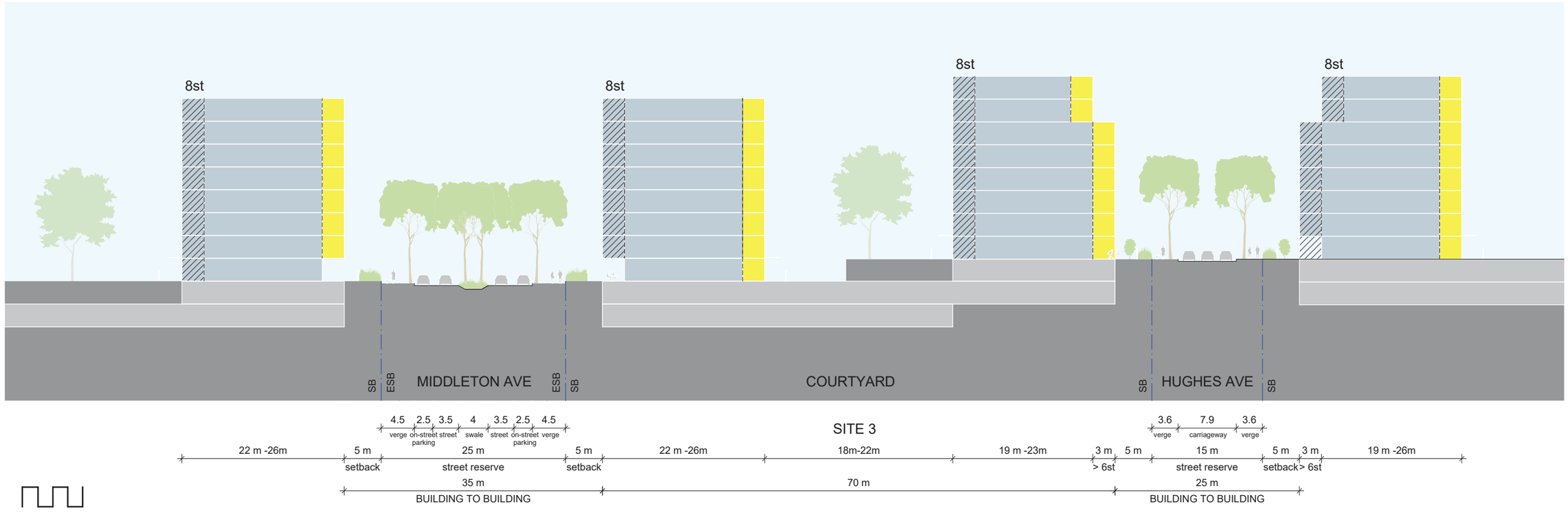
DAWES AVE
PROPOSED ST
PARTRIDGE AVE
POTENTIAL ROAD WIDENING DEDICATION - DIMENSION TO BE CONFIRMED
MIDDLETON AVE
HUGHES AVE
CADMAN CR
THROUGH SITE LINK
POCKET PARK
ASHFORD AVE
CATTAI CREEK
A
8
2D+2E
18669 m²
D
8
B
8
C
8
4
24 MIN
18
16
6
0 5 10 15 20m

