SITE DATA

Site Area	**3,748 m²**
Maximum Height (storeys)	**6-12 storeys**
Maximum Height (RL)	**66.5m**
FSR	**3.52:1**
Total GFA	**13,149 square metres**
Residential GFA	**13,149 square metres**

GFA

AREA_GFA PER BUILDING		
BUILDING	LEVEL	AREA
A	L00	368 m²
A	L01	379 m²
A	L02	379 m²
A	L03	379 m²
A	L04	338 m²
A	L05	338 m²
		2180 m²
B	B01	9 m²
B	B02	9 m²
B	B03	9 m²
B	L00	570 m²
B	L01	583 m²
B	L02	583 m²
B	L03	583 m²
B	L04	583 m²
B	L05	583 m²
B	L06	536 m²
B	L07	516 m²
B	L08	516 m²
B	L09	18 m²
		5098 m²
C	B01	9 m²
C	B02	9 m²
C	B03	9 m²
C	L00	326 m²
C	L01	583 m²
C	L02	583 m²
C	L03	583 m²
C	L04	583 m²
C	L05	583 m²
C	L06	536 m²
C	L07	517 m²
C	L08	517 m²
C	L09	517 m²
C	L10	517 m²
		5870 m²
Grand total		13148 m²

AVERAGE APT. AREA

Average Apartment Area - Private Housing

Apartment Type	1B	2B	3B
Average Area	53.4m²	75.4m²	102.1m²

APARTMENT MIX

APARTMENT MIX		
VVVV	NO.	%
1B	53	35%
2B	54	36%
2B+S	2	1%
3B	29	19%
3B+S	12	8%
Grand total	150	100%

UNIT MIX A,B,C		
TYPE	NO.	%
A		
1 BED	12	40%
2 BED	18	60%
A: 30	30	
B		
1 BED	21	37%
2 BED	17	30%
2 BED+S	1	2%
3 BED	14	25%
3 BED+S	4	7%
B: 57	57	
C		
1 BED	20	32%
2 BED	19	30%
2 BED+S	1	2%
3 BED	15	24%
3 BED+S	8	13%
C: 63	63	
Grand total: 150	150	

UNIT MIX A		
TYPE	NO.	%
1 BED	12	40%
2 BED	18	60%
Grand total: 30	30	

UNIT MIX B&C		
TYPE	NO.	%
1 BED	41	34%
2 BED	36	30%
2 BED+S	2	2%
3 BED	29	24%
3 BED+S	12	10%
Grand total: 120	120	

PARKING

West Ryde Town Centre Rates used for dwellings and RMS Rate for visitors due to close proximity to transport hub:

- 0.6 space per 1 bedroom dwelling
- 0.9 space per 2 bedroom dwelling
- 1.4 spaces per 3 bedroom dwelling
- **1** visitor space per 5 dwellings

Minimum required parking number:

Parking Type	1B	2B	3B	Total	Disabled (Inclusive)
Building A	7.2	16.2	N/A	24.0	6
Building B	12.0	17.1	25.2	54.3	4
Building C	12.0	18.0	32.2	62.2	5
Visitor (1 in 5 dwellings) (Total 150 dwellings)				30.0	1
Total				170.5 (171)	16

Proposed Parking Schedule	
Description	Count
BUILDING A	
Standard Carpark Bay	18
Disabled Carpark Bay (AS2890-2009)	6
24	
BUILDING B	
Standard Carpark Bay	50
Disabled Carpark Bay (AS2890-2009)	4
54	
BUILDING C	
Standard Carpark Bay	58
Disabled Carpark Bay (AS2890-2009)	5
63	
VISITOR	
Standard Carpark Bay	29
Disabled Carpark Bay (AS2890-2009)	1
30	
Grand total: 171	

City of Ryde Development Control Plan 2014 – **2.7 Bicycle Parking**

- In every new building, where the floor space exceeds 600 m2 GFA (except for dwelling houses and multi unit housing) provide bicycle parking equivalent to 10% of the required car spaces or part thereof.

23 BICYCLE SPACES PROVIDED ON LEVEL B03

SOLAR ACCESS

*ADG requires at least 70% of apartments to receive a minimum of 2 hours of direct sunlight to their living space between 9am and 3pm at midwinter.
*ADG requires a maximum of 15% of apartments receive no direct sunlight between 9am and 3pm at midwinter.

SOLAR ACCESS	NO OF APARTMENTS	%
<2HRS	34	23%
>2HRS	116	77%
0HRS	0	0%
TOTAL	150	

CROSS VENTILATION

*ADG requires at least 60% of apartments are naturally cross ventilated in the first nine storeys of the building. Apartments at ten storeys or greater are deemed to be cross ventilated only if any enclosure of the balconies at these levels allows adequate natural ventilation and cannot be fully enclosed.

CROSS VENTILATION SCHEDULE UP TP L8 OVERALL		
CROSS VENTILATION	NO. OF APARTMENTS	%
NO	48	34%
YES	92	66%
Grand total: 140	140	

COMMUNAL OPEN SPACE

*ADG requires that communal open space has a minimum area equal to 25% of the site.

Required Commnual Open Space (25%) 937m²

Communal Open Space A & B :168m²
Communal Open Space B & C : 392m²
Communal Open Space B Rooftop: 377m²

TOTAL COMMUNAL OPEN SPACE PROVIDED 937m²

*ADG requires developments achieve a minimum of 50%direct sunlight to the principal usable part of the communal open space for a minimum of 2 hours between 9 am and 3 PM on 21 June (mid winter).

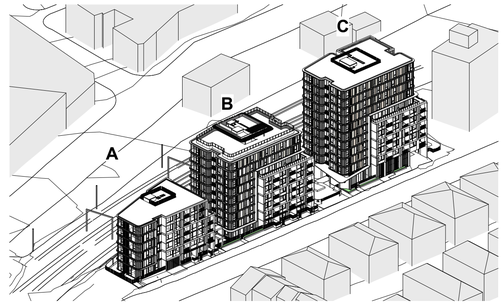
50% OF USABLE COMMUNAL OPEN SPACE ACHIEVED 50% DIRECT SULIGHT

DEEP SOIL

*ADG requires that the deep soil zone has a minimum area equal to 7%of the site area.

Deep Soil with min. 6m Dimension 262.36 m² (7.0%)
Deep Soil with min. 3m Dimension 309 m² (8.2%)

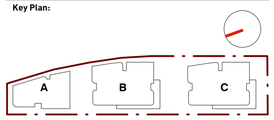
TOTAL DEEP SOIL PROVIDED 15.2%



Basix Building Fabric Requirements (63-77 West Parade)

Element	Material Type	Detail
External walls	Lightweight cladding + R2.5 Insulation + PB	Medium colour
Internal walls	Plasterboard on studs	Intra-tenancy walls
	Hebel	Inter-tenancy walls
Windows	ALM-002-01 A Aluminium B SG Clear	NFRC Glazing System values: ⇒ U ≤ 6.70 and SHGC = 0.70 (± 5%)
	ALM-002-04 A Aluminium B SG Low Solar Gain Low-E Modified units: **Building A**: G02, G03, 102, 103, 202, 203, 302, 303. **Building C**: G01	NFRC Glazing System values: ⇒ U ≤ 5.6 and SHGC = 0.41 (± 5%)
	ALM-004-03 A Aluminium B DG Air Fill High Solar Gain low-E - Clear Modified units: **Building A**: G01, 402, 403, 501-504.	NFRC Glazing System values: ⇒ U ≤ 4.3 and SHGC = 0.4153 (± 5%)
Skylights	N/A	
Downlights	Deafault	Sealed options
Floor	Concrete slab	Tile (kitchen, wet & living areas) Timber (bedrooms)
	Concrete slab + R1.0 Insulation	To outside air/non conditioned space below car park
Ceiling	Concrete	
Roof	PB + R3.0 Insulation + Concrete (top level)	Medium colour

Key Plan:



Rv	Amendment	By	Ck	Date
B	DEVELOPMENT APPLICATION			17/07/2020
A	DEVELOPMENT APPLICATION			26/03/2020

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Project PA017559
West Ryde Billbergia
63-77 West Parade, West Ryde

Status
DEVELOPMENT APPLICATION

Title
00-GENERAL INFORMATION
DEVELOPMENT DATA SHEET

Drawing Number DA-01-0010
Revision B

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1 SITE PLAN
1 : 500

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Project PA017559
West Ryde Billbergia
63-77 West Parade, West Ryde

Status
DEVELOPMENT APPLICATION

Title
00-GENERAL INFORMATION
SITE PLAN

Drawing Number DA-01-0100
Revision A

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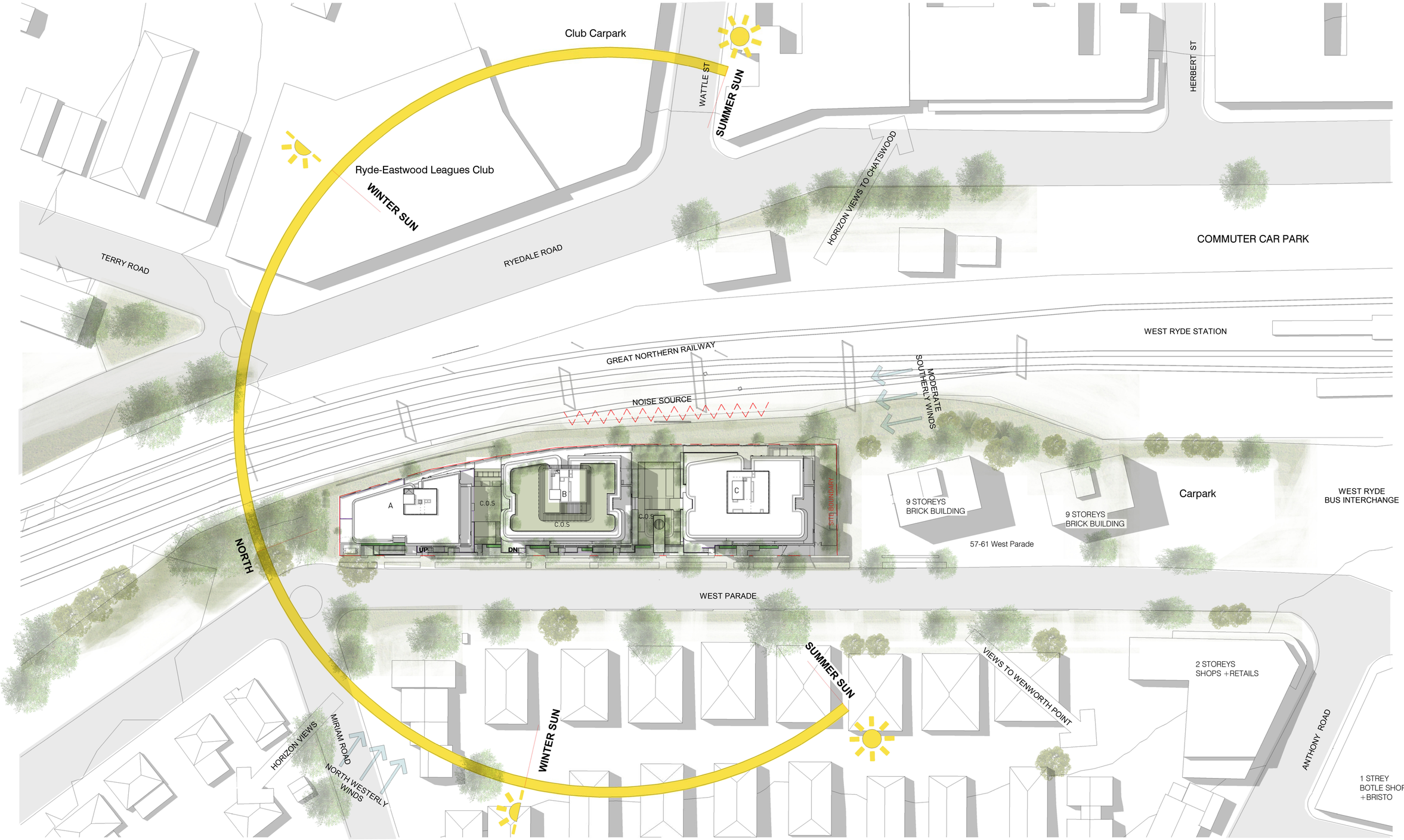

1 SITE ANALYSIS
1 : 500

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West Ryde Billbergia
63-77 West Parade, West Ryde

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Title
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SITE ANALYSIS PLAN

Drawing Number DA-01-0200
Revision A

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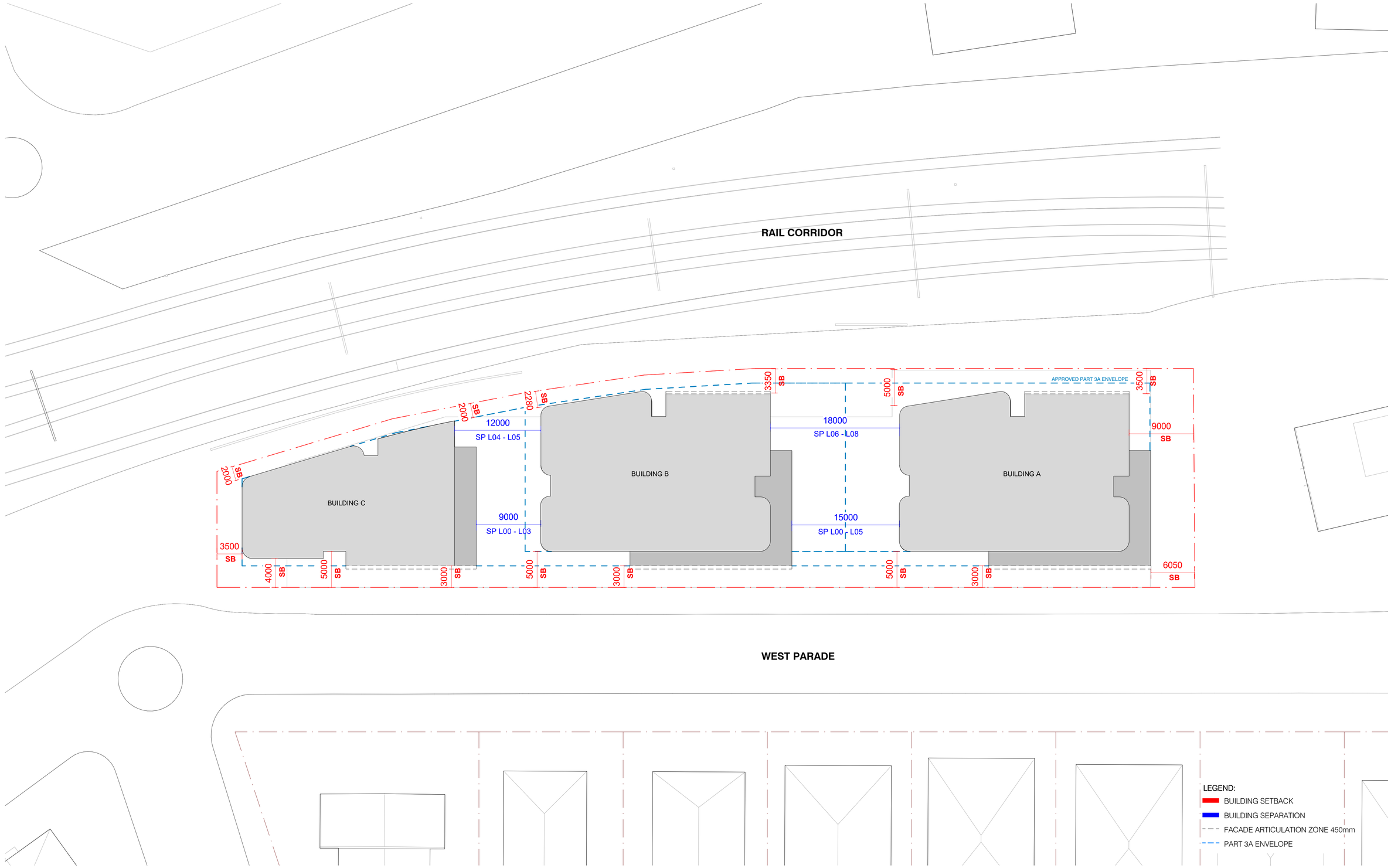

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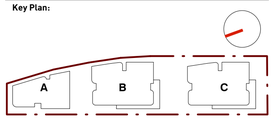

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Project PA017559
West Ryde Billbergia
63-77 West Parade, West Ryde

Status
DEVELOPMENT APPLICATION

Title
00-GENERAL INFORMATION
SETBACKS AND CONSTRAINTS DIAGRAM

Drawing Number DA-01-0300

Revision A

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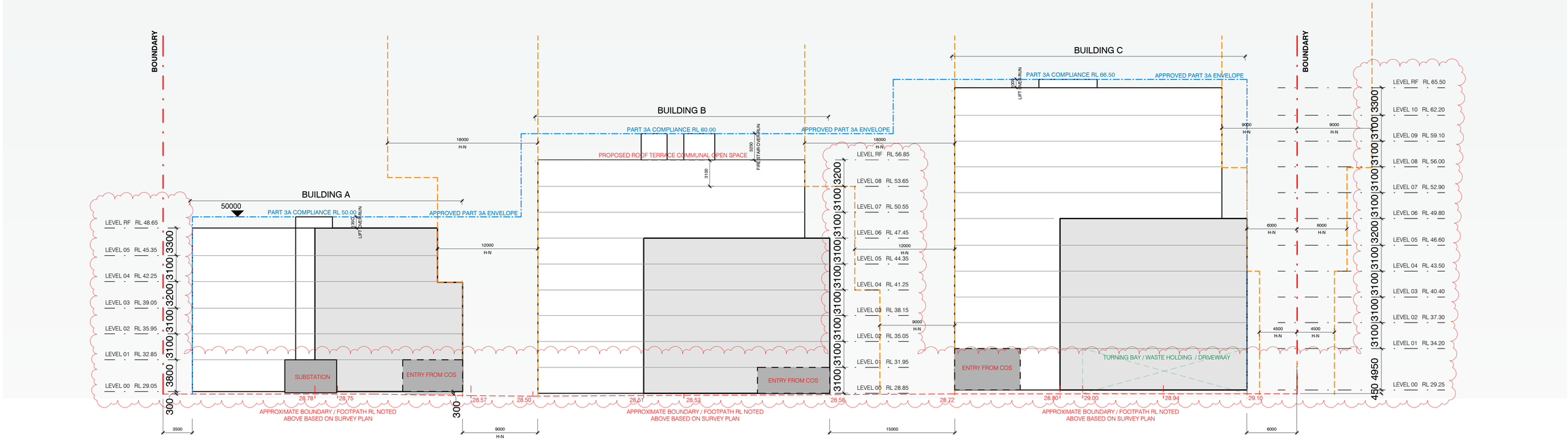
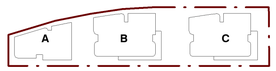


1 WEST PARADE ELEVATION

1 : 250

Key Plan:



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B	DEVELOPMENT APPLICATION			17/07/2020
A	DEVELOPMENT APPLICATION			26/03/2020

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Project PA017559
West Ryde Billbergia
63-77 West Parade, West Ryde

Status
DEVELOPMENT APPLICATION

Title
00-GENERAL INFORMATION
APPROVED PART 3A HEIGHT

Drawing Number DA-01-0400

Revision B

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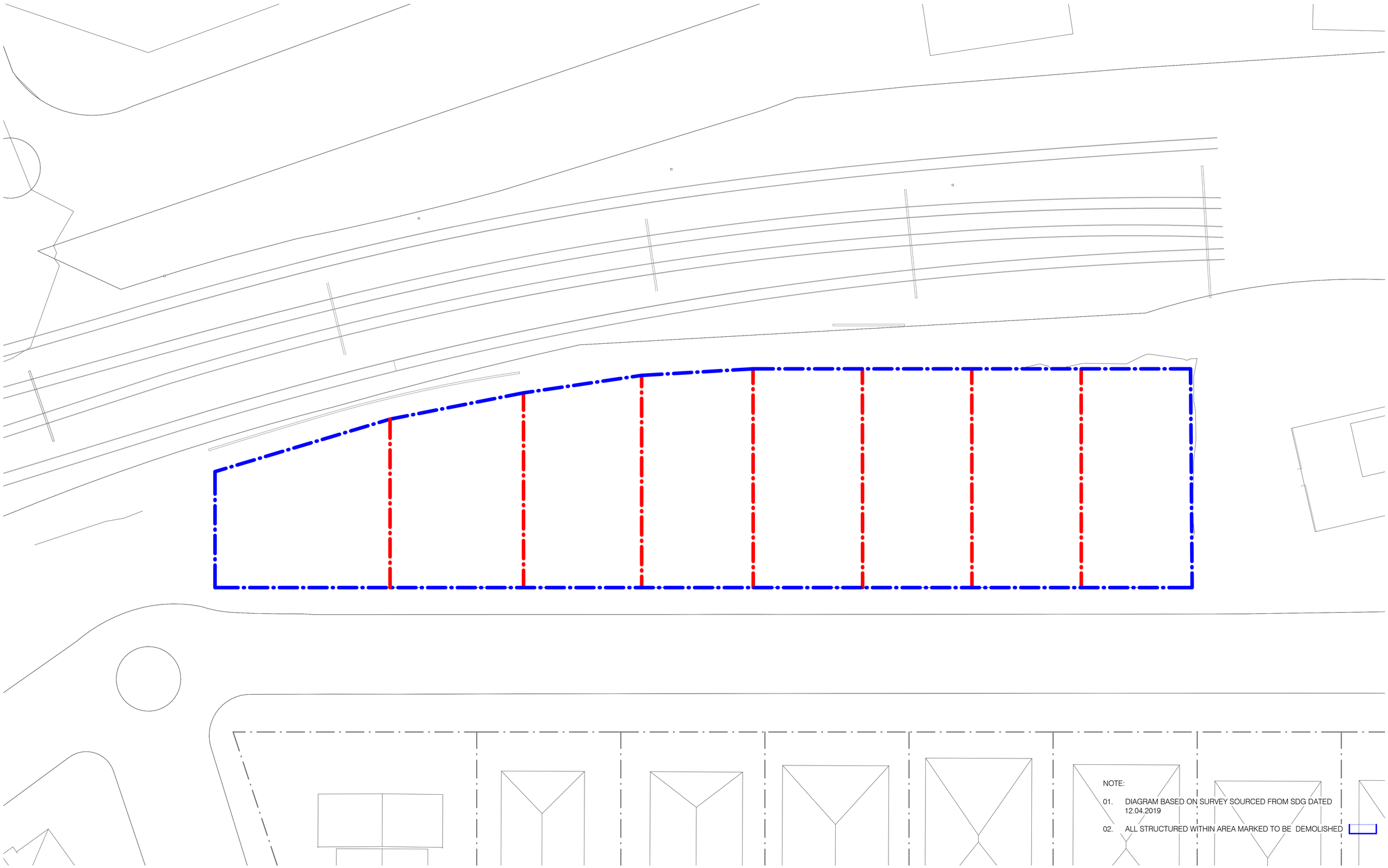

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Project PA017559
West Ryde Billbergia
63-77 West Parade, West Ryde

Status
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Title
00-GENERAL INFORMATION
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Drawing Number DA-01-0500

