### **APPENDIX 1**

**Design Report** 

Urban Context Analysis
1. Location Plan

Massing Study and Concept Envelope
17. 3 Plan Options
18. Option 1
19. Option 2
20. Option 3
21. Option 3
22. Typology and Built Form Precedents
23. Preferred Plan Development
24. Preferred Plan Development
25. Preferred Option Axonometric

# SEP 65 Residential Compliance and Amenity testing: 37. Shadows - Solar Access to adjoining dev. Assessment 38. Shadows - Solar Access to adjoining dev. Assessment 39. Natural Ventilation to Apartments 40. Solar Access to Apartments 41. Visual Privacy

FSR testing 42. Area and Apartment Mix Schedule

2. Urban Context
2. Urban Context
3. Infrastructure Plan
4. Street Heracky, and Connectivity
5. Building Study: Early Development
5. Building Study: Recent Development
7. Building Study: Anticipated Development
8. Future Local Context

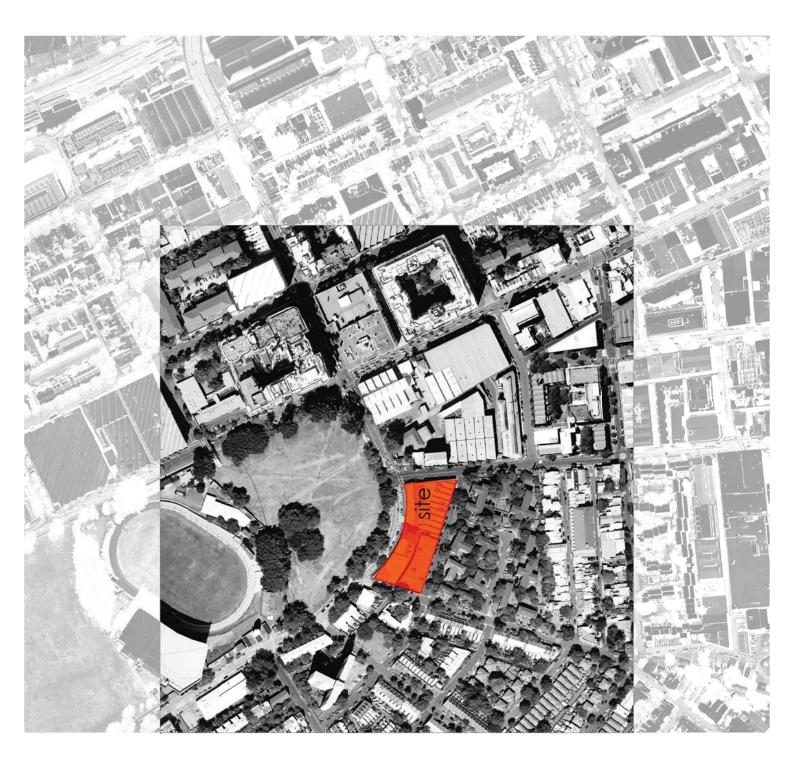
Urban Design Framework
9. Environment
10. Land Use
11. Views and vistas
12. Site Coverage
13. Building Heights
14. Building Edge
15. Connectivity
16. Urban Design Summary

# Density and Built Form Development and Testing 26. Urban Density 27. Urban Sections 28. Urban Sections 29. Site Sections 30. Public Domain Plann 31. Public Domain Sections 32. Public Domain Sections 33. Public Domain Sections 34. Vehicular Access 35. Pedestrian Access 36. Communal Open Space/Landscaping

Proposed Planning Documentation

July 2011

87 Bay Street Glebe Planning Submission



## Urban Design Framework Location plan

87 Bay Street comprises a significant sovereign block approximately 1.8 kilometers from the Sydney CBD. The site is located on the southern edge of the large urban open space forming Wentworth Park. Bay Street located on the Eastern boundary of the site defines the limits of the Glebe and Ultimo suburbs.

The City of Sydney Depot facilities are located across the street - also accupying an entire large block. Across Wentworth Street to the south is a large single ownership site which currently has low rise housing apartment blocks owned by the Department of Housing. This site is currently being rezoned to allow more intensive urban development.

Both the CoS depot site and the Dott Housing site were part of a joint demonstration project under the Sustainable Sydney 2030 Strategy. The planning outcomes of this process and the implications for the future urban character of the precinct and in particular the subject site are presented in more detail through the following report.

### HT ON 001 400m. radius 200m. radius 20

## Urban Design Framework Urban context

The site is located on the suburb boundary between Glebe to the west and Ultimo to the east.

Ultimo to the east can be generally characterised by:

• Rectilinear street grid.

- Long street blocks
   Combination and often in close proximity of large warehouse structures and small fine grain terrace houses.

Glebe to the west can be generalised by:

• Tapered rectilinear street pattern following the typography

• Short blocks and rear access lanes.

- Mostly fine grain residential lots.
   Low scale 1 and 2 storey housing.

Public Transport
The light rail station is located approximateby 560m north of the site off Wattle Street.
The light rail connects from Lillyfield to the
city via Pyrmont.

The bus routes are located at either Hanis Street Ultimo, Broadway and Glebe Point Road, Glebe with numerous options available.

The Village to Village CoS community bus service also stops adjacent to the site.