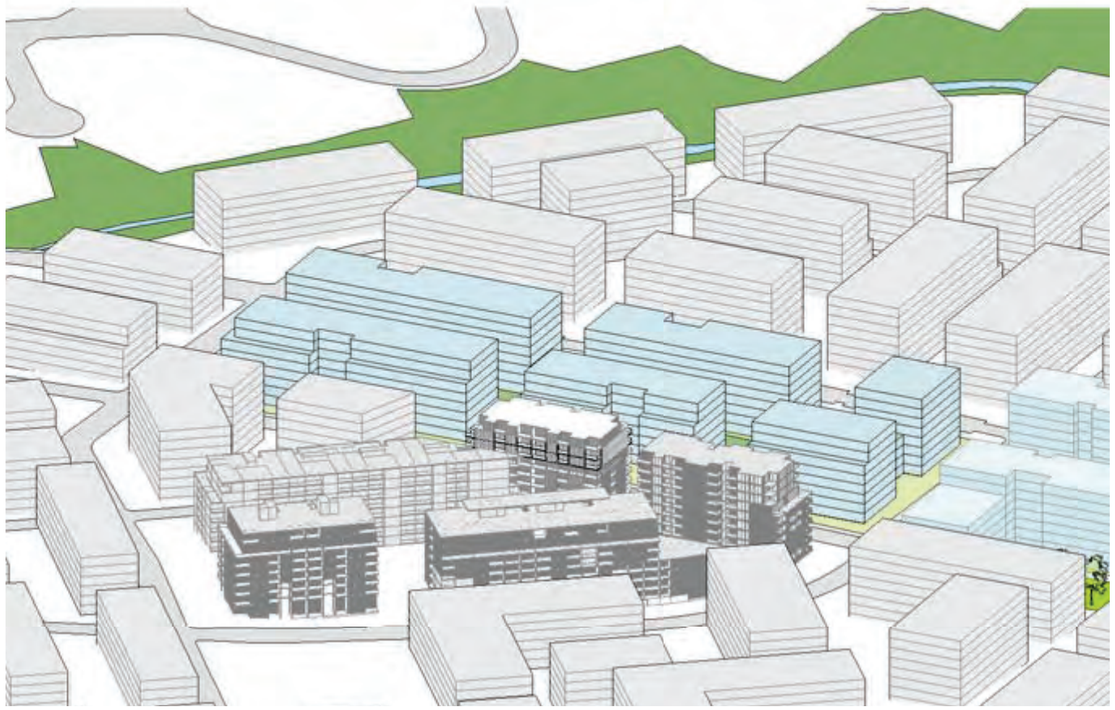
4.2 PREFERRED OPTION - AERIAL VIEWS



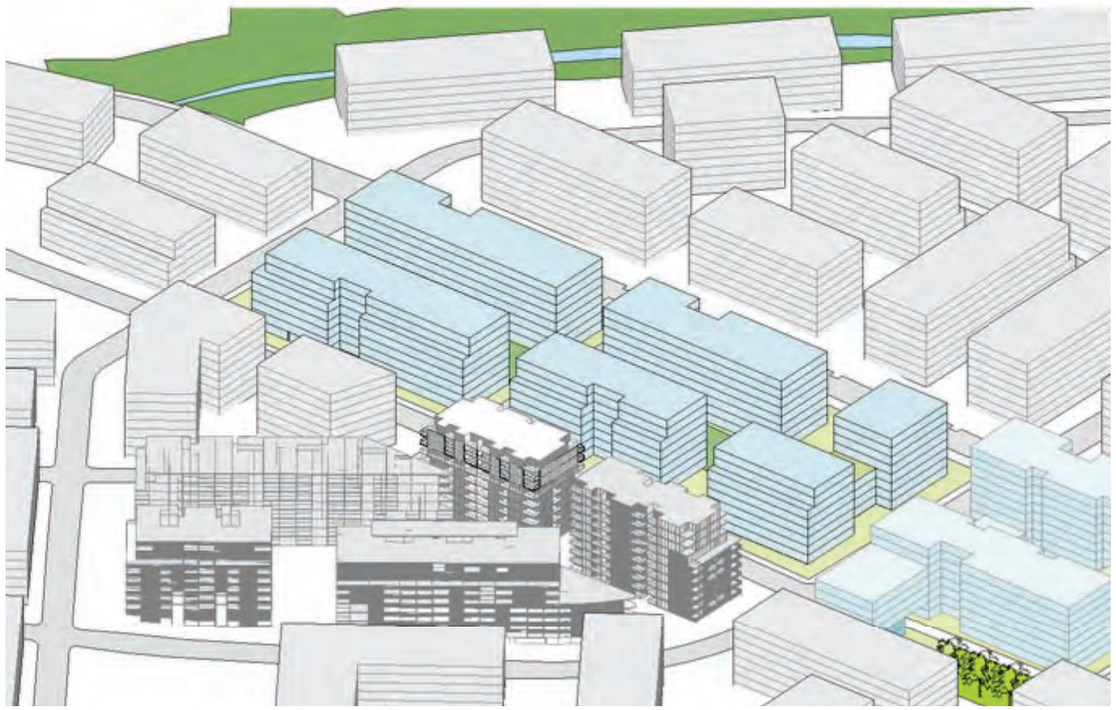
NORTH WEST VIEW

SOUTH EAST VIEW





9AM WINTER SOLSTICE



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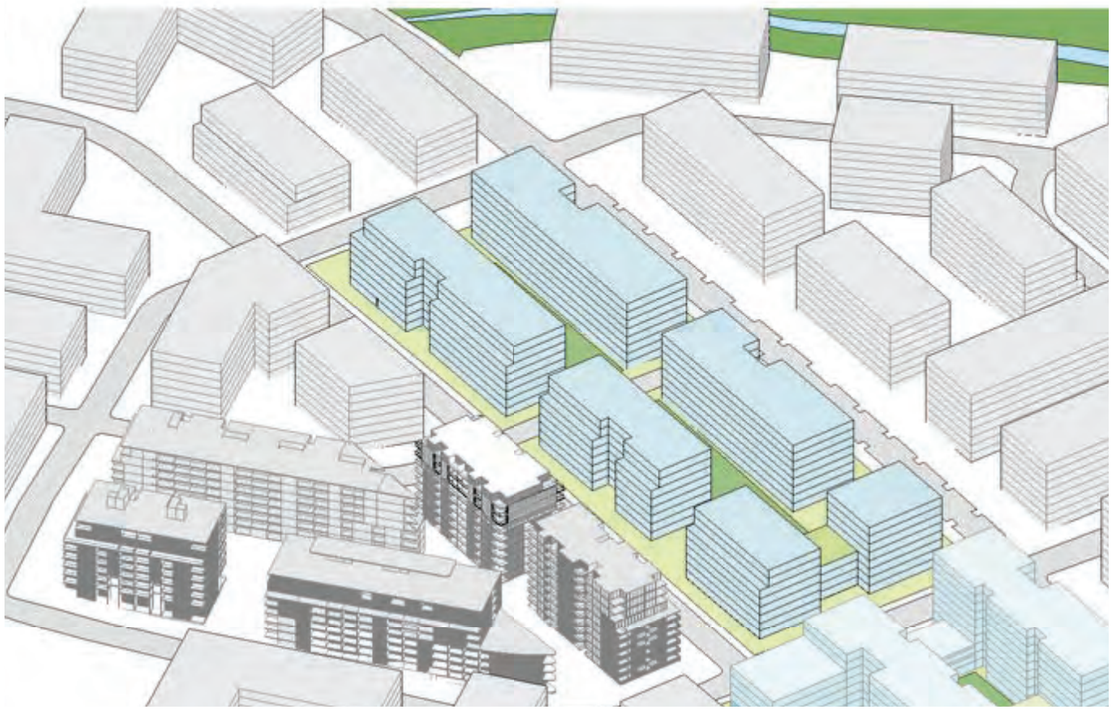
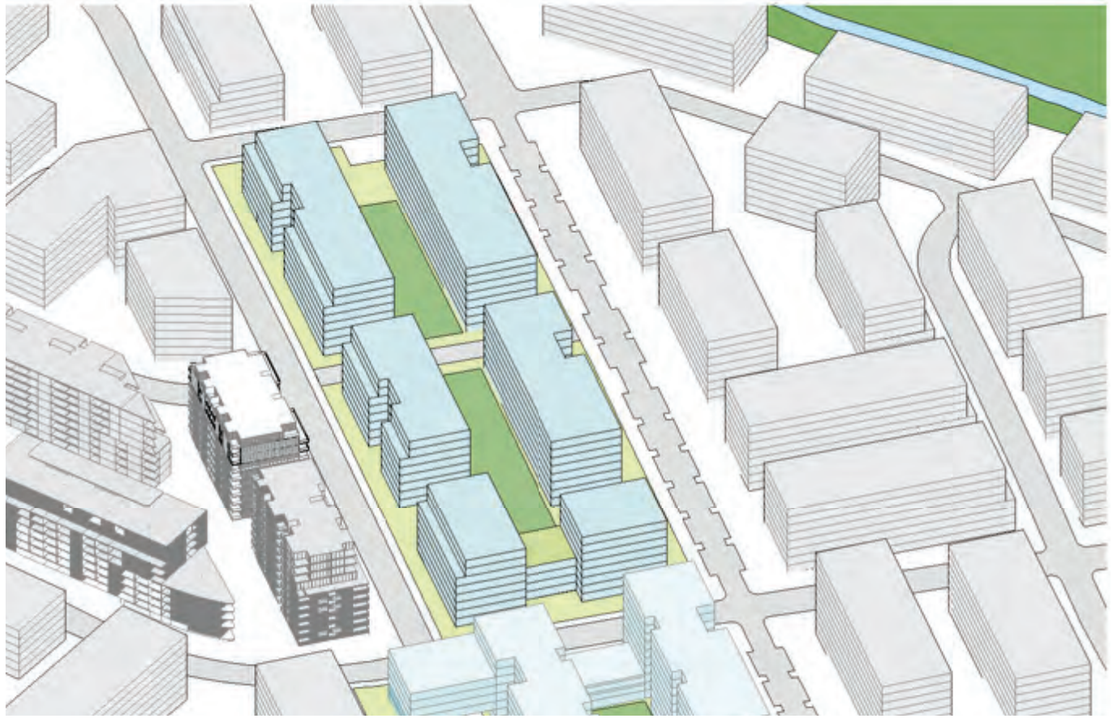
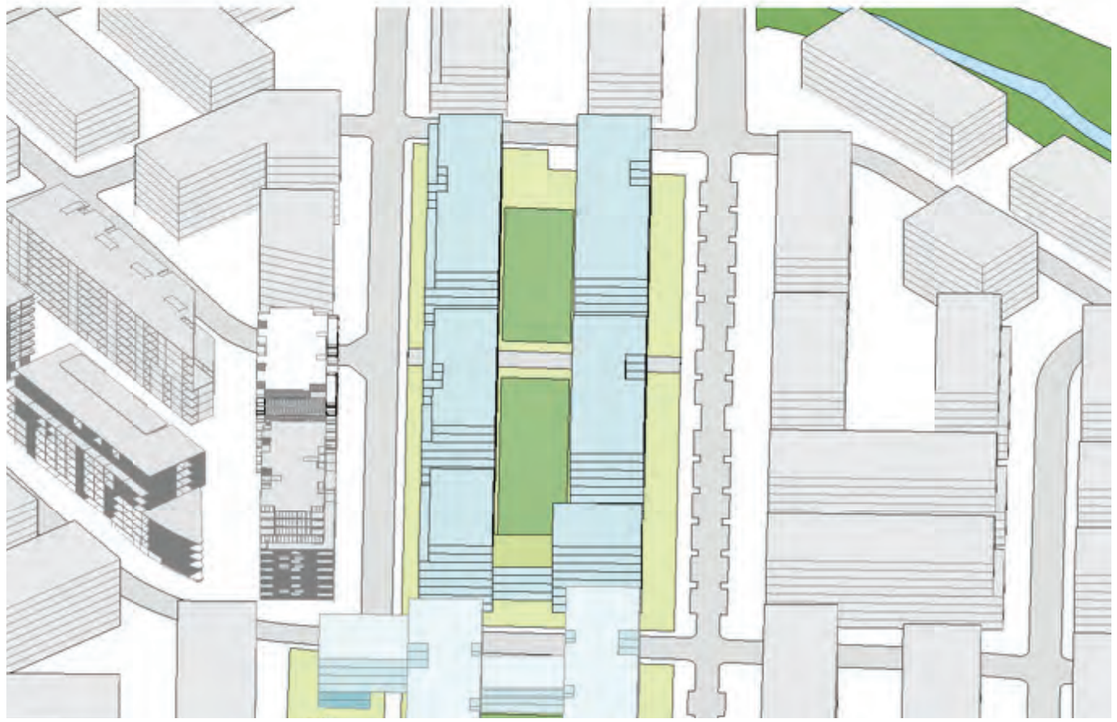
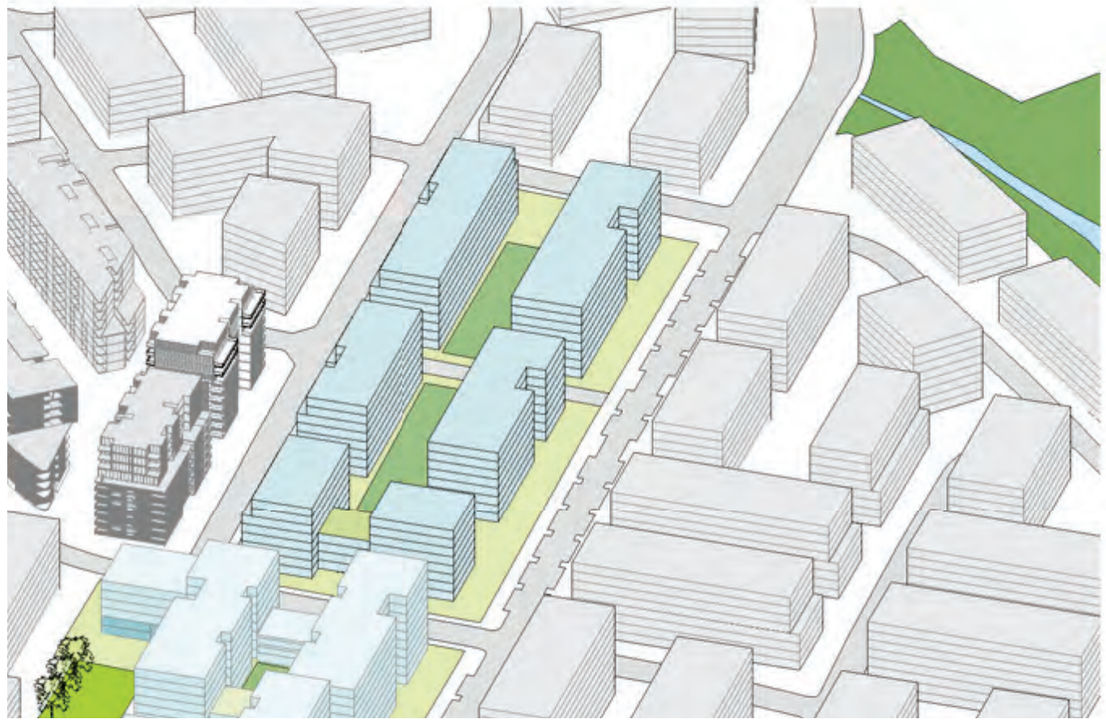




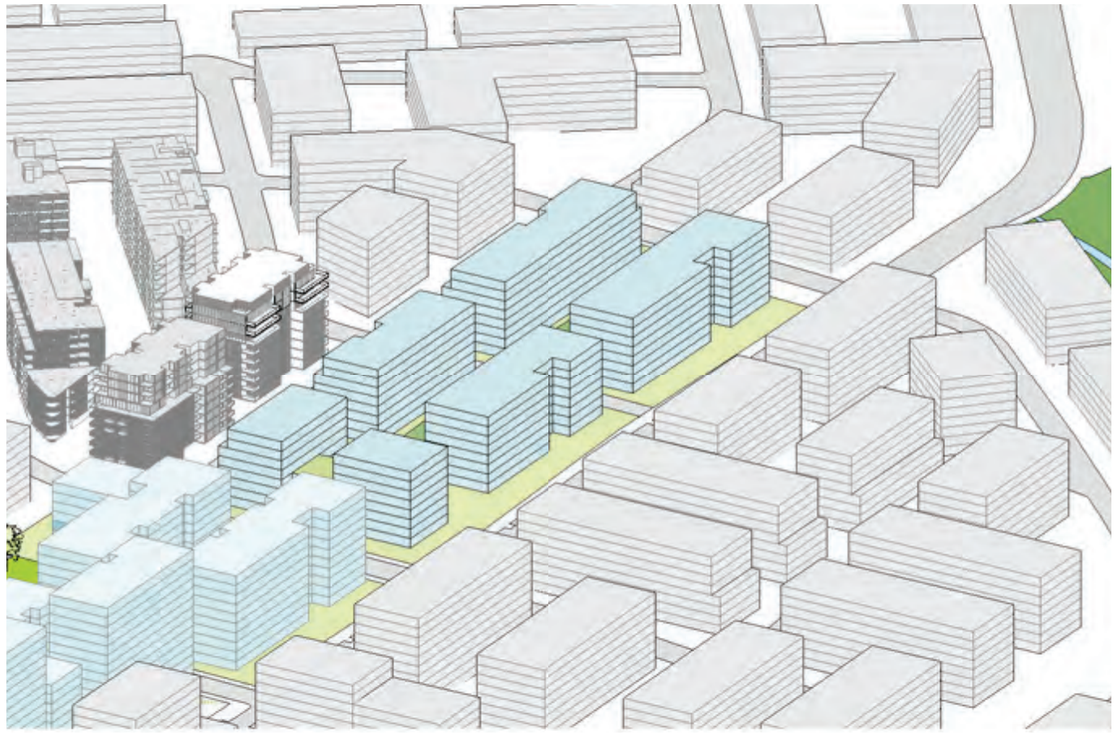
4.2 PREFERRED OPTION - SHADOW DIAGRAMS



1PM WINTER SOLSTICE



2PM WINTER SOLSTICE



3PM WINTER SOLSTICE

VISUALISATION 2 - VIEW LOOKING EAST ALONG THROUGH SITE LINK TOWARDS CADMAN CRESCENT (PREFERRED OPTION)

VISION

The vision for the site is to create an environmentally sustainable and high intensity living environment within an existing low-rise residential setting that is transitioning to high density living centred on the new Showground Station. It will be framed by an increased setback and street dedication to Middleton Avenue to establish this street as a main avenue, a permeable and publicly accessible through site link that connects into the existing street network. Building forms will be oriented to optimise solar access and breezes. The site will be a catalyst for the Showground Station Precinct: Residential Sub-Precinct and set benchmark of design excellence.

Key concepts underlying the vision are Diversity, Connectivity and Sustainability.

Diversity applies to the development of a range of building types, diverse streets and communal spaces and housing choice which underpins a vibrant centre that offers complex experiences and social contact.

Connectivity applies to an accessible, genuine and diverse network of publicly accessible spaces which integrates existing and future landscapes and buildings, and which establishes a lasting framework and pattern for the growth of the area.

Sustainability applies to development of a positive environmental, social and economic outcome for the site that maximises natural cross ventilation and sunlight for the amenity of residents, passive thermal design for ventilation, heating and cooling reducing reliance on technology and operation costs as well as deep soil zones for ground water recharge and vegetation.

