

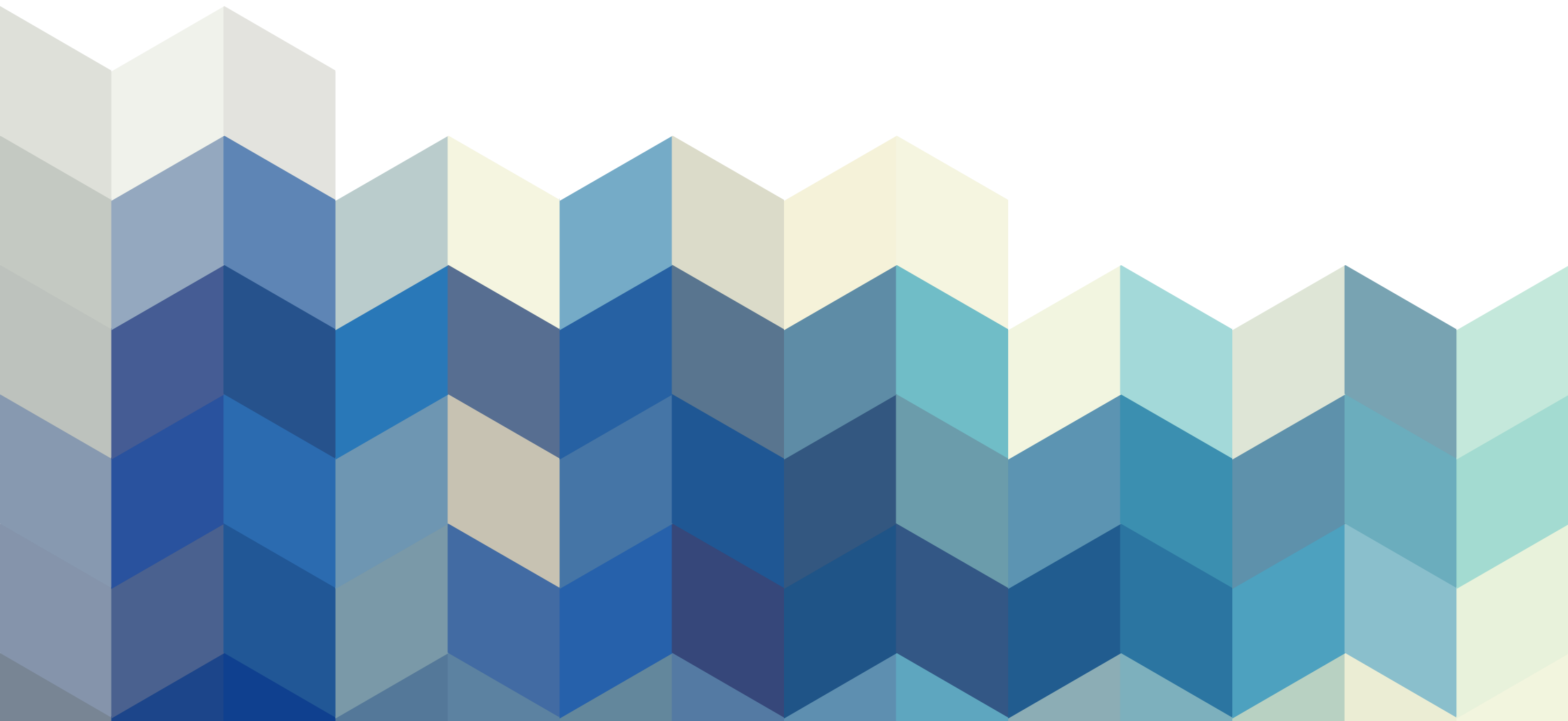
CALL FOR PROPOSAL

Lee 5 Honeysuckle

A development proposal from
 **MILLER** PROPERTY CORPORATION^{PTY LTD}

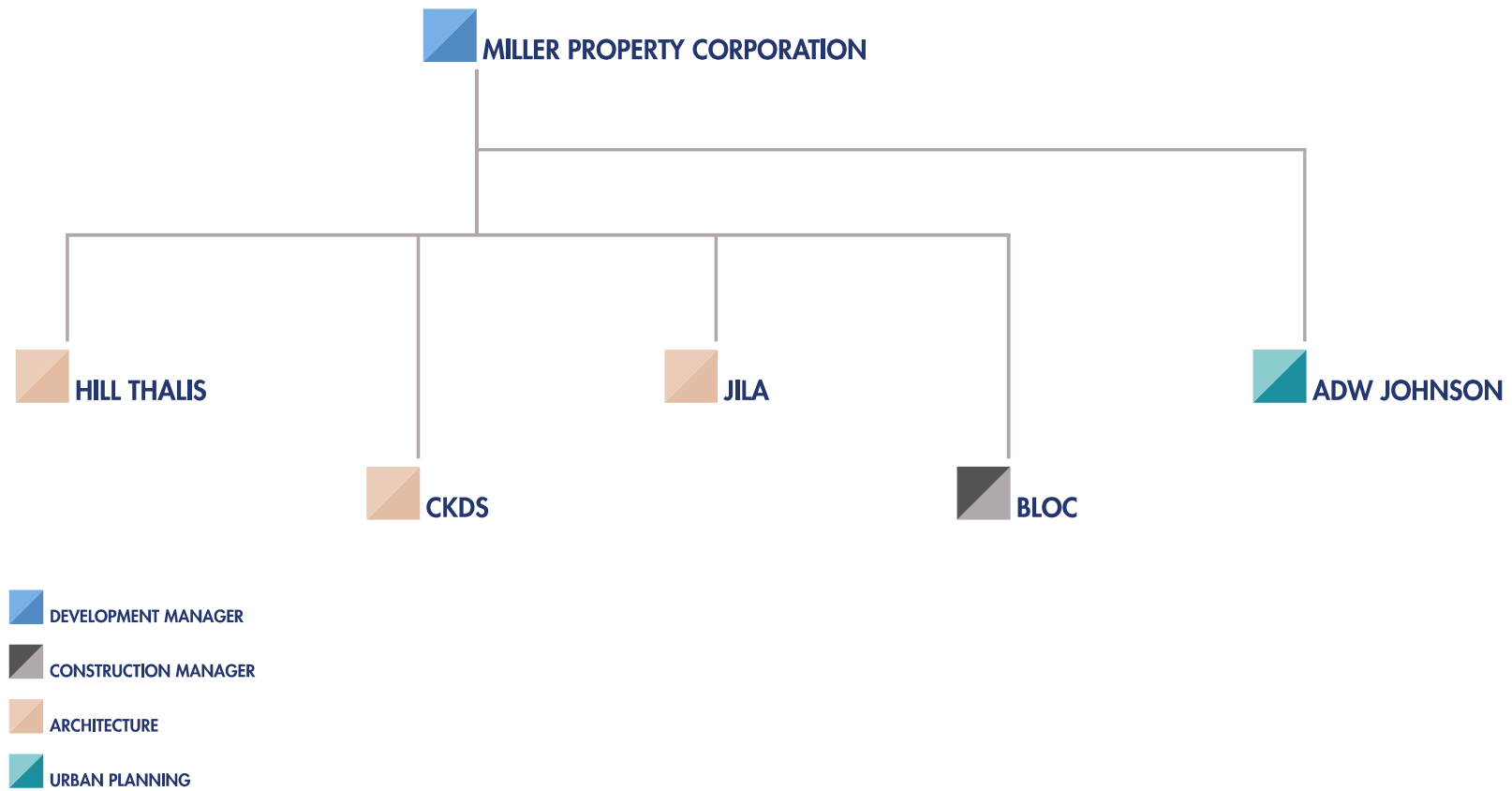
HDC 386

Horizon Newcastle Pty Ltd
22 October 2018





Horizon Development ORGANISATIONAL CHART



Horizon Newcastle acknowledges the master planning guidance included in the Design Objectives and Guidelines prepared for Lee 5. Horizon Newcastle shares the vision outlined by Chrofi that the site can contribute to enhancing the Precinct with a contemporary, vibrant waterfront development of high architectural, urban and landscape merit. The enclosed design response fully addresses the principles laid out in the guidelines in a manner consistent with planning controls and the surrounding context of planned and future development.

The result will deliver an outstanding component of the new Newcastle foreshore, further exhibiting design excellence across this vibrant new precinct. Horizon's proposed building form will complement the existing planned scale, yet have its own distinctive building character and material qualities, establishing its place definitively along the grand sweep of the extended promenade.

THE SITE AND ITS URBAN POTENTIAL

Lee 5 is an extraordinary site, with great potential for an exemplary urban and architectural project. The site's master plan and design concept engages with the site's many opportunities.

Lee 5 sits as a jewel in the Newcastle's waterfront, expanding from the City Centre westward around Throsby Creek. This site is a key component of a greater master plan which defines a major sweep of the river at the grand scale of the city. Together with neighbouring sites, Lee 5 will create an enviable face of the city to its harbour - boasting long, vast vistas along the Hunter River, and shorter more intimate views across the Throsby Creek and Inner Basin.