# site tertiary school cultural parklands major commercial light rail

# 8 400

## Urban Design Framework Urban analysis

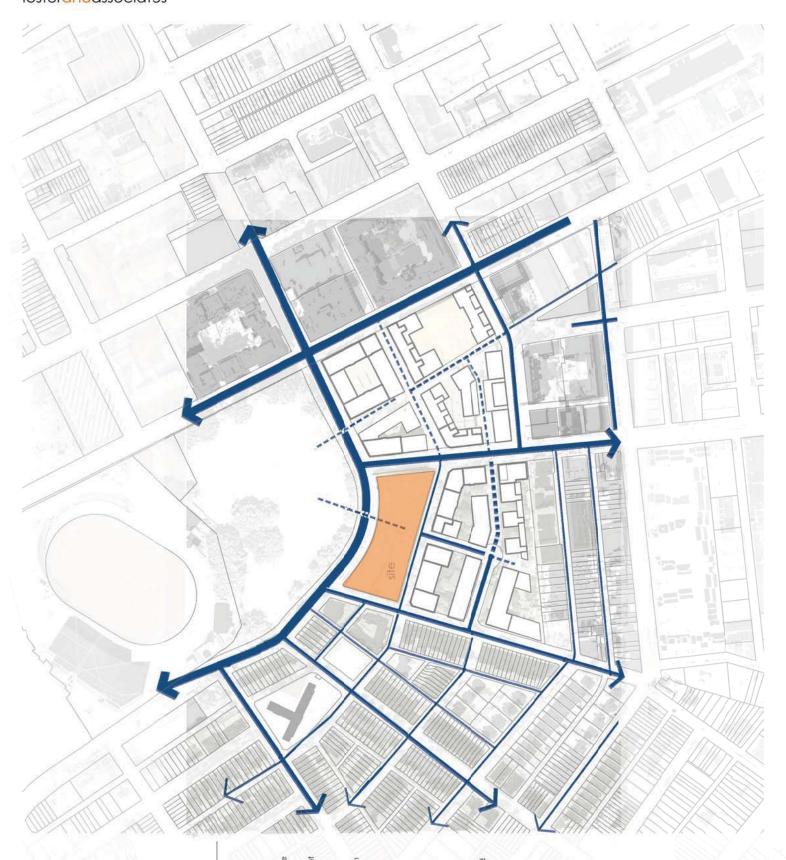
The site occupies a single soverign block bounded by Wentworth Park Road to the north. Bay Street to the east, Wentworth Street to the South and Cowper Street to the South and Cowper Street to the west. North of the site across Wentworth Park Good is Wentworth Park a large urban open space. Other small parks are within walking distance to the site in the Glebe and Ullifmo area. Victoria Park another large regional park is located at the other end of Bay Street across Paramatina Road

The site is in a very good location within a short walking distance of good public trans port and within walking distance of the City. Central Station and numerous bus routes are available on Broadway and Paramonta Road and are within walking distance. The light rail runs across the northern section of Wernworth Park and the nearest station is located off Wattle Street approximately, 550 metres norther mately, 550 metres northern section of Wernworth Park and the nearest station is located off Wattle Street approximately, 550 metres northern mately, 550 metres northern

The site is well serviced by city CBD and city fitnge facilities such as Broadway and Haymarks Shopping Centres and the local strip shops of Glebe Point Road and Broadway. The fish markets are also easily accessible and located at the northern end of Wentworth Park. A new retail precinct is also proposed within the Central Park (old CUB site, which is currently under development.

The site is also very well located in relation t schools and universities. The large tertiary is situtions such as UTS, Ultimo TAE, Sydney and Notice Dame Universities are in close proximity around the Paramatita Road and Broadway precincts, Schools such as international Grama, Glebe public, Ultimo Publi and the Blackwattle Campus of the Sydney Secondary College are within a few minute wolk of the site.

87 BAY ST.



## Urban Design Framework Street Hierarchy

## Street Hierarchy

Vehicle Access
The sile fronts 4 streets, to the north is Wentworth Park Road which continues west from the side around the western edge of park and connects to Pyrmont Bridge Road, east from the sile it changes name to William Henry Street which transverses Ultimo enroute to the connect with Coulbourn Street and the southern end of the CBD.

Bay Street to the east of the site is a north-south Street connecting Broadway and terminating at the north-east corner of the site at Wentworth Park Road. Cowper Street is a low volume local street and Wentworth Street is a normow east-west street which becomes one way for a short section between Stirling and Bay Street.

- Vehicular access to and from the site will be assessed in relation to the following:

   Local fload study to determine the possible locations to access and egress the site.

   Traffic study to determine the capacity and suitability of the surrounding street network and appropriate exit and entry points.

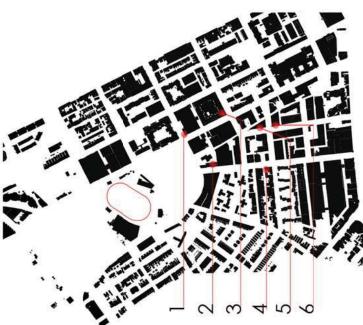
   Existing traffic conditions such as the traffic.

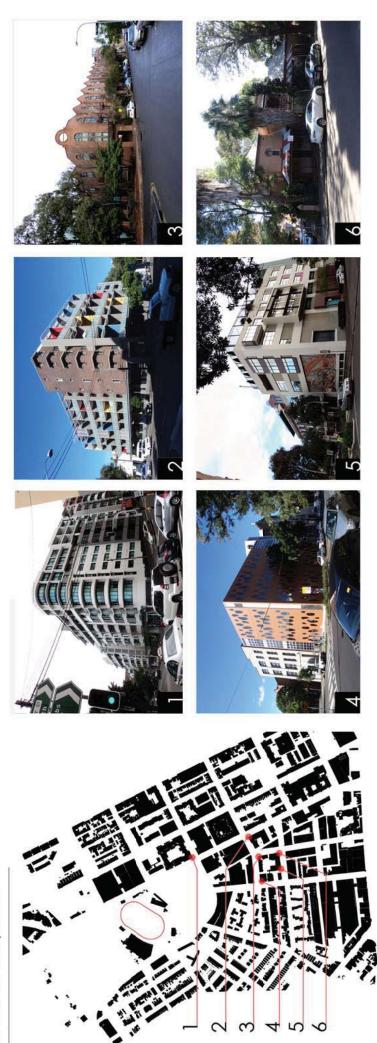




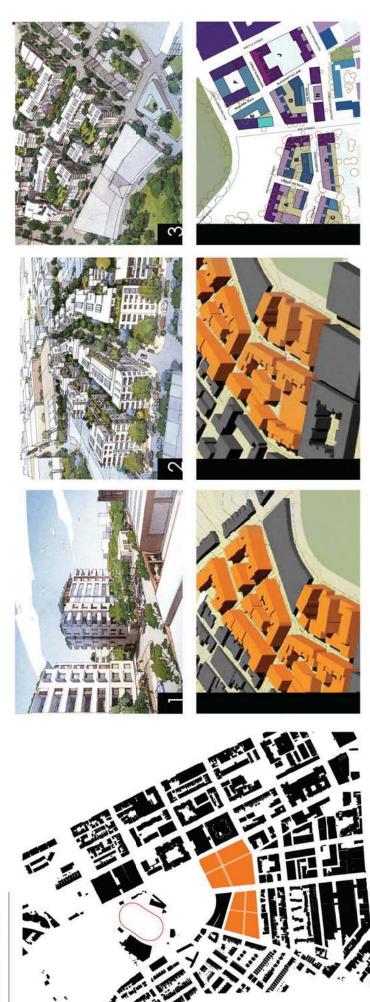


Urban Design Framework Early development





Urban Design Framework Recent development



Urban Design Framework Anticipated dev.



## Future Local Context Urban Design Framework

The key objectives identified by the planning process of the Sustainable Sydney 2030 demonstration

Place base urban consolidation to deliver housing within walking distance of the city.