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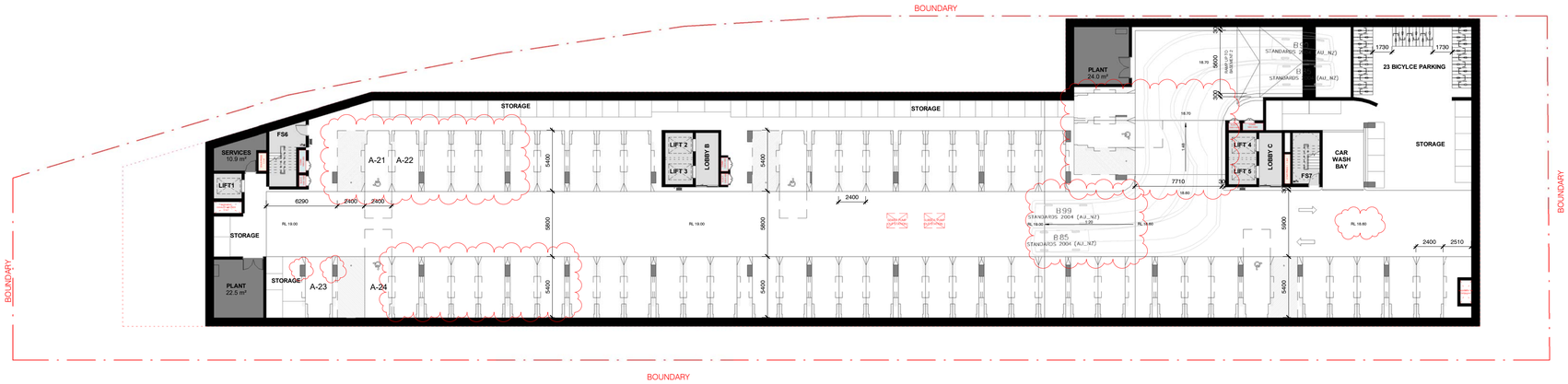
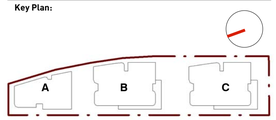


1 BASEMENT LEVEL 03 PLAN

1 : 250

Key Plan:



Rv	Amendment	By	Ck	Date
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Project PA017559
West Ryde Billbergia
63-77 West Parade, West Ryde

Status
DEVELOPMENT APPLICATION

Title
10-GENERAL ARRANGEMENT PLANS
BASEMENT LEVEL 03 PLAN

Drawing Number DA-10-0070

Revision B

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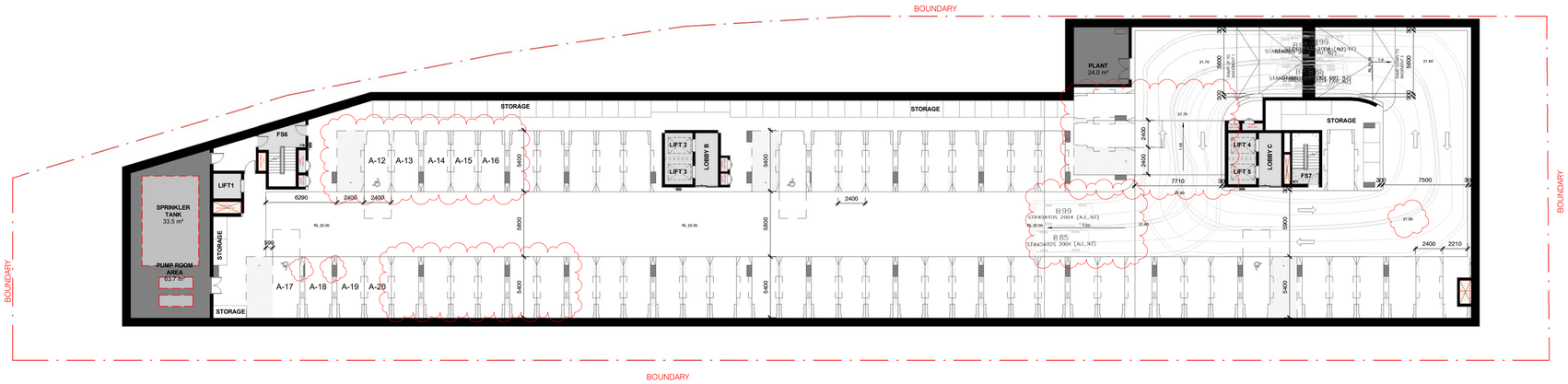
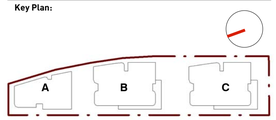


1 BASEMENT LEVEL 02 PLAN

1 : 250

Key Plan:



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West Ryde Billbergia
63-77 West Parade, West Ryde

Status
DEVELOPMENT APPLICATION

Title
10-GENERAL ARRANGEMENT PLANS
BASEMENT LEVEL 02 PLAN

Drawing Number DA-10-0080

Revision B

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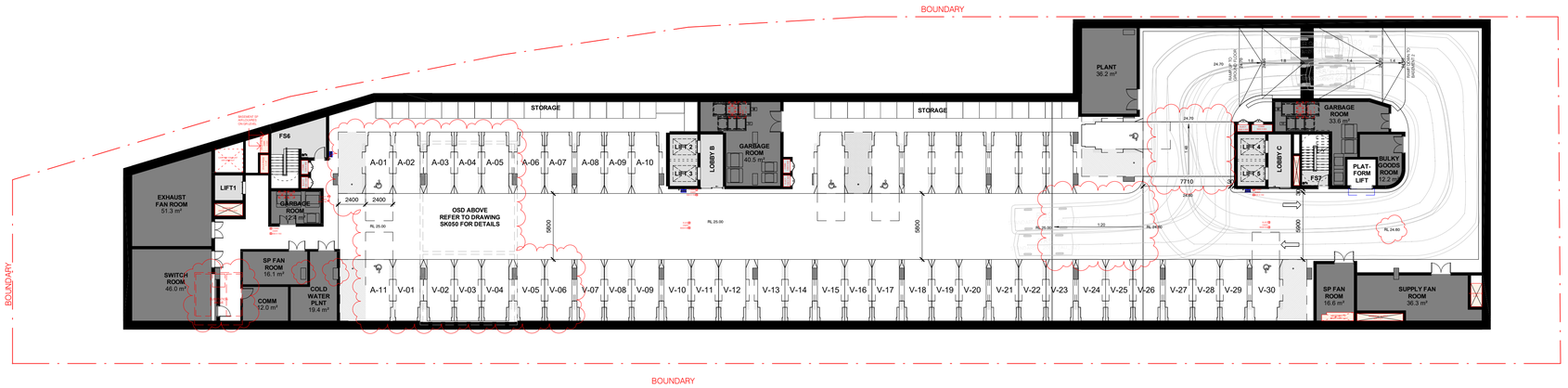

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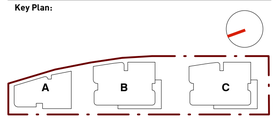

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Project PA017559
West Ryde Billbergia
63-77 West Parade, West Ryde

Status
DEVELOPMENT APPLICATION

Title
10-GENERAL ARRANGEMENT PLANS
BASEMENT LEVEL 01 PLAN

Drawing Number DA-10-0090

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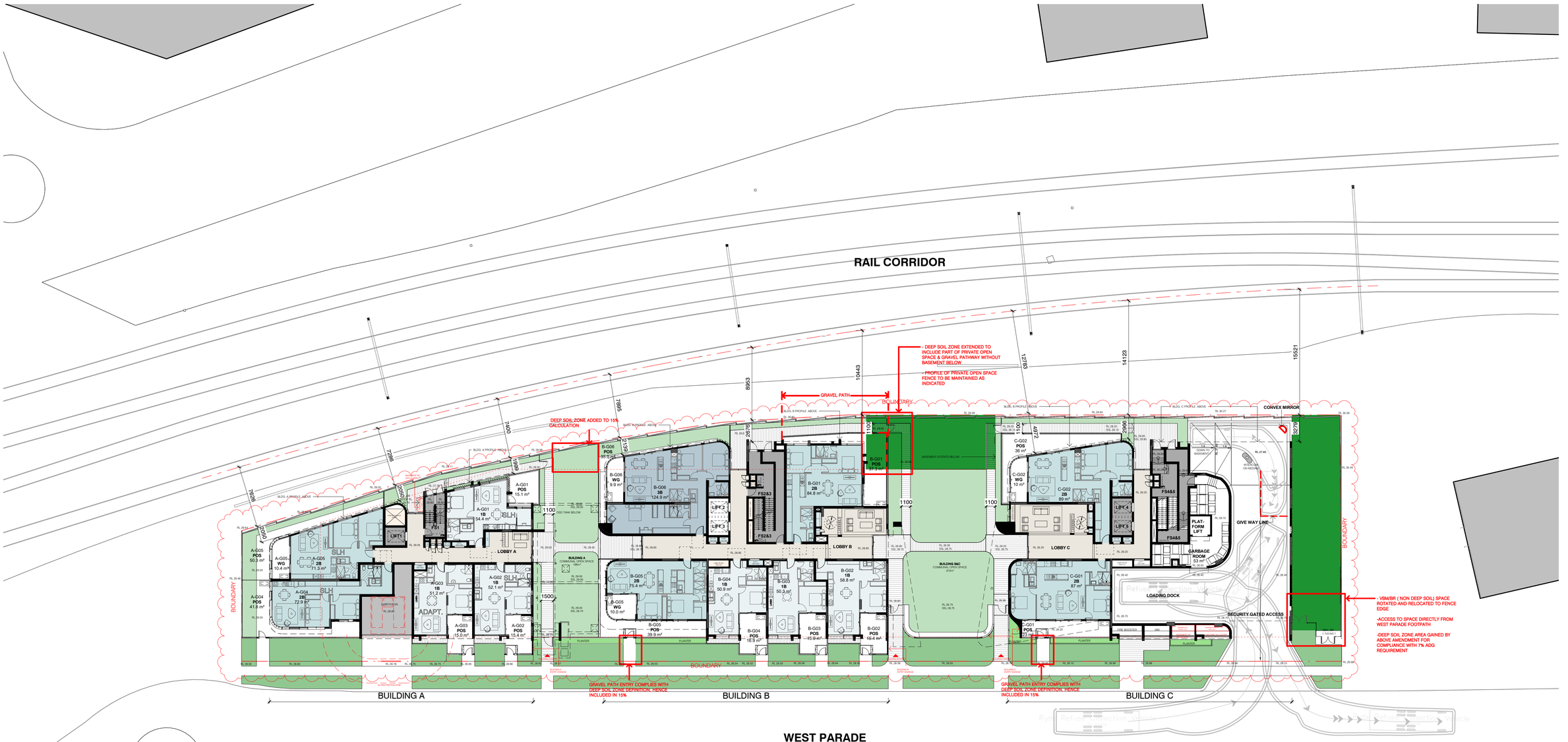
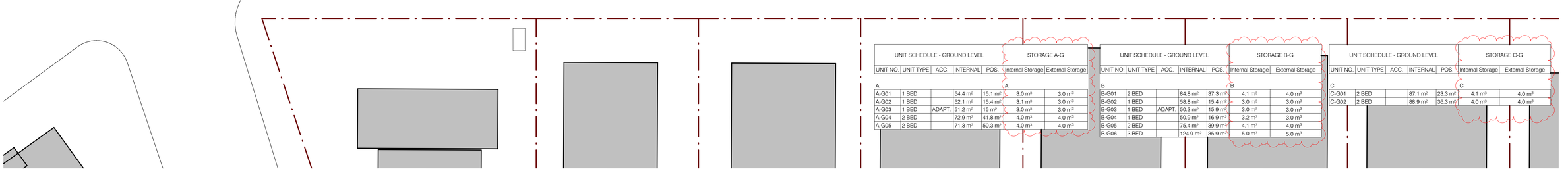




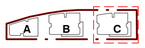
UNIT SCHEDULE - GROUND LEVEL					STORAGE A-G	
UNIT NO.	UNIT TYPE	ACC.	INTERNAL	POS.	Internal Storage	External Storage
A					A	
A-G01	1 BED		54.4 m²	15.1 m²	3.0 m³	3.0 m³
A-G02	1 BED		52.1 m²	15.4 m²	3.1 m³	3.0 m³
A-G03	1 BED	ADAPT.	51.2 m²	15 m²	3.0 m³	3.0 m³
A-G04	2 BED		72.9 m²	41.8 m²	4.0 m³	4.0 m³
A-G05	2 BED		71.3 m²	50.3 m²	4.0 m³	4.0 m³

UNIT SCHEDULE - GROUND LEVEL					STORAGE B-G	
UNIT NO.	UNIT TYPE	ACC.	INTERNAL	POS.	Internal Storage	External Storage
B					B	
B-G01	2 BED		84.8 m²	37.3 m²	4.1 m³	4.0 m³
B-G02	1 BED		58.8 m²	15.4 m²	3.0 m³	3.0 m³
B-G03	1 BED	ADAPT.	50.3 m²	15.9 m²	3.0 m³	3.0 m³
B-G04	1 BED		50.9 m²	16.9 m²	3.2 m³	3.0 m³
B-G05	2 BED		75.4 m²	39.9 m²	4.1 m³	4.0 m³
B-G06	3 BED		124.9 m²	35.9 m²	5.0 m³	5.0 m³

UNIT SCHEDULE - GROUND LEVEL					STORAGE C-G	
UNIT NO.	UNIT TYPE	ACC.	INTERNAL	POS.	Internal Storage	External Storage
C					C	
C-G01	2 BED		87.1 m²	23.3 m²	4.1 m³	4.0 m³
C-G02	2 BED		88.9 m²	36.3 m²	4.0 m³	4.0 m³

1B & 1B+S | 2B & 2B+S | 3B & 3B+S

Key Plan:



Rv	Amendment	By	Ck	Date
B	DEVELOPMENT APPLICATION			17/07/2020
A	DEVELOPMENT APPLICATION			26/03/2020

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NSW Nominated Architects
S Parsons Architect No.6098
D Jones Architect No.4778

0 | 2 | 5 | 10 | 20m

Project PA017559
West Ryde Billbergia
63-77 West Parade, West Ryde

Status
DEVELOPMENT APPLICATION

Title
10-GENERAL ARRANGEMENT PLANS
GROUND FLOOR PLAN (LEVEL 00)

Drawing Number DA-10-1000

Revision B

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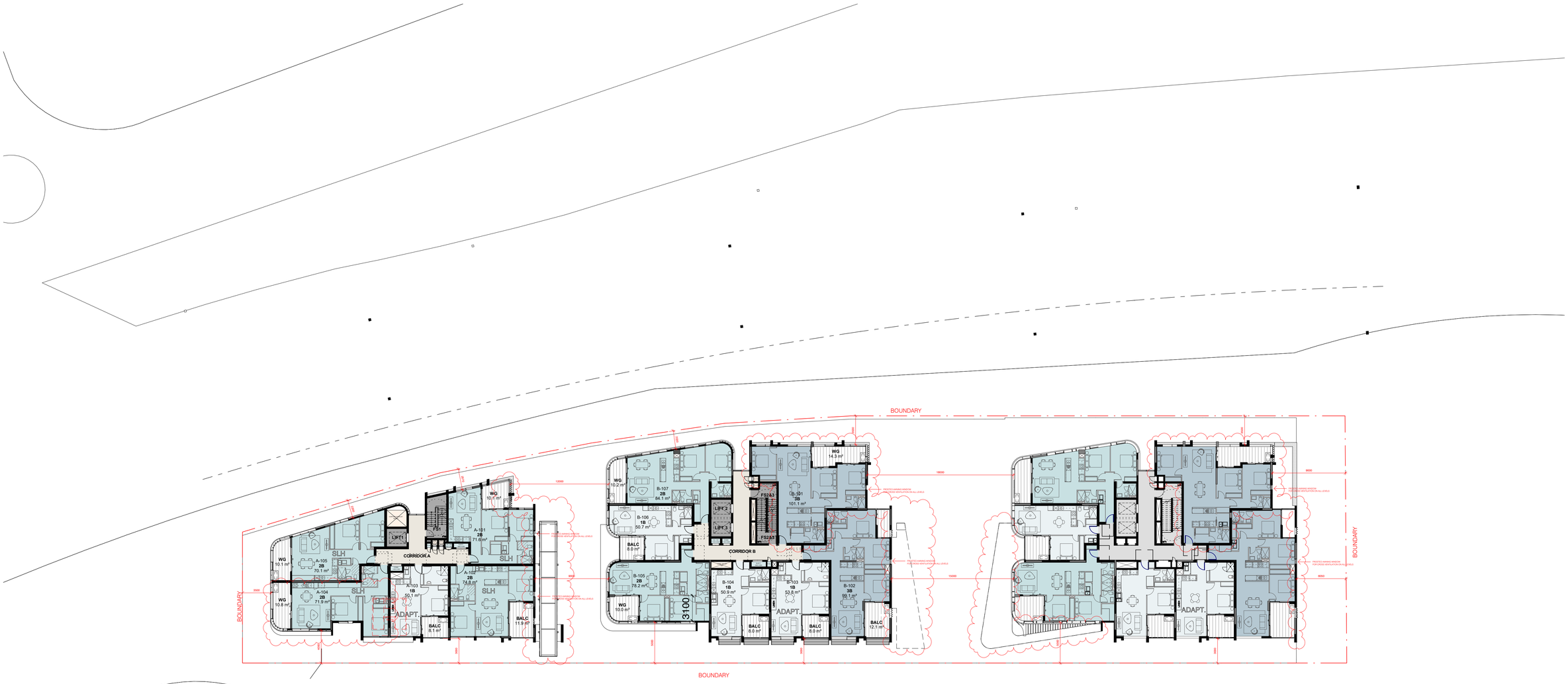


UNIT SCHEDULE - LEVEL 1						STORAGE A-L01	
UNIT NO.	UNIT TYPE	ACC.	INTERNAL	BAL.	WG.	Internal Storage	External Storage
A						A	
A-101	2 BED		71.6 m²	0 m²	10.1 m²	4.0 m³	4.0 m³
A-102	2 BED		74.8 m²	11.9 m²	0 m²	4.0 m³	4.0 m³
A-103	1 BED	ADAPT.	50.1 m²	8.1 m²	0 m²	3.1 m³	3.0 m³
A-104	2 BED		71.9 m²	0 m²	10.8 m²	4.0 m³	4.0 m³
A-105	2 BED		70.1 m²	0 m²	10.1 m²	4.0 m³	4.0 m³

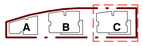
UNIT SCHEDULE - LEVEL 1						STORAGE B-L01	
UNIT NO.	UNIT TYPE	ACC.	INTERNAL	BAL.	WG.	Internal Storage	External Storage
B						B	
B-101	3 BED		101.1 m²	0 m²	14.3 m²	5.1 m³	5.0 m³
B-102	3 BED		99.1 m²	17.7 m²	0 m²	5.0 m³	5.0 m³
B-103	1 BED	ADAPT.	53.8 m²	8 m²	0 m²	3.1 m³	3.0 m³
B-104	1 BED		50.9 m²	8 m²	0 m²	4.1 m³	3.0 m³
B-105	2 BED		78.2 m²	0 m²	10 m²	4.0 m³	4.0 m³
B-106	1 BED		50.7 m²	8 m²	0 m²	3.0 m³	3.0 m³
B-107	2 BED		84.1 m²	0 m²	10.2 m²	4.0 m³	4.0 m³

UNIT SCHEDULE - LEVEL 1						STORAGE C-L01	
UNIT NO.	UNIT TYPE	ACC.	INTERNAL	BAL.	WG.	Internal Storage	External Storage
C						C	
C-101	3 BED		102.6 m²	0 m²	15.5 m²	5.7 m³	5.0 m³
C-102	3 BED		99.1 m²	12.1 m²	0 m²	5.0 m³	5.0 m³
C-103	1 BED	ADAPT.	53.8 m²	8 m²	0 m²	3.1 m³	3.0 m³
C-104	1 BED		50.9 m²	8 m²	0 m²	4.0 m³	3.0 m³
C-105	2 BED		78.2 m²	0 m²	10.1 m²	4.0 m³	4.0 m³
C-106	1 BED		50.7 m²	8 m²	0 m²	3.0 m³	3.0 m³
C-107	2 BED		84.1 m²	0 m²	10 m²	4.0 m³	4.0 m³

1B & 1B+S
2B & 2B+S
3B & 3B+S

1 LEVEL 01 PLAN
1 : 250

Key Plan:



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NSW Nominated Architects
S Parsons Architect No.6098
D Jones Architect No.4778

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Project PA017559
West Ryde Billbergia
63-77 West Parade, West Ryde

Status
DEVELOPMENT APPLICATION

Title
10-GENERAL ARRANGEMENT PLANS
LEVEL 01 PLAN

Drawing Number DA-10-1100
Revision B

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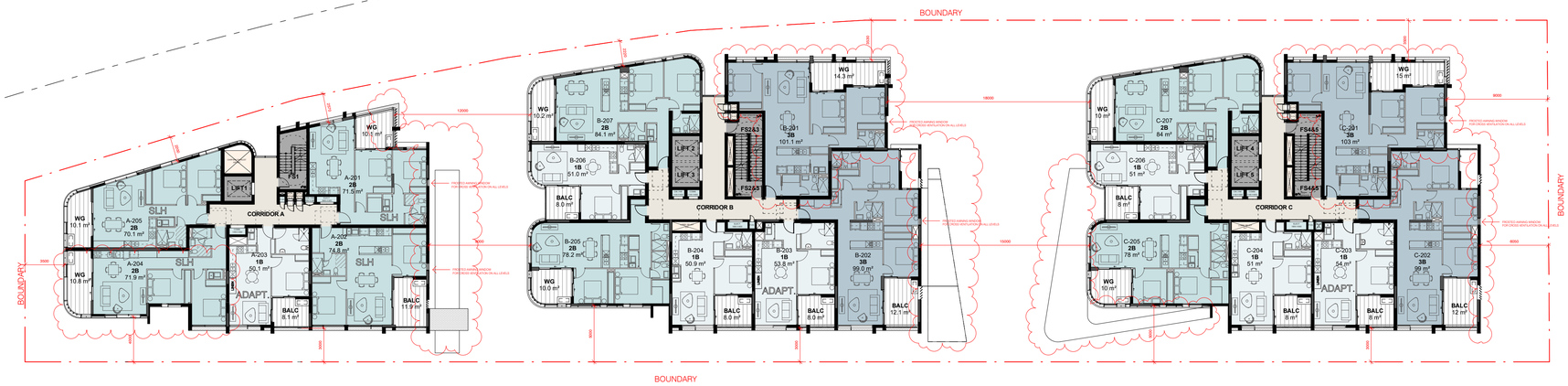


1 LEVEL 02 PLAN

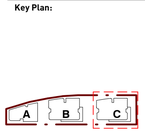
1 : 250

UNIT SCHEDULE - LEVEL 2						STORAGE A-L02	
UNIT NO.	UNIT TYPE	ACC.	INTERNAL	BAL.	WG.	Internal Storage	External Storage
A						A	
A-201	2 BED		71.5 m²	0 m²	10.1 m²	4.0 m³	4.0 m³
A-202	2 BED		74.8 m²	11.9 m²	0 m²	4.0 m³	4.0 m³
A-203	1 BED	ADAPT.	50.1 m²	8.1 m²	0 m²	3.1 m³	3.0 m³
A-204	2 BED		71.9 m²	0 m²	10.8 m²	4.0 m³	4.0 m³
A-205	2 BED		70.1 m²	0 m²	10.1 m²	4.0 m³	4.0 m³

UNIT SCHEDULE - LEVEL 2						STORAGE B-L02	
UNIT NO.	UNIT TYPE	ACC.	INTERNAL	BAL.	WG.	Internal Storage	External Storage
B						B	
B-201	3 BED		101.1 m²	0 m²	14.3 m²	5.1 m³	5.0 m³
B-202	3 BED		99 m²	12.1 m²	0 m²	5.0 m³	5.0 m³
B-203	1 BED	ADAPT.	53.8 m²	8 m²	0 m²	3.1 m³	3.0 m³
B-204	1 BED		50.9 m²	8 m²	0 m²	4.1 m³	3.0 m³
B-205	2 BED		78.2 m²	0 m²	10 m²	4.0 m³	4.0 m³
B-206	1 BED		51 m²	8 m²	0 m²	3.0 m³	3.0 m³
B-207	2 BED		84.1 m²	0 m²	10.2 m²	4.0 m³	4.0 m³