GOALS

The key goals of the vision are to:

- Achieve design excellence;
- Increase housing supply to meet targets projected in the Showground Station Precinct Proposal;
- Create diverse built forms that reinforce the varied street types, building types and orientation;
- Create urban forms within a landscaped setting;
- Create a connected public domain with increased street activation, permeable movement system for pedestrian and bicycles to support higher density development;
- Achieve a high amenity standard to built forms and central courtyard;
- Achieve compliance with SEPP 65/ Apartment Design Guide; and
- Create a diversity of accommodation suited to a variety of lifestyles.

DESIGN CONCEPT

The concept design comprises articulated and street defining forms with a central courtyard. It validates the preferred option by demonstrating that the key concepts and goals of the vision are achieved by:

- Achieving design excellence with a site specific architectural response that exceeds the minimum requirements of SEPP 65/ ADG and sets a benchmark for future developments in the precinct;
- Exceeding the housing targets projected in the Showground Station Precinct Proposal by approximately 18% or 66 units;
- Creating diverse built forms that reinforce Middleton Avenue as the main avenue with an 8 storey street wall height and Hughes Avenue as a residential street with 6 storey street wall height stepping back 3m at upper levels. Compared to the articulated and orthogonal street elevations, the eastern courtyard elevation to buildings A + B has a fluid form that responds to the courtyard. Apartments have been planned to maximise solar access, cross ventilation and outlook;
- Creating strong urban forms within a landscaped setting with landscaped front setbacks and courtyards with approximately 30% of the site area (7% min ADG) as deep soil planting suitable for large tree planting. Low level planting and raised terraces are used to activate streets and the courtyard while ensuring visual privacy is acheived to ground floor apartments. Entry lobbies are located level with the adjacent footpath with stairs and accessible platform lifts located within the entry lobby to mediate the variation in topography across the site;
- Creating an accessible through site link suitable for pedestrians and bicycles that connects Middleton and Hughes Avenue as an extension of Cadman Crescent. The link is a single 1:20 ramp and provides access to the central courtyard;
- Achieving a high amenity standard to built forms and central courtyard with the courtyard width between 18-22m, 2 hours of solar access to 70% of apartments at mid-winter and natural cross ventilation to 60% of apartments; and
- Creating a diversity of accommodation suited to a variety of lifestyles with 25% x 1 bed/ 1 bed + study, 65% 2 bed and 10% 3 bed apartments. Apartment sizes range in size with 1 bed (50-54sqm), 1 bed + study (55-69sqm), 2 bed (70-89sqm), 3 bed (90-110sqm).
- Creating a pocket park to the south of the site with frontage to Middleton Avenue, Hughes Avenue and potential new street.

LEGEND

- SOLAR ACCESS
- THROUGH SITE LINK
- POCKET PARK
- PEDESTRIAN ENTRIES
- VEHICLE ACCESS
- SUNNY COMMUNAL OPEN SPACE
- COURTYARD
- 3M SETBACK AT L6
- 2.5M SETBACK
- LANDSCAPE
- FUTURE FORM
- 8 STOREYS
- ARTICULATION RECESSES
- SITE

4 CONCEPT DESIGN

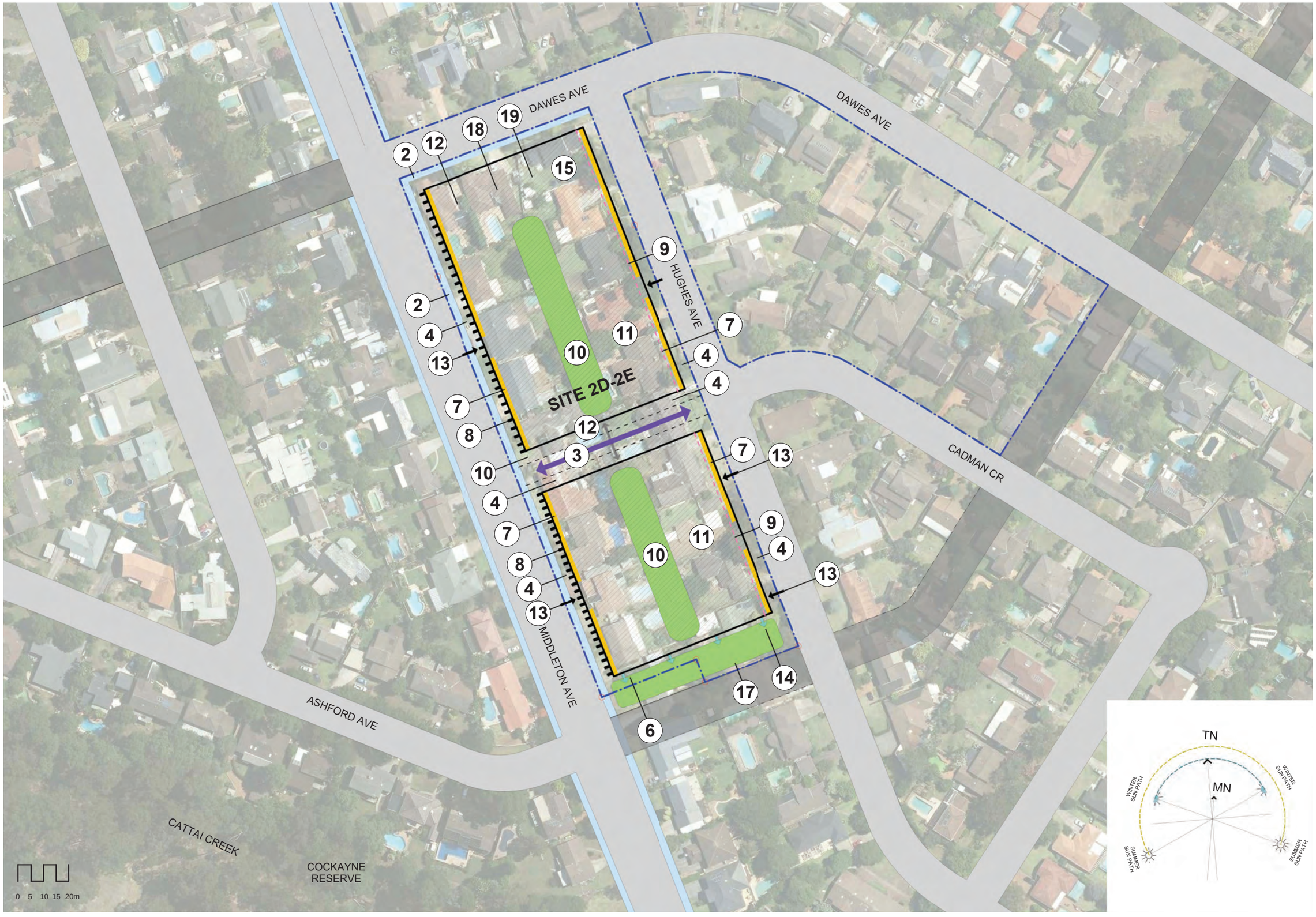
BUILDING DESIGN PRINCIPLES

After considering the vision for the site within the Showground Station Precinct Proposal (DoPE), the recommendations from the Showground Select Sites Strategic Positioning Report (AJ+C) and built form modelling a number of key design principles have been defined for the project.

The design principles that underpin the building design are:

1. Create building forms that respond to the transformation of the public domain;
2. Provide an potential street wiudenting along Middleton Avenue with dimension to be confirmed;
3. Create 8m wide pedestrian through site link extending Cadman Crescent to Middleton Avenue;
4. Create front setbacks to Middleton/ Hughes Avenues and through site link with entry and planting to ground floor units directly from the street - dimension to be confirmed;
5. Provide 9m setback between buildings between site 2D + 2E to the northern boundary to facilitate staging;
6. Provide a 6m setback to the southern boundary adjacent to the single isolated lot which is unlikely to redevelop;
7. Limit facade lengths to 45m or introduce a recess into the form that presents as a full height break;
8. Create a strong street wall along Middleton Avenue (25m wide) with no upper level setbacks and to reinforce Middleton Avenue as a primary street;
9. Introduce a 3m setback above 6 storeys along Hughes Avenue (16m wide) to provide a finer grain residential character;
10. Create a stepped central linear courtyard with a high level of amenity with tree planting for the enjoyment of residents;
11. Locate carparking in basement levels;
12. Extend basement carparking beneath through site link to limit excavation;
13. Provide clearly defined and accessible entries as addresses for all buildings and provide direct entry from the street to ground floor units;
14. Create an active interface to the south boundary and pocket park;
15. Provide a mix of dwelling types for all - singles, couples, families, the young and elderly; and
16. Provide internal and external communal open spaces for social engagement and networking.
17. Create a pocket park to the south of the site with frontages to Middleton and Hughes Avenues and potential new street.
18. Provide communal open spaces on lower roofs for the enjoyment of residents.
19. Limit forms between linear buildings to 4 storeys in height to provide a finer grain residential character and assist in breaking up the bulk and mass of the tower forms;

4 CONCEPT DESIGN



VISUALISATION 3 - VIEW LOOKING NORTH ALONG HUGHES AVENUE (PREFERRED OPTION)

VISUALISATION 4- VIEW LOOKING NORTH ACROSS CENTRAL COURTYARD (PREFERRED OPTION)

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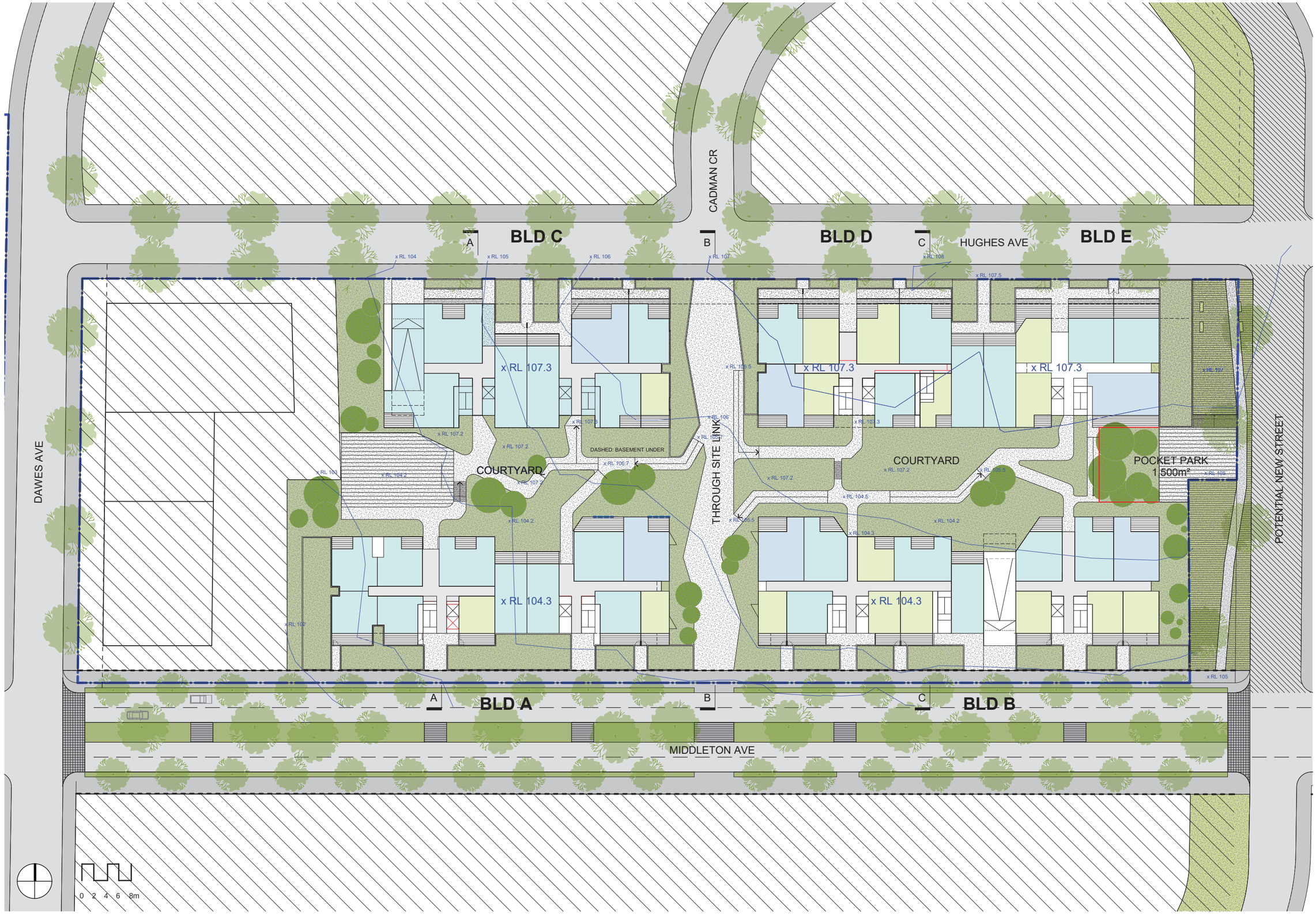
CONCEPT DESIGN -SITE PLAN (LEVELS 2-6 PLAN) (PREFERRED OPTION)