The Lee 5 site also sits at a critical junction between two major open space networks: the harbourfront passing east to west, and the Cottage Creek corridor. This next piece of the harbourfront will further add to the expansive publicly accessible waterfront from City Beach and Nobby's, through Newcastle City Centre and around into Throsby Creek and the Inner Basin. With the scale of renewal occurring west of the city centre, Cottage Creek is emerging as a key north-south connection between inner Newcastle' Pioneer Park and the harbour. The Lee 5 site creates a destination at the northern end of this connection and celebrates its arrival with a water place - providing environmental and recreational possibilities.

SITE HISTORY

Newcastle's history is tied to its harbour and its associated industries. From the outset its dramatic site was altered to create a more sheltered harbour on the mouth of the Hunter River, and the foreshore flattened and extended to serve as railyards and wharfage.

The master plan began with close examination of the site and its broader urban context. These were well described in the Chrofi Guidelines. The rail corridor, the timber mill, the Wickham oil berth, the working harbour; all speak to the promise of prosperity that was ushered in at the turn of the 20th century. The rise of mechanisation and the harbour activities created these artefacts that formed the industrialised heart of the Newcastle manufacturing heyday. With today's changes in work places and trade, the expansive foreshore's legacy of past industrial activity creates great city shaping opportunities for Newcastle in the 21st century.

CONNECTED TO THE FUTURE

Traditionally the focus of community and social infrastructure has been in the city centre. The area around the Lee 5 site is undergoing transformation from its industrial past. With major residential and employment uses an important focus of its future, it is critical that provision is made for community and social programmes to support the new population. The Lee 5 site is well situated to provide community spaces at the junction of the harbourfront, Honeysuckle Drive and Cottage Creek in a conspicuous and accessible location.

With the new Wickham transport interchange just an easy walk to the west, access to rail and light rail systems will transform the precinct. The second tram station to the east of the site, will also be in easy walking distance. The infrastructure will link the precincts of Wickham Interchange, Honeysuckle, Civic Centre, Crown Street. This new service will be fully operational before the Horizon project is completed.



PLANNING CONTROL

The built form of Horizon continues the eastern waterfront street wall which has formed part of the developments approved for the precinct. This will help achieve continuity along the foreshore building line, strengthening the promenade view corridors, reinforcing activity and defining the harbour edge when viewed from the water.

To Honeysuckle Drive the proposal follows the curves of the street alignment. At each end major new connection public spaces are proposed. Steel Street is taken through to the water as a generous planted square, while to the west a more landscaped space relates to the ecology of Cottage Creek, creating a relaxed and more intimate interface.

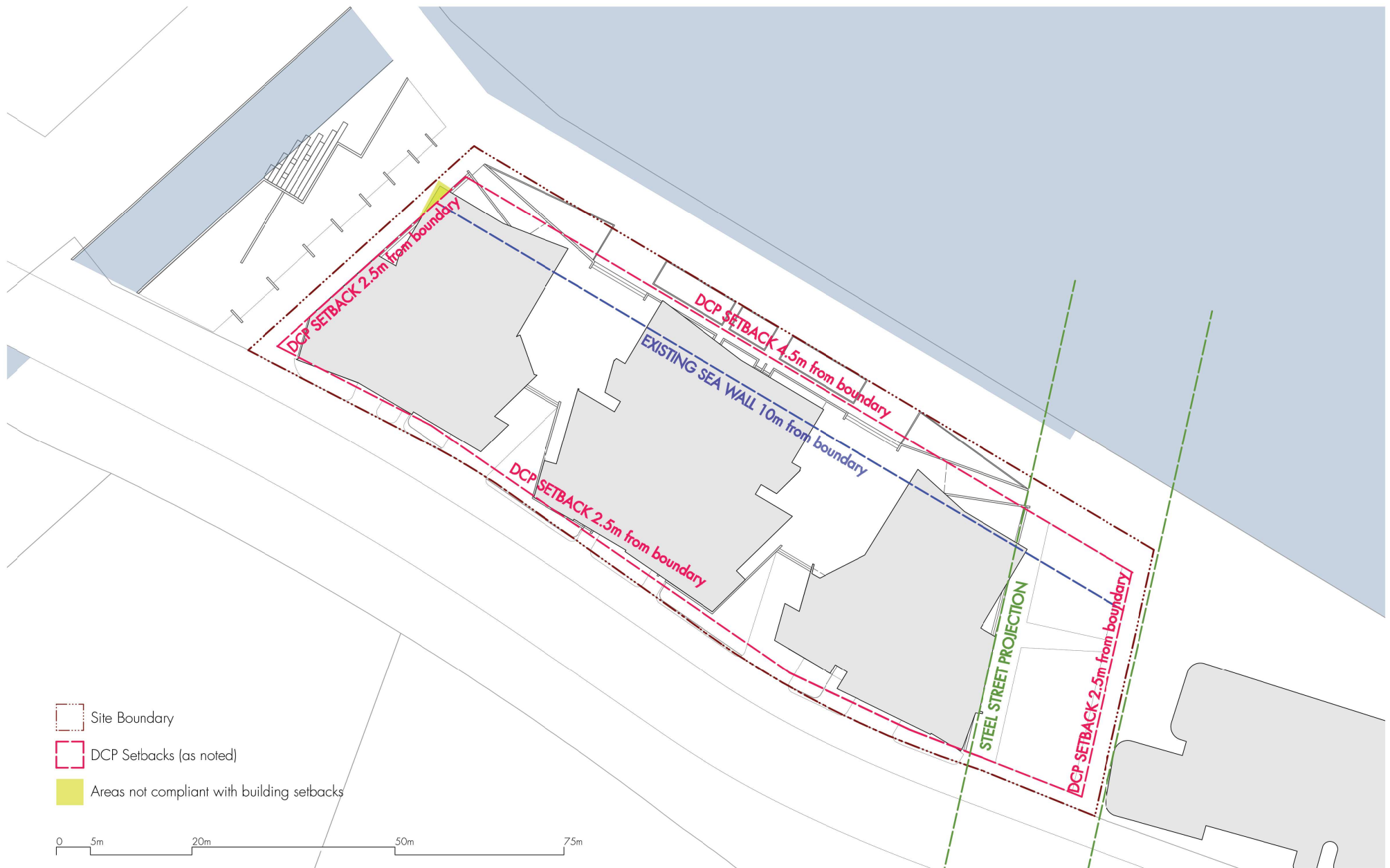
PLANNING COMPLIANCE

Horizon on Lee 5 site complies with the proposed alternative Height Envelope foreshadowed in the planning controls. This makes the building scale a continuation of the heights already approved and under construction to the east. This urban form creates a strong edge to both the waterfront promenade areas and Honeysuckle Drive. The proposed building heights are 7 storeys to the waterfront, with a sliver of 8 storeys fronting Honeysuckle Drive. There is some potential for a larger 8th storey to provide an appropriate urban scale fronting the expanse of the Cottage Creek Park.

The proposal substantially complies with the DCP setback controls which are 2.5m for east, west & south faces, and 4.5m for northern boundary. The sculptural forms of the footprints are often even further setback than the DCP requirements to articulate and accentuate the movement in the southern boundary and hold the corners to the courtyards.

The northern boundary is folded in a manner which gives independent character to each form in the group of three - with the overall building face reading within the zone between the 4.5m DCP and the 10m seawall alignments. The proposal creates a generous promenade for public use as it has a 10m setback from the back face of the sea wall to the landscaped edge along the northern boundary.

The building form deviates to a minor extent from a DCP setback on the northwestern corner. This is proposed as an acceptable design approach as it provides a dynamic urban elevation to the Cottage Creek Park which is more than 50 metres in width.



SETBACKS + LEP COMPLIANCE

The site is framed by two 'major precinct view corridors' in both Cottage Creek to the site's west, and Steel Street, to the site's east. These primary axial channels provide important public access to sun and view access. In addition, they provide significant opportunities for the development of quality public spaces and ground level activation.

In addition to these precinct level view corridors, the site offers the potential to generate through site links that relate to existing built form to the south and connecting Honeysuckle Drive with the Harbour Promenade. These additional links provide further public access to both light and water views while also providing street level activation.

It is intended that the north-eastern edge of the Lee 5 site will retain and enhance the continuity of the strong promenade facing street wall, which will strengthen the promenade view corridor.

In addition to the major public view corridors, two additional view corridors are created by the site planning. Horizon proposes three distinct buildings, with open garden courtyards between the buildings. This allows much better visual connections from Honeysuckle Drive to the harbour, and much better solar access to this significant street. Importantly it also allows properties deeper within Newcastle's urban fabric to retain more connection to the harbour.

Horizon is enviably located with a primary frontage to northeast with unimpeded views across the waterfront. The sculpting of 3 forms within the block allows even for apartments further back in the floor plan to acquire long water views across the internal courtyards. The predominant north-east orientation welcomes the cooling sea breezes in summer, and warm protected courtyards on winter mornings. Conversely, this optimal orientation creates deep shade to the courtyards on hot summer afternoons.

The 3 distinct building forms of Horizon not only provide variation and interest to the harbour's edge, but significantly increase the amenity to the street and neighbours behind. Honeysuckle Drive is gifted multiple sweeps of sunlight throughout the day promoting activation along the southern side of this important civic spine.