UNIT SCHEDULE - LEVEL 2						STORAGE C-L02	
UNIT NO.	UNIT TYPE	ACC.	INTERNAL	BAL.	WG.	Internal Storage	External Storage
C						C	
C-201	3 BED		102.6 m²	0 m²	15.5 m²	5.7 m³	5.0 m³
C-202	3 BED		99 m²	12.1 m²	0 m²	5.0 m³	5.0 m³
C-203	1 BED	ADAPT.	53.8 m²	8 m²	0 m²	3.1 m³	3.0 m³
C-204	1 BED		50.9 m²	8 m²	0 m²	4.0 m³	3.0 m³
C-205	2 BED		78.2 m²	0 m²	10.1 m²	4.0 m³	4.0 m³
C-206	1 BED		51 m²	8 m²	0 m²	3.0 m³	3.0 m³
C-207	2 BED		84.1 m²	0 m²	10 m²	4.0 m³	4.0 m³

Key Plan:



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D Jones Architect No.4778

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Project PA017559
West Ryde Billbergia
63-77 West Parade, West Ryde

Status
DEVELOPMENT APPLICATION

Title
10-GENERAL ARRANGEMENT PLANS
LEVEL 02 PLAN

Drawing Number DA-10-1200

Revision B

A1

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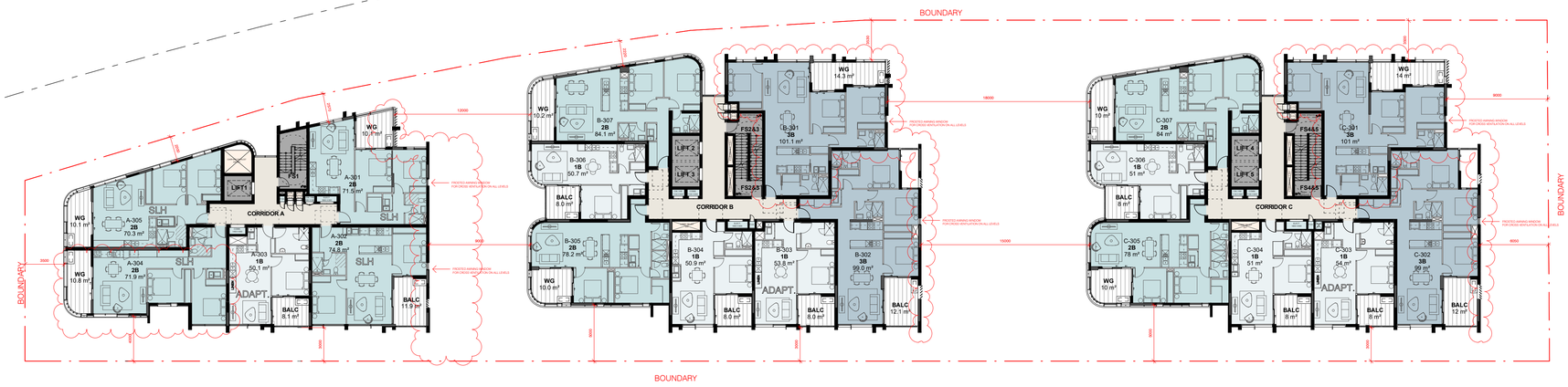


BUILDING A

BUILDING B

BUILDING C

1 LEVEL 03 PLAN

1 : 250

UNIT SCHEDULE - LEVEL 3						STORAGE A-L03	
UNIT NO.	UNIT TYPE	ACC.	INTERNAL	BAL.	WG.	Internal Storage	External Storage
A						A	
A-301	2 BED		71.5 m²	0 m²	10.1 m²	4.0 m³	4.0 m³
A-302	2 BED		74.8 m²	11.9 m²	0 m²	4.0 m³	4.0 m³
A-303	1 BED	ADAPT.	50.1 m²	8.1 m²	0 m²	3.1 m³	3.0 m³
A-304	2 BED		71.9 m²	0 m²	10.8 m²	4.0 m³	4.0 m³
A-305	2 BED		70.3 m²	0 m²	10.1 m²	4.0 m³	4.0 m³

UNIT SCHEDULE - LEVEL 3						STORAGE B-L03	
UNIT NO.	UNIT TYPE	ACC.	INTERNAL	BAL.	WG.	Internal Storage	External Storage
B						B	
B-301	3 BED		101.1 m²	0 m²	14.3 m²	5.1 m³	5.0 m³
B-302	3 BED		99 m²	12.1 m²	0 m²	5.0 m³	5.0 m³
B-303	1 BED	ADAPT.	53.8 m²	8 m²	0 m²	3.1 m³	3.0 m³
B-304	1 BED		50.9 m²	8 m²	0 m²	4.1 m³	3.0 m³
B-305	2 BED		78.2 m²	0 m²	10 m²	4.0 m³	4.0 m³
B-306	1 BED		50.7 m²	8 m²	0 m²	3.0 m³	3.0 m³
B-307	2 BED		84.1 m²	0 m²	10.2 m²	4.0 m³	4.0 m³

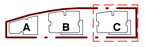
UNIT SCHEDULE - LEVEL 3						STORAGE C-L03	
UNIT NO.	UNIT TYPE	ACC.	INTERNAL	BAL.	WG.	Internal Storage	External Storage
C						C	
C-301	3 BED		100.7 m²	0 m²	14.3 m²	5.1 m³	5.0 m³
C-302	3 BED		99.1 m²	12.1 m²	0 m²	5.0 m³	5.0 m³
C-303	1 BED	ADAPT.	53.8 m²	8 m²	0 m²	3.1 m³	3.0 m³
C-304	1 BED		50.9 m²	8 m²	0 m²	4.0 m³	3.0 m³
C-305	2 BED		78.2 m²	0 m²	10.1 m²	4.0 m³	4.0 m³
C-306	1 BED		50.7 m²	8 m²	0 m²	3.0 m³	3.0 m³
C-307	2 BED		84.1 m²	0 m²	10 m²	4.0 m³	4.0 m³

1B & 1B+S

2B & 2B+S

3B & 3B+S

Key Plan:



Rv	Amendment	By	Ck	Date
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D Jones Architect No.4778

0 1 2 5 8m

Project PA017559
West Ryde Billbergia
63-77 West Parade, West Ryde

Status
DEVELOPMENT APPLICATION

Title
10-GENERAL ARRANGEMENT PLANS
LEVEL 03 PLAN

Drawing Number DA-10-1201

Revision B

A1

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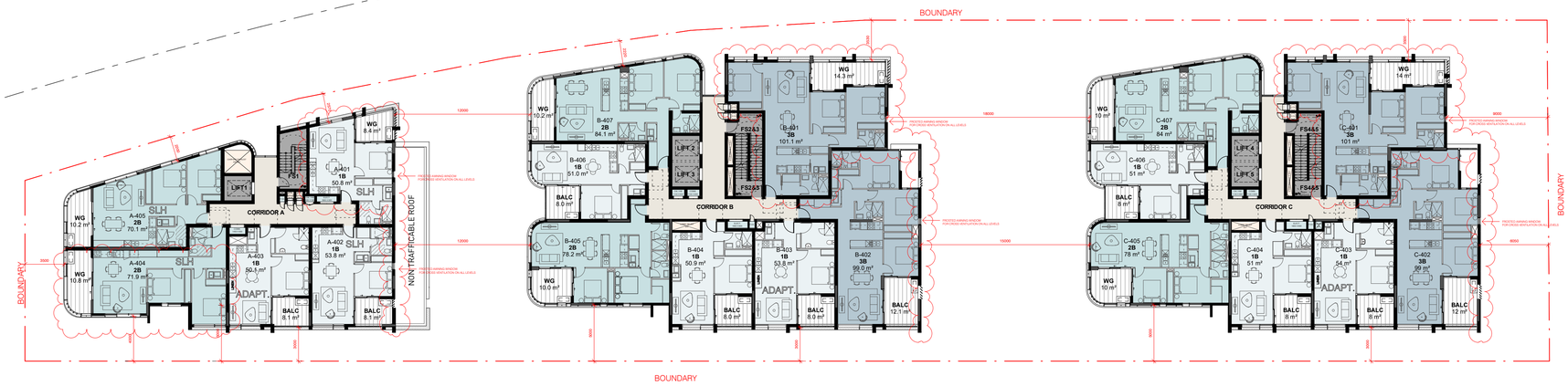


1 LEVEL 04 PLAN

1 : 250

UNIT SCHEDULE - LEVEL 4						STORAGE A-L04	
UNIT NO.	UNIT TYPE	ACC.	INTERNAL	BAL.	WG.	Internal Storage	External Storage
A						A	
A-401	1 BED		50.8 m²	0 m²	8.4 m²	3.1 m³	3.0 m³
A-402	1 BED		53.8 m²	8.1 m²	0 m²	3.1 m³	3.0 m³
A-403	1 BED	ADAPT.	50.1 m²	8.1 m²	0 m²	3.1 m³	3.0 m³
A-404	2 BED		71.9 m²	0 m²	10.8 m²	4.0 m³	4.0 m³
A-405	2 BED		70.1 m²	0 m²	10.2 m²	4.0 m³	4.0 m³

UNIT SCHEDULE - LEVEL 4						STORAGE B-L04	
UNIT NO.	UNIT TYPE	ACC.	INTERNAL	BAL.	WG.	Internal Storage	External Storage
B						B	
B-401	3 BED		101.1 m²	0 m²	14.3 m²	5.1 m³	5.0 m³
B-402	3 BED		99 m²	12.1 m²	0 m²	5.0 m³	5.0 m³
B-403	1 BED	ADAPT.	53.8 m²	8 m²	0 m²	3.1 m³	3.0 m³
B-404	1 BED		50.9 m²	8 m²	0 m²	4.1 m³	3.0 m³
B-405	2 BED		78.2 m²	0 m²	10 m²	4.0 m³	4.0 m³
B-406	1 BED		51 m²	8 m²	0 m²	3.0 m³	3.0 m³
B-407	2 BED		84.1 m²	0 m²	10.2 m²	4.0 m³	4.0 m³

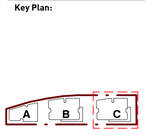
UNIT SCHEDULE - LEVEL 4						STORAGE C-L04	
UNIT NO.	UNIT TYPE	ACC.	INTERNAL	BAL.	WG.	Internal Storage	External Storage
C						C	
C-401	3 BED		100.7 m²	0 m²	14.3 m²	5.1 m³	5.0 m³
C-402	3 BED		99 m²	12.1 m²	0 m²	5.0 m³	5.0 m³
C-403	1 BED	ADAPT.	53.8 m²	8 m²	0 m²	3.1 m³	3.0 m³
C-404	1 BED		50.9 m²	8 m²	0 m²	4.0 m³	3.0 m³
C-405	2 BED		78.2 m²	0 m²	10.1 m²	4.0 m³	4.0 m³
C-406	1 BED		51 m²	8 m²	0 m²	3.0 m³	3.0 m³
C-407	2 BED		84.1 m²	0 m²	10 m²	4.0 m³	4.0 m³

1B & 1B+S

2B & 2B+S

3B & 3B+S

Key Plan:



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Project PA017559
West Ryde Billbergia
63-77 West Parade, West Ryde

Status
DEVELOPMENT APPLICATION

Title
10-GENERAL ARRANGEMENT PLANS
LEVEL 04 PLAN

Drawing Number DA-10-1202

Revision B

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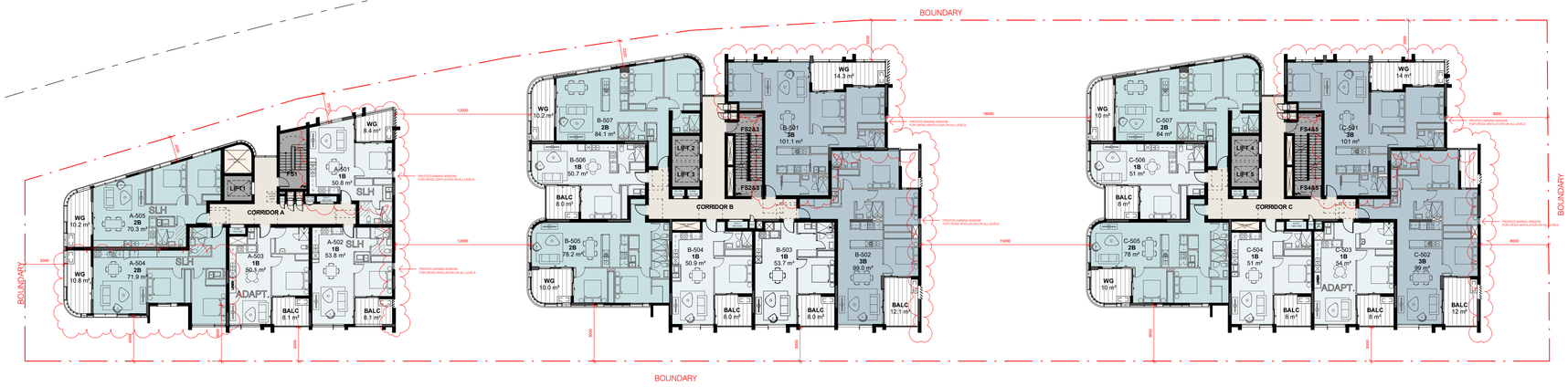


1 LEVEL 05 PLAN

1 : 250

UNIT SCHEDULE - LEVEL 5						STORAGE A-L05	
UNIT NO.	UNIT TYPE	ACC.	INTERNAL	BAL.	WG.	Internal Storage	External Storage
A						A	
A-501	1 BED		50.8 m²	0 m²	8.4 m²	3.1 m³	3.0 m³
A-502	1 BED		53.8 m²	8.1 m²	0 m²	3.1 m³	3.0 m³
A-503	1 BED	ADAPT.	50.1 m²	8.1 m²	0 m²	3.1 m³	3.0 m³
A-504	2 BED		71.9 m²	0 m²	10.8 m²	4.0 m³	4.0 m³
A-505	2 BED		70.3 m²	0 m²	10.2 m²	4.0 m³	4.0 m³

UNIT SCHEDULE - LEVEL 5						STORAGE B-L05	
UNIT NO.	UNIT TYPE	ACC.	INTERNAL	BAL.	WG.	Internal Storage	External Storage
B						B	
B-501	3 BED		101.1 m²	0 m²	14.3 m²	5.1 m³	5.0 m³
B-502	3 BED		99 m²	12.1 m²	0 m²	5.0 m³	5.0 m³
B-503	1 BED		53.7 m²	8 m²	0 m²	3.0 m³	3.0 m³
B-504	1 BED		50.9 m²	6 m²	0 m²	4.1 m³	3.0 m³
B-505	2 BED		78.2 m²	0 m²	10 m²	4.0 m³	4.0 m³
B-506	1 BED		50.7 m²	8 m²	0 m²	3.0 m³	3.0 m³
B-507	2 BED		84.1 m²	0 m²	10.2 m²	4.0 m³	4.0 m³

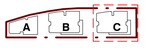
UNIT SCHEDULE - LEVEL 5						STORAGE C-L05	
UNIT NO.	UNIT TYPE	ACC.	INTERNAL	BAL.	WG.	Internal Storage	External Storage
C						C	
C-501	3 BED		100.7 m²	0 m²	14.3 m²	5.1 m³	5.0 m³
C-502	3 BED		99.1 m²	17.6 m²	0 m²	5.0 m³	5.0 m³
C-503	1 BED	ADAPT.	53.8 m²	8 m²	0 m²	3.1 m³	3.0 m³
C-504	1 BED		50.9 m²	8 m²	0 m²	4.0 m³	3.0 m³
C-505	2 BED		78.2 m²	0 m²	10.1 m²	4.0 m³	4.0 m³
C-506	1 BED		50.7 m²	8 m²	0 m²	3.0 m³	3.0 m³
C-507	2 BED		84.1 m²	0 m²	10 m²	4.0 m³	4.0 m³

1B & 1B+S

2B & 2B+S

3B & 3B+S

Key Plan:



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D Jones Architect No.4778

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Project PA017559
West Ryde Billbergia
63-77 West Parade, West Ryde

Status
DEVELOPMENT APPLICATION

Title
10-GENERAL ARRANGEMENT PLANS
LEVEL 05 PLAN

Drawing Number DA-10-1203

Revision B

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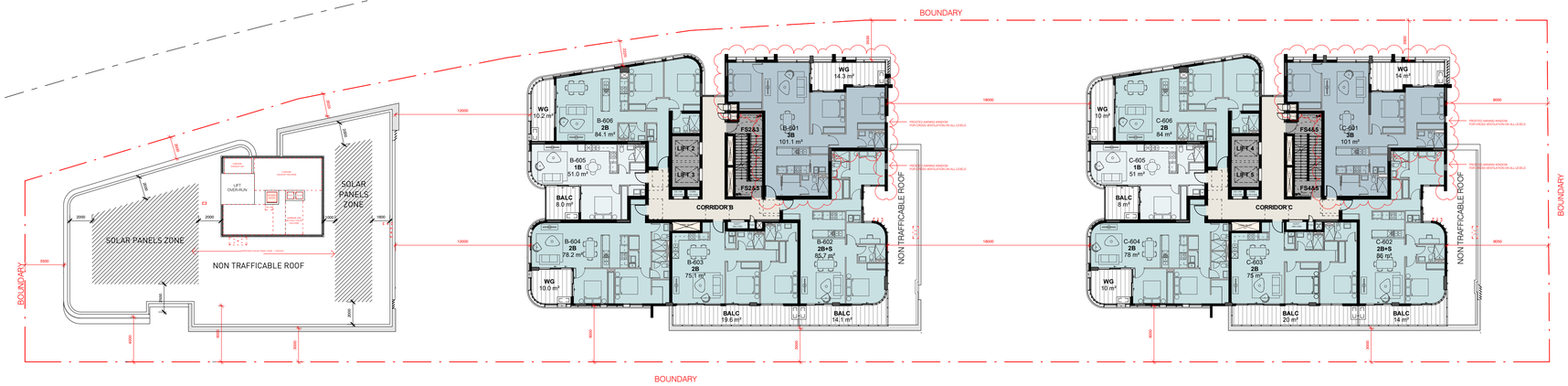


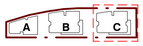
1 LEVEL 06 PLAN
1 : 250

UNIT SCHEDULE - LEVEL 6						STORAGE B-L6	
UNIT NO.	UNIT TYPE	ACC.	INTERNAL	BAL.	WG.	Internal Storage	External Storage
B						B	
B-601	3 BED		101.1 m²	0 m²	14.3 m²	5.1 m³	5.0 m³
B-602	2 BED+S		85.7 m²	14.1 m²	0 m²	4.0 m³	4.0 m³
B-603	2 BED		75.1 m²	19.6 m²	0 m²	4.1 m³	4.0 m³
B-604	2 BED		78.2 m²	0 m²	10 m²	4.0 m³	4.0 m³
B-605	1 BED		51 m²	8 m²	0 m²	3.0 m³	3.0 m³
B-606	2 BED		84.1 m²	0 m²	10.2 m²	4.0 m³	4.0 m³

UNIT SCHEDULE - LEVEL 6						STORAGE C-L6	
UNIT NO.	UNIT TYPE	ACC.	INTERNAL	BAL.	WG.	Internal Storage	External Storage
C						C	
C-601	3 BED		100.7 m²	0 m²	14.3 m²	5.1 m³	5.0 m³
C-602	2 BED+S		85.7 m²	14.1 m²	0 m²	4.0 m³	4.0 m³
C-603	2 BED		75 m²	19.6 m²	0 m²	4.2 m³	4.0 m³
C-604	2 BED		78.2 m²	0 m²	10.1 m²	4.0 m³	4.0 m³
C-605	1 BED		51 m²	8 m²	0 m²	3.0 m³	3.0 m³
C-606	2 BED		84.1 m²	0 m²	10 m²	4.0 m³	4.0 m³

1B & 1B+S
2B & 2B+S
3B & 3B+S

Key Plan:



Rv	Amendment	By	Ck	Date
B	DEVELOPMENT APPLICATION			17/07/2020
A	DEVELOPMENT APPLICATION			26/03/2020

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D Jones Architect No.4778

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Project PA017559
West Ryde Billbergia
63-77 West Parade, West Ryde

Status
DEVELOPMENT APPLICATION

Title
10-GENERAL ARRANGEMENT PLANS
LEVEL 06 PLAN

Drawing Number DA-10-1600
Revision B

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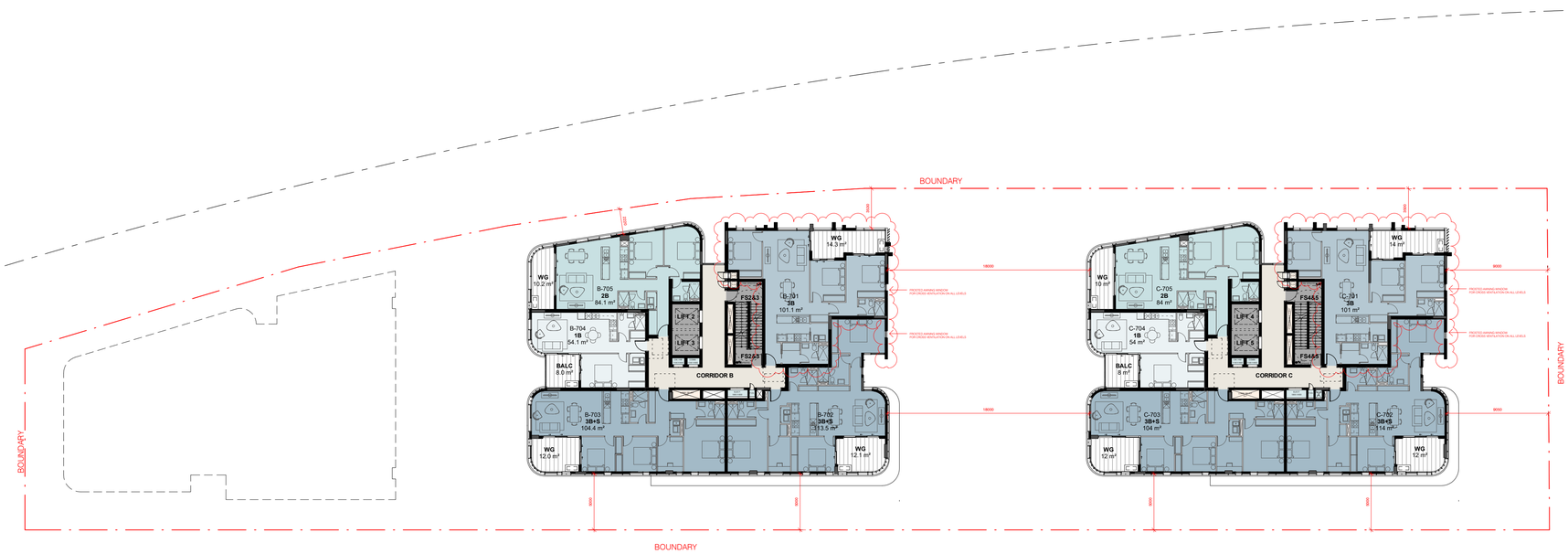

1 LEVEL 07 PLAN
1 : 250

UNIT SCHEDULE - LEVEL 7						STORAGE B-L7	
UNIT NO.	UNIT TYPE	ACC.	INTERNAL	BAL.	WG.	Internal Storage	External Storage
B						B	
B-701	3 BED		101.1 m²	0 m²	14.3 m²	5.1 m³	5.0 m³
B-702	3 BED+S		113.5 m²	0 m²	12.1 m²	5.0 m³	5.0 m³
B-703	3 BED+S		104.4 m²	0 m²	12 m²	5.1 m³	5.0 m³
B-704	1 BED		54.1 m²	8 m²	0 m²	3.0 m³	3.0 m³
B-705	2 BED		84.1 m²	0 m²	10.2 m²	4.0 m³	4.0 m³