DESIGN CONTROLS

HEIGHT

- 8 storeys (Middleton Avenue)
- 8 storeys with 3m setback (Hughes Avenue)
- 2 storeys + 1 part storey basement parking

SETBACKS

- 2.5m street dedication to Middleton Avenue
- 8m through site link adjacent to Cadman Crescent
- 5m front setback to Middleton, Hughes Avenue, New Street + through site link
- 9m side setback to north boundary
- 6m side setback to south boundary

FLOOR PLATE

- Multiple core with through apartments
- 5-9 apartments per core
- Natural light and ventilation to common lobbies
- 700-1100sqm nett floor area per floor

SCALE

- 20m street wall height to Hughes Avenue (varies)
- 25m street wall height to Middleton Avenue (varies)

ACCOMMODATION

- 425 apartments (approximate)
- 106 (25%) x 1 bed, 276 (65%) x 2 bed, 43 (10%) x 3 bed

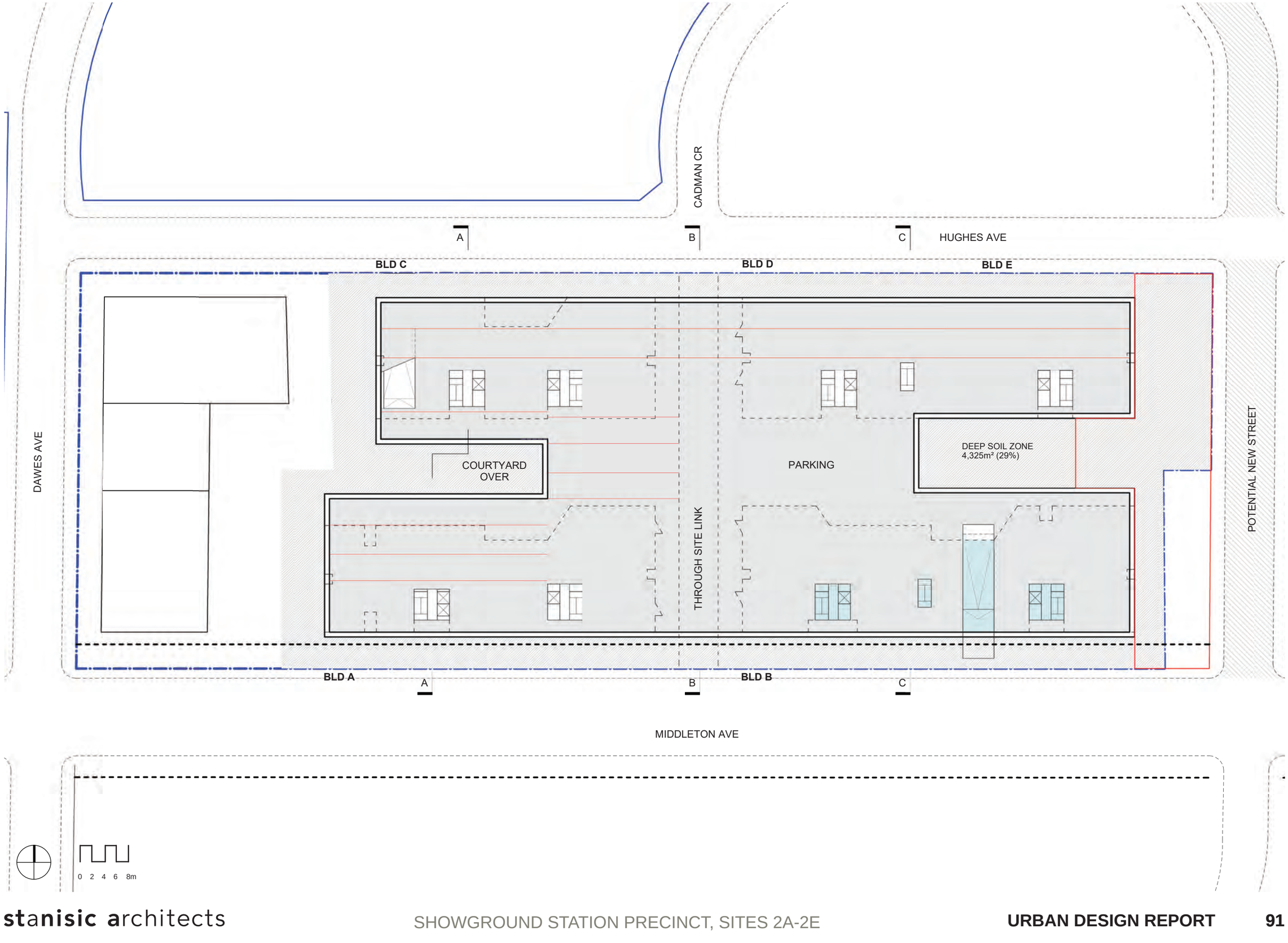
SEPP 65/ ADG

- 70% apartment achieve 2 hours solar access at mid-winter
- 60% apartments acehive natural cross ventilation
- 30% of site area is deep soil planting
- 18-22m separation to courtyard
- 9m building separation to north boundary adjacent to neighbouring future forms
- 12m separation between buildings D + E with directional splayed windows to provide 18m separation between buildings

GFA/ FSR

- The achieved gross floor area is 40,335sqm
- The achieved FSR is 2.7:1

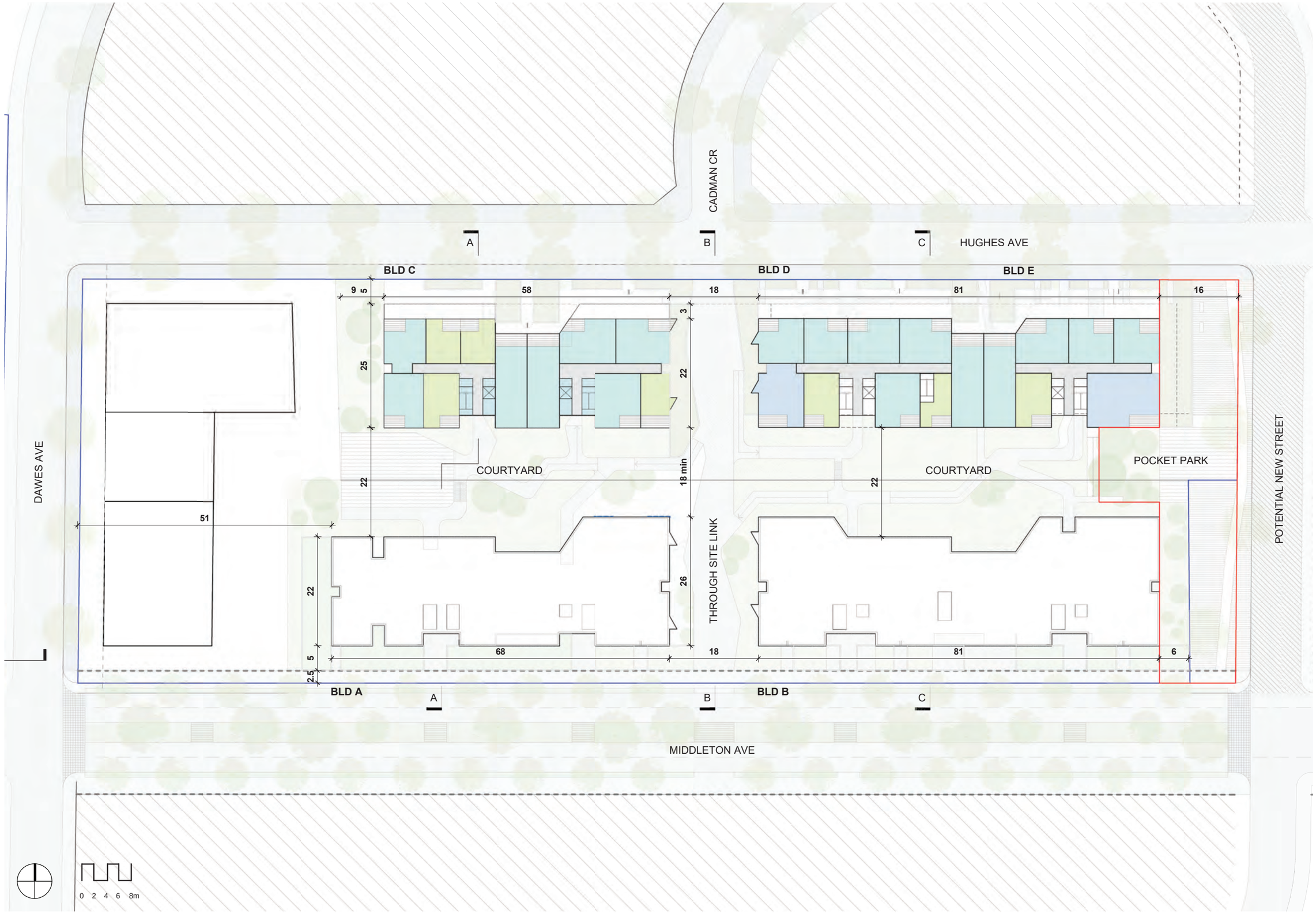
CONCEPT DESIGN - TYPICAL BASEMENT PLAN (PREFERRED OPTION)



CONCEPT DESIGN - LEVEL 1 (GROUND) PLAN: MIDDLETON AVENUE (PREFERRED OPTION)

CONCEPT DESIGN - LEVEL 1 (GROUND) PLAN: HUGHES AVENUE (PREFERRED OPTION)