Expanded public domain of new streets and

connections.

New street edge buildings with multiple entries and a mix of uses to provide a positive frontage and oversight of the public realm.

Also identified as preferred Urban Framework by the CoS and DoH planning process conducted by Hill Thosis was:
Hill Thosis was:
Bayy St is the major street and is the "Green" link between the two major open spaces of Wentworth Park and Victoria Park.

domain and improve connectivity particularly within the large single ownership sites. New local streets are proposed within the DoH and CoS Depot sites to improve the permeability of the There exists an opportunity to expand the public

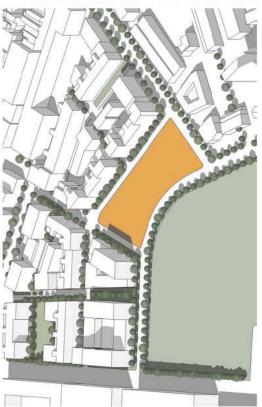
site. Proposed within the depot is a pedestrian

connection from the proposed internal local streets to the open space of Wentworth Park this was identified as the 'Blue' link within the 2030 Strategy

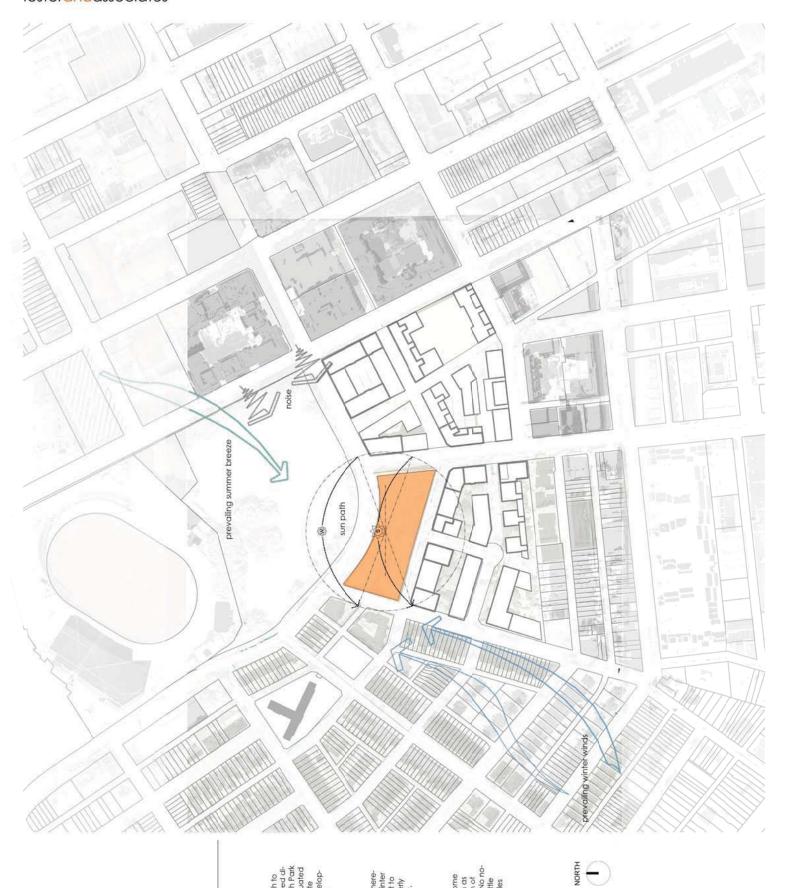
Street with the Wentworth Park open space.
This connection will be an extension of the proposed breakup of the large single ownership sites which currently cut the valley areas of Glebe and Utilimo off from the open space of Wentworth Park. prepared by Hill Thalis.

A connection of this nature is also possible through the subject site to connect the realigned Strling









## Urban Design Framework Environment

### Solar

The site has its long axis orientated north to north-east and wentworth Park is located alterly north of the site across Wentworth Park Road. The property therefore is well situated to maximize the solar across sind to the site while maintain sunlight to the new development proposed to the south of the site.

### Wind

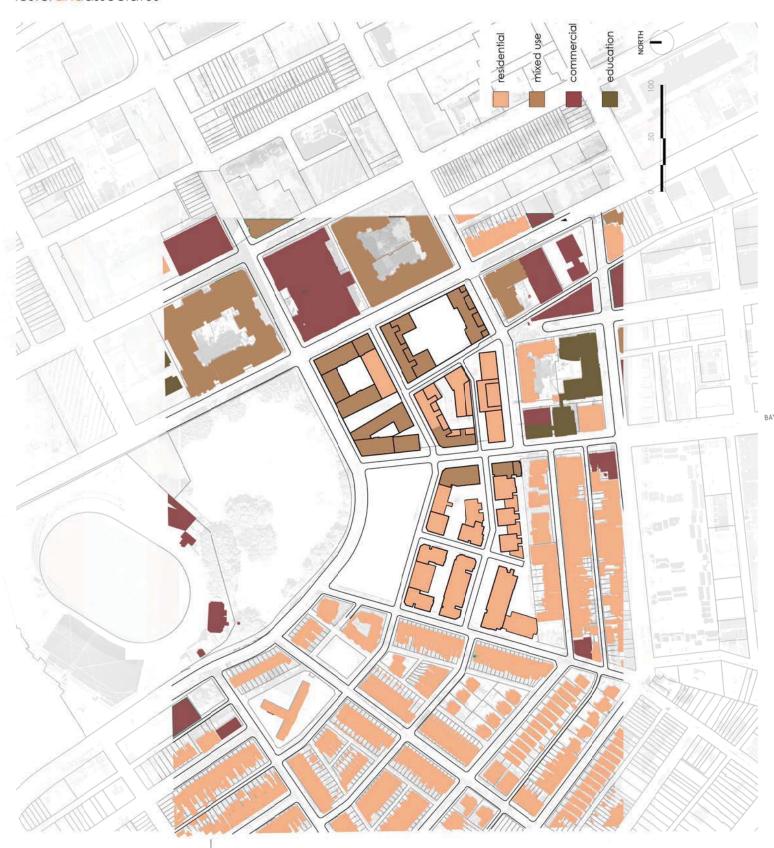
The site is located within a valley and therefore will be quite protected from the winter southerly winds while opportunities exist to maximize the northerly and north-easierly summer breezes conning off the harbon.

### Noise

The most significant noise source will come from vehicles; and the busy streets such as wattle Street and even the intersection of Wentworth Park Road and Bay Street. No notable bus routes pass the site while Wattle Street does support many heavy vehicles these are over 130m from the site.