UNIT SCHEDULE - LEVEL 7						STORAGE C-L7	
UNIT NO.	UNIT TYPE	ACC.	INTERNAL	BAL.	WG.	Internal Storage	External Storage
C						C	
C-701	3 BED		100.7 m²	0 m²	14.3 m²	5.1 m³	5.0 m³
C-702	3 BED+S		113.8 m²	0 m²	12.2 m²	5.0 m³	5.0 m³
C-703	3 BED+S		104.4 m²	0 m²	12 m²	5.1 m³	5.0 m³
C-704	1 BED		53.8 m²	8 m²	0 m²	3.0 m³	3.0 m³
C-705	2 BED		84.1 m²	0 m²	10 m²	4.0 m³	4.0 m³

1B & 1B+S
2B & 2B+S
3B & 3B+S

Key Plan:

A B C

Rv	Amendment	By	Ck	Date
B	DEVELOPMENT APPLICATION			17/07/2020
A	DEVELOPMENT APPLICATION			26/03/2020

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D Jones Architect No.4778

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Project PA017559
West Ryde Billbergia
63-77 West Parade, West Ryde

Status
DEVELOPMENT APPLICATION

Title
10-GENERAL ARRANGEMENT PLANS
LEVEL 07 PLAN

Drawing Number DA-10-1700

Revision B

A1

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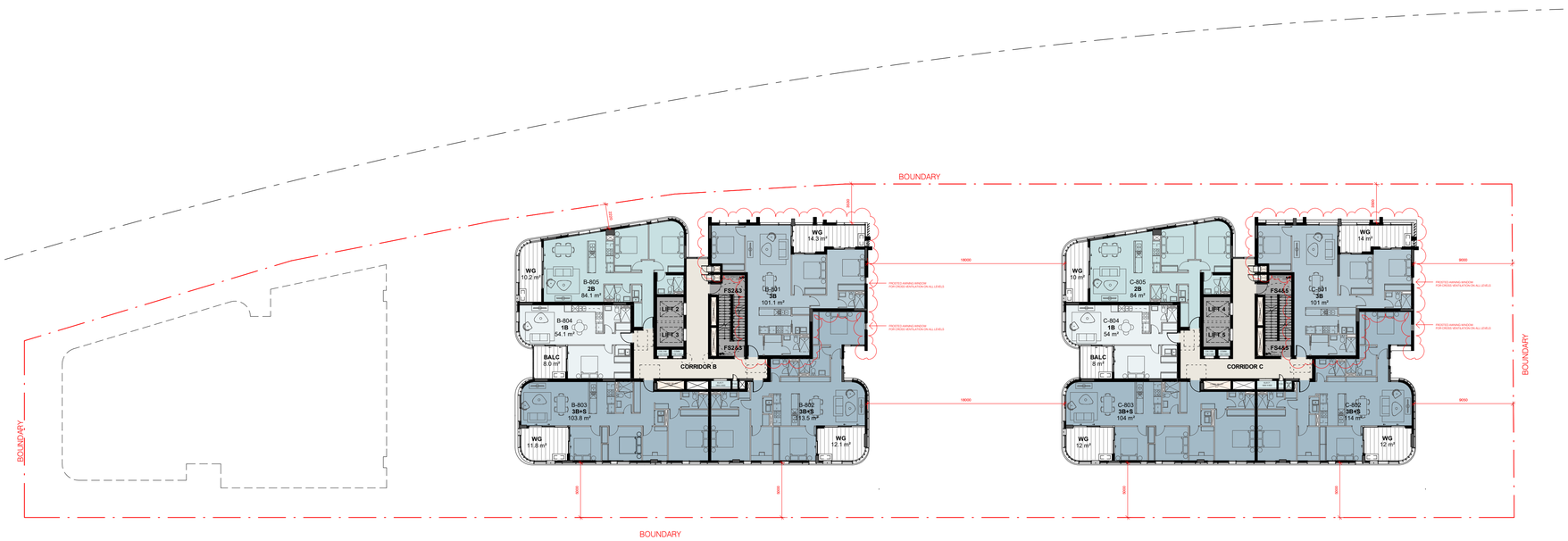


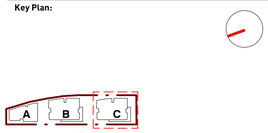
1 LEVEL 08 PLAN
1 : 250

UNIT SCHEDULE - LEVEL 8						STORAGE B-L8	
UNIT NO.	UNIT TYPE	ACC.	INTERNAL	BAL.	WG.	Internal Storage	External Storage
B						B	
B-801	3 BED		101.1 m²	0 m²	14.3 m²	5.1 m³	5.0 m³
B-802	3 BED+S		113.5 m²	0 m²	12.1 m²	5.0 m³	5.0 m³
B-803	3 BED+S		103.8 m²	0 m²	11.8 m²	5.1 m³	5.0 m³
B-804	1 BED		54.1 m²	8 m²	0 m²	3.0 m³	3.0 m³
B-805	2 BED		84.1 m²	0 m²	10.2 m²	4.0 m³	4.0 m³

UNIT SCHEDULE - LEVEL 8						STORAGE C-L8	
UNIT NO.	UNIT TYPE	ACC.	INTERNAL	BAL.	WG.	Internal Storage	External Storage
C						C	
C-801	3 BED		100.7 m²	0 m²	14.3 m²	5.1 m³	5.0 m³
C-802	3 BED+S		113.8 m²	0 m²	12.2 m²	5.0 m³	5.0 m³
C-803	3 BED+S		104.4 m²	0 m²	12 m²	5.1 m³	5.0 m³
C-804	1 BED		54.1 m²	8 m²	0 m²	3.0 m³	3.0 m³
C-805	2 BED		84.1 m²	0 m²	10 m²	4.0 m³	4.0 m³

1B & 1B+S
2B & 2B+S
3B & 3B+S

Key Plan:



Rv	Amendment	By	Ck	Date
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Project PA017559
West Ryde Billbergia
63-77 West Parade, West Ryde

Status
DEVELOPMENT APPLICATION

Title
10-GENERAL ARRANGEMENT PLANS
LEVEL 08 PLAN

Drawing Number DA-10-1800
Revision B

A1

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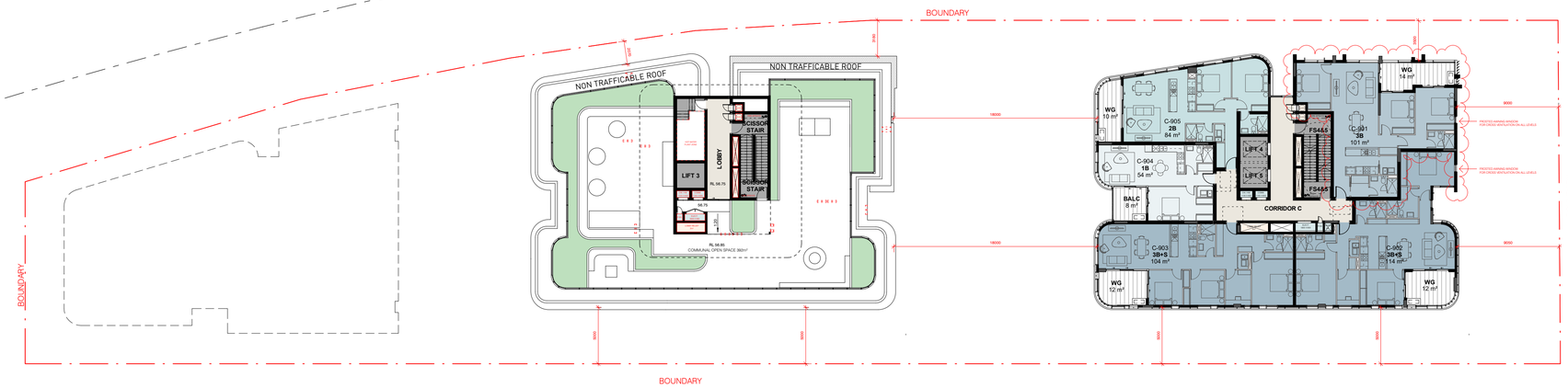

1 LEVEL 09 PLAN
1 : 250

UNIT SCHEDULE - LEVEL 9						STORAGE L9	
UNIT NO.	UNIT TYPE	ACC.	INTERNAL	BAL.	WG.	Internal Storage	External Storage
C						C	
C-901	3 BED		100.7 m²	0 m²	14.3 m²	5.1 m³	5.0 m³
C-902	3 BED+S		113.8 m²	0 m²	12.2 m²	5.0 m³	5.0 m³
C-903	3 BED+S		104.4 m²	0 m²	12 m²	5.1 m³	5.0 m³
C-904	1 BED		53.8 m²	8 m²	0 m²	3.0 m³	3.0 m³
C-905	2 BED		84.1 m²	0 m²	10 m²	4.0 m³	4.0 m³

1B & 1B+S
2B & 2B+S
3B & 3B+S

Key Plan:

A B C

Rv	Amendment	By	Ck	Date
B	DEVELOPMENT APPLICATION			17/07/2020
A	DEVELOPMENT APPLICATION			26/03/2020

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Project PA017559
West Ryde Billbergia
63-77 West Parade, West Ryde

Status
DEVELOPMENT APPLICATION

Title
10-GENERAL ARRANGEMENT PLANS
LEVEL 09 PLAN

Drawing Number DA-10-1900

Revision B

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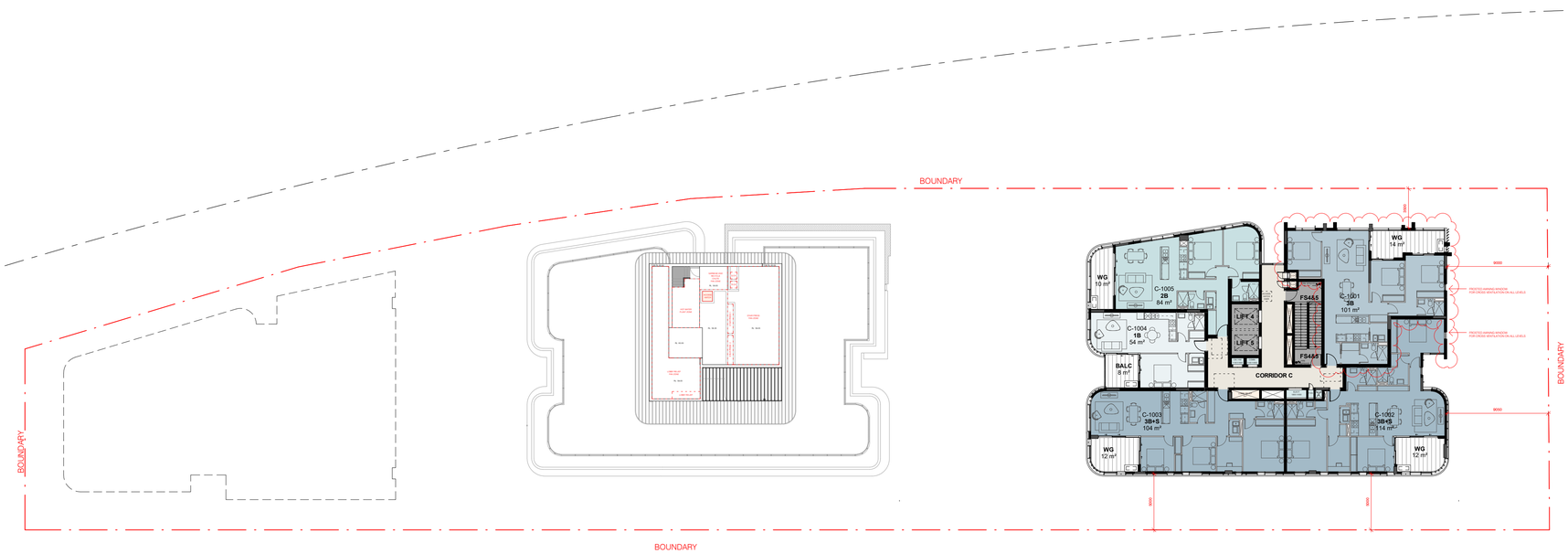

1 LEVEL 10 PLAN
1 : 250

UNIT SCHEDULE - LEVEL 10						STORAGE L10	
UNIT NO.	UNIT TYPE	ACC.	INTERNAL	BAL.	WG.	Internal Storage	External Storage
C						C	
C-1001	3 BED		100.7 m²	0 m²	14.3 m²	5.1 m³	5.0 m³
C-1002	3 BED+S		113.8 m²	0 m²	12.2 m²	5.0 m³	5.0 m³
C-1003	3 BED+S		104.4 m²	0 m²	12 m²	5.1 m³	5.0 m³
C-1004	1 BED		54.1 m²	8 m²	0 m²	3.0 m³	3.0 m³
C-1005	2 BED		84.1 m²	0 m²	10 m²	4.0 m³	4.0 m³

1B & 1B+S
2B & 2B+S
3B & 3B+S

Key Plan:

A B C

Rv	Amendment	By	Ck	Date
B	DEVELOPMENT APPLICATION			17/07/2020
A	DEVELOPMENT APPLICATION			26/03/2020

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Project PA017559
West Ryde Billbergia
63-77 West Parade, West Ryde

Status
DEVELOPMENT APPLICATION

Title
10-GENERAL ARRANGEMENT PLANS
LEVEL 10 PLAN

Drawing Number DA-10-2000
Revision B

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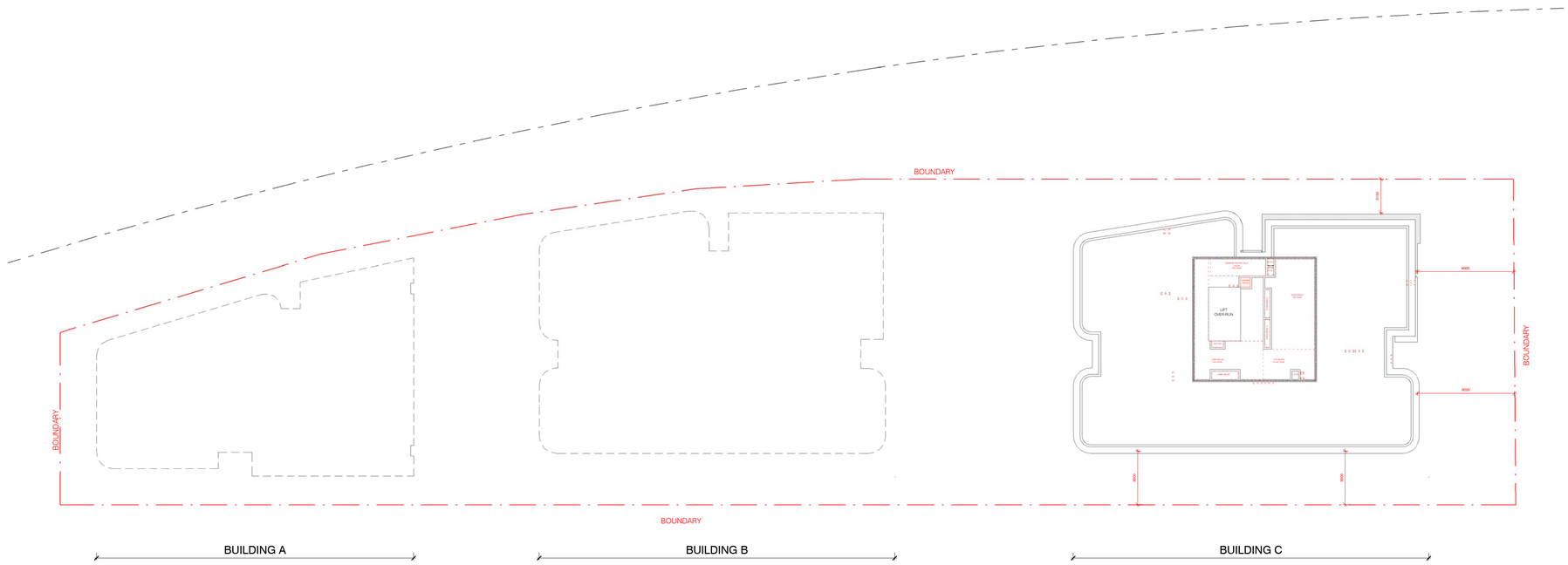
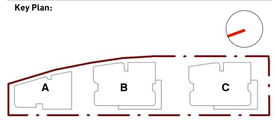


1 ARCH-DA_ROOF
1 : 250

Key Plan:



Rv	Amendment	By	Ck	Date
B	DEVELOPMENT APPLICATION			17/07/2020
A	DEVELOPMENT APPLICATION			26/03/2020

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Project PA017559
West Ryde Billbergia
63-77 West Parade, West Ryde

Status
DEVELOPMENT APPLICATION

Title
10-GENERAL ARRANGEMENT PLANS
ROOF PLAN

Drawing Number DA-10-2200

Revision B

A1

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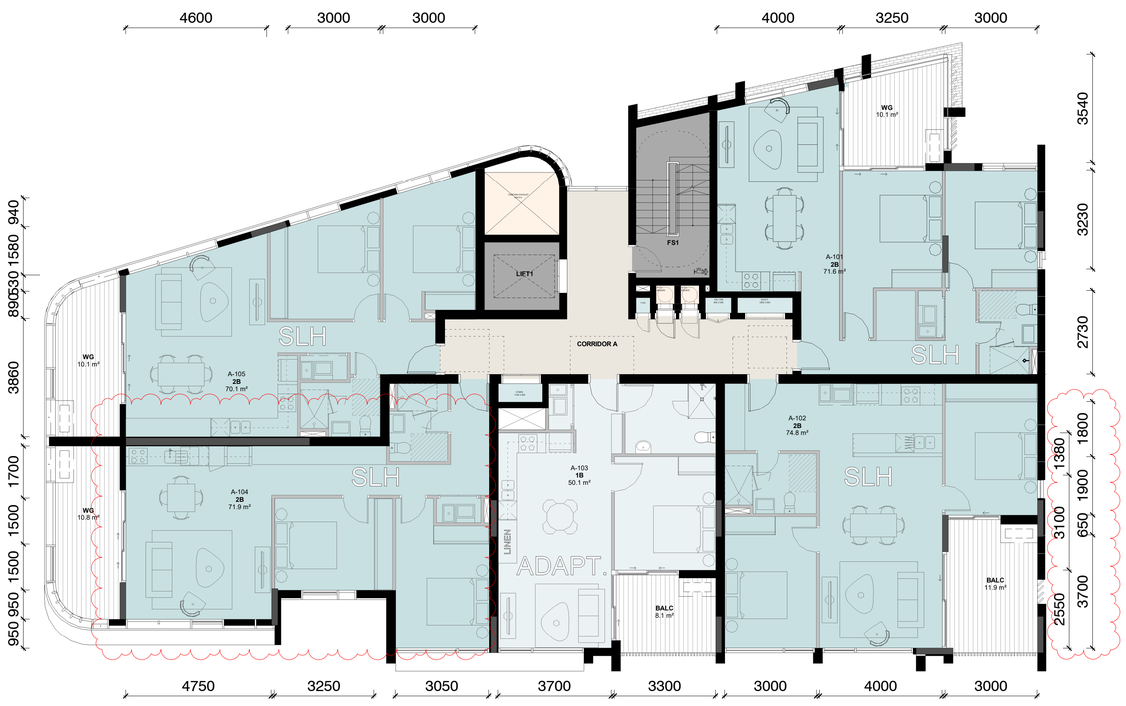
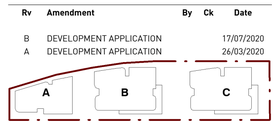
1 BUILDING A - GROUND FLOOR APARTMENT
1 : 100



2 BUILDING A - TYPICAL APARTMENTS
1 : 100

3 BUILDING A -LEVELS 4 & 5 FLOOR APARTMENTS
1 : 100

Key Plan:



Rv	Amendment	By	Ck	Date
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A	DEVELOPMENT APPLICATION			26/03/2020

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Project PA017559
West Ryde Billbergia
63-77 West Parade, West Ryde

Status
DEVELOPMENT APPLICATION

Title
10-GENERAL ARRANGEMENT PLANS
BUILDING A - TYPICAL APARTMENT LAYOUTS

Drawing Number DA-10-5000

Revision B

A1

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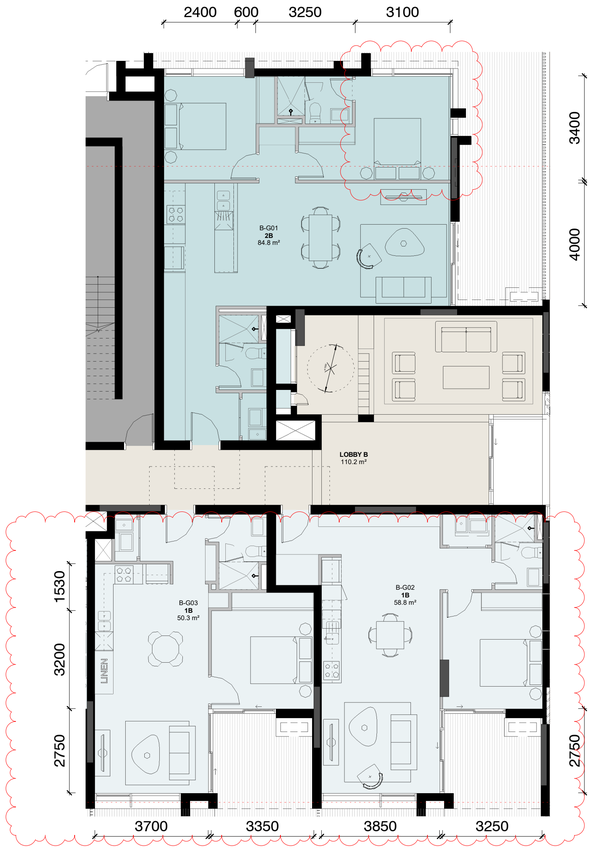


1 BUILDING B - GROUND FLOOR APARTMENTS
1 : 100

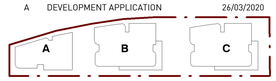
2 BUILDING B & C - TYPICAL APARTMENTS
1 : 100

3 BUILDING B & C -LEVELS 6 & 7 FLOOR APARTMENTS
1 : 100

4 BUILDING B & C -LEVELS 8 TO ROOF FLOOR APARTMENTS
1 : 100

DIMENSIONS ONLY TO DEMONSTRATE COMPLIANCE WITH MINIMUM ADG SIZES FOR LIVING/DINING AND BEDROOMS

Key Plan:



Rv	Amendment	By	Ck	Date
B	DEVELOPMENT APPLICATION			17/07/2020
A	DEVELOPMENT APPLICATION			26/03/2020

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0 1 2 5 8m

Project PA017559
West Ryde Billbergia
63-77 West Parade, West Ryde

Status
DEVELOPMENT APPLICATION

Title
10-GENERAL ARRANGEMENT PLANS
BUILDING B & C - TYPICAL APARTMENT LAYOUTS

Drawing Number DA-10-5100
Revision B

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A1

1 WEST PARADE ELEVATION
1 : 250

EXTERNAL FINISHES

FIBRE CEMENT FINISHES

FC1 Silbonit 010HA_SuperbiancoRigo

FC2 Silbonit 030HC_Grigio

FC3 Silbonit 020HA_Naturale

FC4 Silbonit 080HA_Deserto

FC5 Silbonit 030HC_Grigio

MASONRY FINISHES

M1 PGH Bricks Mowbray Blue Stretcher Bond

M2 PGH Bricks Mineral Stretcher Bond

M2A PGH Bricks Mineral Soldier Course

CONCRETE FINISH

C1

POWDERCOAT FINISHES

PC1 Dulux "Fresh Gold" Satin

PC2 Dulux "Medium Bronze" Satin

PC3 Dulux "Dark Bronze" Satin

PAINT FINISHES

P1 Dulux "Namadji" (Matte)