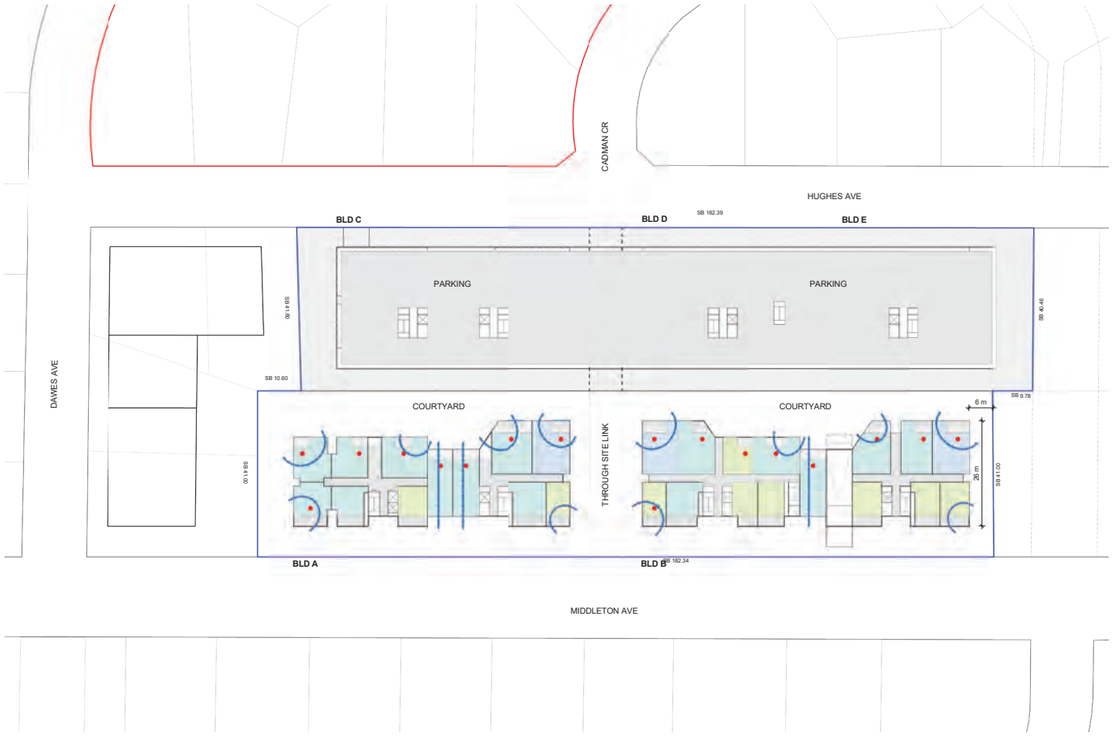
CONCEPT DESIGN - LEVEL 8 PLAN: MIDDLETON AVENUE (PREFERRED OPTION)


CADMAN CR
HUGHES AVE
A
B
C
BLD C
BLD D
BLD E
9
5
58
18
81
16
3
25
22
22
18 min
22
COURTYARD
COURTYARD
POCKET PARK
DAWES AVE
51
22
26
THROUGH SITE LINK
POTENTIAL NEW STREET
5
2.5
68
18
81
6
BLD A
BLD B
A
B
C
MIDDLETON AVE
0 2 4 6 8m

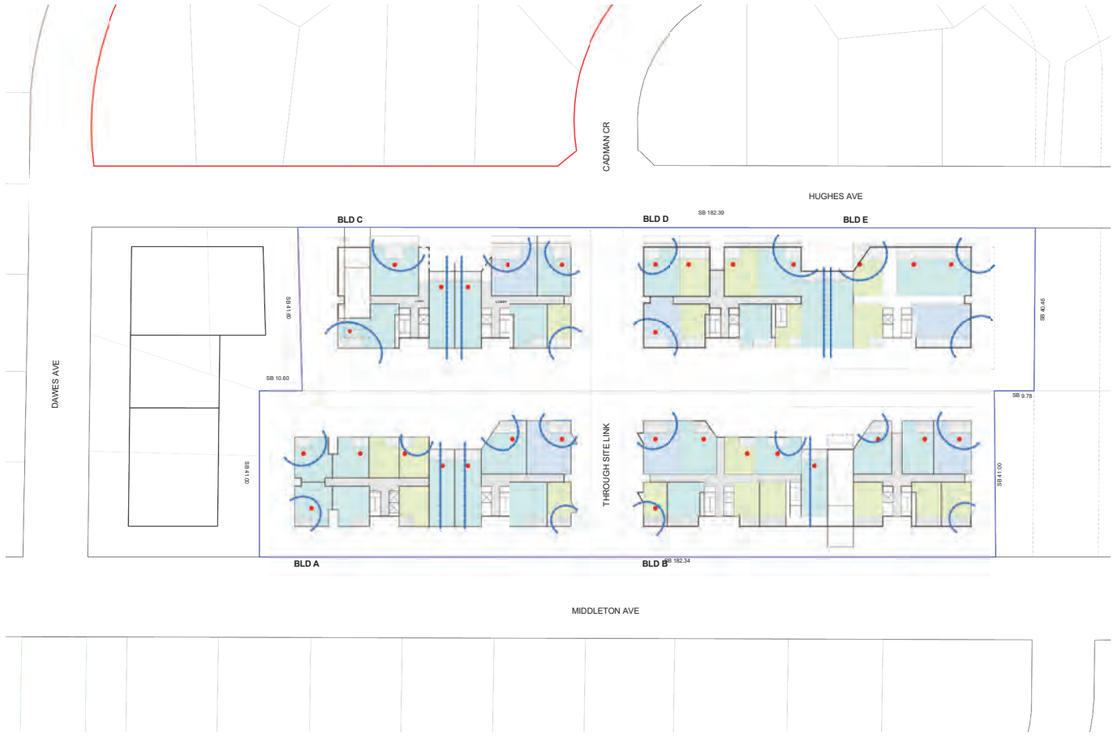
CONCEPT DESIGN - SECTION A-A (PREFERRED OPTION)


28m max building height
ROOF
129.10
L8
126.00
L7
122.90
L6
119.80
L5
116.70
L4
113.60
L3
110.50
L2
107.40
L1
104.30
B2
101.30
B3
98.30
MIDDLETON AVE
SB
ESB
3.1 m
3 m
ESB
SB
PARKING
PARKING
ROOF
132.10
L8
129.00
L7
125.90
L6
122.80
L5
119.70
L4
116.60
L3
113.50
L2
110.40
L1
107.30
B1
104.30
B2
101.30
B3
98.30
HUGHES AVE
SB
3.1 m
3 m
SB
BUILDING B
BUILDING C
0 1 2 3 4m

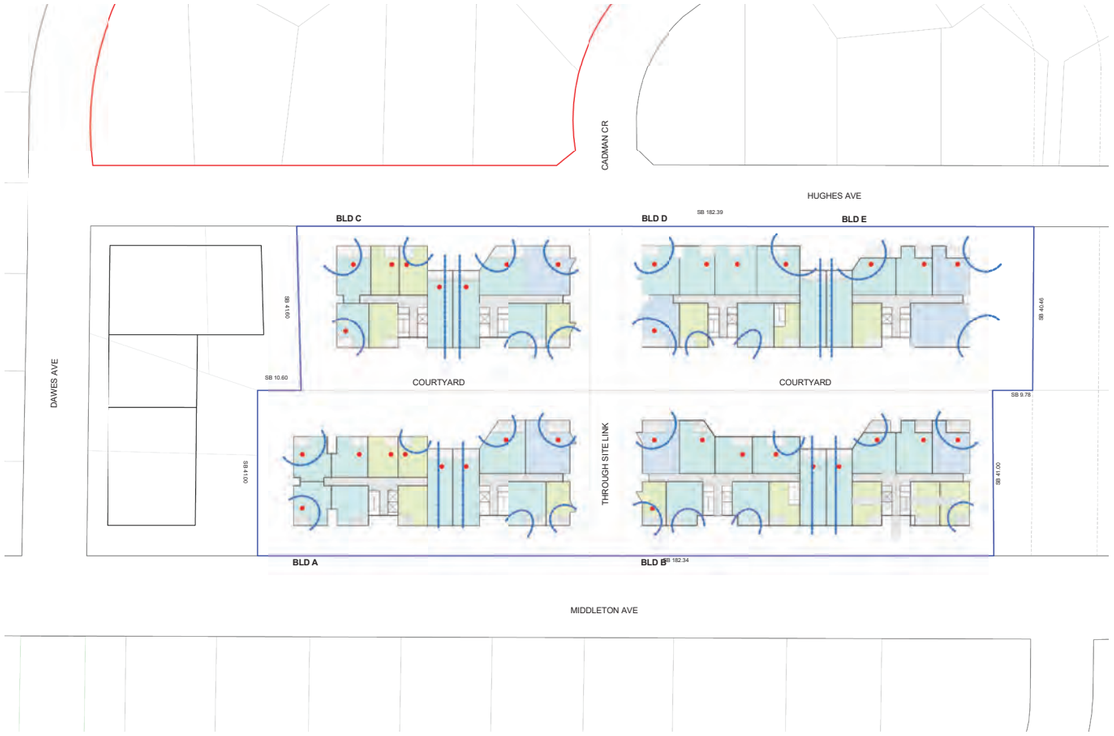
CONCEPT DESIGN - SECTION C-C (PREFERRED OPTION)



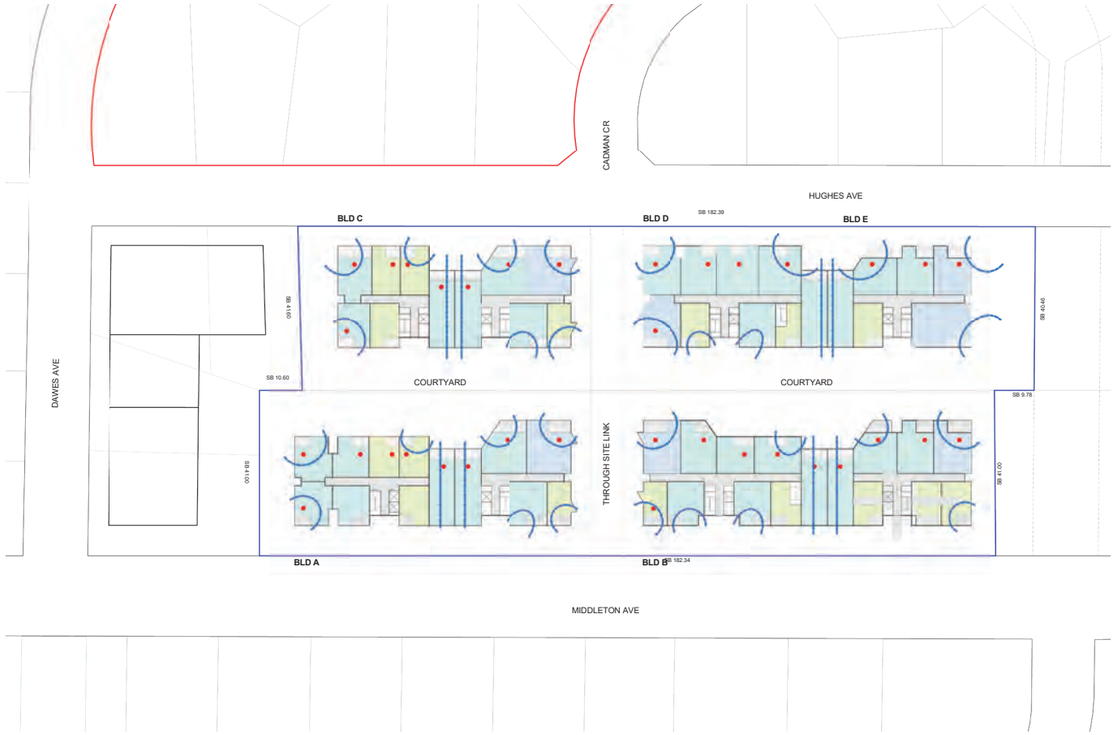
SEPP 65 SOLAR ACCESS + CROSS VENTILATION: LEVEL 1 (GROUND) PLAN - MIDDLETON AVENUE