Neighbours across Honeysuckle Drive maintain view corridors to the water through the Cottage Creek Park and Steel Street Square, as well as through the vegetated courtyards of Horizon. A hierarchy of proportion and character are created to enable way finding - where the courtyards are sculpted and tighter than the park and square - maintaining the major connections from the city to the water and complementing the pedestrian network with finer, more intimate spaces.





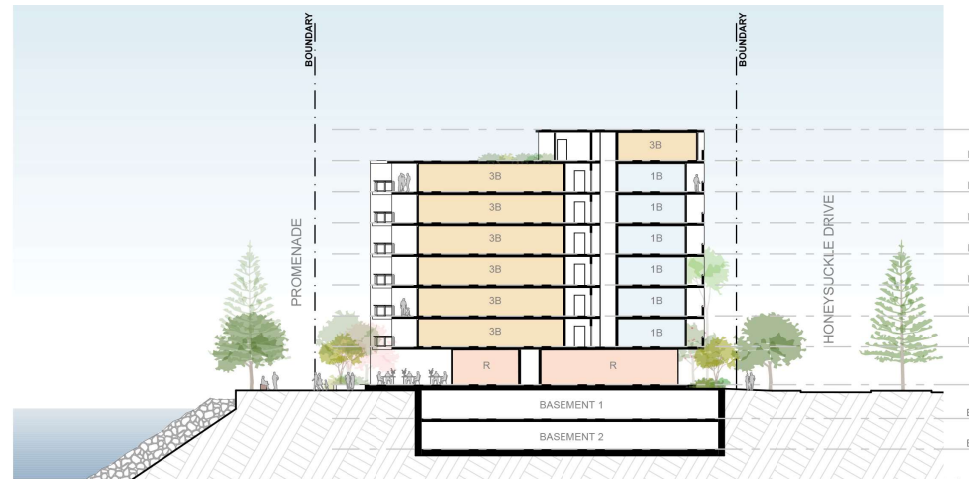
South Elevation
SCALE 1:500 @ A3



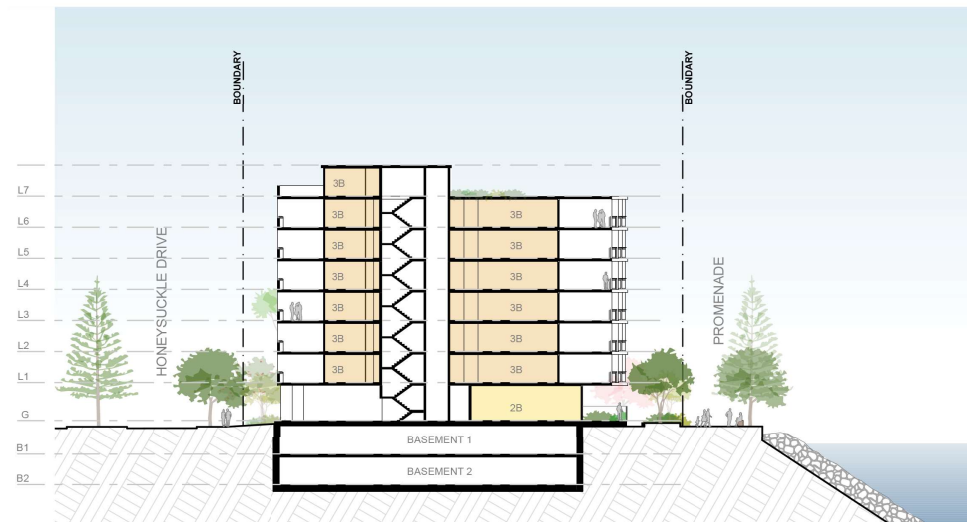
West Elevation
SCALE 1:500 @ A3

Elevations SK-400

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Section A
SCALE 1:500 @ A3



Section B
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Sections
SK-300

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The ground plane has been considered as a holistic plinth - gently raised from the predominant public domain level to provide flood-proofing and prospect over the adjoining public spaces.

Generous ramps and gentle runs of shallow steps provide numerous points of access along the majority of the perimeter to let activity spill to and from the harbourfront, Cottage Creek Park and Steel Street Square.

Ground floor residential addresses and home occupations have been integrated to provide additional openings and activations, maintaining privacy but at the same time enabling easy flow of pedestrians into and around the ground floor.

Multiple entries to lobbies ensure that each frontage is given maximum activation and passive surveillance with services limited only to small lengths along the southern facades.

SITE THROUGH LINKS

The public connections to the waterfront are concentrated at each end of the site, strengthening the open spaces offered by Steel St and Cottage Creek as the points where the city can connect to the harbourfront. There are no obstructions within the mandated view corridors.

As the distance between these two points of arrival is only around 100 metres, no other public access paths have been provided as they would be difficult to activate and would not create logical further public connections. Despite this, the distribution of the building mass over the three distinct forms has generated a range of ancillary design benefits to the overall amenity offered by Horizon. The solar access exceeds ADG guidelines. Water views are maximised, in most cases in multiple directions through the provision of very generous external private spaces.

PERMEABILITY

A combination of public and semi-public access is proposed to ensure the ground floor activities are inviting and easy to find.

Between the 3 buildings are semi-public courtyards which can be open during daytime hours and managed at night. This flexibility will allow a range of currently unknown uses to occur over time. The southern face to Honeysuckle Drive is activated at corners and courtyards with adaptable spaces suited to a range of uses, easily visible from the street for visitors, having their own direct entries.

ACTIVE TRANSPORT

The design response has considered the two cyclist connections that also cross the site from east to west. In addition a shared way along the Cottage Creek corridor is envisaged, and is in the process of being delivered. This will also allow excellent cycle and pedestrian connections to the south.



GROUND PLANE AND ACCESSIBILITY

PUBLIC DOMAIN ACTIVATION

The key strategies are to make generous public connections to the waterfront promenade at either end of the site. Both Steel Street and Cottage Creek are new elements of public domain that penetrate deeper into Newcastle's existing urban fabric, improving the accessibility and connection of the foreshore for all modes of transit.

The detailed design and orientation of open spaces has considered the benefits of light summer breezes and protection against exposure to strong winds. The strong planting along the promenade will help create a favourable microclimate protecting against the exposure to the north-eastern winds.

The north-west and north-eastern corners of the plinth have open and playful colonnades with retail and community spaces and generous outdoor terraces. These spaces are directly fronting all major public spaces and are key to activating in combination them throughout the day and night.

STEEL STREET AND COTTAGE CREEK INTERFACES

The site strategy for Horizon has carefully considered the interface with the major public spaces being created. It is crucial that each space is made in recognition of its particular urban and landscape potential. The Steel Street extension is proposed as an urban square, bringing the hustle and bustle of the city down to the waterfront, so Steel Street is crafted as a generous paved area and planted square. This makes it ideal for gatherings.

Accordingly the space has a retail frontage to provide daily activation and commercial opportunities. The lesson of many waterfront areas internationally is that there are limits to viable commercial activity, and a major need to provide opportunities for a broad spectrum of the community to come and enjoy the pleasures waterfront. An exclusively retail frontage has the twin risks of commercial overload and failure, and potentially alienating sectors of the community who do not have a high disposable income.

In contrast, the Cottage Creek frontage to the west has a more informal, landscaped character in keeping with its ecological potential. The frontage is more appropriate as commercial at ground floor offers a much greater potential for appropriate activation of the less intensively used spaces along Cottage Creek. The design envisages a diversity of levels, and the incorporation of water elements further complementing the adjoining creek and connecting to the water elements of the harbour.

THE PROMENADE

The foreshore promenade is becoming Newcastle's signature public place. Horizon's design creates a coherent presence to the foreshore promenade. It takes its cues from the planning documents to extend this major new urban space to the west.

The foreshore promenade itself is broad and distinctively planted. Major waterfront spaces such as this often have a width in the order of 10 metres, supplemented by connecting broader spaces. This is precisely the proposal at Lee 5. The width of the promenade is enhanced by a 4.5 metre wide landscape frontage and generous podium which seamlessly deals with both flood levels and equitable access.

Retail uses are concentrated towards the Steel Street Square, while Community Uses engage with the Cottage Creek interface. The 10 metre wide promenade includes a boardwalk edge and the nominated grand tree plantings, supplemented by further landscaped areas and upper terraces on the podium.

Along the northern edge in the centre of the site are three residential apartments with generous terraces facing north east across the harbour. The open north faces of the building will provide both spatial definition and passive surveillance of this important public space.

Secondary entries from the promenade add further grain to this already sculpted edge. Between the buildings the garden courtyards can be flexibly managed to suit the time of day and year, supporting the adjoining community and retail uses.



Ground Floor
SCALE 1:500 @ A3

Ground Floor Plan
SK-101

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INITIATIVES TO AFFECT MIX AND PROTECT

As befitting its exceptional position on prime waterfront land, Horizon will deliver a range of high quality, generous and amenable apartments. The development includes 105 apartments in total. Each apartment is designed to take particular advantage of its urban location, outlook and orientation.