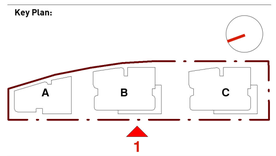
P2 Dulux "Distant Planet" (Matte)

GLAZING

G1 Clear Vision Glass

G2 Frosted Glass

Key Plan:



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Project PA017559
West Ryde Billbergia
63-77 West Parade, West Ryde

Status
DEVELOPMENT APPLICATION

Title
20-ELEVATIONS
WEST ELEVATION

Drawing Number DA-20-0100

Revision B

A1

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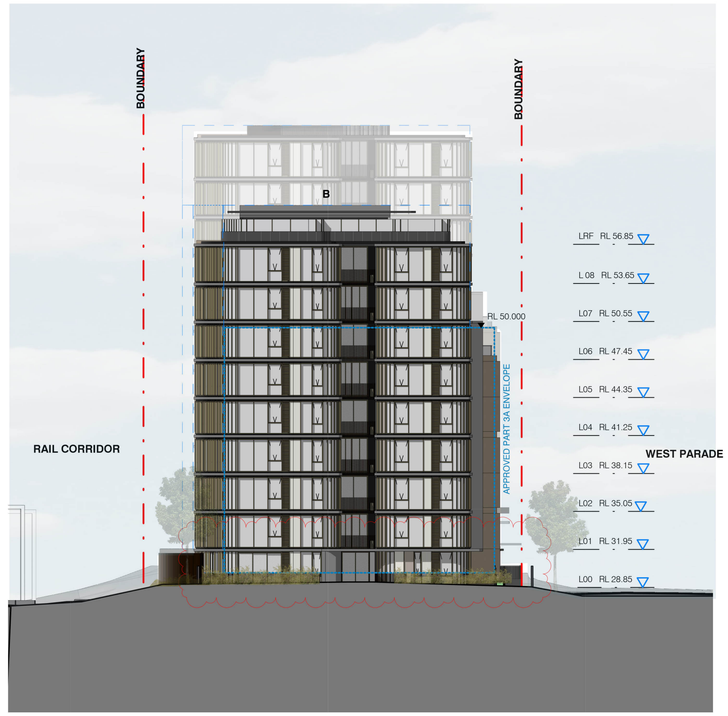
1 BUILDING A NORTH ELEVATION
1 : 250



2 BUILDING B NORTH ELEVATION
1 : 250

3 BUILDING C NORTH ELEVATION
1 : 250

EXTERNAL FINISHES

FIBRE CEMENT FINISHES

- **FC1** Silbonit 010HA_SuperbiancoRigo
- **FC2** Silbonit 030HC_Grigio
- **FC3** Silbonit 020HA_Naturale
- **FC4** Silbonit 080HA_Deserto
- **FC5** Silbonit 030HC_Grigio

MASONRY FINISHES

- **M1** PGH Bricks Mowbray Blue Stretcher Bond
- **M2** PGH Bricks Mineral Stretcher Bond
- **M2A** PGH Bricks Mineral Soldier Course

CONCRETE FINISH

- **C1**

POWDERCOAT FINISHES

- **PC1** Dulux "Fresh Gold" Satin
- **PC2** Dulux "Medium Bronze" Satin
- **PC3** Dulux "Dark Bronze" Satin

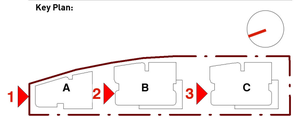
PAINT FINISHES

- **P1** Dulux "Namadji" (Matte)
- **P2** Dulux "Distant Planet" (Matte)

GLAZING

- **G1** Clear Vision Glass
- **G2** Frosted Glass

Key Plan:



Rv	Amendment	By	Ck	Date
B	DEVELOPMENT APPLICATION			17/07/2020
A	DEVELOPMENT APPLICATION			26/03/2020

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NSW Nominated Architects
S Parsons Architect No.6098
D Jones Architect No.4778

0 2 5 10 20m

Project PA017559
West Ryde Billbergia
63-77 West Parade, West Ryde

Status
DEVELOPMENT APPLICATION

Title
20-ELEVATIONS
NORTH ELEVATIONS

Drawing Number DA-20-0200

Revision B

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17/07/2020 12:57:52 PM

A1

1 BUILDING A SOUTH ELEVATION
1 : 250

2 BUILDING B SOUTH ELEVATION
1 : 250

3 BUILDING C SOUTH ELEVATION
1 : 250

EXTERNAL FINISHES

FIBRE CEMENT FINISHES

- **FC1** Silbonit 010HA_SuperbiancoRigo
- **FC2** Silbonit 030HC_Grigio
- **FC3** Silbonit 020HA_Naturale
- **FC4** Silbonit 080HA_Deserto
- **FC5** Silbonit 030HC_Grigio

MASONRY FINISHES

- **M1** PGH Bricks Mowbray Blue Stretcher Bond
- **M2** PGH Bricks Mineral Stretcher Bond
- **M2A** PGH Bricks Mineral Soldier Course

CONCRETE FINISH

- **C1**

POWDERCOAT FINISHES

- **PC1** Dulux "Fresh Gold" Satin
- **PC2** Dulux "Medium Bronze" Satin
- **PC3** Dulux "Dark Bronze" Satin

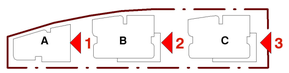
PAINT FINISHES

- **P1** Dulux "Namadji" (Matte)
- **P2** Dulux "Distant Planet" (Matte)

GLAZING

- **G1** Clear Vision Glass
- **G2** Frosted Glass

Key Plan:



Rv	Amendment	By	Ck	Date
B	DEVELOPMENT APPLICATION			17/07/2020
A	DEVELOPMENT APPLICATION			26/03/2020

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S Parsons Architect No.6098
D Jones Architect No.4778

0 1 2 5 8m

Project PA017559
West Ryde Billbergia
63-77 West Parade, West Ryde

Status
DEVELOPMENT APPLICATION

Title
20-ELEVATIONS
SOUTH ELEVATIONS

Drawing Number DA-20-0300

Revision B

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A1

1 EAST ELEVATION
1 : 250

EXTERNAL FINISHES

FIBRE CEMENT FINISHES

FC1
Silbonit 010HA_SuperbiancoRigo

FC2
Silbonit 030HC_Grigio

FC3
Silbonit 020HA_Naturale

FC4
Silbonit 080HA_Deserto

FC5
Silbonit 030HC_Grigio

MASONRY FINISHES

M1
PGH Bricks Mowbray Blue Stretcher Bond

M2
PGH Bricks Mineral Stretcher Bond

M2A
PGH Bricks Mineral Soldier Course

CONCRETE FINISH

C1

POWDERCOAT FINISHES

PC1
Dulux "Fresh Gold" Satin

PC2
Dulux "Medium Bronze" Satin

PC3
Dulux "Dark Bronze" Satin

PAINT FINISHES

P1
Dulux "Namadji" (Matte)

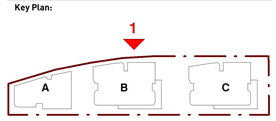
P2
Dulux "Distant Planet" (Matte)

GLAZING

G1
Clear Vision Glass

G2
Frosted Glass

Key Plan:



Rv	Amendment	By	Ck	Date
B	DEVELOPMENT APPLICATION			17/07/2020
A	DEVELOPMENT APPLICATION			26/03/2020

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Project PA017559
West Ryde Billbergia
63-77 West Parade, West Ryde

Status
DEVELOPMENT APPLICATION

Title
20-ELEVATIONS
EAST ELEVATION

Drawing Number DA-20-0400

Revision B

A1

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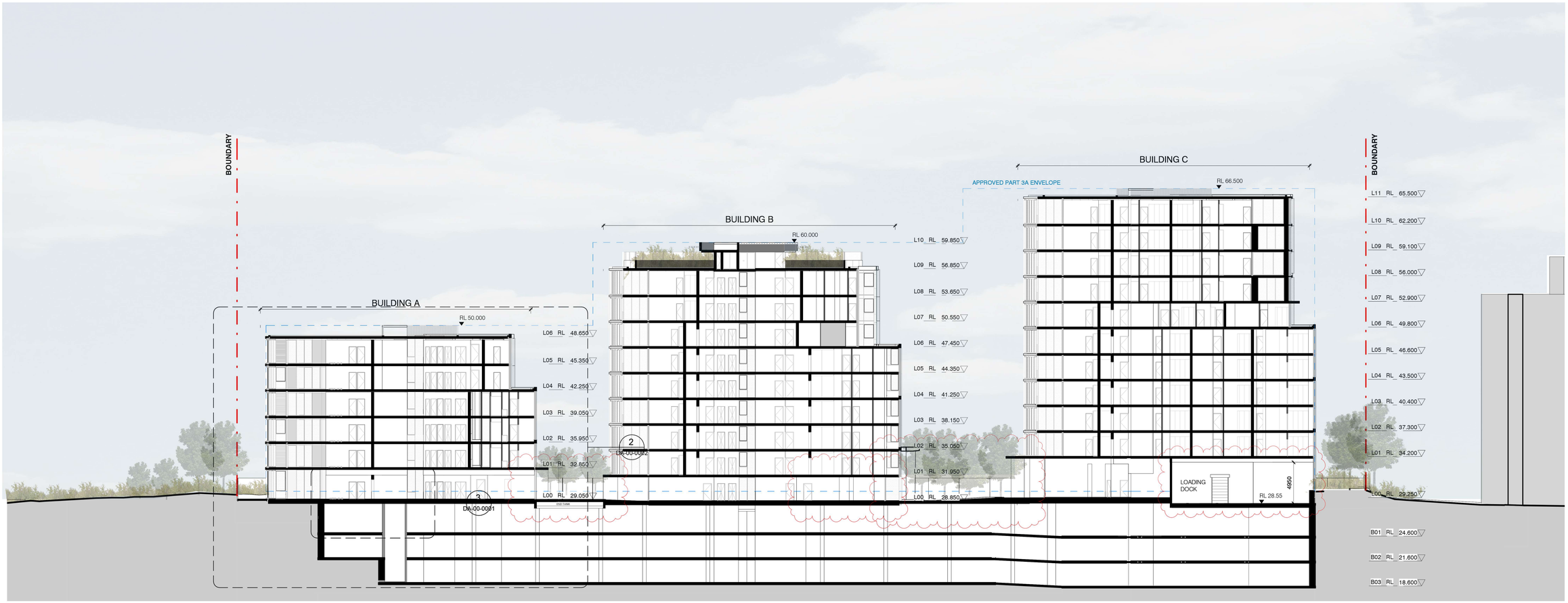
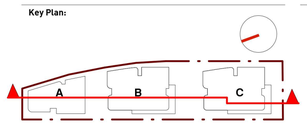


1 SECTION A-A'
1 : 250

Key Plan:



Rv	Amendment	By	Ck	Date
B	DEVELOPMENT APPLICATION			17/07/2020
A	DEVELOPMENT APPLICATION			26/03/2020

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Project PA017559
West Ryde Billbergia
63-77 West Parade, West Ryde

Status
DEVELOPMENT APPLICATION

Title
30-SECTIONS
SITE SECTION A-A

Drawing Number DA-30-0100

Revision B

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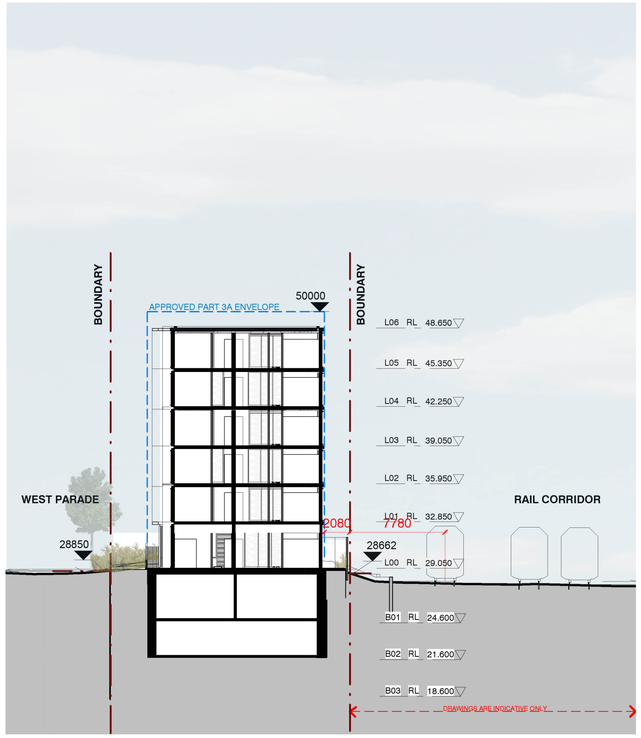
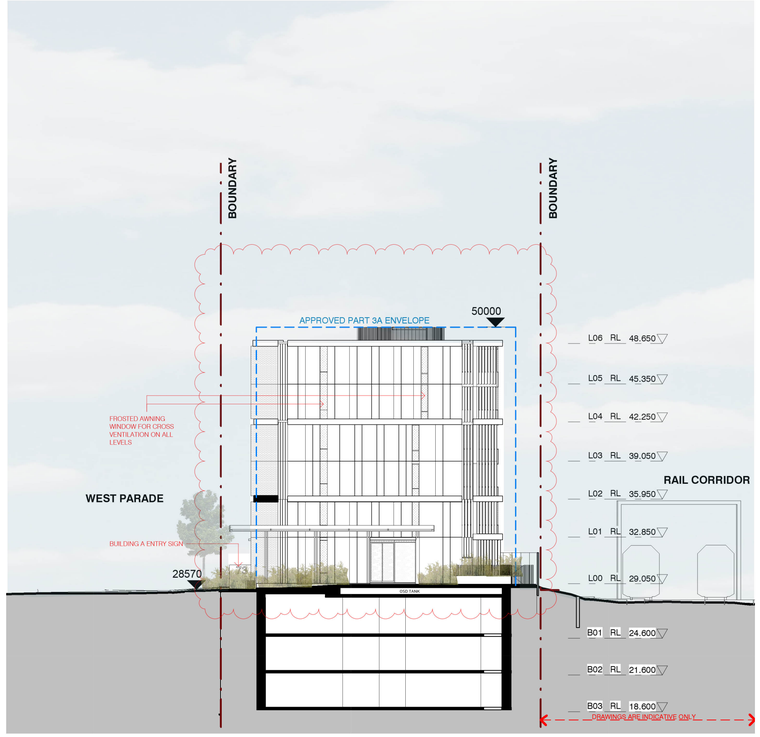
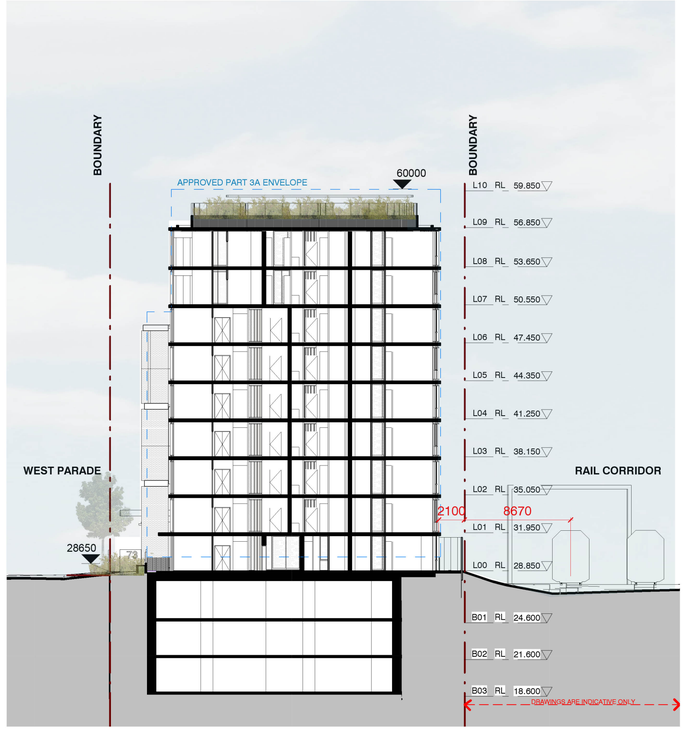


1 SECTION - B-B' - BUILDING A
1 : 250

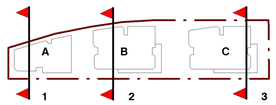


2 SECTION C-C' - BUILDING A
1 : 250



3 SECTION - D-D" - BUILDING B
1 : 250

Key Plan:



Rv	Amendment	By	Ck	Date
B	DEVELOPMENT APPLICATION			17/07/2020
A	DEVELOPMENT APPLICATION			26/03/2020

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D Jones Architect No.4778

0 2 5 10 20m

Project PA017559
West Ryde Billbergia
63-77 West Parade, West Ryde

Status
DEVELOPMENT APPLICATION

Title
30-SECTIONS
SITE SECTIONS B-B, C-C, D-D

Drawing Number DA-30-0200
Revision B

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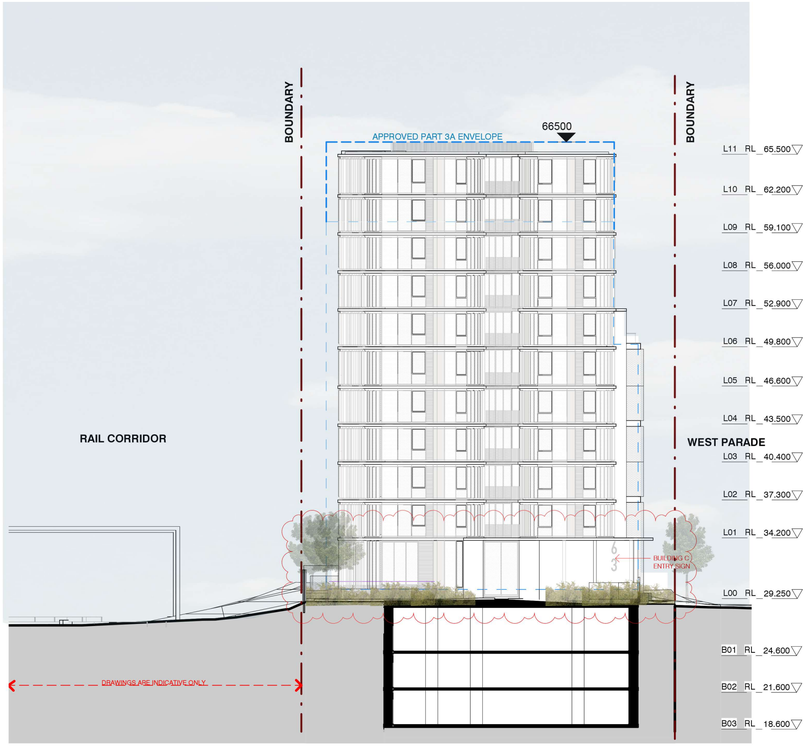
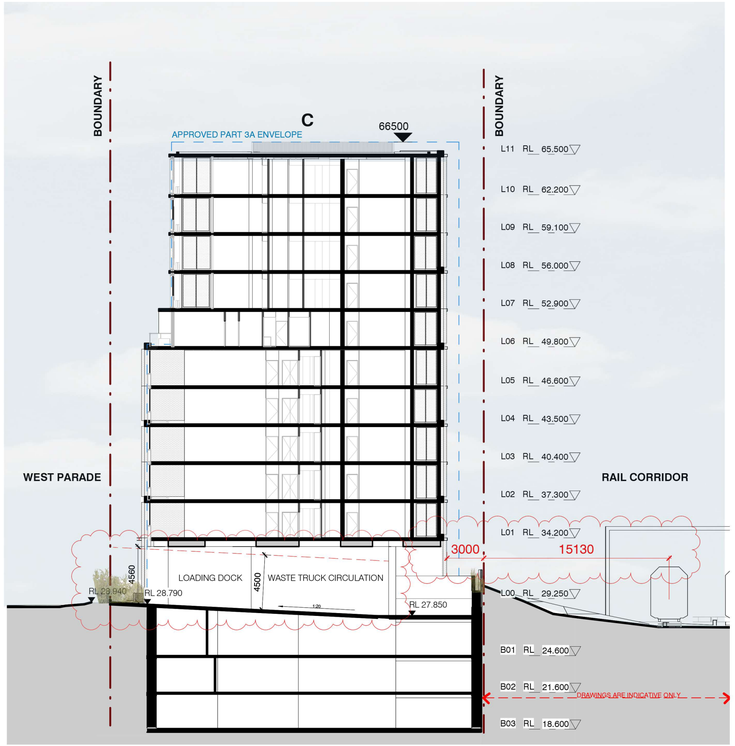
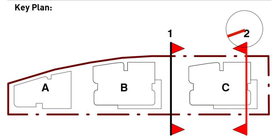


1 Section E-E' - BUILDING C
1 : 250



2 SECTION F-F' - BUILDING C
1 : 250

Key Plan:



Rv	Amendment	By	Ck	Date
B	DEVELOPMENT APPLICATION			17/07/2020
A	DEVELOPMENT APPLICATION			26/03/2020

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D Jones Architect No.4778

PTW

0 2 5 10 20m

Project PA017559
West Ryde Billbergia
63-77 West Parade, West Ryde

Status
DEVELOPMENT APPLICATION

Title
30-SECTIONS
SITE SECTION E-E', F-F'

Drawing Number DA-30-0300

Revision B

A1

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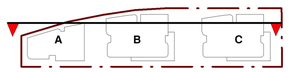
3/08/2020 2:37:31 PM

1 SECTION G-G'
1 : 250

Key Plan:



Rv	Amendment	By	Ck	Date
B	DEVELOPMENT APPLICATION			17/07/2020
A	DEVELOPMENT APPLICATION			26/03/2020

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0 2 5 10 20m

Project PA017559
West Ryde Billbergia
63-77 West Parade, West Ryde

Status
DEVELOPMENT APPLICATION

Title
30-SECTIONS
SITE SECTION G-G'

Drawing Number DA-30-0401

Revision B

A1

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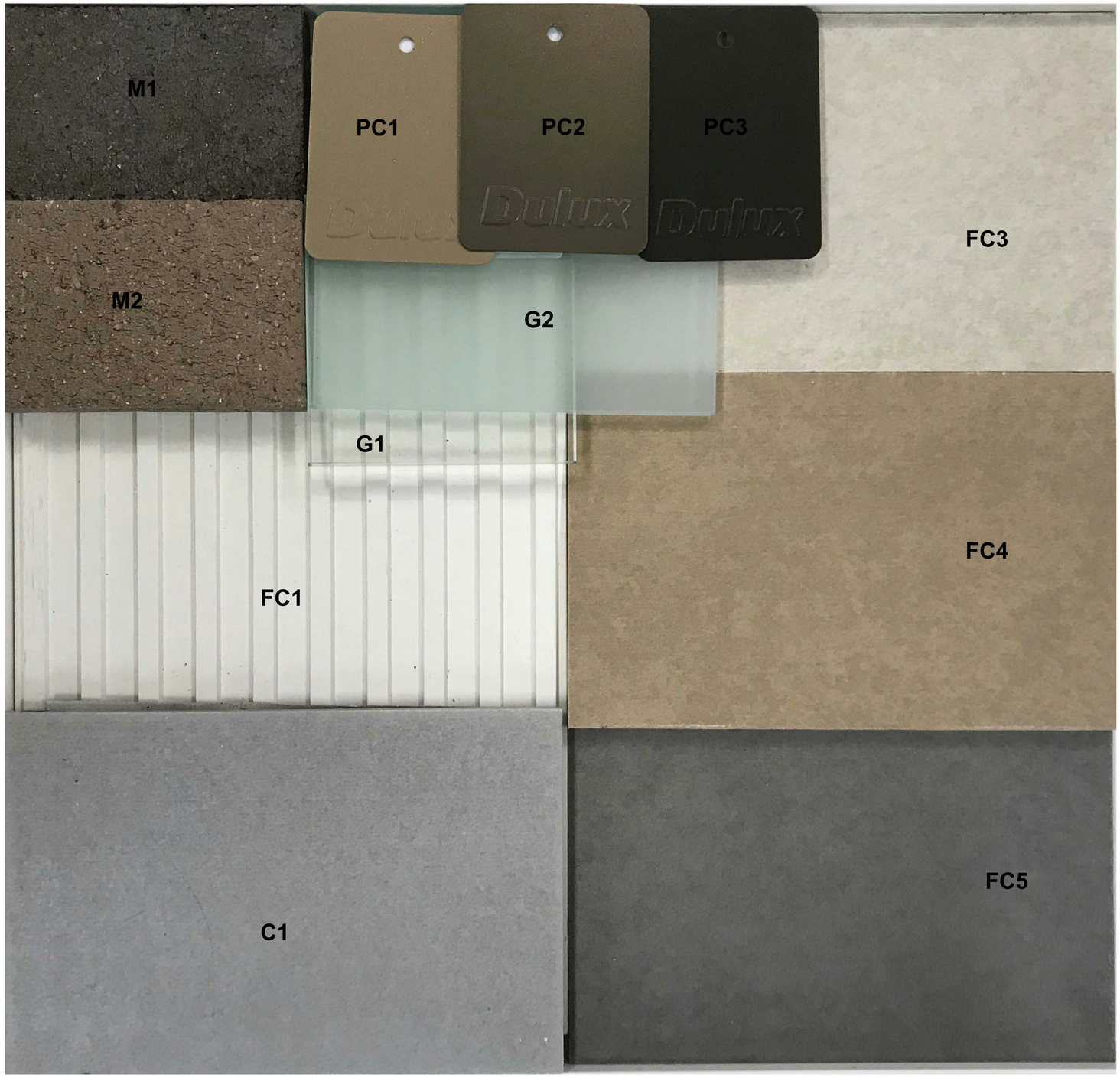