SEPP 65 SOLAR ACCESS + CROSS VENTILATION: LEVEL 1 (GROUND) PLAN - HUGHES AVENUE

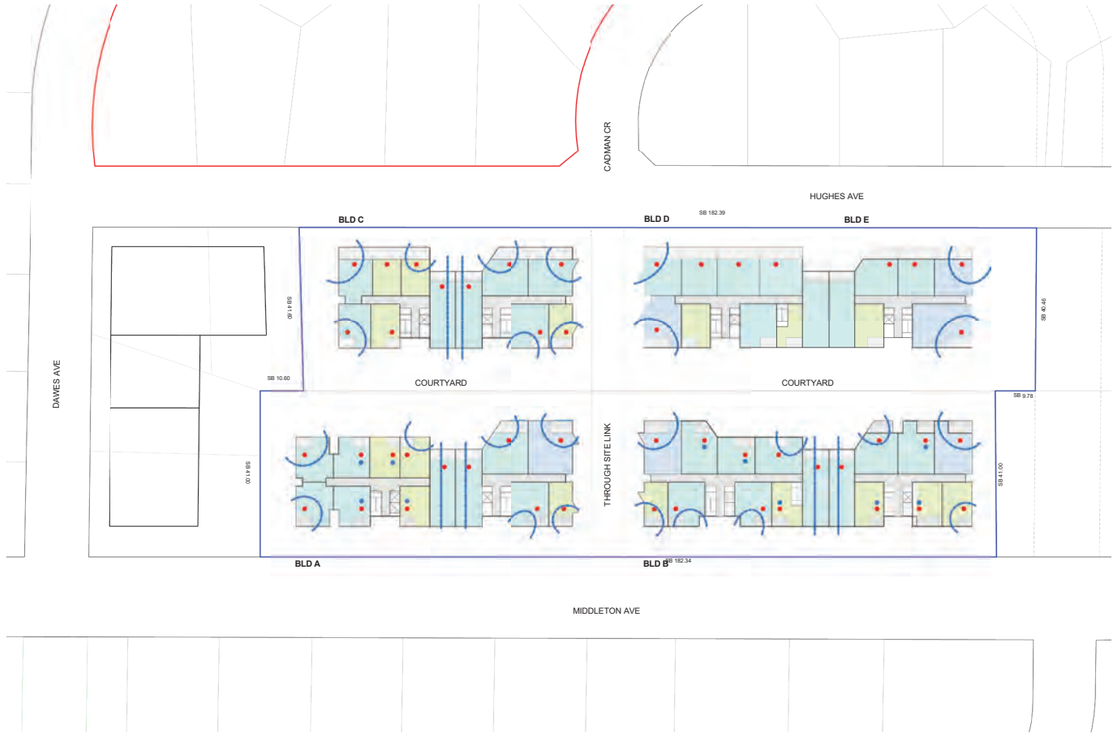


CONCEPT DESIGN - SEPP 65 SOLAR ACCESS + CROSS VENTILATION: LEVELS 2-4 PLAN

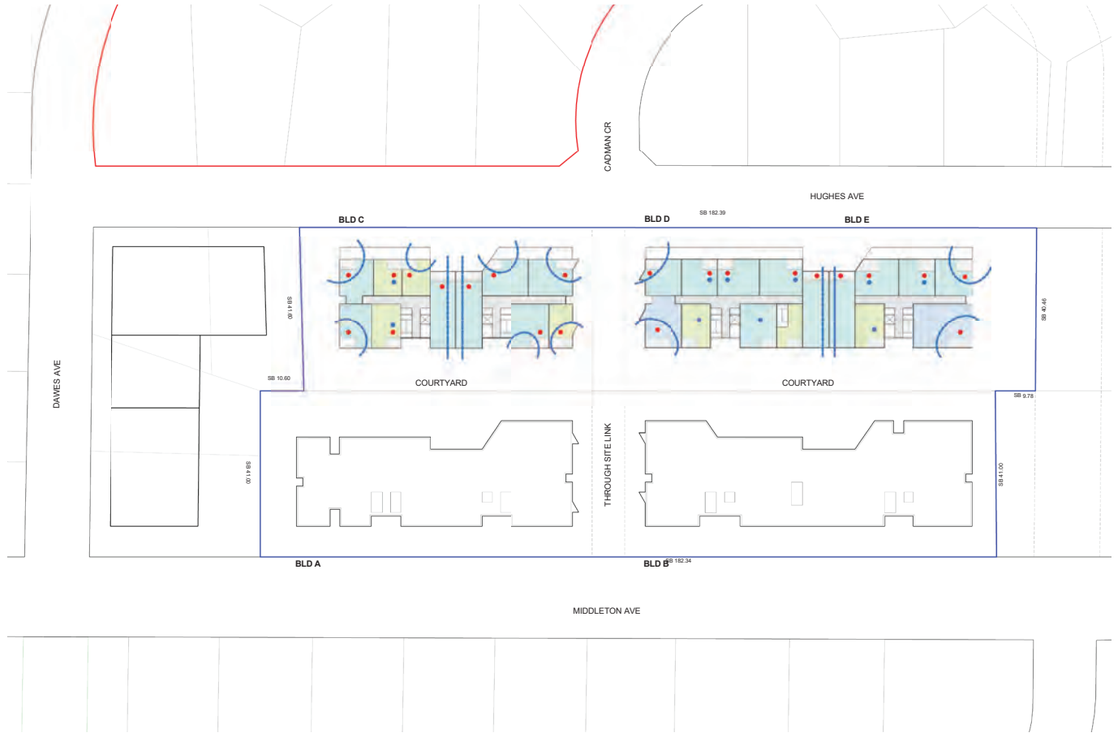


CONCEPT DESIGN - SEPP 65 SOLAR ACCESS + CROSS VENTILATION: LEVELS 5-6 PLAN

CONCEPT DESIGN - SEPP 65 SOLAR ACCESS + CROSS VENTILATION



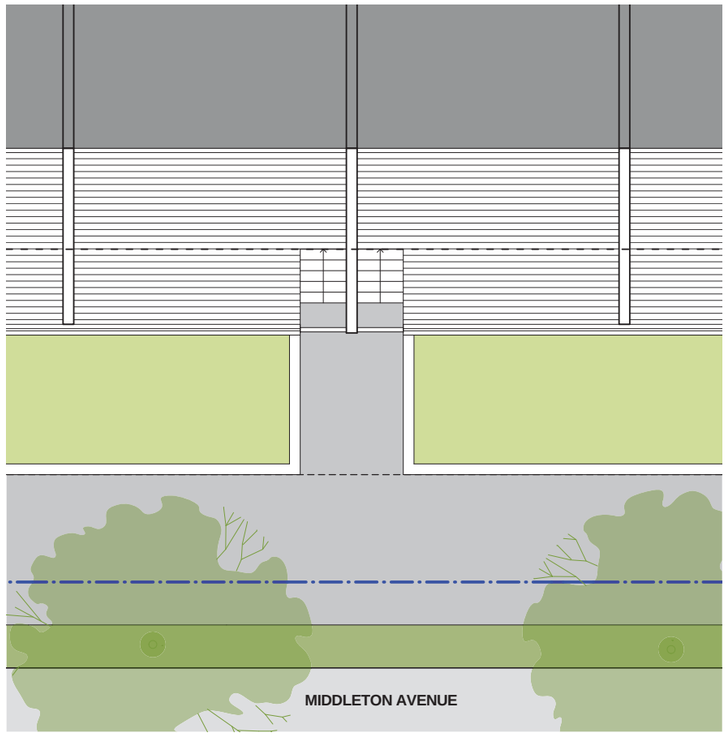
CONCEPT DESIGN - SEPP 65 SOLAR ACCESS + CROSS VENTILATION: LEVELS 8 - MIDDLETON AVENUE