## Urban Design Framework Land Use

The site is currently zoned Industrial and is a combination of commercial office, showncom/retail and tertiary education uses. The immediately surrounding sites are the CoS depot, parkand and various forms and types of residential accommodation.

Ultimo to the east is characterised by a combination and of large warehouse buildings converted to apartments, storage facilities or offices and small fine grain terrace houses. Some more recent residential developments and apartment buildings hove replaced I some of the original structures. Glebe to the west is dominated by small lots and low scale housing. The exceptions to this are some industrial uses around the edge of the park such a meat processing facility and the large housing block of John Byrne Court.

in the wider urban context a number of schools such as international Grama, Ultimo Public and the Blackwattle Campus of the Sydney Secondary College are within 5 minute walk of the site. The large tertiary institutions such as Uts, sydney University, Notre Dame University and the Ultimo TAETC, More are located in close proximity to the site.

The site is also well served by existing retail uses such as Broadway Shopping Centre, the Fish Markets in Pyrmont, Market City Shopping Centre and Paddys Markets in Haymarket, Glebe Point Road shops providing good variety of retail experiences and options.

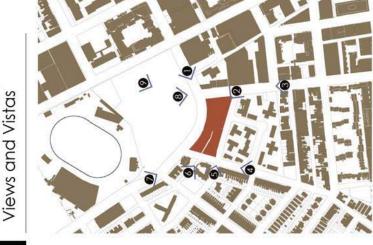
The CoS and DoH planning proposed a number of opportunities for ground floor retail and also the potential for markets in the old garage siturcture on the corner of Macarithur and Wattle Streets was identified.

## Opportunities

Opportunities
The site can easily accommodate and there is an opportunity to continue the current building use and employment to apportunities including accommercial, educational and small retail facilities in combination with new housing accommodation. This mixed land use is consistent with the Sustainable Sydney 2030 objectives and is appropriate for a site in close proximity to the City. This approach is also consistent with the Draft LEP which proposes the land be zoned Mixed Use.







Urban Design Framework Views and Vistas







## **Building heights** Urban Design Framework

The sife has developed over the years as a series of separate and connected one and have story exindustrial and commercial buildings. The immediately surrounding sites are the CoS depot which has varied built forms ranging in heights from single storey workshops to 3 storey buildings. The DoH sife to the south has a series of low fee 3 storey walk up residential flat buildings.

Ultimo to the east has buildings varying in height from one to nine storeys and is characterized by a combination and of large warehouse buildings converted to apartments, storage facilities or offices and small fine grain terrace houses. Some more recent residential developments and apartment buildings have replaced some of the original structures. Glebe west of Cowper Street is dominated by small folls and low scale housing of predominately one to two states vin height. The notable exception to this is the large housening black of John Byrne Court located to the north-west of the site which is approximately 13 levels.

The area south of the site toward Broadway is again varied in the heights of the buildings from one to six storeys. Some more recent residential developments toward Broadway have towers between 12-15 storeys.













# 3-6m 1-3m 0-1m 4 m9

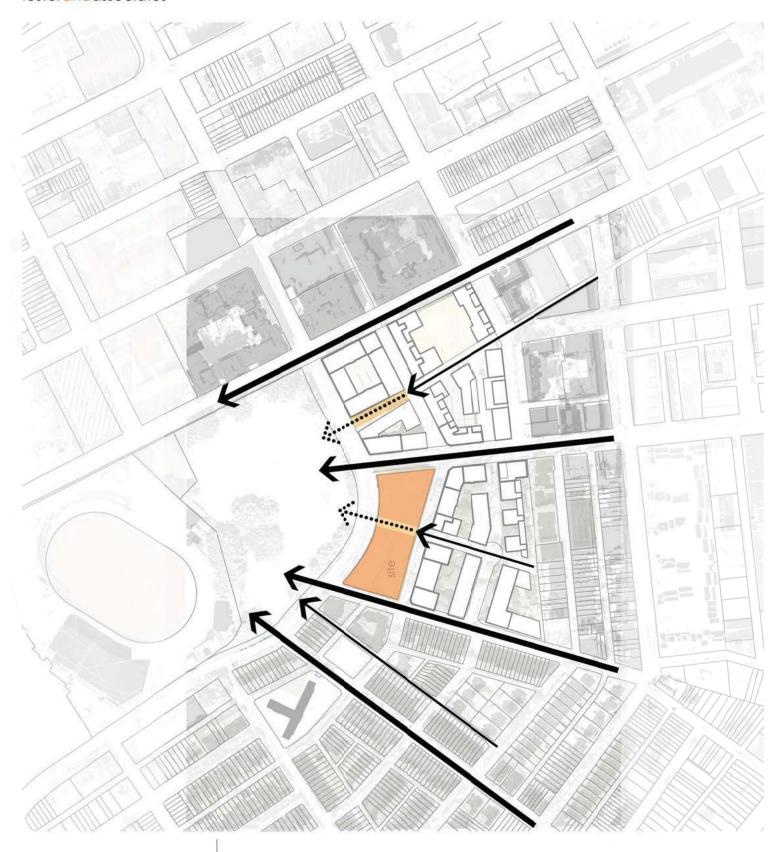
## Urban Design Framework Building edge

generally by 2-3 statey structures including houses, light industrial uses such as Glemance wheats through to the northwest corner on the intersection of Wentworth Park Road and Pyrmont Bridge Road is a recent mixed use development with retail at ground floor and 4 levels of residential oppartments above. commercial uses. In recent years residential apartment developments have replaced the some The low scale nature of the buildings means that visually the mature frees predominantly define this edge of the park. The east or Ultimo edge of the park has a more defined hard edge and the warehouse and wool store structures a number of of the older stock warehouses however their envelopes are generally consistent with the 9-10 storey built form of the adjoining structures. The Glebe edge of Wentworth Park is defined which have been converted to residential or dominant built form is the old brick

subject to the masterplan prepared by Hill Thalis for the Nastainable Sydney 200d demonstration project. The planning outcomes of this work resulted in three 9 storey towers arranged end on defining the park conglomeration of desperate buildings ranging in age and heights. The boundary of this site to the park is particularly poorly defined. The depot site is The southern edge of the park is currently defined by two industrial/commercial sites. The first is the CoS depot which occupies the entire block and is with 4 storey infill between the towers.

of Wentworth Park provides a unique opportunity to when combined with the redevelopment of the CoS depot site to define the nature the built form the guiding principles established by CoS Sustainable Sydney 2030 planning on the depot site the following are developed for the subject site: edge to the large urban open space. In relation to The site with its long frontage to the southern edge

- Perpendicular tower forms responding in height to · New pedestrian and visual connection from the proposed street network.
  - the established eastern park edge wall height
- A well defined street wall to define the park edge as well as enhance the public and private domains
   An active street front at ground level with
  - complimentary uses such as small scale retail and
    - Multiple entry points to assist surveillance of the public domain.