The proportion of two and three bedroom apartments is higher than many comparable buildings creating highly articulated and breathable floor plates. Of the total residential product mix, there are only 13 one bedroom apartments. On floors 1-6, these one bedroom apartments front Honeysuckle Drive. There is one 1 bedroom unit on the ground floor facing north to promenade. This approach responds directly to the market demand and feedback arising from sales in the area.

The level 7 spatial layout provides for six generous 3 bedroom dwellings ranging in size from 127m² to 169m² of interior floor space. The more generous apartments on this level are on the exterior built forms east and west. These luxurious apartments enjoy similar large exterior spaces, overlooking the green roof out across the harbour.

SEPP 65 PERFORMANCE

With the site plan configured as three building forms, the amount of perimeter is maximised, which in turn optimises both the number and length of frontages per dwelling. All apartments have generous external spaces in the form of terraces, balconies and roof gardens.

The apartments facing the water on the outside edges of the east and west buildings boast exceptional outdoor floor areas of between 53m² and 56m². On levels 1 - 6, these balconies wrap around the apartment program offering distinct views over the harbour in multiple directions. On level 7, the external space is even more generous with external areas ranging between 55m² and 93m².

This built form strategy allows superior performance against SEPP 65 and the Apartment Design Guide (ADG) requirements. Only 2 apartments out of 16 on typical floors do not receive northern sun, so that 89% of apartment receive 2 hours or more sunshine, and 88% of apartments are cross ventilated. All common areas have daylight and fresh air. Horizon will perform exceptionally in relation to these primary SEPP 65 and ADG benchmarks.

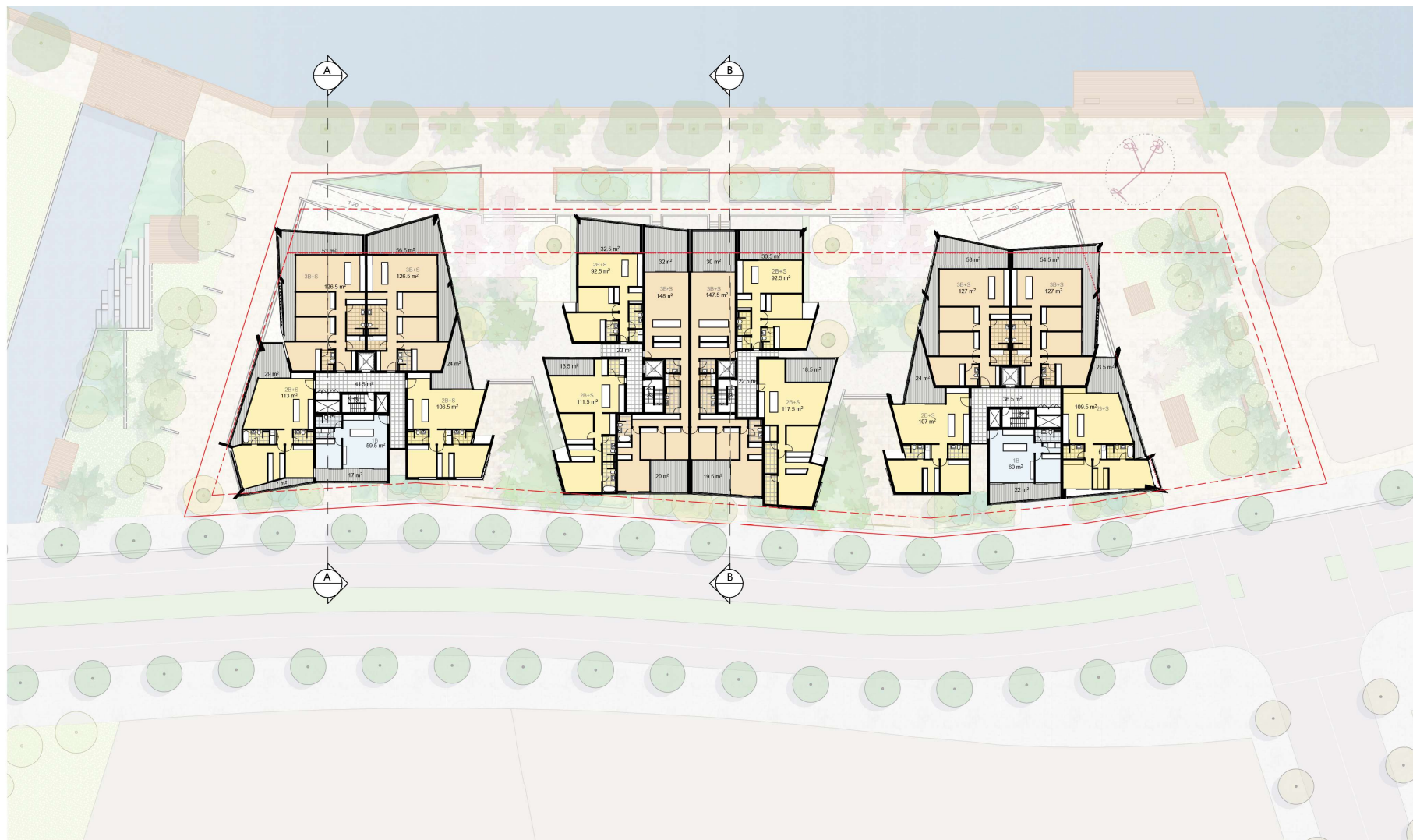
Proposed Development Summary (refer area schedule below for further detail)		Total				
Total Gross Floor Area - (incl. Retail):		13199		1 Bed	2 Bed	3 Bed
Site Area:		5600		13	50	42
Floor Space Ratio (FSR):		2.36		12%	48%	40%
Total Apartments:		105				

Level	Function	1 Bed	2 Bed	3 Bed	4 Bed		GFA (excl. balconies)	NSA (excl. balconies)
Level 07	Residential	0	0	6	0		855.5	812
Level 06	Residential	2	8	6	0		1895.5	1772
Level 05	Residential	2	8	6	0		1895.5	1772
Level 04	Residential	2	8	6	0		1895.5	1772
Level 03	Residential	2	8	6	0		1895.5	1772
Level 02	Residential	2	8	6	0		1895.5	1772
Level 01	Residential	2	8	6	0		1895.5	1772
Ground	Retail /	1	2	0	0		970.5	699.5
Total		13	50	42	0		13199	12143.5
		12%	48%	40%	0%			

Proposed Car Parking		Total	
Level	Function		
Basement 02	Parking	102	
Basement 01	Parking	102	
Total		106	204

*Parking required by DCP is as per below - see S.C. emails dated 20/21/10/2018

1 Bed	- 0.6 per	(7.8)		
2 Bed (under 100m ²)	- 0.9 per	10.8		
2 Bed (over 100m ²), 3-4 Bed	- 1.4 per	112		
Total			Visitors	Retail
			1 per 5 units	1 per 6.0m ² GFA
			21.4 cars	5.5 cars