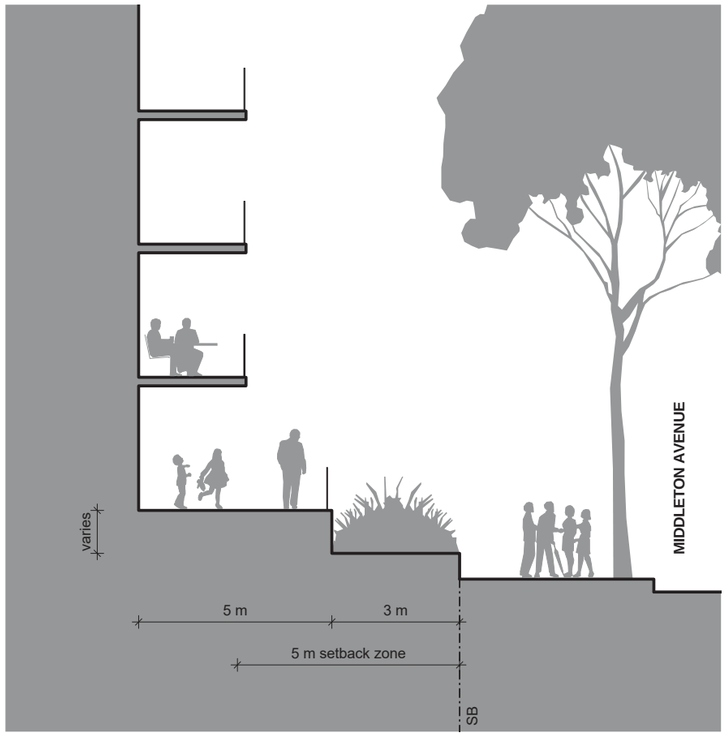


CONCEPT DESIGN - SEPP 65 SOLAR ACCESS + CROSS VENTILATION: LEVELS 8 - HUGHES AVENUE

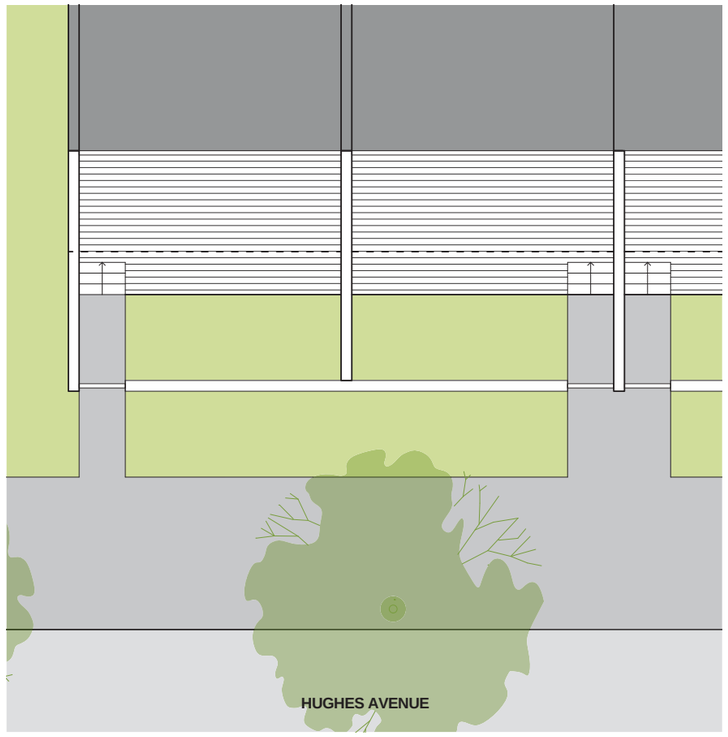
STREET INTERFACE DETAILS

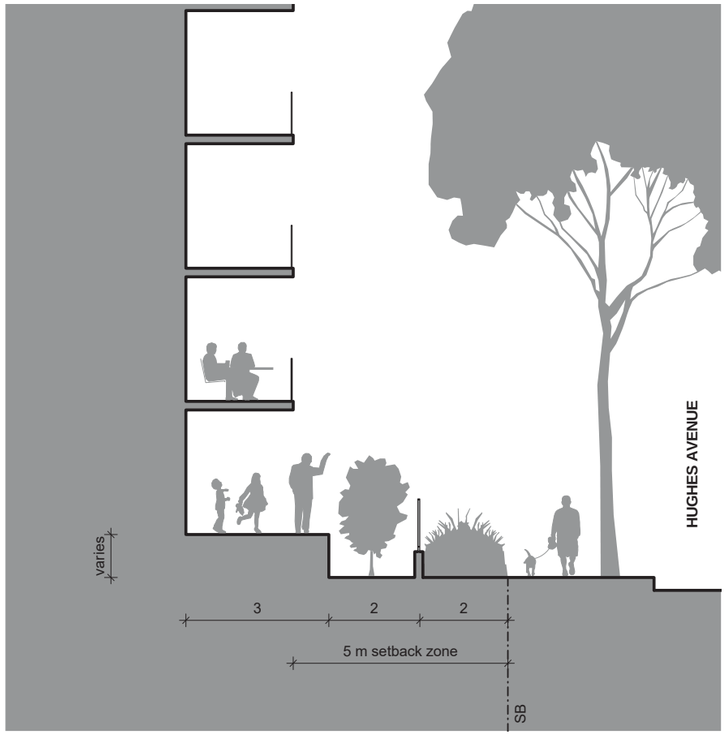
MIDDLETON AVENUE





HUGHES AVENUE





RECOMMENDATIONS

This Urban Design Report has identified that the proposed amendments to the statutory development standards within the Showground Station Precinct Proposal are inadequate to meet the anticipated residential growth target for the site.

Built form testing has confirmed that a scheme that is fully compliant with the Showground Station Precinct Proposal, can not achieve an FSR of 2.3:1 (34,096sqm GFA) within a maximum height of building of 21m (6 storeys). It will only be able to achieve a maximum of 2.05:1 (30,602sqm GFA) which equates to a shortfall of 3,758sqm GFA (10.9%) or approximately 40 residential units on the site.

If amplified across the Showground Station Precinct, this will result in a significant shortfall in the number of dwellings. This would also be inconsistent with the objectives of the priority precincts programme to provide new housing in centres with good existing or planned transport services within 800m or 10 minute walk to public transport, shops and services.

Built form testing has confirmed that the preferred option can achieve an FSR of 2.7:1 (50,715sqm GFA) within a maximum height of building of 28m (8 storeys) without adverse built form or amenity impacts.

The vision for the site is to create an environmentally sustainable and high intensity living environment within an existing low-rise residential setting that is transitioning to high density living centred on the new Showground Station. It will be framed by an increased setback and street dedication to Middleton Avenue to establish this street as a main avenue, a permeable and publicly accessible through site link that connects into the existing street network. Building forms will be oriented to optimise solar access and breezes. The site will be a catalyst for the Showground Station Precinct: Residential Sub-Precinct and set benchmark of design excellence.

Key concepts underlying the vision are Diversity, Connectivity and Sustainability. The concept design, which validates the preferred option, has demonstrated the key concepts and goals of the vision are achieved by:

- Achieving design excellence with a site specific architectural response that exceeds the minimum requirements of SEPP 65/ ADG and sets a benchmark for future developments in the precinct
-
-
- Creating diverse built forms that reinforce Middleton Avenue as the main avenue with an 8 storey street wall height and Hughes Avenue as a residential street with 6 storey street wall height stepping back 3m at upper levels. Compared to the articulated and orthogonal street elevations, the eastern courtyard elevation to buildings A + B has a fluid form that responds to the courtyard. Apartments have been planned to maximise solar access, cross ventilation and outlook;
- Creating strong urban forms within a landscaped setting with landscaped front setbacks and courtyards with approximately 30% of the site area (7% min ADG) as deep soil planting suitable for large tree planting. Low level planting and raised terraces are used to activate streets and the courtyard while ensuring visual privacy is achieved to ground floor apartments. Entry lobbies are located level with the adjacent footpath with stairs and accessible platform lifts located within the entry lobby to mediate the variation in topography across the site;
- Creating an accessible through site link suitable for pedestrians and bicycles that connects Middleton and Hughes Avenue as an extension of Cadman Crescent. The link is a single 1:20 ramp and provides access to the central courtyard;
- Achieving compliance with SEPP 65/ Adpartment Design Guide;
- Achieving a high amenity standard to built forms and central courtyard with the courtyard width between 18-22m, 2 hours of solar access to 70% of apartments at mid-winter and natural cross ventilation to 60% of apartments; and
- Creating a diversity of accommodation suited to a variety of lifestyles with 25% x 1 bed/ 1 bed + study, 65% 2 bed and 10% 3 bed apartments. Apartment sizes range in size with 1 bed (50-54sqm), 1 bed + study (55-69sqm), 2 bed (70-89sqm), 3 bed (90-110sqm).

Therefore, we recommend that Proposed Option B is adopted with the following amendments to the statutory development standards:

Development Standard	Existing*	Proposed
FSR (Sites 2D+2E)	2.3:1	2.7:1
Maximum height of building (Sites 2D-2E)	21m (6 storeys)	28m (8 storeys)

* *Showground Station Precinct Proposal (Department of Planning and Environment*

STREETSCAPE DESIGN OPTIONS FOR MIDDLETON AVENUE

The proposal to increase the width of the carriageway along Middleton Avenue from 20m to 25m with an additional 2.5m dedication on each side of the street will increase the distance between buildings from 25m to 35m. This additional width allows for a number of possibilities for the design of the street.

Central to the vision for the site is to create an environmentally sustainable and high intensity living environment within an existing low-rise residential setting that is transitioning to high density living centred on the new Showground Station that is framed by an increased setback and street dedication to Middleton Avenue to establish this street as a main avenue.

The key concepts underlying the vision are Diversity, Connectivity and Sustainability.

Diversity applies to the development of a range of building types, diverse streets and communal spaces and housing choice which underpins a vibrant centre that offers complex experiences and social contact.

Connectivity applies to an accessible, genuine and diverse network of publicly accessible spaces which integrates existing and future landscapes and buildings, and which establishes a lasting framework and pattern for the growth of the area.

Sustainability applies to development of a positive environmental, social and economic outcome for the site that maximises natural cross ventilation and sunlight for the amenity of residents, passive thermal design for ventilation, heating and cooling reducing reliance on technology and operation costs as well as deep soil zones for ground water recharge and vegetation.

Three streetscape design options have been prepared to illustrate a range of possibilities and the different characteristics for the street. These options have been considered in relation to the key concepts underlying the vision and are detailed below:

OPTION B - Grand avenue + central swale

- Middleton Avenue is reinforced as a 'Grand Avenue' with large tree planting along kerbs and in the central swale and with on-street parking and two lanes;
- Central swale provides a 'bio-sink' for stormwater management and filtration of water into the water table/ Cataii Creek;
- Central swale provides a refuge for pedestrians to safely cross the street;
- Tree planting is entirely within the public domain and will ensure that the authorities can enforce consistent street tree planting and provide appropriate maintenance;
- Trees along kerbs can be within 'islands' or within the verge to maximise on-street parking;
- Middleton Avenue will be dominated by large tree canopies to break up the bulk and scale of the built form; and
- Middleton Avenue will be distinctively different from all other streets to provide diversity which will also be reflected in the built form.

OPTION B2 - Widened verge + no central swale

- Middleton Avenue has a similar character to other streets with large tree planting along kerbs with on-street parking and two lanes which is inconsistent with the vision;
- Stormwater management is by grates and drains on the sides of the street and is unfiltered;
- Pedestrians have to navigate across four lanes to cross the street;
- Tree planting is entirely within the public domain and will ensure that the authorities can enforce consistent street tree planting and provide appropriate maintenance; and
- Trees along kerbs can be within 'islands' or within the verge to maximise on-street parking;
- Built forms will be visible along Middleton Avenue between the tree canopies.
- Vehicles will dominate the street which is undesirable.

OPTION B3 - Two northbound lanes + no central swale

- Middleton Avenue has a similar character to other streets with large tree planting along kerbs with on-street parking and three lanes which is inconsistent with the vision for the precinct;
- Stormwater management is by grates and drains on the sides of the street and is unfiltered;
- Pedestrian have to navigate across five lanes to cross the street;
- Tree planting is either within 'islands' or within the private domain within the setback zone and tree canopies will brush up against the built form, will need regular pruning and will reduce outlook from apartments;
- Built forms will be visible along Middleton Avenue between the tree canopy.
- Vehicles will dominate the street which is undesirable.

There are many excellent examples of great streets with central swales in Sydney, including Victoria Park, that illustrate how water sensitive urban design can be integrated into the design of the public domain.

It is strongly recommended that OPTION B is adopted, as it reinforces the vision for a public domain and high intensity living environment that is diverse, connected and sustainable. Furthermore. OPTION B is better suited to families and children with streets that are safe to cross and where the public domain dominates rather than the vehicle.

OPTION B: MIDDLETON AVENUE - GRAND AVENUE + CENTRAL SWALE

1 Type 1A: Middleton Avenue [25m]
Typical Plan @1:150

1A Type 1A: Middleton Avenue [25m]
Typical Section @1:100

Street Hierarchy Benefits and Principles

We are proposing a road hierarchy from large Avenues to shared Play Streets. Some key benefits of a distinct road hierarchy within the precinct are:

- increased way finding and legibility across the development which is of particular importance to encourage cyclists and pedestrians to undertake travel
- an enhanced sense of place for motorists, cyclists and pedestrians
- management of speed in a manner that does not rely on extensive regulatory controls and physically intrusive measures for enforcement
- management of the road network to facilitate efficient and safe road operation, which in turn assists in achieving greater environmental sustainability and improves overall amenity
- successful integration of all modes of travel from motoring, cycling, walking and public transport
- including environmental initiatives such as WSUD and use of predominantly native plant species to enhance local flora and fauna
- preserving areas where through traffic is discouraged which contributes to varied and diverse neighbourhoods
- ensuring commercial, retail and important community hubs are positioned adjacent suitable road corridors which reduces vehicular movements

Grand Avenue

The Grand Avenue is a high order road which forms a central transit spine through the development. It provides convenient, safe and consolidated distribution to vehicular traffic generated by the development and typically consists of well planted medians and verges that provide a buffer between more trafficked carriageways and the surrounding environment. These corridors provide for regional cycle movements and are designed so that pedestrians and cyclists are kept separate from general traffic. Direct vehicular access onto the Grand Avenue from single dwelling allotments is generally not provided however consolidated access to multi unit developments via driveways is typical. In these instances the provision of consolidated access into allotments allows for turning movements (i.e. interruptions to through traffic) to be focussed at specific, controlled location which is important for ensuring the safety of pedestrian and cyclists.