# Urban Design Framework Connectivity

Extend connections through the site.

The extension of the repositioned Stiting
Street as a pedestrian and visual connection through the site will improve the site
permeability and access. This public access through site lift will relate to the pedestrian connection 'Blackwattle Stand' proposed on the CoS depot site and together they will open up the valley areas of Ultimo and Glebe to the large open public space of Wentworth Park.

Maintain views through the site to the park introduce a new visual and physical connection through the site by extending the proposed realigned Stifring Street. Retain where possible higher level views through the site to the north loward the park particularly from the proposed affordable housing buildings on the Dob site to the south.





NORTH



# Connectivity

## Urban Design Framework Summary

Appropriate built form and heights reflecting the stabilished 2030 strategy. The building heights and forms of 9-10 storeys established on the CoS d epot and DOH sites which extend the building heights of the pre-dominant urban forms of the eastern edge of Wentworth Pork should be developed to provide a new southern park edge street wall

The built form established on the CoS depot site of perpendicular tower forms defining the southern edge of the park and an active street wall should be developed on the subject site to maximize solar access and views to the park.

### Park definit

Perpendicular tower forms responding in height to the established eastern park edge wall height will allow good solar amenity into and through the site to the proposed buildings beyond. A well defined podium form and an active steet finot 1 aground level with complimentary uses such as small scale retail and commercial will enhance the public. domain.

Extend connections through the site. The extension of the repositioned Stifling Street as a pedestrian and visual connection through the site will improve the site permedbility and access. This public access through site link will lead to the pedestrian connection. Blackwattle Stand's proposed on the CoS depot site and together they will open up the valley areas at Utilimo and Glebe to the large open public space of Wentworth Park.

# Massing Study and Concept Envelope 3 plan options.

# Option Summary Sheet

Option 1 - Perimeter Block Option

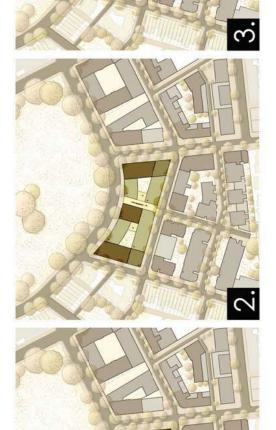
This option explores variations to the traditional full perimeter block typology.

Option 2- Direct 2030 Strategy interpretation

This option is a direct interpretation on the site of the planning and principles developed by Hell Thalis for the immediate surrounding precinct namely the CoS and DoH adjoining sites.

Option 3 - The Preferred Option

The third option is a four tower option with the tall residential buildings orientated perpendicular to the park edge.



# Massing Study and Concept Envelope Option 1.

# Option 1 - Perimeter Block Option

This option explores variations to the traditional perimeter block is a common built form on the western edge of Ultimo in areas addressing the park. The basic full perimeter block was assessed during the development of options as it allowed maximum flexibility for a later stage.

- Attributes

   Full patimeter street wall buildings between

   Full patimeter street wall buildings between

   10 stories relating in height to the Ultimo wall

  edge buildings facing the park.
- Advantages
  The unique positive attributes of the variant
  perimeter block option can be summarized as:
  Good street definition

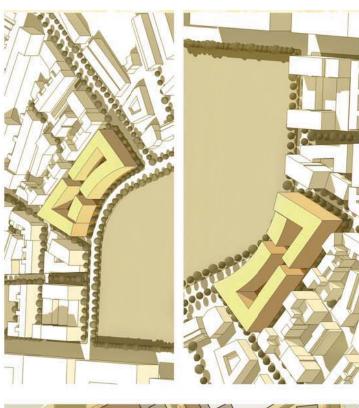
Constraints
Like option the centre of the site is quite
narrow and results in the following issues:

• Building depths becoming inefficient and or

• Building separation is very poor.

• Views of the park available through the site
from the DoH site adjacent are highly
impacted.

- Central courtyards would feel very constrained and would result in poor solar access.





# Massing Study and Concept Envelope Option 2.

# Option 2- Direct 2030 Strategy interpretation

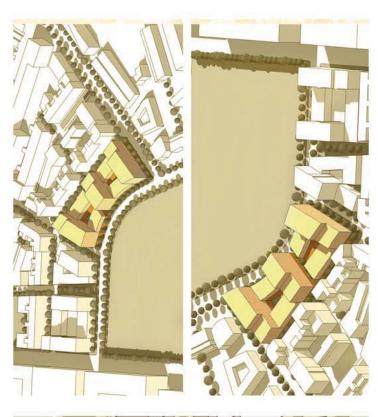
This option is a direct interpretation on the site of the planning and principles developed by Hill Thalis for the immediate surrounding precinct namely the CoS and DoH adjoining sites.

- Three perpendicular 9-10 storey towers evenly spaced across the park elevation relating in height to the fullimo wall edge buildings facing the park.
  The height of the towers reduces by two storeys to the rear to reduce the impact of overshadowing on the adjoining development.
  Four storey perimeter street edge buildings located between all the full sections.
  Central communal courtyards.

- Advantages
  The unique positive attributes can be summarized as:
  - Consistent built form and massing to the CoS Good street definition
- Views of the park available through the site from level 5 and above from the DoH site adjacent. depot site masterplan

Constraints
The centre of the site is quite narrow and results in the following issues:

- Building separation becoming tight small.
   Sethicted solar access to central courtyard and therefore the deep soil planting areas.
   Limited views from lower levels through the site.





- Building depths becoming inefficient and or

# Massing Study and Concept Envelope Option 3.

# Option 3 - The Perpendicular Tower Option

The third option is a four tower option with the tall residential buildings orientated perpendicular to the park edge.

Attributes

• The building to the east defines the street wall of Bay Street and angles to relate to the orientation of Wentworth Street to the south. The built form provides positive varied and less hard defined street edge to both Wentworth Park Road to the north and Wentworth Street to the south the south Street to the south east to west across the site varying in height from • Four of these angled form building are spaced evenly from east to west across the site varying in height from • Residential towers sit above a 2 storey commercial podium which provides a

Advantages to under a strain and the angled tower option can be summarized as:

• Varied street definition

• Angled farm maximizes views to the park from the buildings on the site.