EXTERNAL FINISHES

FIBRE CEMENT FINISHES

FC1
Silbonit 010HA_SuperbiancoRigo

FC2
Silbonit 030HC_Grigio

FC3
Silbonit 020HA_Naturale

FC4
Silbonit 080HA_Deserto

FC5
Silbonit 030HC_Grigio

MASONRY FINISHES

M1
PGH Bricks Mowbray Blue Stretcher Bond

M2
PGH Bricks Mineral Stretcher Bond

M2A
PGH Bricks Mineral Soldier Course

CONCRETE FINISH

C1

POWDERCOAT FINISHES

PC1
Dulux "Fresh Gold" Satin

PC2
Dulux "Medium Bronze" Satin

PC3
Dulux "Dark Bronze" Satin

PAINT FINISHES

P1
Dulux "Namadji" (Matte)

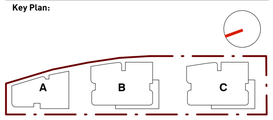
P2
Dulux "Distant Planet" (Matte)

GLAZING

G1
Clear Vision Glass

G2
Frosted Glass

Key Plan:



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D Jones Architect No.4778

Project PA017559
West Ryde Billbergia
63-77 West Parade, West Ryde

Status
DEVELOPMENT APPLICATION

Title
50-EXTERNAL MATERIAL AND FINISHES
EXTERNAL MATERIAL & FINISHES SAMPLE BOARD

Drawing Number DA-50-0200
Revision A

A1

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26/03/2020 6:26:10 PM

1 WEST PARADE ELEVATION
1 : 50

2 BUILDING A - EAST ELEVATION
1 : 50

EXTERNAL FINISHES

FIBRE CEMENT FINISHES

- **FC1** Silbonit 010HA_SuperbiancoRigo
- **FC2** Silbonit 030HC_Grigio
- **FC3** Silbonit 020HA_Naturale
- **FC4** Silbonit 080HA_Deserto
- **FC5** Silbonit 030HC_Grigio

MASONRY FINISHES

- **M1** PGH Bricks Mowbray Blue Stretcher Bond
- **M2** PGH Bricks Mineral Stretcher Bond
- **M2A** PGH Bricks Mineral Soldier Course

CONCRETE FINISH

- **C1**

POWDERCOAT FINISHES

- **PC1** Dulux "Fresh Gold" Satin
- **PC2** Dulux "Medium Bronze" Satin
- **PC3** Dulux "Dark Bronze" Satin

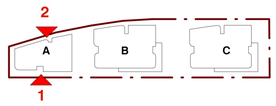
PAINT FINISHES

- **P1** Dulux "Namadji" (Matte)
- **P2** Dulux "Distant Planet" (Matte)

GLAZING

- **G1** Clear Vision Glass
- **G2** Frosted Glass

Key Plan:



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Project PA017559
West Ryde Billbergia
63-77 West Parade, West Ryde

Status
DEVELOPMENT APPLICATION

Title
50-EXTERNAL MATERIAL AND FINISHES
EXTERNAL MATERIAL AND FINISHES - BUILDING A

Drawing Number DA-50-0300
Revision A

A1

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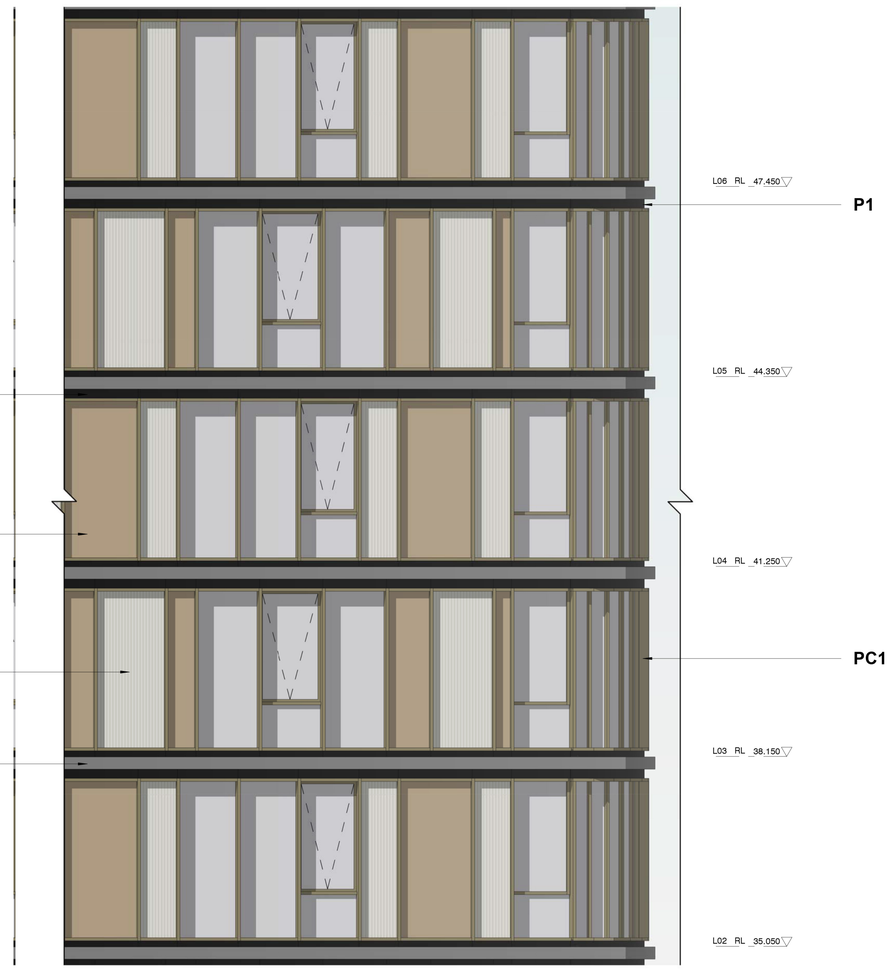
1 WEST PARADE ELEVATION
1 : 50



2 BUILDING B - EAST ELEVATION
1 : 50

EXTERNAL FINISHES

FIBRE CEMENT FINISHES

FC1
Silbonit 010HA_SuperbiancoRigo

FC2
Silbonit 030HC_Grigio

FC3
Silbonit 020HA_Naturale

FC4
Silbonit 080HA_Deserto

FC5
Silbonit 030HC_Grigio

MASONRY FINISHES

M1
PGH Bricks Mowbray Blue Stretcher Bond

M2
PGH Bricks Mineral Stretcher Bond

M2A
PGH Bricks Mineral Soldier Course

CONCRETE FINISH

C1

POWDERCOAT FINISHES

PC1
Dulux "Fresh Gold" Satin

PC2
Dulux "Medium Bronze" Satin

PC3
Dulux "Dark Bronze" Satin

PAINT FINISHES

P1
Dulux "Namadji" (Matte)

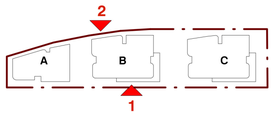
P2
Dulux "Distant Planet" (Matte)

GLAZING

G1
Clear Vision Glass

G2
Frosted Glass

Key Plan:



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0 | 0.5 | 1 | 2 | 3 | 4m

Project PA017559
West Ryde Billbergia
63-77 West Parade, West Ryde

Status
DEVELOPMENT APPLICATION

Title
50-EXTERNAL MATERIAL AND FINISHES
EXTERNAL MATERIAL AND FINISHES - BUILDING B

Drawing Number DA-50-0400

Revision A

A1

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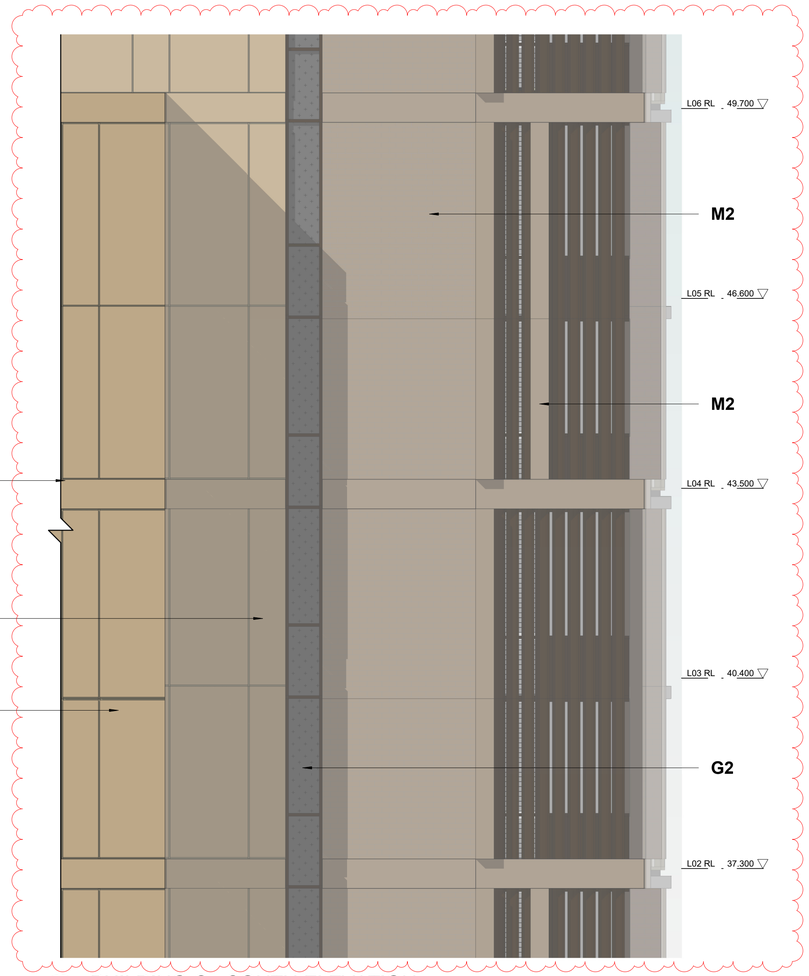
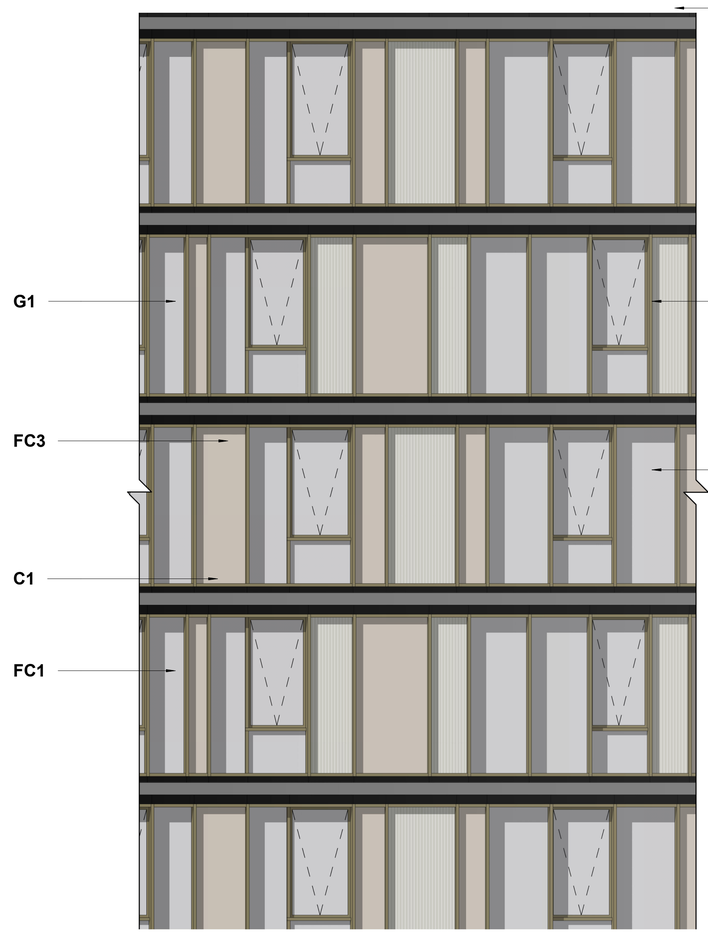


1 BUILDING C - SOUTH ELEVATION
1 : 50



2 BUILDING C - EAST ELEVATION
1 : 50

EXTERNAL FINISHES

FIBRE CEMENT FINISHES

- **FC1** Silbonit 010HA_SuperbiancoRigo
- **FC2** Silbonit 030HC_Grigio
- **FC3** Silbonit 020HA_Naturale
- **FC4** Silbonit 080HA_Deserto
- **FC5** Silbonit 030HC_Grigio

MASONRY FINISHES

- **M1** PGH Bricks Mowbray Blue Stretcher Bond
- **M2** PGH Bricks Mineral Stretcher Bond
- **M2A** PGH Bricks Mineral Soldier Course

CONCRETE FINISH

- **C1**

POWDERCOAT FINISHES

- **PC1** Dulux "Fresh Gold" Satin
- **PC2** Dulux "Medium Bronze" Satin
- **PC3** Dulux "Dark Bronze" Satin

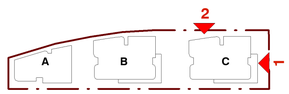
PAINT FINISHES

- **P1** Dulux "Narnadji" (Matte)
- **P2** Dulux "Distant Planet" (Matte)

GLAZING

- **G1** Clear Vision Glass
- **G2** Frosted Glass

Key Plan:



Rv	Amendment	By	Ck	Date
B	DEVELOPMENT APPLICATION			17/07/2020
A	DEVELOPMENT APPLICATION			26/03/2020

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trading as PTW Architects

NSW Nominated Architects
S Parsons Architect No.6098
D Jones Architect No.4778

0 0.5 1 2 3 4m

Project PA017559
West Ryde Billbergia
63-77 West Parade, West Ryde

Status
DEVELOPMENT APPLICATION

Title
50-EXTERNAL MATERIAL AND FINISHES
EXTERNAL MATERIAL AND FINISHES - BUILDING C

Drawing Number DA-50-0500 **Revision** B

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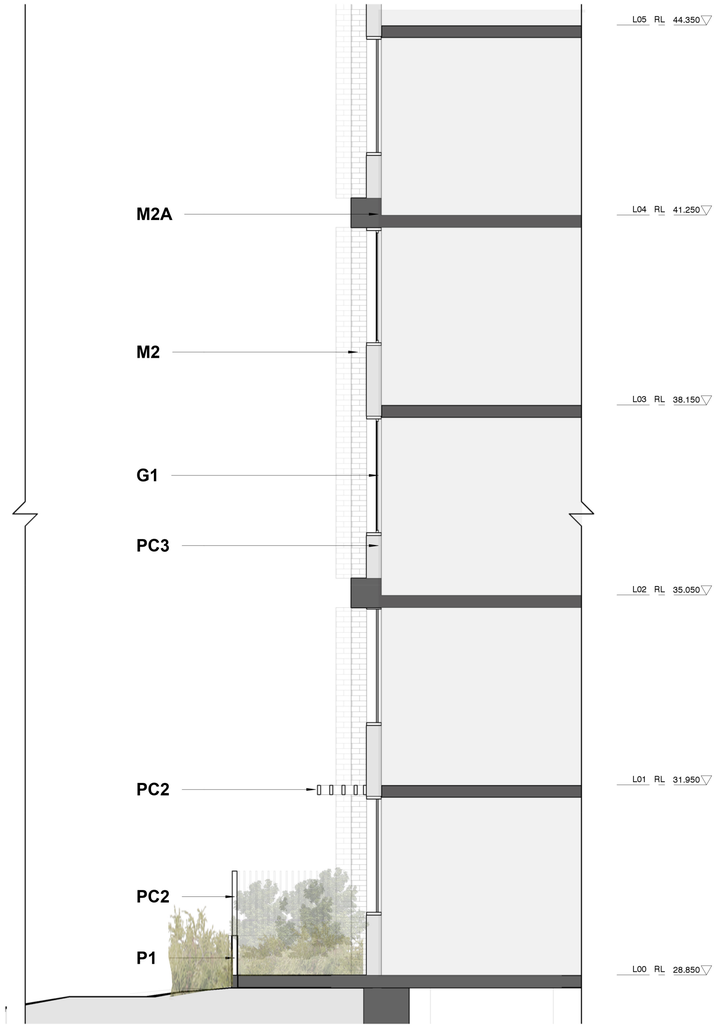
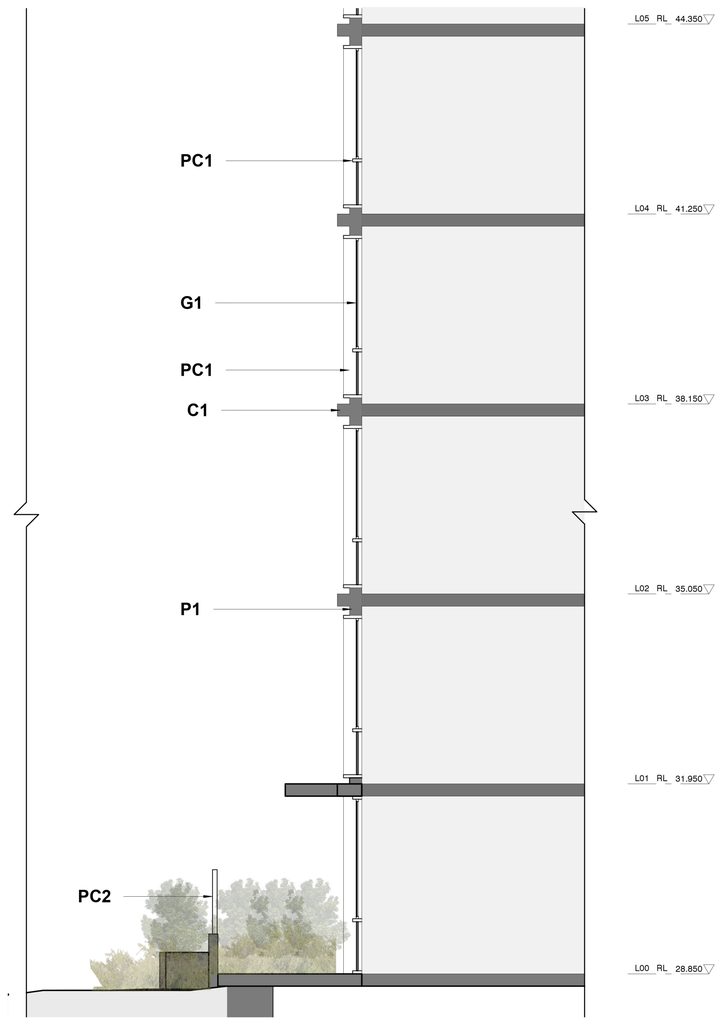
A1



1 TYPICAL FACADE SECTION A
1 : 50



2 TYPICAL FACADE SECTION B
1 : 50

EXTERNAL FINISHES

FIBRE CEMENT FINISHES

- **FC1** Silbonit 010HA_SuperbiancoRigo
- **FC2** Silbonit 030HC_Grigio
- **FC3** Silbonit 020HA_Naturale
- **FC4** Silbonit 080HA_Deserto
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CONCRETE FINISH

- **C1**

POWDERCOAT FINISHES

- **PC1** Dulux "Fresh Gold" Satin
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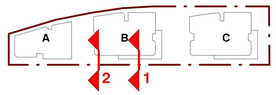
- **P1** Dulux "Narnadji" (Matte)
- **P2** Dulux "Distant Planet" (Matte)

GLAZING

- **G1** Clear Vision Glass
- **G2** Frosted Glass

Key Plan:



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NSW Nominated Architects
S Parsons Architect No.6098
D Jones Architect No.4778

0 | 0.5 | 1 | 2 | 3 | 4m

Project PA017559
West Ryde Billbergia
63-77 West Parade, West Ryde

Status
DEVELOPMENT APPLICATION

Title
50-EXTERNAL MATERIAL AND FINISHES
TYPICAL FACADE SECTIONS

Drawing Number DA-50-0600
Revision A

A1

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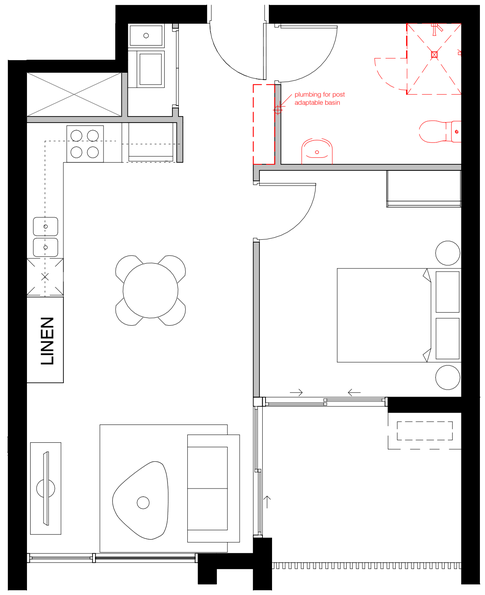

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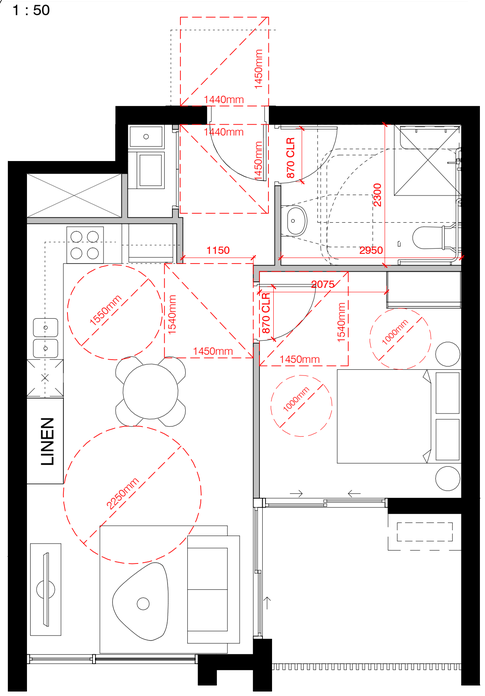
1 : 50

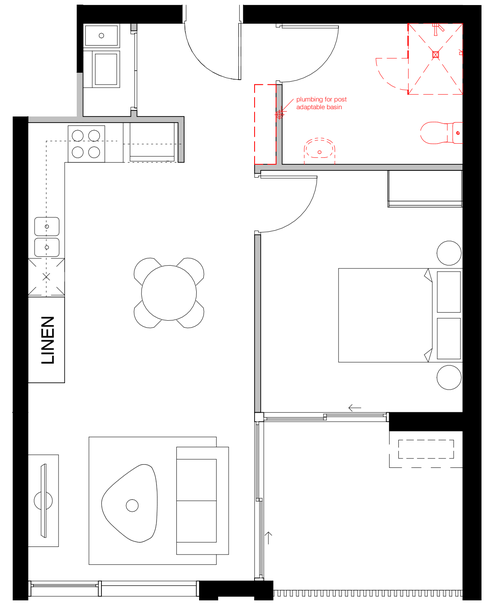


2 POST ADAPTABLE 1
1 : 50

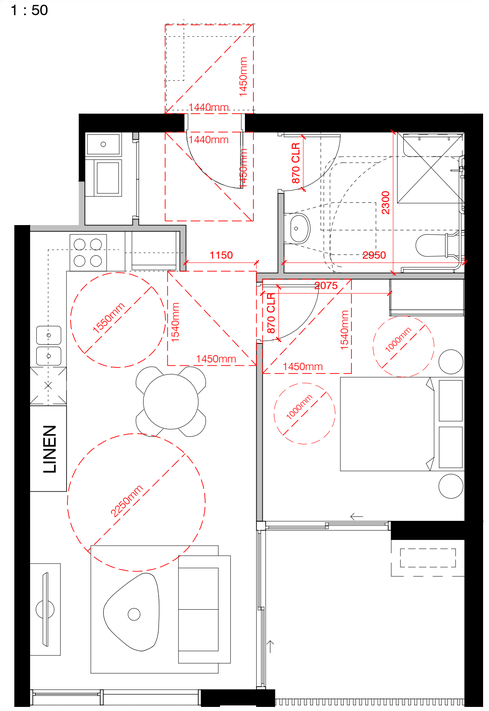
1-BEDROOM UNITS IN BUILDING A:

A-G03,103,203,303,403,503

TOTAL NUMBER : 6



3 PRE ADAPTABLE 2
1 : 50



4 POST ADAPTABLE 2
1 : 50

1-BEDROOM UNITS IN BUILDINGS B AND C:

B-103,203,303,403,503 C-103,203,303,403

TOTAL NUMBER : 9

City of Ryde Development Control Plan 2014 |Part: 9.2
Access for People With Disabilities

6.4.8 Interior – General
1. All interior doors shall be a minimum of 820 mm wide to allow easy access for people using wheelchairs and other mobility devices.
(AS4299 Clause 4.3.3)
2. Internal corridors shall have a minimum width of 1000mm and there shall be provision for circulation spaces at doors in compliance with AS1428.1.
(AS4299 Clause 4.3.7)
3. The maximum height of window sills above the floor should be 730 mm in living rooms and 600 mm in bedrooms.
(AS4299 Clauses 4.7.2 and 4.6.2)

6.4.9 Living Room and Dining Room
1. To allow sufficient circulation space in these areas, provision shall be made for a minimum clear space of 2250 mm in diameter after furniture is in place.
(AS4299 Clause 4.7.1)

6.4.11 Main Bedroom
1. At least one bedroom shall have sufficient space to accommodate a queen size bed, wardrobes and have circulation space as specified in AS1428.2. Wardrobes should have sliding doors with full-length mirrors.