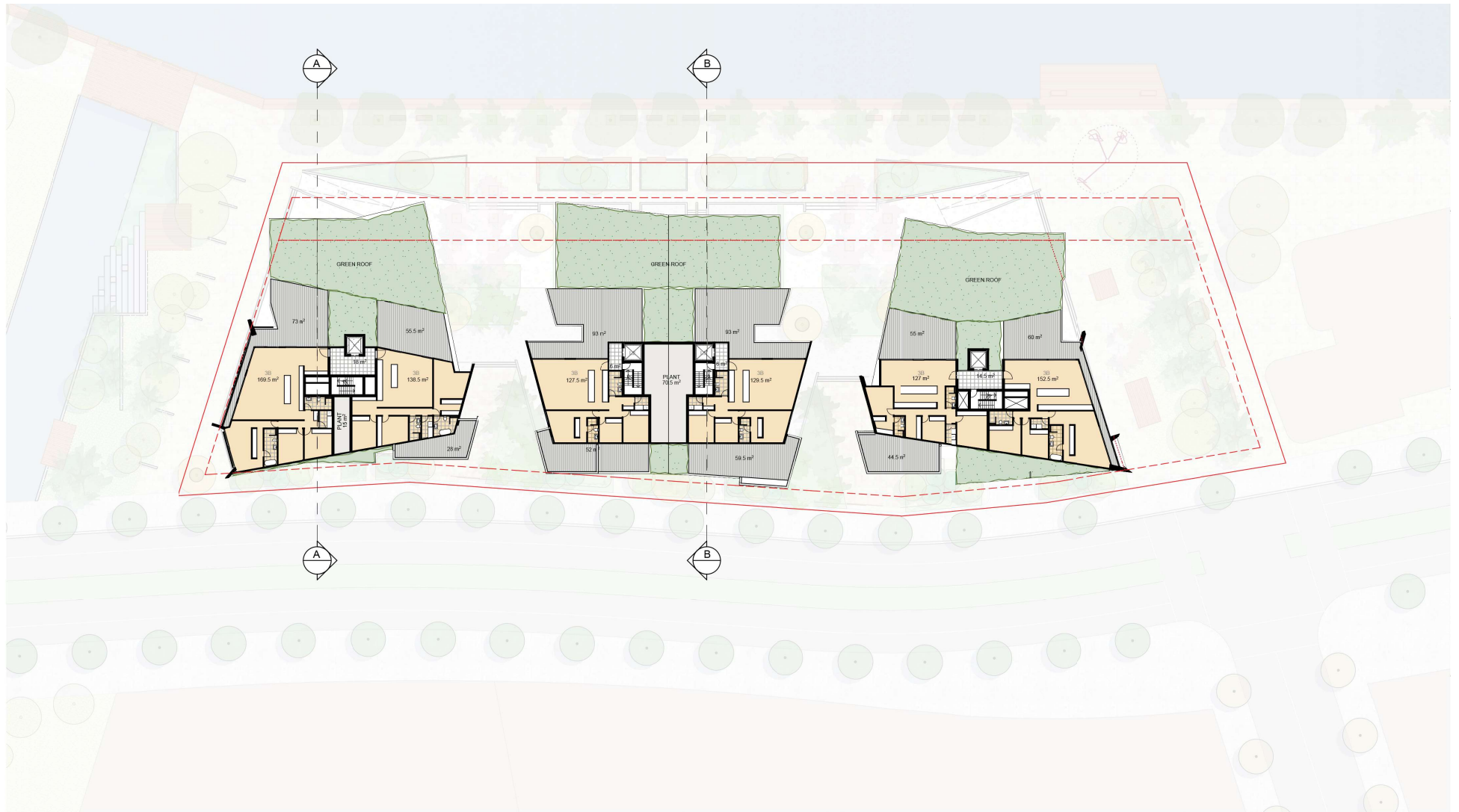
Typical 1- 6
SCALE 1:500 @ A3



Typical 1 - 6
SK-103

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check and verify all dimensions on site, refer any discrepancies to the designer before proceeding with the work
do not scale drawings manually or electronically, drawing shall not be used for construction until issued to
construction by designer.



Level 7
SCALE 1:500 @ A3



Level 07
SK-104

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Basement access has been located away from the Cottage Creek Park because this allows the commercial facilities to better activate this edge. The driveway to the basement carparking is discretely located, accessed from the eastern end of the Honeysuckle Drive frontage.

There are two levels of basement proposed, each with the ability to accommodate 102 cars, taking the total carparking available in the development to 204. For the proposed mix, the allocated carparking meets and exceeds the DCP requirements.

Bloc has detailed knowledge of a range of construction techniques to allow the construction of the basement below the water table and also the ongoing serviceability of the basement after construction. With regard to basement construction, Bloc has successfully designed and constructed three projects immediately adjacent to lakes with basements below adjacent water level. None of these have experienced issues of water ingress.

Bloc currently has another two projects in construction that are immediately adjacent to lakes or rivers with basements below the adjacent water level. These include 21 HD, Newcastle and Sapphire apartments at Kingston Foreshore, Canberra.

In order to avoid compromising the integrity of the existing foreshore engineering, the excavated basement has been set well back from the rock revetment seawall and the public open space.

The basement levels are compactly arranged under the building footprint to minimise the area disturbed. Displaced soil as part of a basement construction has been characterised as Restricted Solid Waste.

The design has also considered the mine subsidence and indigenous archeology risk associated with the site. The building is within the overall volumes and is not expected to require additional mine subsidence treatments.

It is understood that the earliest development dates back to 1870. Since that time the Site has seen varying factories, saw mills, refinery and warehousing structures operate. Therefore, it's expected to contain relics from previous developments which have the potential of local and state heritage significance. We will obtain necessary permits for excavation issued by NSW Heritage office before we start.

We are aware that Aboriginal artefacts have been found at surface level. To manage this sensitive issues, we will complete a test excavation pit set to particular guidelines (approx. 10m x 10m) at a depth to be agreed with archaeologist. This will establish the extent of artefacts and inform the development of management plan. Bloc has the experience from 42HD where relics in the form of rocks were discovered. Similar management techniques will apply at Lee 5 site.

Servicing of each building is discretely layered into the southern facade of each building, supported by active uses adjacent and limited to small runs of inactive walls.

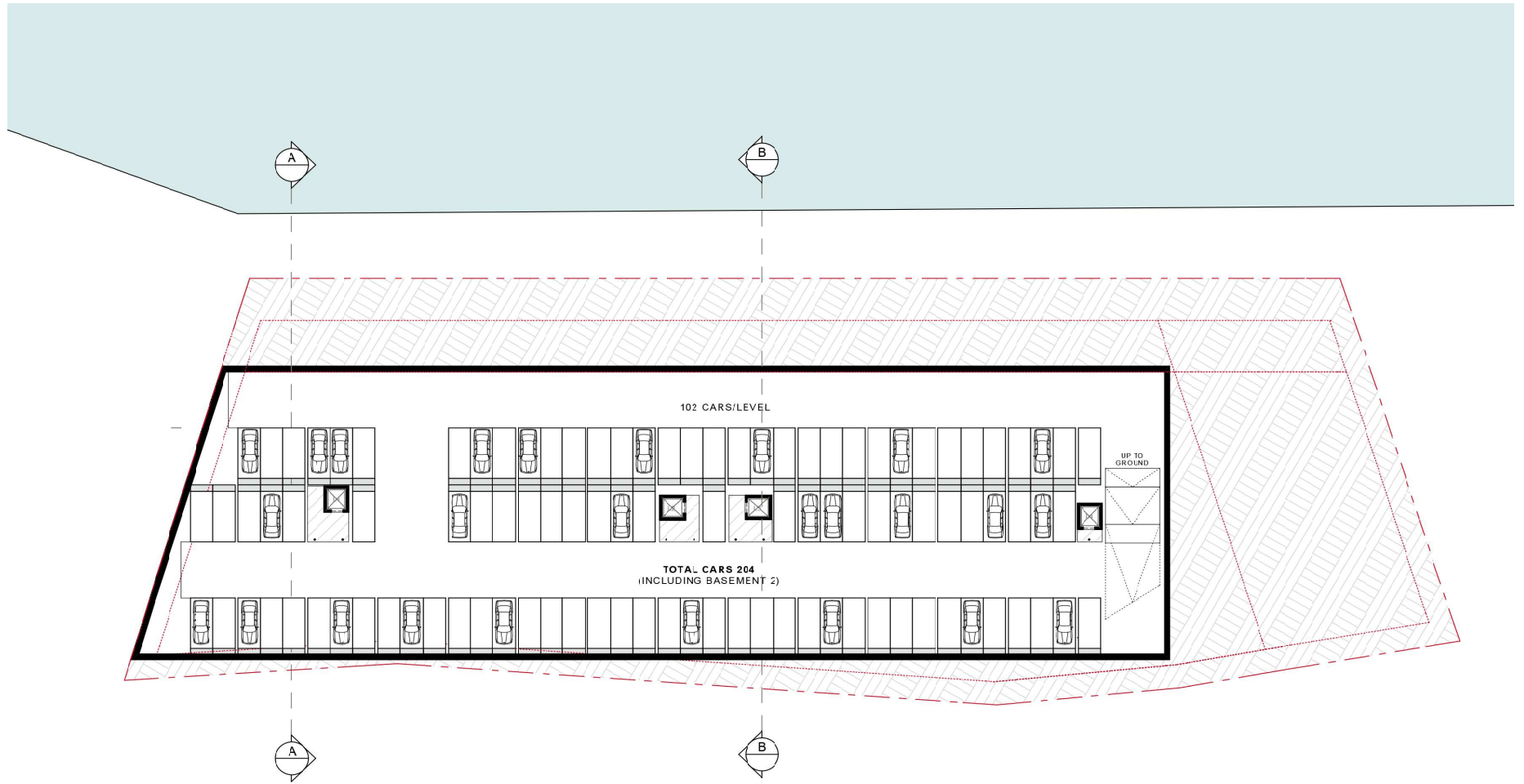
We are proposing more car parks than the DCP so we can generally provide every 3 bed apartment – 2 spaces; every 2 bed apartment 1.5 spaces and every 1 bed apartment 1 space. We have also allowed for visitor and parking for the commercial and retail spaces in the basement. The opportunity for additional carparking was considered given the loss of public carparking in the area.

However as the site will complete after the light rail is operational, and the connections to rail at Wickham are also very strong, additional carparking beyond this provision is not desirable because of its potential negative impacts on the overall active transport strategies otherwise pursued in the design.

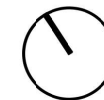
The new Honeysuckle Drive offers opportunities for timed parking including loading zones to assist in the servicing of retail and community spaces. Dedication of at least one carshare spot at both the Cottage Creek and Steel Street corners is envisioned.



PARKING + SERVICING



Basement
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Basement Floor Plan
SK-100

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The design has been organised so that programmes requiring more security and privacy are located away from prominent corners in the central building.

Along Honeysuckle Drive provision has been made for adaptable home-office spaces in order to remain flexible to a number of uses, over time. Along the northern edge are 3 residential apartments with generous terraces facing north east across the harbour.

Secondary entries from the promenade add further grain to this already sculpted edge.

Between the buildings the courtyards can be flexibly managed to suit the time of day and year, supporting the adjoining community and retail uses.