• The angled form also maximizes solar access to apart-

- · Excellent solar access into the communal open

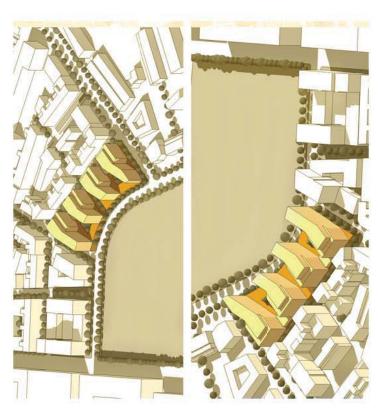
- Good connection and views from the communal spaces to the park

- Constraints
  This option raises the following issues:

   Potential for loss of privacy and careful façade design required to avoid overlooking.

   Angled building form requires more complex planning to maximize the solar access, views and to avoid overlooking issues.

   Less defined street definition to the park and streets.







# Massing Study and Concept Envelope Option analysis

Option Analysis and Evaluation Council following the interim presentation provided the following feedback:

Supported Aspects
Higher density mixed use generally supported in this location
Afficulation of the site as two separate lots
Separation of higher building elements
Good surveillance of Wentworth Park

Good mix of apartments to cater for a variety of residents

Aspects to be reviewed steed to the steed to reduce impact on the adjoining steed to the south.

Building scales should transition between the industrial buildings to the east and the lower density sites to the west Presentation to Wentworth Park Road to be more defined at street levels and to establish a lower predominant height datum

To guide the development the following principles were established:

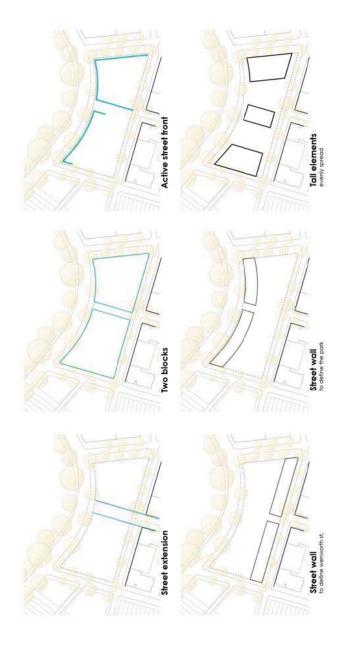
Two separate massing blocks Maximum height control of 9 storeys Locate taller elements appropriately across the site to avoid crowding and retain sunlight access to the south

Predominantly 5 storey street wall to Wentworth Street 50% of Cowper Street frontage to be maximum 6 storey Predominant street wall between 4-6 storeys to Wentworth Park Road to define

the park edge

Street wall to be setback 5-6m from the existing kerb line to provide for boulevard tree planting

Taller building elements to be setback at least 6m from front boundary Public accessible with clar line of site to the park, open to the sky, passive surveil-location and priorities can and priorities bublic transport and bicycle infrastructure. Grounds floor retail or commercial facing Wentworth Park Road and Bay Street Diverse range of housing types.





# Massing Study and Concept Envelope

# Typology and Built Form Precedents

Capella Apartments, Kensington NSW architect: FJMT A recent 9 storey mixed use development on the busy Anzac Parade in Kensington successfully combines a strong street wall built form with setback upper floors to produce a well defined public domain and active streetscape.

Potsdamer Platz, Berlin Germany architect:

RPWS Renzo Piano Workshop

This project formed part of the extensive redevelopment of the Potsdamer Platz after the reunification of Germany. Each block or section of the new masterplan had a signature taller tower located on the narrow wedge of land fronting the square. The taller built forms help to define the square as well as each street leading to the key open urban space. The transparent retail façade at street level assists to activate the square while providing sightlines through to the other streets giving a sense of openness and connection.

Silkwood Mixed Use Development, Reservoir Street Surry Hills,

NSW architect: Turner and Associates

A 9 Storey mixed use development incorporating urban housing arranged in a courtyard form over commercial and auditorium uses in a multi level podium. Rich layered materials, commercial uses and multiple entries

provide an active streetscape.
Upper levels successfully combine a majority of setback floors to reduce street wall height with a strong vertical comer element to define the development and relate to the adjoining built form.



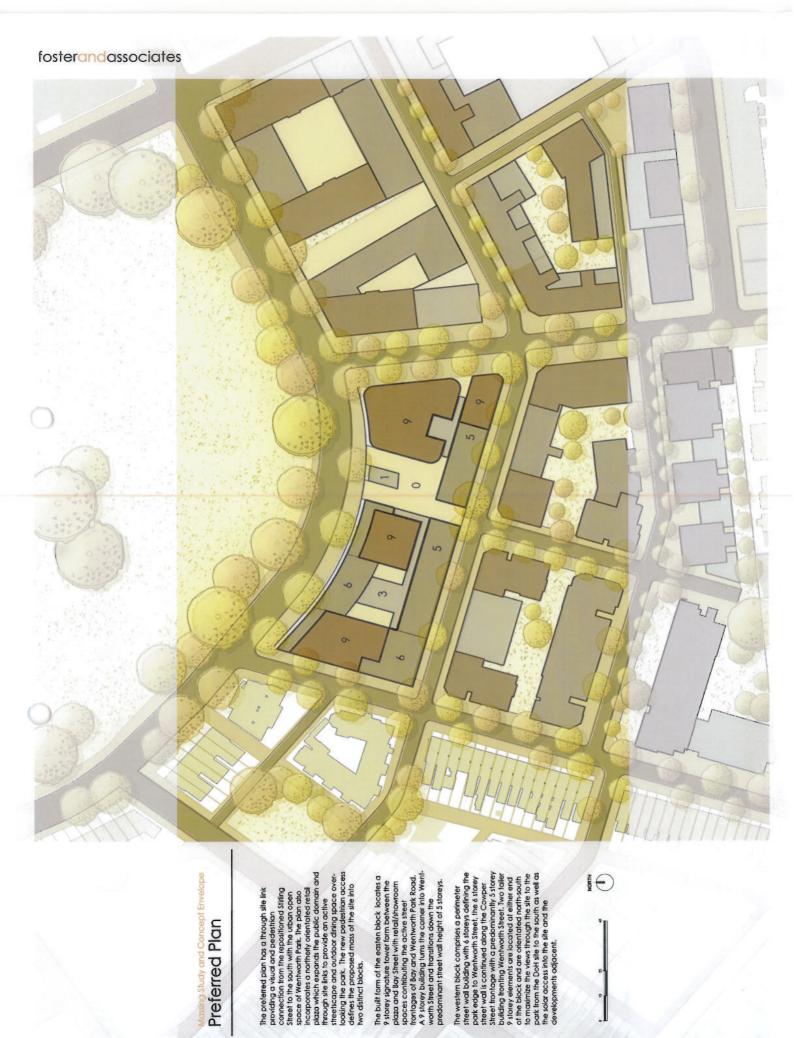






# Bay \$t tower split into backdrop building and unique corner element. Tall elements moved north away from development to the south Bay St tall built form to define both private and public open spaces. Tall elements setback on the western block to transition to residential areas. Parc de Bercy typology of street wall to park explored Connect internal open space to pedestrian link to create a plaza Define unique tall corner element betv and Bay St Punctuate the street wall to allow connection into the site Combination of identified urban design principles The Site.