6.4.15 Laundry
1. There shall be sufficient circulation space at all doors to comply with AS1428.1 and circulation space beside or in front of appliances (at least 1550 mm).

Key Plan:

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NSW Nominated Architects
S Parsons Architect No.6098
D Jones Architect No.4778

0 0.5 1 2 3 4m

Project PA017559
West Ryde Billbergia
63-77 West Parade, West Ryde

Status
DEVELOPMENT APPLICATION

Title
70- DETAIL PLANS
ACCESSIBLE APARTMENTS

Drawing Number DA-70-0200

Revision A

A1

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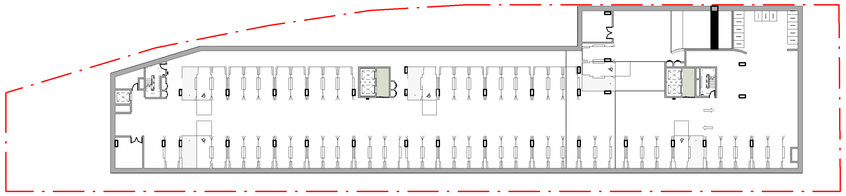

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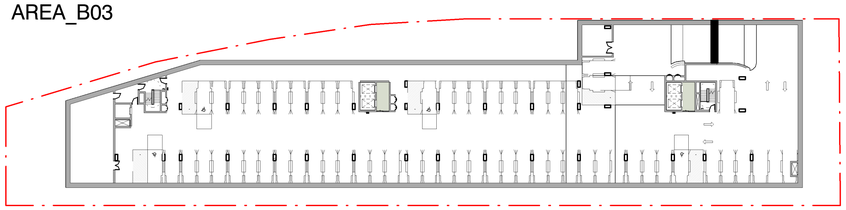

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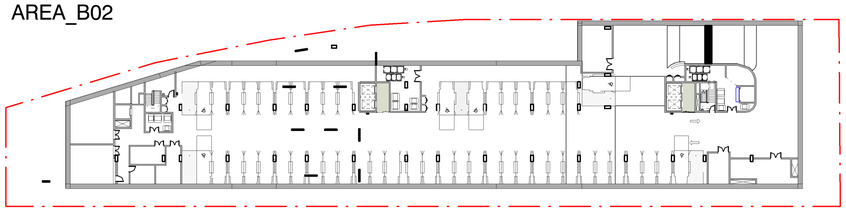

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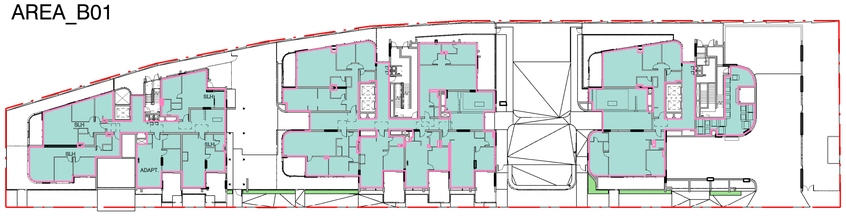
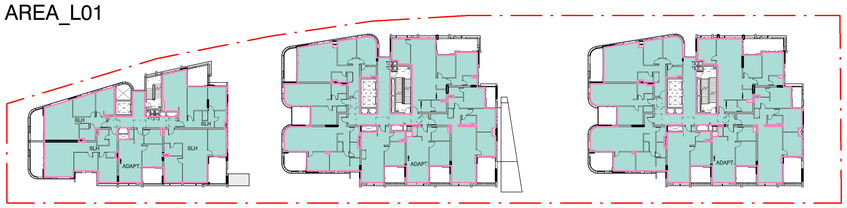


AREA_L00

AREA_L01



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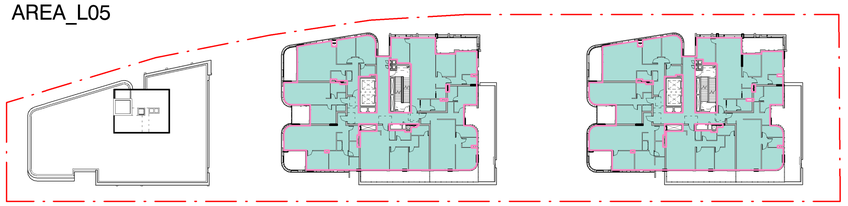
AREA_L03

AREA_L04

AREA_L05



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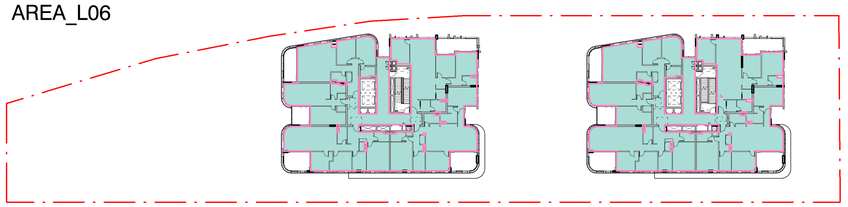

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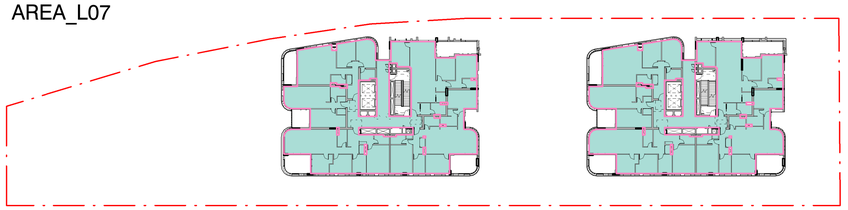

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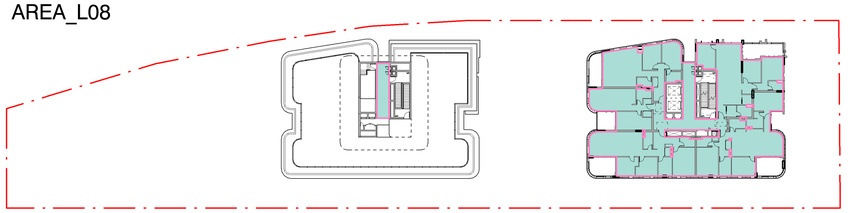

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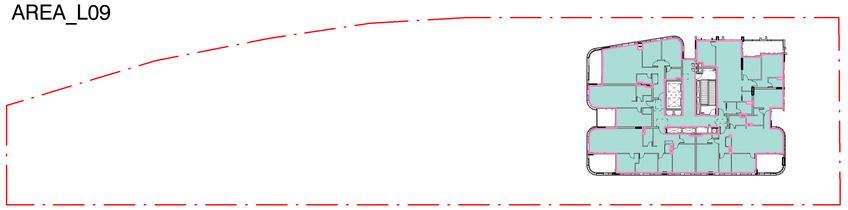
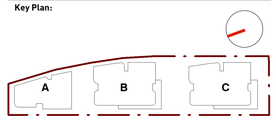


AREA_L10

AREA_GFA PER BUILDING		
BUILDING	LEVEL	AREA
A	L00	368 m²
A	L01	379 m²
A	L02	379 m²
A	L03	379 m²
A	L04	338 m²
A	L05	338 m²
		2180 m²
B	B01	9 m²
B	B02	9 m²
B	B03	9 m²
B	L00	570 m²
B	L01	583 m²
B	L02	583 m²
B	L03	583 m²
B	L04	583 m²
B	L05	583 m²
B	L06	536 m²
B	L07	516 m²
B	L08	516 m²
B	L09	18 m²
		5098 m²
C	B01	9 m²
C	B02	9 m²
C	B03	9 m²
C	L00	326 m²
C	L01	583 m²
C	L02	583 m²
C	L03	583 m²
C	L04	583 m²
C	L05	583 m²
C	L06	536 m²
C	L07	517 m²
C	L08	517 m²
C	L09	517 m²
C	L10	517 m²
		5870 m²
Grand total		13148 m²

TOTAL ALLOWABLE GFA 13,149M2

Key Plan:



Rv	Amendment	By	Ck	Date
B	DEVELOPMENT APPLICATION			17/07/2020
A	DEVELOPMENT APPLICATION			26/03/2020

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NSW Nominated Architects
S Parsons Architect No.6098
D Jones Architect No.4778

PTW

0 5 10 20 30 40m

Project PA017559
West Ryde Billbergia
63-77 West Parade, West Ryde

Status
DEVELOPMENT APPLICATION

Title
90-SCHEDULES/COMPLIANCE
GFA DIAGRAMS

Drawing Number DA-90-0100

Revision B

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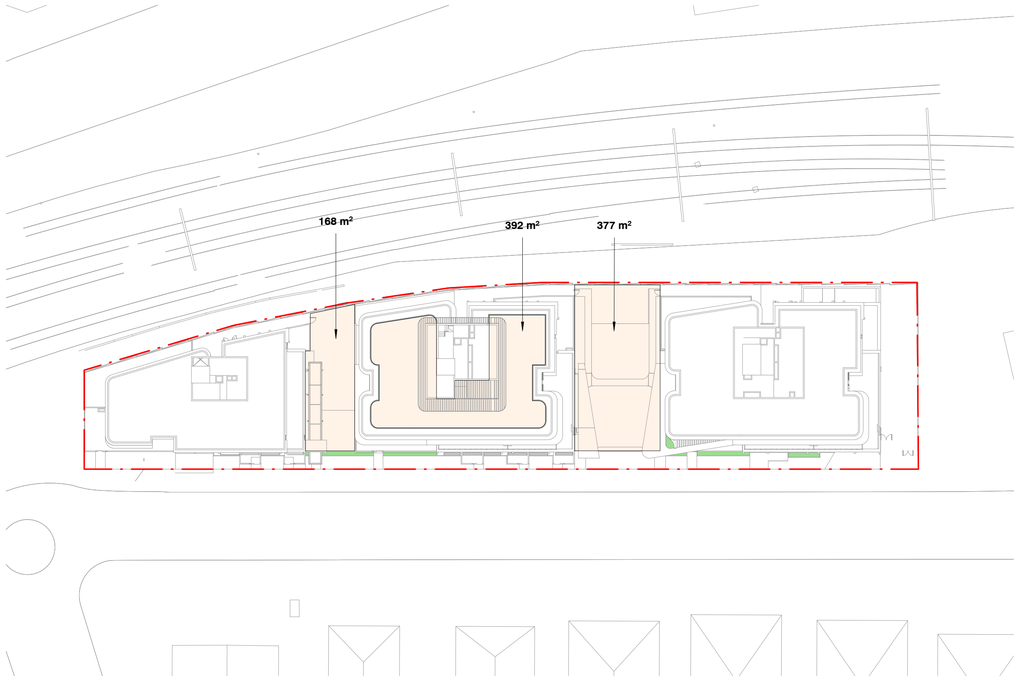
A1

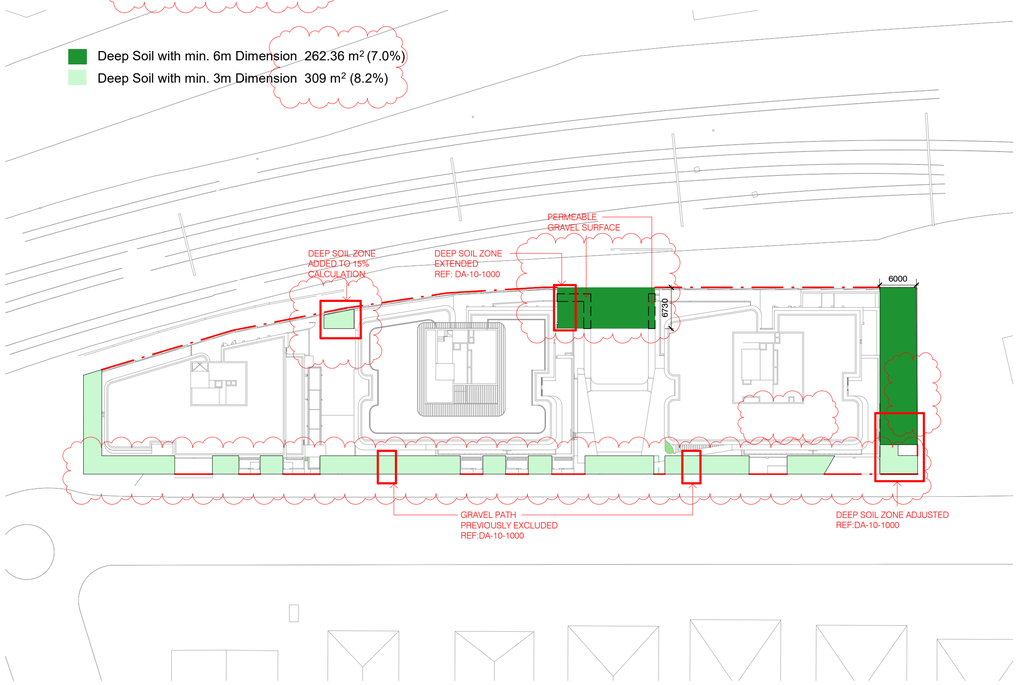
Communal Open Space
Site Area 3748m^2
Req COS (25%) 937m^2

Achieved : 937m^2
25% COS



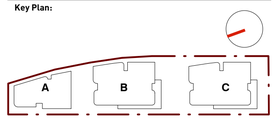
DIAGRAM_COMMUNAL OPEN SPACE

Deep Soil Req: 262.36m^2 (7%)
Achieved : 262.36m^2 (7%)



DIAGRAM_DEEP SOIL

Key Plan:



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PTW

0 1 2 5 8m

Project PA017559
West Ryde Billbergia
63-77 West Parade, West Ryde

Status
DEVELOPMENT APPLICATION

Title
90-SCHEDULES/COMPLIANCE
COS / DEEP SOIL DIAGRAMS

Drawing Number DA-95-0100

Revision B

A1

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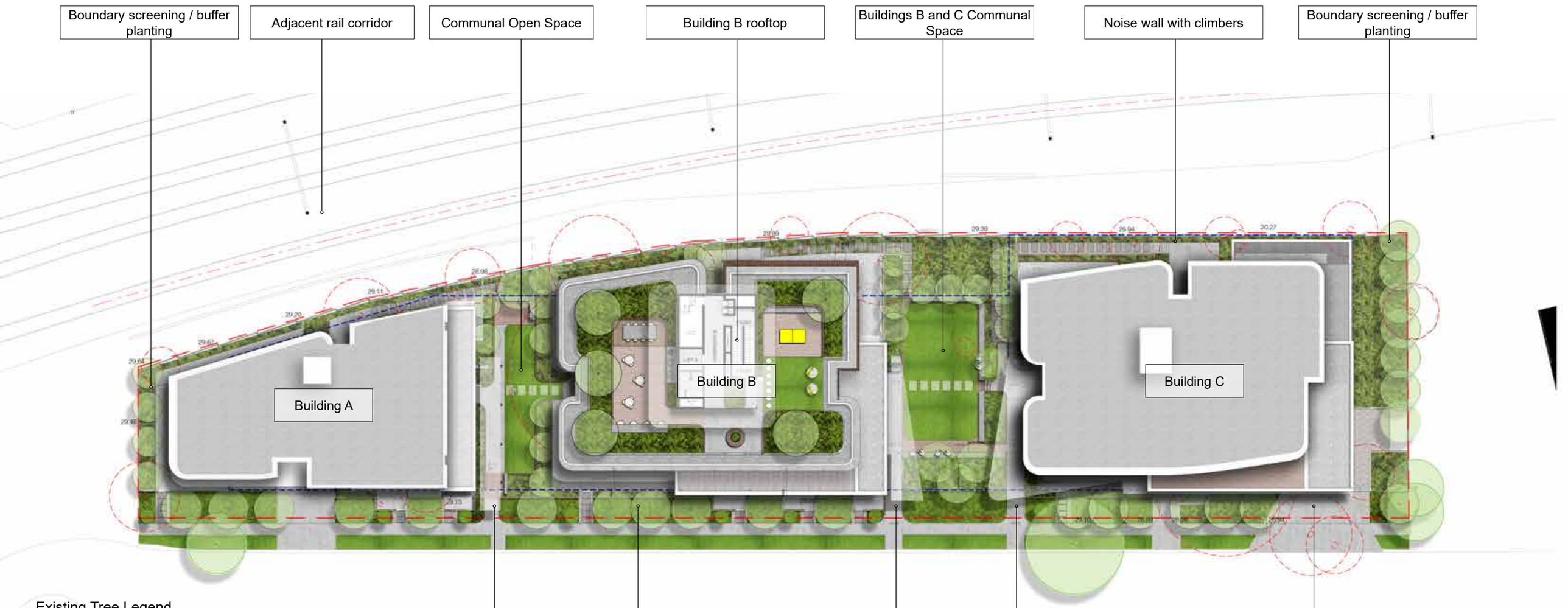
2.3 Landscape Master Plan



Existing Tree Legend

Existing trees to be removed

Existing trees to be retained

0 5 10 15 20M

SCALE 1:400 @ A3

CTLA LANDSCAPE ARCHITECTURE

Contact /

Studio 502, level 5,
22 Central ave
Manly, nsw
Australia

0424769049
www.ctladesigngroup.com.au
craig@ctladesigngroup.com.au

Registration /

Australian Institute of Landscape Architects

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Council /
City of Ryde

Client /
Billbergia

Architect /
PTW Architects

Scale /
As Shown

Drawn by /
Tyler Christian

Checked by /
Craig Tennant

North /

Stage /

Landscape Development Application

Project /

63-77 West Parade, West Ryde

2.4. Landscape Plan - Ground

Legend

01 Adjacent rail corridor
02 Acoustic wall (2.0m)
03 Deep soil planting (see Architects Deep Soil Plan)
04 POS entries from West Parade
05 Buildings A-B COS
06 Entry Building A
07 Entry Building B
08 Entry Building C
09 Building B Rooftop
10 Maintenance path
11 Substation
12 Basement car park entry / exit
13 Buildings B-C COS
14 Building A street entry
15 Building B street entry
16 Building C street entry
17 1.1m wide egress path

Existing Tree Legend

Existing trees to be removed

Existing trees to be retained

0 5 10 15 20M

SCALE 1:400 @ A3

CTLA LANDSCAPE ARCHITECTURE

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Scale /
As Shown

Drawn by /
Tyler Christian

Checked by /
Craig Tennant

North /

N

Stage /

Landscape Development Application

Project /

63-77 West Parade, West Ryde

2.5 Landscape Detail Plan - Buildings B+C COS

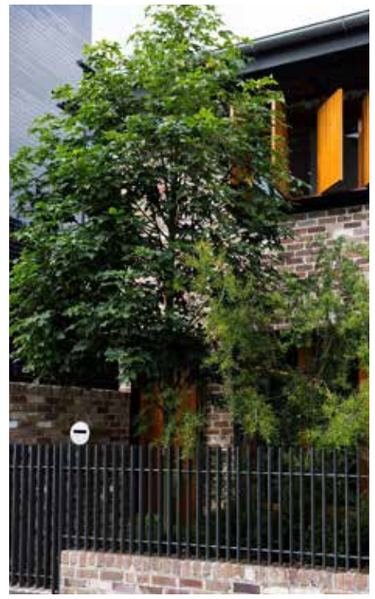
Reference Plan

Legend

01	West Parade footpath
02	Building B Entry with canopy
03	Building C entry with canopy
04	Low street planting to allow clear visibility of entrys
05	Gates / Security line
06	1.8m HT wall with metal slats
07	COS buffer planting with shade trees
08	Seating edge facing open lawn
09	Open lawn
10	Stepping stone link
11	Seating edge around periphery of lawn
12	Canopy
13	Buffer planting to ground floor units (1m HT planters)
14	Deep soil planting and noise wall screening
15	1.1m egress path
16	Feature entry planting

0 5 10 15M

SCALE 1:250 @ A3



(06) 1.8m HT wall with metal slats with buffer planting behind

(16) Feature entry planting

CTLA LANDSCAPE ARCHITECTURE

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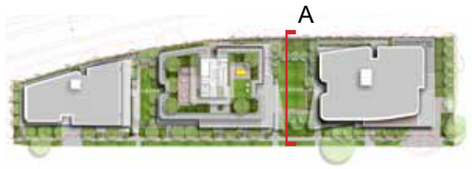
2.6 Landscape Sections - Communal Open Space



Reference Plan

Legend

01 Open lawn
02 Seating edge around lawn
03 Entry planting
04 Buffer planting to street
05 Deep soil planting and screening of noise wall
06 Buffer planting to ground floor units
07 Building C lobby entry
08 Basement below