The courtyards provide intimacy and quietness on contrast to the open and expansive public edges surrounding the block on all sides.

At the residential level on the upper floors, privacy and building separation is dealt with by balcony screening on the east and west facades.



EDGES + PRIVACY



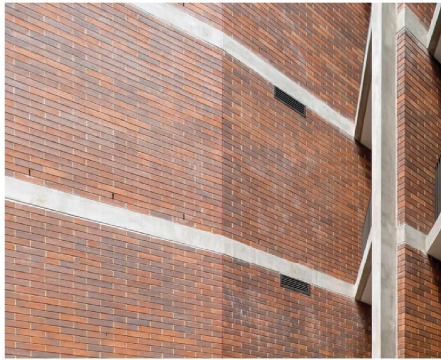
Materials have been chosen for their enduring, textural and complementary character.

A primary off-form concrete structure gives a robust solidity that demonstrates a lasting presence. The industrial rigidity anchors the building on the site, while columns are placed and sculpted to open the ground floor and lift the volumes above. These columns translate the major vertical structures from top-to-bottom and also break up the overall scale.

Within this, the high quality face brick holds the corners of the courtyards - giving warmth and texture, and providing an urban grain to Honeysuckle Drive. The bronze in the finishes is very complementary to the face brick, in earthen tones ensuring an elegance and quality that is timeless. The opposing horizontal and vertical elements ensure the building has rich texture and further breaks down the overall scale of each face.

Finer elements such as screening and balustrades are limited to timber and bronze finishes. The effect of this adds further warmth and variation to the cooler concrete, without expanding beyond a distinct and deliberately limited palette.

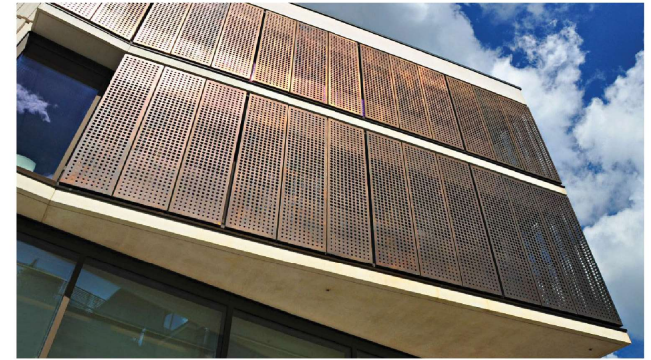
The glazed screens framing the balconies ensure the waterfront views are maintained, and provide a transparency to the building facade, without interrupting the privacy.



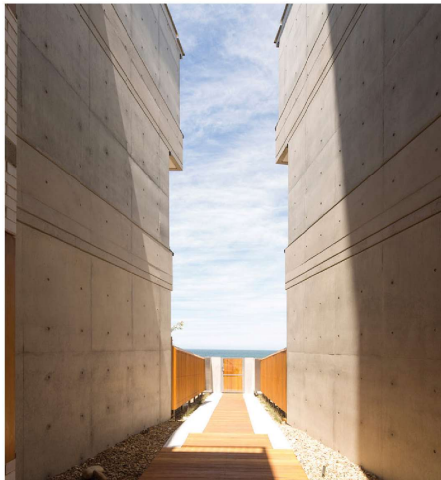
Hawkesbury Bronze Pressed Bricks



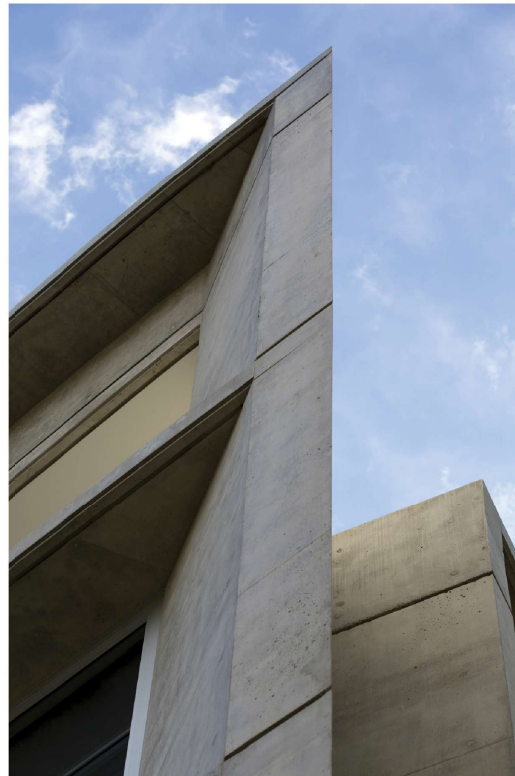
Bronze coloured external louvers



Bronze coloured external perforated screens



Off Form Concrete Blades



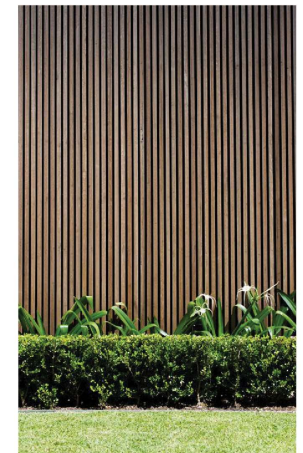
Off Form Concrete Columns



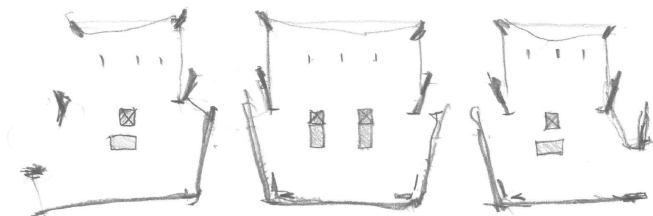
Bronze coloured handrail +
Frameless glass balustrades



Exposed Bronze coloured
metal frame openings



Vertical batton fencing



Concept Sketch - Play of solid elements along Honeysuckle Drive that frame the lighter, reflective materials along the harbour.