Massing Study and Concept Envelope Planning development





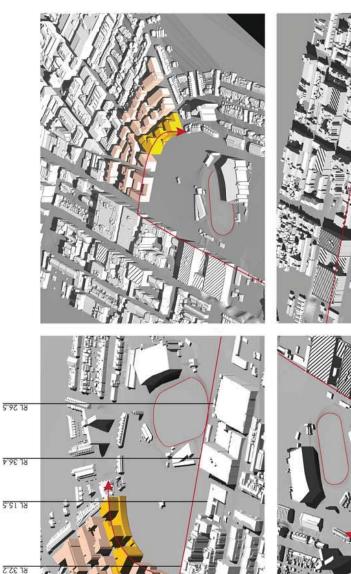
### fosterandassociates



Massing Study and Concept Envelope Preferred option visualisation

25

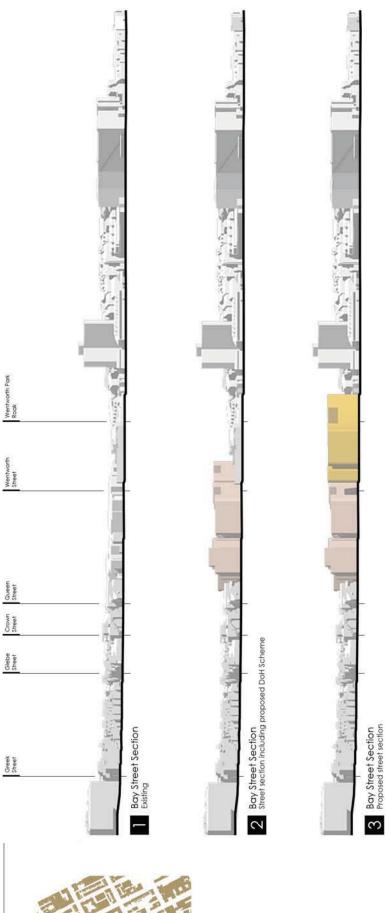






Density and built form developmen Urban density

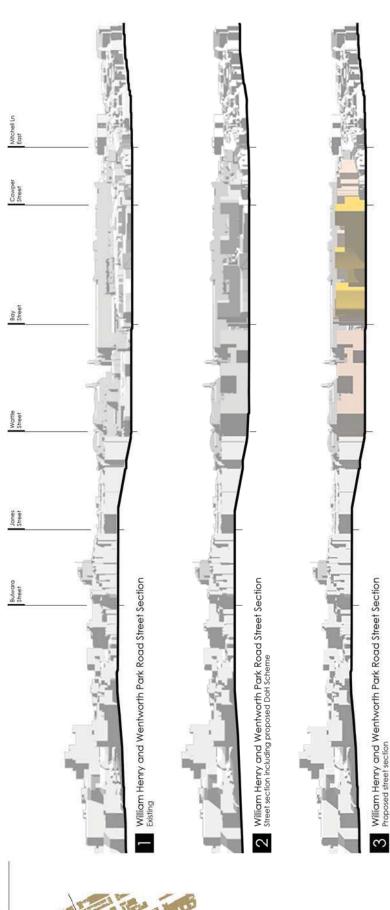
RL 36.Z



Density and built form development Urban Street Section

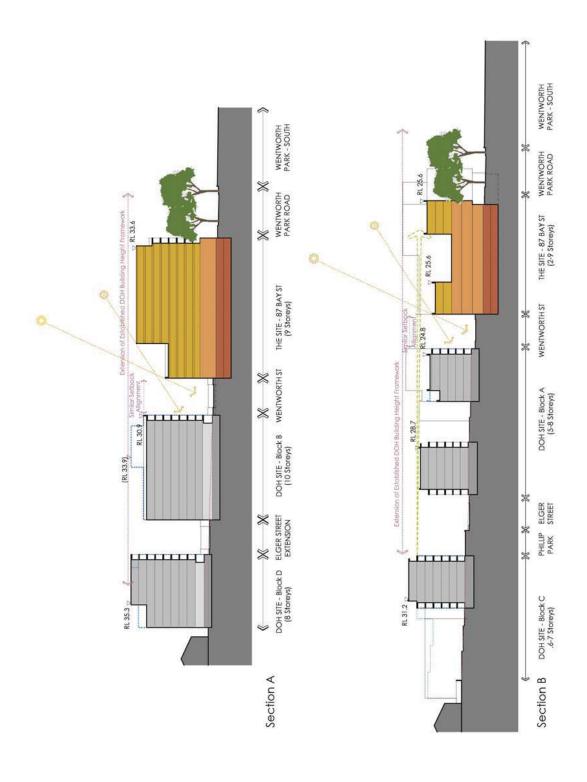




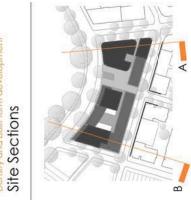


Density and built form development Urban Street Section















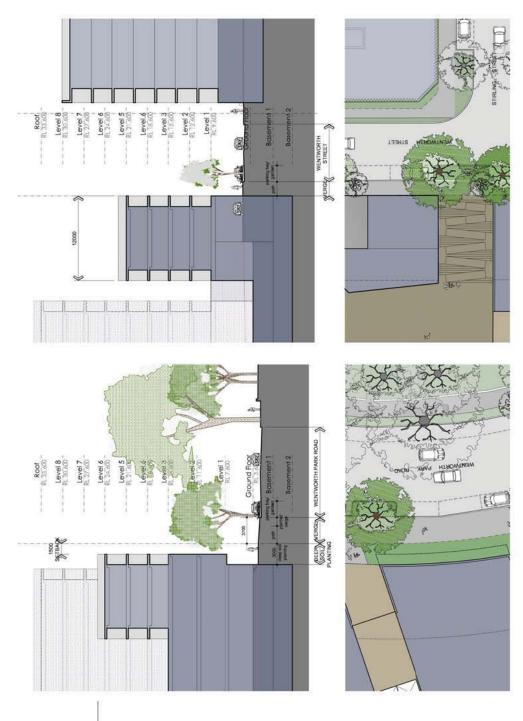


Density and built form developme Public domain plan





87 BAY ST.



Density and built form development Public domain sections

> 87 8 ×



Density and built form development Public domain sections

33









Density and built form development Pedestrian Access



Density and built form development Open Space and Landscaping

# Sepp 65 Residential Compliance and amenty testing



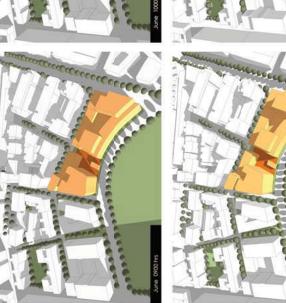
# Sepp 65 Residential Compliance and amenty testing Shadows

Solar Access to adjoining dev. Assesment Mid winter

The shadow model demonstrates that the majority of DoH apartments in the blacks A2 and B1&2 (i.e. those fronting Wentworth St) retain a minimum of 2 hours of solar access.