SK03A

SHOWGROUND STATION PRECINCT

Showground Corporation PTY LTD

Middleton Avenue, Castle Hill, NSW

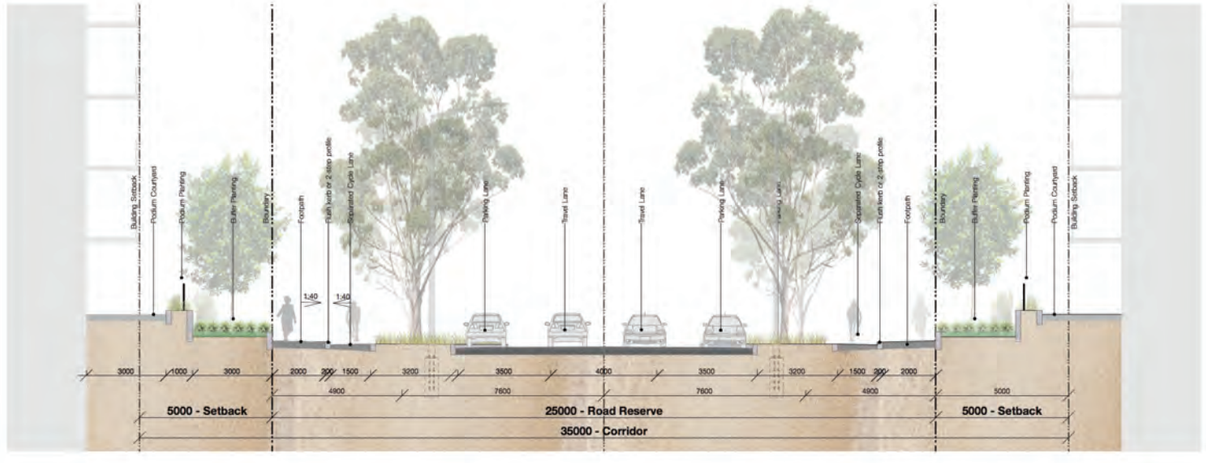
TYPICAL STREET TYPES 1A

REVISION F | 1:150 @ A1 0 2 4 6 8 10 M

scape design
LANDSCAPE ARCHITECTURE
2-6 Smith Lane
Manly NSW 2095
www.scapedesign.com.au

OPTION B2: MIDDLETON AVENUE - WIDENED VERGE + NO CENTRAL SWALE

1 Type 1B: Middleton Avenue [25m]
Typical Plan @1:150



1A Type 1B: Middleton Avenue [25m]
Typical Section @1:100

0 2 4 6 8 10 M

Street Hierarchy Benefits and Principles

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SK03B

SHOWGROUND STATION PRECINCT

Showground Corporation PTY LTD

Middleton Avenue, Castle Hill, NSW

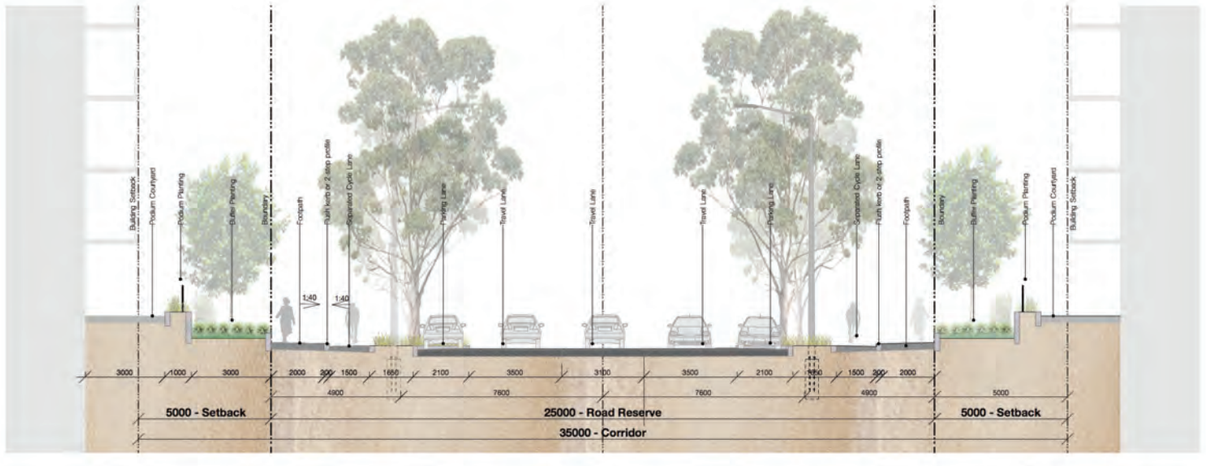
TYPICAL STREET TYPES 1B

REVISION A | 1:150 @ A1 0 2 4 6 8 10 M

scape design
LANDSCAPE ARCHITECTURE
2-6 Smith Lane
Manly NSW 2095
www.scapedesign.com.au

OPTION B3: MIDDLETON AVENUE - TWO NORTHBOUND LANES + NO CENTRAL SWALE

1 Type 1C: Middleton Avenue [25m]
Typical Plan @1:150



1A Type 1C: Middleton Avenue [25m]
Typical Section @1:100

Street Hierarchy Benefits and Principles

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SK03C

SHOWGROUND STATION PRECINCT

Showground Corporation PTY LTD

Middleton Avenue, Castle Hill, NSW

TYPICAL STREET TYPES 1C

REVISION A | 1:150 @ A1 0 2 4 6 8 10 M

scape design
LANDSCAPE ARCHITECTURE
2-6 Smith Lane
Manly NSW 2095
www.scapedesign.com.au

POCKET PARK EXAMPLE 1: MONDRIAN

2-4 Powell St, Waterloo NSW 2017

Architect: Stanisic Architects, Landscape Architect: McGregor + Partners Landscape Architects.

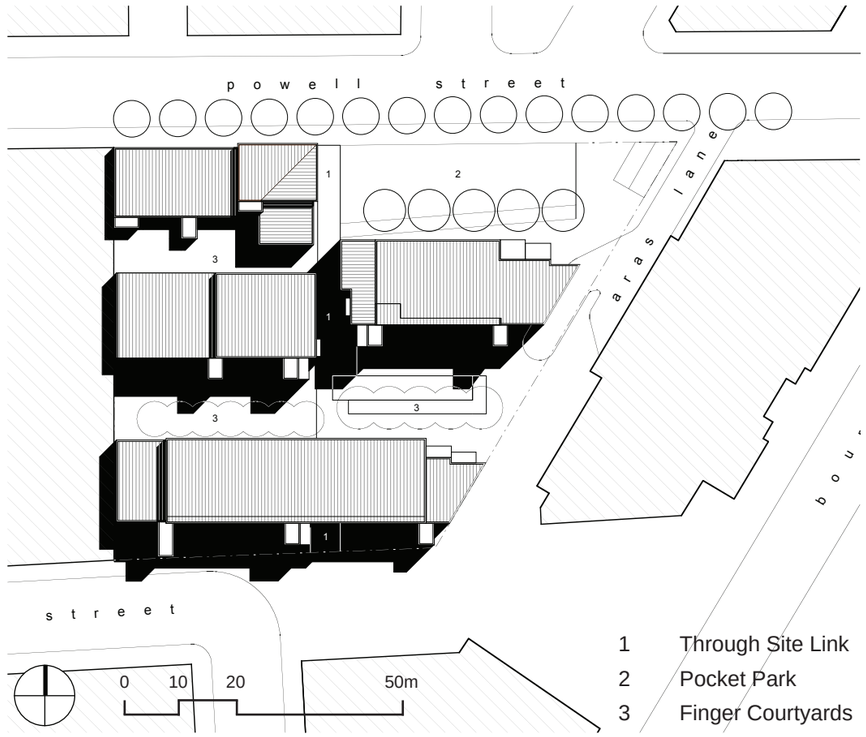
Mondrian is the most eco-responsive living environment in Green Square – it is the greenest building in Green Square and was completed in 2002. It is an innovative project that sets new standards for environmental design. It is a climatically responsive modern box, green as well as white. The project is focused on performance as well as aesthetics. It combines an artistic and scientific approach to apartment design. It has exceptional and dynamic qualities of space, natural light, sun access and airflow to achieve high personal comfort and low levels of energy consumption.

The development incorporates a pocket park on Powell Street which also functions as a detention basin and 'bio-sink' for site-based stormwater management of roof and ground water and filtration of water into the water table. It extends the public domain with a publicly accessible pocket park and through-site pedestrian way that connects Powell Street to Short Street.

The concept for the site is three slender building forms and individual finger courtyards. Over 60% of site is open space in the form of garden courts, communal courtyards, through site pedestrian ways and the pocket park.

The pocket park and through site way create a genuine and diverse network of publicly accessible spaces which integrates existing and future landscapes and buildings to establish a lasting framework and pattern for the growth of the area. The pocket park also provides a deep soil zone for ground water recharge and vegetation.

The pocket park also includes an art installation that draws upon the history of the site - recycling steel and materials from the existing buildings. It also provides a place for kids to kick a football and for families to gather.



VISUALISATION 5: VIEW LOOKING NORTH TOWARDS POCKET PARK

POCKET PARK

A pocket park (1,500m²) is proposed along the southern boundary of the site with frontages to Middleton and Hughes Avenues. Together with the through site link, it will create a genuine and diverse network of publicly accessible spaces that will establish a long lasting framework for the future growth of the area. It will be strengthened by a potential new street that extends Ashford Avenue to the east to provide a long frontage and increased interface with the public domain. It is envisaged that future development sites will also extend this network to cater to families with intensive and extensive spaces.

The park is located diagonally opposite to Cockayne Reserve, a large public recreation zone that will connect Middleton Avenue with the Showground. The orientation of the pocket park will ensure solar access is received with morning sun from the east, midday sun from the north and afternoon sun from the west.

The pocket park will provide increased deep soil areas and function as a 'bio sink' for site-based stormwater management of roof and ground water and filtration of water into the ground. It clearly delineates the private domain from the publicly accessible domain and ensures that the required communal open space is provided in accordance with the principles of SEPP 65.

The pocket park provides a variety of spaces to cater to a variety of uses and has the potential to include the following characteristics:

- A centrally located large hard paved/ timber terrace with seating for parents to gather with the potential for BBQ, tables and chairs and a pergola;
- A childrens's play space to the south that creates a destination and point of activity;
- A lawn and garden to the north to create a breakout space for active and passive recreation;
- An accessible pathway that connects Middleton Avenue to Hughes Avenue - with a pedestrian crossing with paving sets across Middleton Avenue to prioritise pedestrian movement; and
- Potential to extend pocket park north and south to a proposed linear park
- Public art elements that draws upon the history of the Showground Precinct.
- Planted garden transition with the communal courtyard to ensure that privacy is maintained - avoiding where possible the need for physical barriers.
- Building B and D will activate the southern boundary with secondary fenestrations and balconies to provide increased surveillance in accordance with the principles of CPTED.

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stanisic architects
arb 4480

Level 2, 243 Liverpool Street
East Sydney, NSW 2010
AUSTRALIA

T +612 9358 2588
E fs@stanisic.com.au
W www.stanisic.com.au