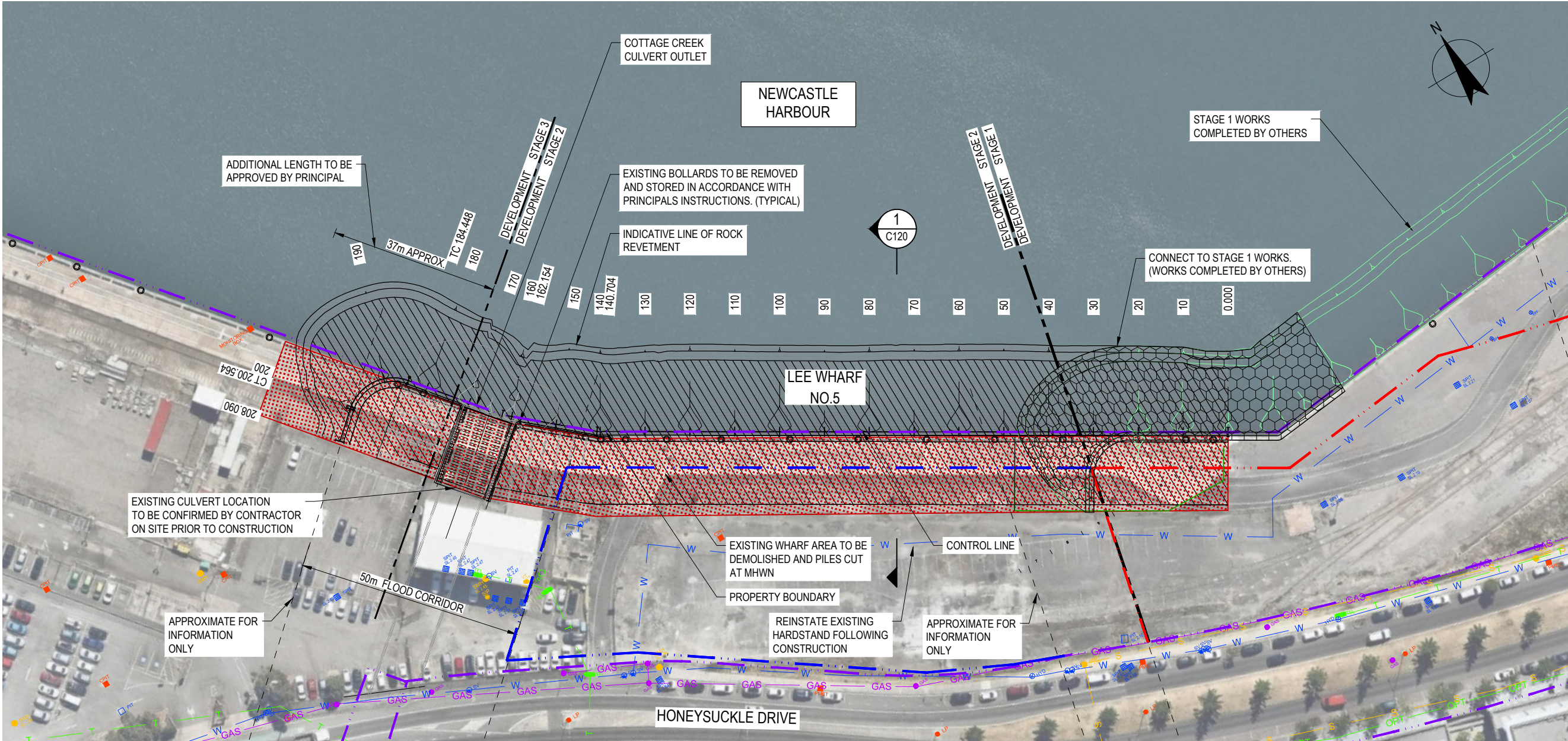
ARCHITECTURAL CHARACTER + MATERIALITY





Maddocks

Attachment 2 Seawall Works Plan



PLAN
SCALE 1:1000

LEGEND

	DEVELOPMENT STAGE BOUNDARY (FOR INFORMATION PURPOSES)		CONTROL LINE
	'VIEW' OR 'FLOODING' CORRIDOR (APPROXIMATE FOR INFORMATION ONLY)		CADASTRE / PROPERTY BOUNDARY
	CLASS I ROCK		HCCDC SUPPLIED CADASTRAL BDY
	CLASS II ROCK		HCCDC SUPPLIED CADASTRAL BDY
	DEMOLITION AREA		EXISTING WATER
	BATTER SLOPE		EXISTING SEWER
	DARACON WAE 20180913		EXISTING TELECOMMUNICATIONS
			EXISTING GAS
			SHIP BOLLARD
			PT LOCATION

STAGE 2 TONNAGE		
	VOLUME (m ³)	WEIGHT (ton)
CLASS I ROCK	6165	10783
CLASS II ROCK	26512	52763
CLASS IV BACKFILL	2335	4914
TOTAL	35012	68460

NOTES

- LEVELS AND CONTOURS ARE IN METERS RELATIVE TO CHART DATUM.
- REFER TO SHEET C102 FOR SURVEY REFERENCE NOTES.
- ANY EXISTING STORMWATER OUTLETS AND HEADWALLS TO BE EXTENDED IN ACCORDANCE WITH COUNCILS REQUIREMENTS.
- CONTRACTOR TO CONFIRM STAGE 1 ROCK PLACEMENT UPON RECEIPT OF WAE DRAWINGS.

CTRL SETOUT - LEE WHARF NO. 5								
PT	CHAINAGE	EASTING	NORTHING	HEIGHT	BEARING	RAD/SPIRAL	A.LENGTH	DEFL.ANGLE
IP 1	0.000	384526.130	6356328.840	3.100	301°17'29.92"			
IP 2	140.700	384405.890	6356401.920	3.100				
IP 3	162.150	384389.760	6356416.050	3.100				
TC	184.450	384375.820	6356433.450	3.100	321°18'08.28"			
IP 4	192.510	384369.310	6356441.580	3.100		R = -10.00	16.120	92°20'17.15"
CT	200.560	384361.450	6356434.740	3.100	228°57'51.13"			
IP 5	208.090	384355.770	6356429.800		228°57'51.13"			

FOR CONSTRUCTION

1	ISSUED FOR CONSTRUCTION	C.P	C.D.*	L.G.*	19.11.18		
0	ISSUED FOR CONSTRUCTION	C.P.	C.D.*	L.G.*	21.08.18		
No	Revision	Note: * indicates signatures on original issue of drawing or last revision of drawing		Drawn	Job Manager	Project Director	Date



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DO NOT SCALE

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Drawn MA.LOVENDINO Designer C. DENGATE

Drafting Check I. SMITH* Design Check L. GELLATLY*

Approved (Project Director) L. GELLATLY*

Date 16.08.2018

Scale 1:1000

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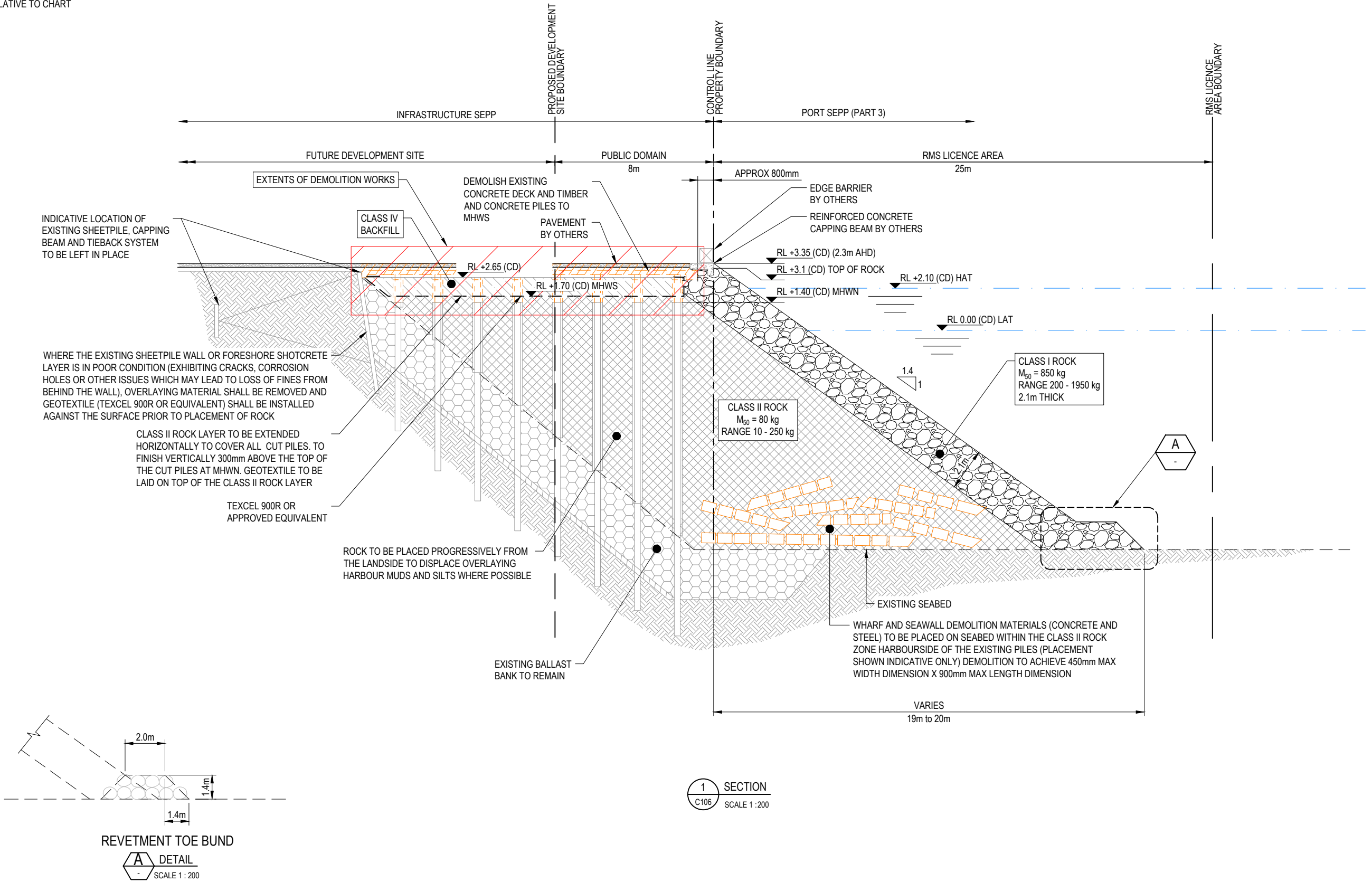
Client	HUNTER DEVELOPMENT CORPORATION
Project	LEE 4 & 5, THROSBY SEAWALL - STAGE 2 DETAILED DESIGN
Title	GENERAL ARRANGEMENT PLAN STAGE 2
Original Size	A3
Drawing No:	22-19137-C106
Rev:	1

NOTE

1. LEVELS ARE IN METRES RELATIVE TO CHART DATUM.

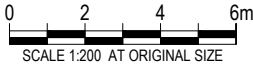
AHD	CD
HAT 1.09	2.10
MHWS 0.69	1.70
MHWN 0.39	1.40
MSL -0.01	1.00
MLWN -0.41	0.60
MLWS -0.61	0.40
LAT -1.01	0.00

NEWCASTLE
AUSTRALIAN
NATIONAL TIDE
TABLES 2012



FOR CONSTRUCTION

0	ISSUED FOR CONSTRUCTION		C.P.	C.D.*	L.G.*	21.08.18
No	Revision	Note: * indicates signatures on original issue of drawing or last revision of drawing	Drawn	Job Manager	Project Director	Date



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Drawn MA.LOVENDINO Designer C. DENGATE

Drafting Check I. SMITH* Design Check L. GELLATLY*

Approved (Project Director) L. GELLATLY*
Date 16.08.2018

Scale AS SHOWN

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used for Construction unless
signed as Approved