Preliminary assessment of individual apartment numbers confirms that in excess of 73% of apartments meet the SEPP 65 solar access requirements.





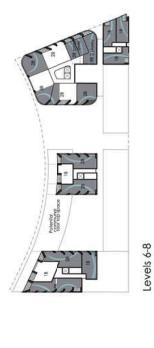


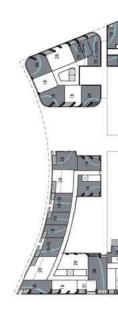




# Sepp 65 Residential Compliance and amenty testing Ventilation to Apts.

Testing demonstrates that in excess of the 60% of apartments required by SEPP 65 can achieve natural ventilation.

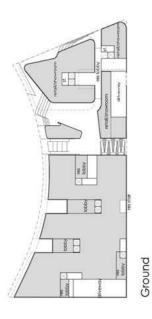






Level 5

Level 1







Level 2

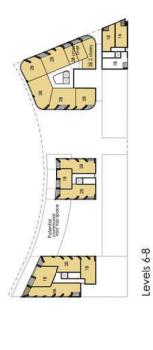


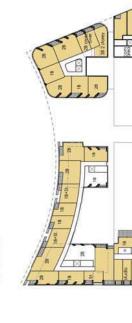


# epp 65 Residential Compliance and amenty testing

Solar Access

Testing demonstrates that in excess of the 70% of apartments required by SEPP 65 can achieve the minimum proscribed amount of solar access within the proposed envelopes.







Level 5



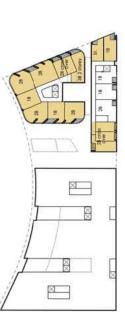
Level 3 & 4





×

Level 1



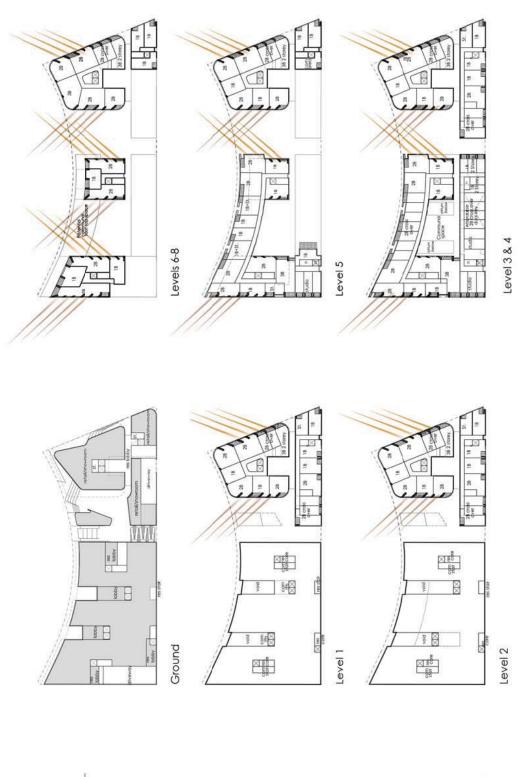
Level 2





# Sepp 65 Residential Compliance and amenty testing Visual privacy

The separation between the tall buildings are a minimum of 24m as recommended by the RPC for buildings over 25m in height. Sensitive design of the faccade will maximize visual privacy between buildings.





NORTH (



Total Apts

3 peq

2 bed

1 peq

Studio

Bay St (East) Block

950

2315

1,246

1,730 1,730 1,730 1,340 1,340 1,340 1,340

Area + Apt. Mix Schedule

Level

Total GFA = 24.420 m2

81 81 Ground Level 1 Level 3 Level 4 Level 5 Level 5 Level 6 Level 6 Level 7 Level 7 Level 7 Level 7 Level 7 Level 1

Site FSR = 4.5:1

	100	
8	23	
32	37	
4	4	
"		
43		
4,630		Block
1,190		per St (West)
		Cowi
8,879		
12,340		
0		
0		
Sub Total	%	
	_	

					Cow	Cowper St (West) Block	Block							
					Use						Man	Market Residential Mix	Mix	
Level	Affordati	Affordable Housing	Resid	Residential	Conn	Commercial		Car Parking/Plant		Shudio	1 bed	2 bed	3 bed	Total Apts
	Built Up Area (m2)	GFA (m2)FSR Area	Bull Up Area (m2)	GFA (m2)FSR Avea	Built Up Area (m2)	GFA (m2)FSR Area	Built Up Area (m2)	Car parks provided	Bicycle parks provided					
82							3,112	62	52					
18					185	148	3,112	62	25					
Ground					2,740	2192								
Level 1					2.850	2280				-		-		0
Level 2					2,850	2.280				-	,	à	,	0
Level 3	800	089	1,540	1,232							6	12	-	17
Level 4	908	089	1,540	1.282						1	6	9	1	10
Level 5	225	161	1.540	1.232						7	7	8	+	14
Level 6			016	728						2	m	(3)	1	
Level 7			016	728						-	9	6		,
Level 8			910	728							9	33	-	1
Plant				0						(4)	)	174	).	0
Sub Total	1,825	1,551	7,350	5,880	8,625	900'9	6,224	124	M	in	22	85	•	42
35										80	35	47	10	100

Notes:

Affordable housing component is not included in the mix and apt numbers listed above. The following allowances have been assumed in the above schedule.

12

181

217

8,090

10,455

14,779

1,551

1,825

The following allowances have been assumed in the above schedule Residential GFA is generally calculated at 80% of GBA envelopes to allow for articulation of the built form as well as balconies, exten

The Bay St tower is has an additional 80% allowance for laçade articulation to permit impro-

Commercial GFA is calculated at 80 % of GBA.

Car parking assumed at 1 space per 50m2 of basement GBA.

87 BAY ST.