Client HUNTER DEVELOPMENT CORPORATION
Project LEE 4 & 5, THROSBY SEAWALL - STAGE 2 DETAILED DESIGN

Title TYPICAL SECTION

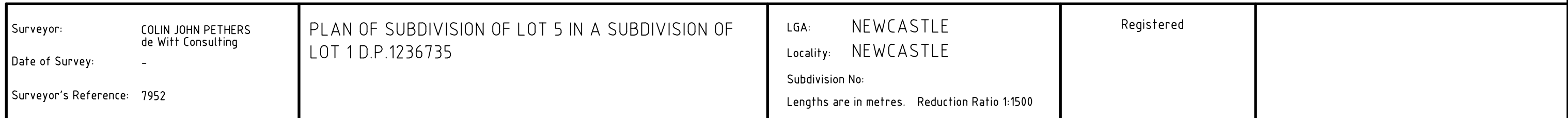
Original Size A3 Drawing No: 22-19137-C120 Rev: 0

Material Type	Material Spec																																						
Class IV Backfill	<p>75 μm ~ 75 mm</p> <p>Backfill with ENM or VENM classification shall be placed to the lines, levels and batters shown on the Drawings provided in Appendix A.</p> <p>The material used for <u>backfill</u> shall be free from organic or other deleterious material, obtained from excavation or imported, and contains no fines smaller than 75 μm. In addition, the backfill material shall be free draining, granular, non-cohesive, and well-graded. The Plasticity Index of the backfill material shall be PI=0.</p>																																						
Class II Material	<table><tr><th rowspan="2">Rock Class</th><th rowspan="2">Type</th><th colspan="5">Mass (Kg)</th></tr><tr><th>ELL</th><th>NLL</th><th>M₅₀</th><th>NUL</th><th>EUL</th></tr><tr><td>II</td><td>Filter rock 1</td><td>10</td><td>25</td><td>80</td><td>140</td><td>250</td></tr><tr><th rowspan="2">Rock Class</th><th rowspan="2">Type</th><th colspan="5">Nominal Diameter (mm)</th></tr><tr><th>ELL</th><th>NLL</th><th>D_{n50}</th><th>NUL</th><th>EUL</th></tr><tr><td>II</td><td>Filter rock 1</td><td>0.16</td><td>0.21</td><td>0.31</td><td>0.38</td><td>0.46</td></tr></table>	Rock Class	Type	Mass (Kg)					ELL	NLL	M ₅₀	NUL	EUL	II	Filter rock 1	10	25	80	140	250	Rock Class	Type	Nominal Diameter (mm)					ELL	NLL	D _{n50}	NUL	EUL	II	Filter rock 1	0.16	0.21	0.31	0.38	0.46
Rock Class	Type			Mass (Kg)																																			
		ELL	NLL	M ₅₀	NUL	EUL																																	
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		ELL	NLL	D _{n50}	NUL	EUL																																	
II	Filter rock 1	0.16	0.21	0.31	0.38	0.46																																	
Existing Ballast	<p>Minimum 1.5m thick (vertically)</p> <p>Igneous rock between 150mm and 381mm in size</p>																																						
Existing Slag	<p>Minimum .175m thick (vertically)</p> <p>Igneous rock between 12.5mm and 38mm in size</p>																																						
Dredged fill and Marine Sediments	Unknown																																						



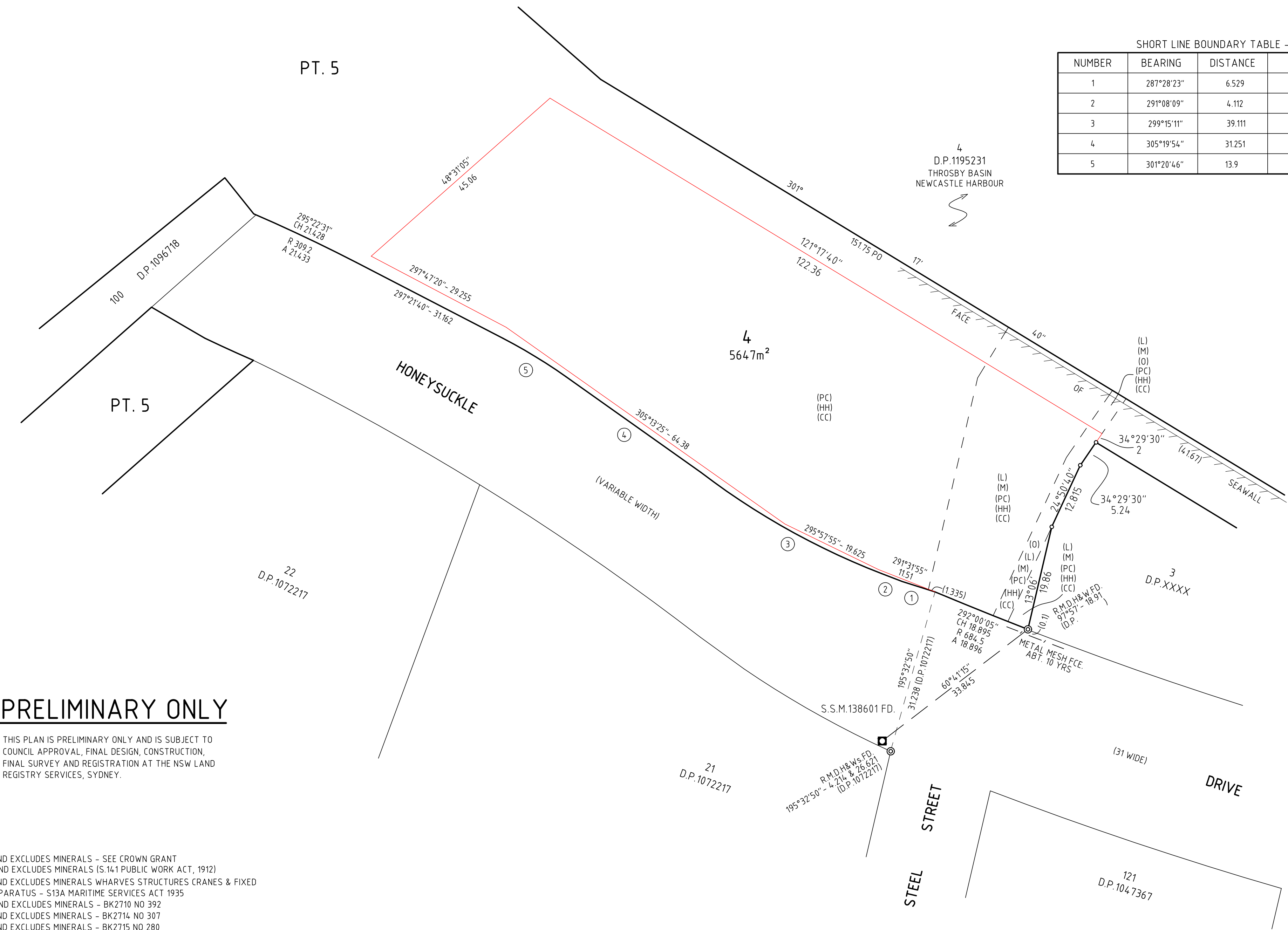
Maddocks

Attachment 3 Draft Subdivision Plan





SHORT LINE BOUNDARY TABLE - ALL PO				
NUMBER	BEARING	DISTANCE	ARC	RADIUS
1	287°28'23"	6.529	-	-
2	291°08'09"	4.112	-	-
3	299°15'11"	39.111	39.242	138.5
4	305°19'54"	31.251	-	-
5	301°20'46"	13.9	13.911	100



PRELIMINARY ONLY

THIS PLAN IS PRELIMINARY ONLY AND IS SUBJECT TO COUNCIL APPROVAL, FINAL DESIGN, CONSTRUCTION, FINAL SURVEY AND REGISTRATION AT THE NSW LAND REGISTRY SERVICES, SYDNEY.

- (AA) - LAND EXCLUDES MINERALS - SEE CROWN GRANT
(BB) - LAND EXCLUDES MINERALS (S.141 PUBLIC WORK ACT, 1912)
(CC) - LAND EXCLUDES MINERALS WHARVES STRUCTURES CRANES & FIXED APPARATUS - S13A MARITIME SERVICES ACT 1935
(DD) - LAND EXCLUDES MINERALS - BK2710 NO 392
(EE) - LAND EXCLUDES MINERALS - BK2714 NO 307
(FF) - LAND EXCLUDES MINERALS - BK2715 NO 280
(GG) - LAND EXCLUDES MINERALS - A26718
(HH) - LAND EXCLUDES MINERALS - 187708, B361219, J78962
(PC) - PUBLIC POSITIVE COVENANT - D.P.1094812
(J) - EASEMENT FOR PUBLIC ACCESS 20 WIDE - D.P.1236735
(L) - EASEMENT FOR PUBLIC ACCESS 20 WIDE & VARIABLE - D.P.....
(M) - EASEMENT FOR FLOODWAY 20 WIDE & VARIABLE - D.P.....
(O) - EASEMENT TO DRAIN WATER 3.0 WIDE

Surveyor:	COLIN JOHN PETHERS de Witt Consulting	PLAN OF SUBDIVISION OF LOT 5 IN A SUBDIVISION OF LOT 1 D.P.1236735	LGA: NEWCASTLE Locality: NEWCASTLE Subdivision No: Lengths are in metres. Reduction Ratio 1:300	Registered	
Date of Survey:	-				
Surveyor's Reference:	7952				