0 1 2 3 4 5M
SCALE 1:100 @ A3

Section A - Communal Open Space B-C

0 1 2 3 4 5M
SCALE 1:100 @ A3

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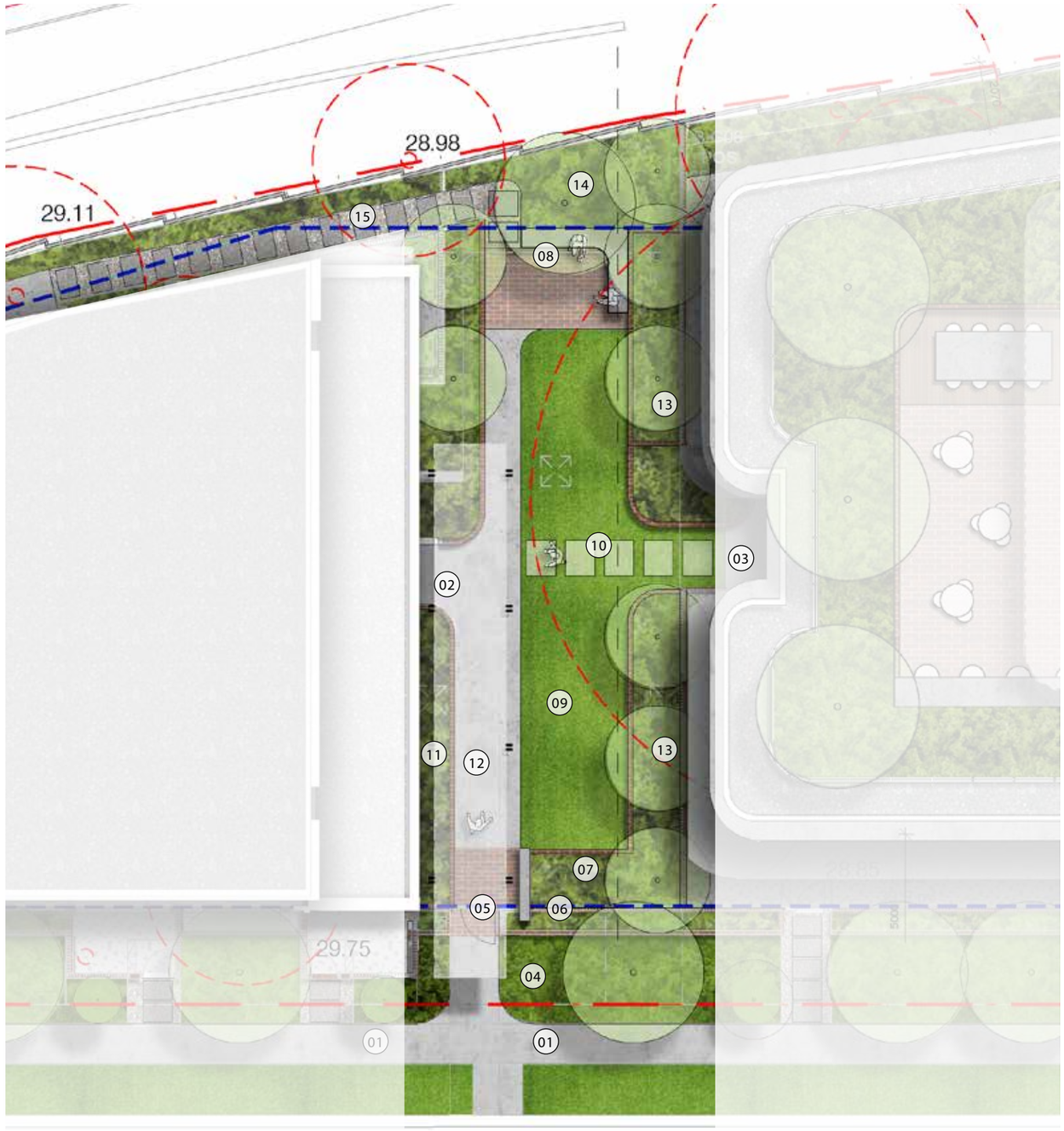
2.7 Landscape Detail Plan - Buildings A+B COS

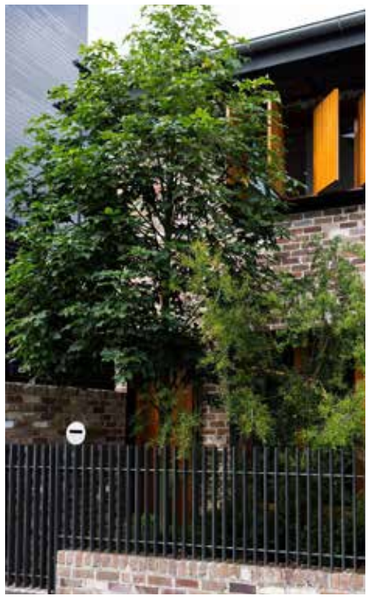
Reference Plan

Legend

01 West Parade footpath
02 Building A Entry with canopy
03 Building B entry with canopy
04 Low street planting to allow clear visibility of entry's
05 Gates / Security line
06 1.8m HT wall with metal slats
07 COS buffer planting with shade trees
08 Seating edge facing open lawn
09 Open lawn
10 Stepping stone link
11 Entry planting
12 Canopy
13 Buffer planting to ground floor units (1m HT planters)
14 Deep soil planting and noise wall screening
15 1.1m egress path

0 5 10 15M
SCALE 1:250 @ A3





06 1.8m HT wall with metal slats with buffer planting behind

11 Feature entry planting

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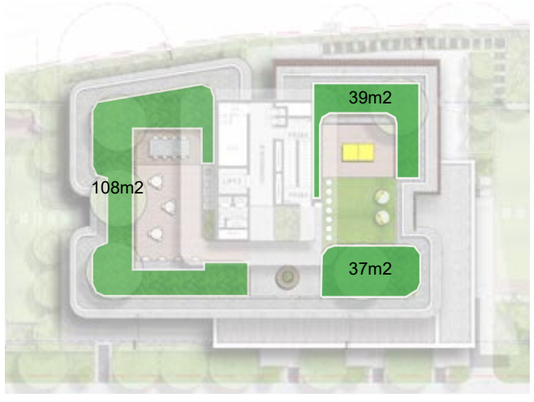
2.8 Landscape Detail Plan - Rooftop

Reference Plan

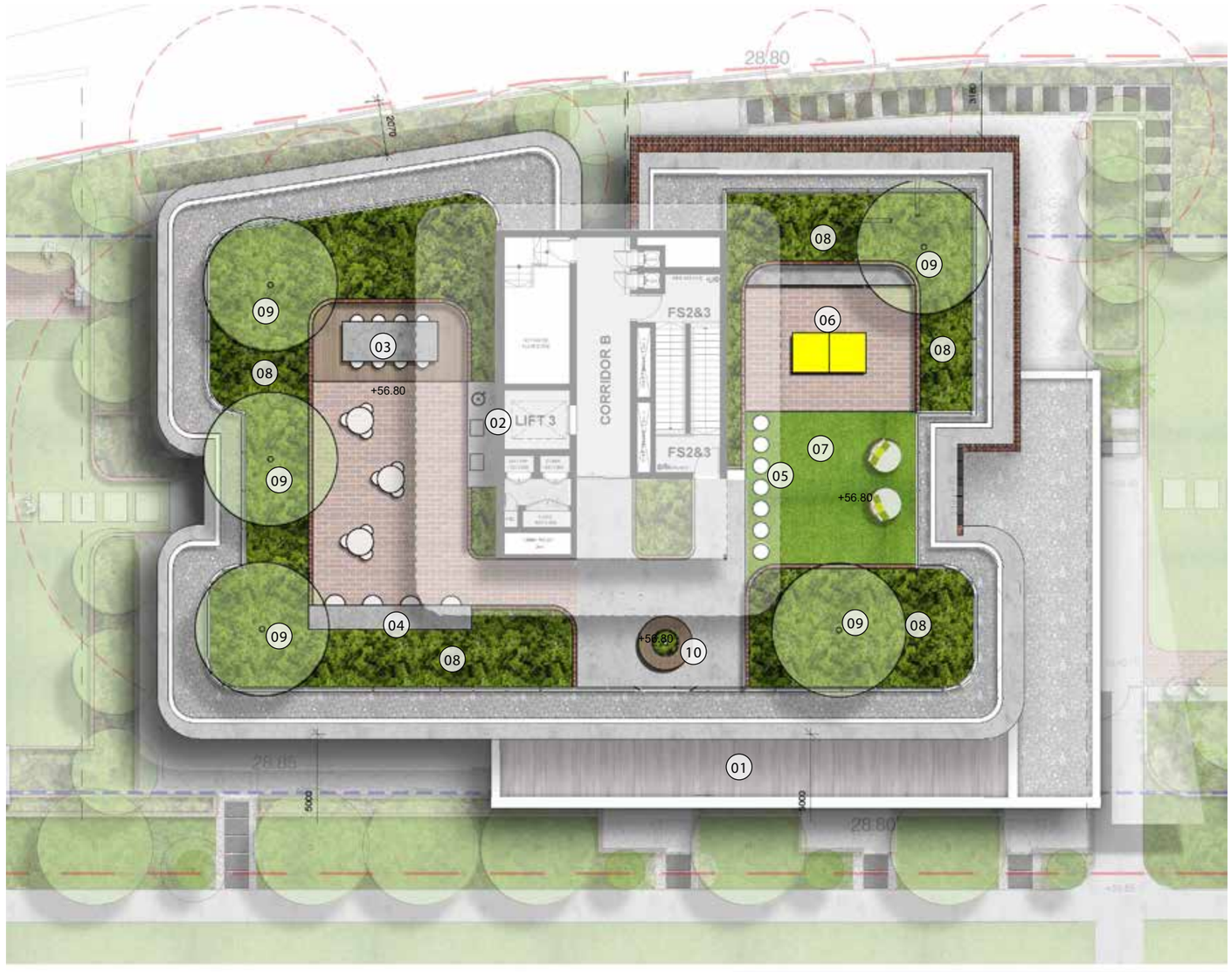
Legend

01 Lower roof level
02 BBQ zone undercover
03 Long social table and seating
04 Bar height table and seating with sunset views
05 Stepping stone pathways
06 Table tennis / activity
Sheltered from prevailing winds
07 Multi functional open lawn /
Artificial turf / yoga / play space / cinema
08 Edge planting (1m depth)
09 Medium sized trees
10 Seating node with sunset views

0 2 4 6 8 10M
SCALE 1:200 @ A3



Rooftop Soil Volume Diagram: ADG Compliant



02 BBQ Zone under canopy

03 Long social table and seating

04 Bar height table and seating with sunset views

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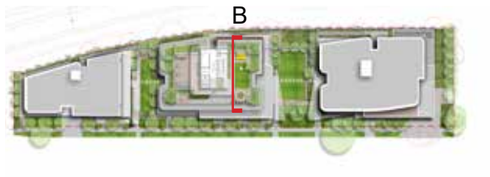
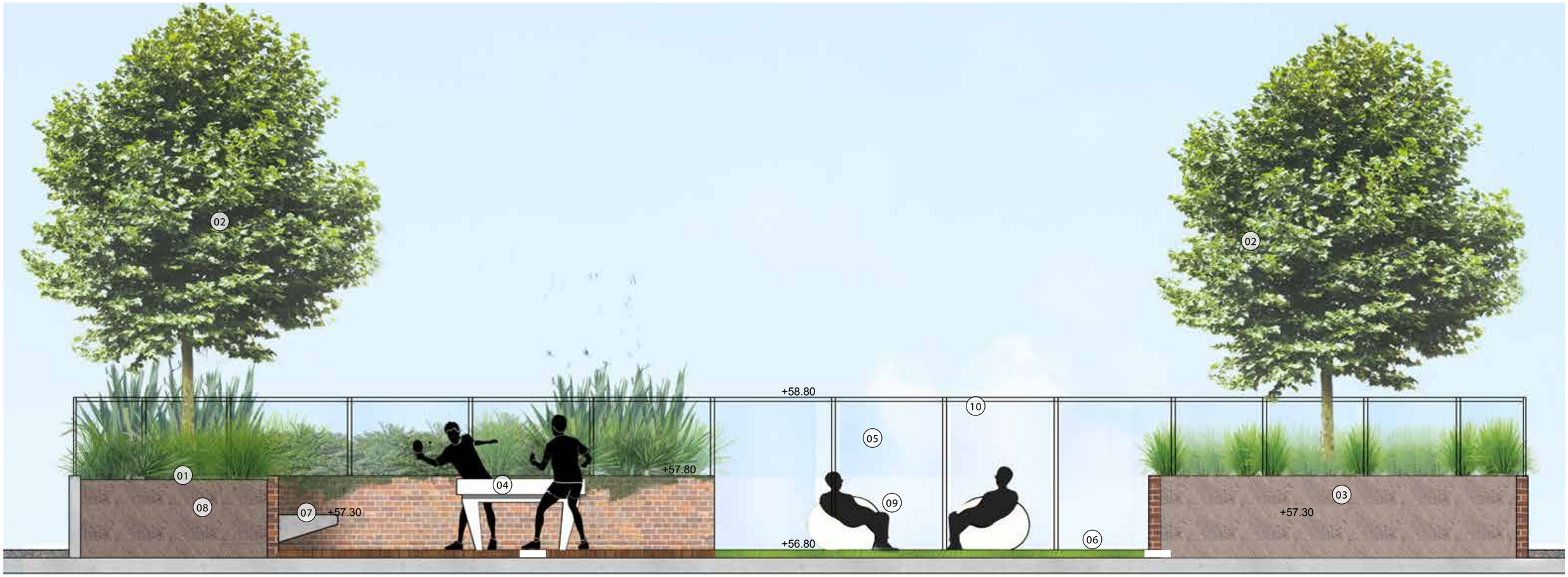
2.9 Landscape Section D - Rooftop



Legend

01	1.0m high planter with hardy shade trees	05	Viewing zone	09	Flexible informal seating
02	Shade trees	06	Open multi functional lawn space	10	2.0m glass balustrade
03	Soil volume 37m2	07	Bench seating		
04	Social / table tennis zone	08	Soil volume 39m2		



Section B - Rooftop

0 1 2 3M

SCALE 1:50 @ A3

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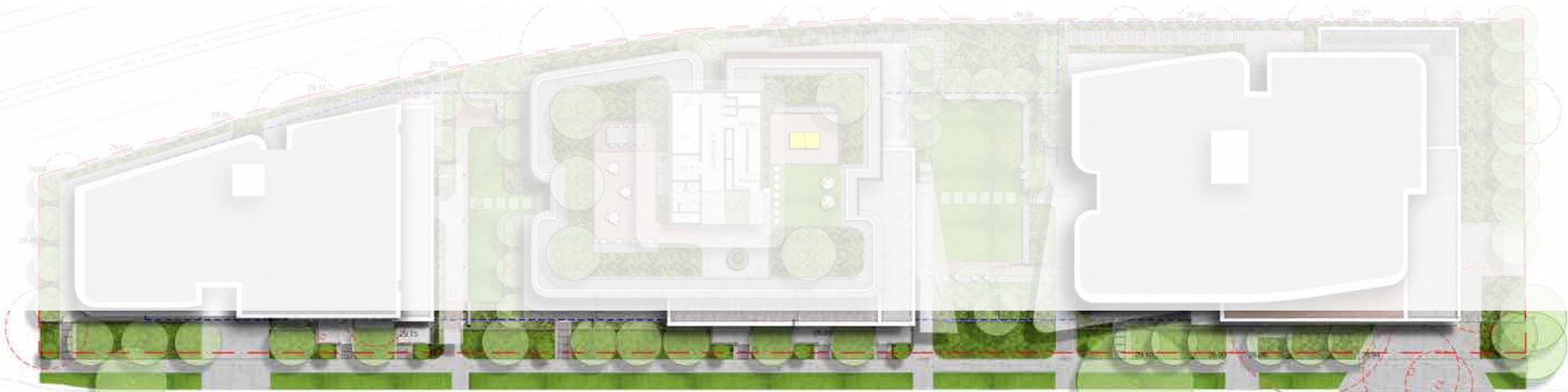
2.10 Landscape Plan - Streetscape

General

The West Parade planting setback generally 3.5m wide allowing for medium size native trees and buffer planting to the street front providing a shaded footpath, shaded entry for ground floor residents and a green edge to the development.



Native trees

Accent planting

Native grasses

Hardy shrubs

Ground covers

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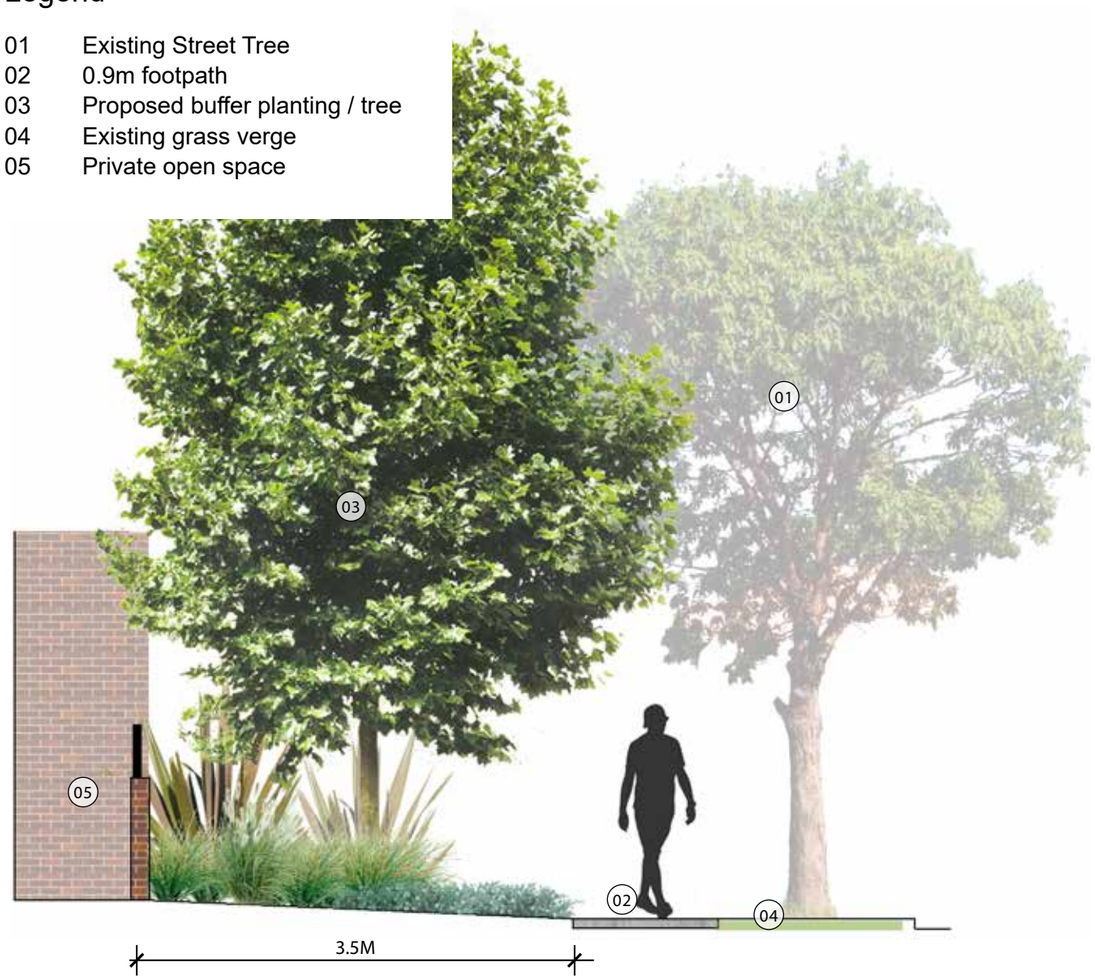
2.11 Landscape Sections - Streetscape Interfaces

Section Reference

Legend

01 Existing Street Tree
02 0.9m footpath
03 Proposed buffer planting / tree
04 Existing grass verge
05 Private open space



Section C - West Parade Interface

Legend

01 Existing Street Tree
02 0.9m footpath
03 Proposed buffer planting / tree
04 Existing grass verge

Section D - West Parade Interface

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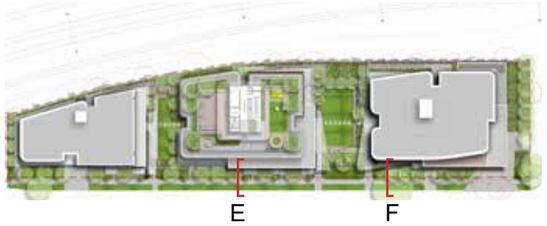
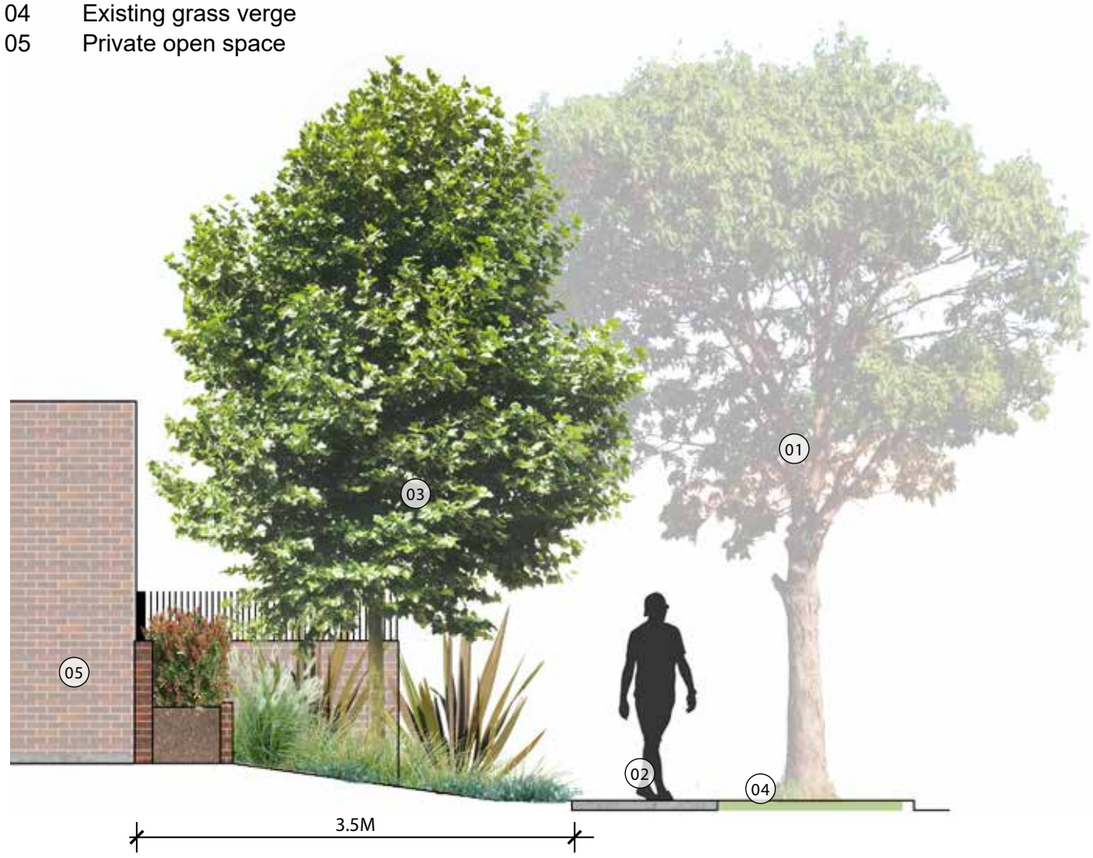
2.12 Landscape Sections - Streetscape Interfaces



Section Reference

Legend

01 Existing Street Tree
02 0.9m footpath
03 Proposed buffer planting / tree
04 Existing grass verge
05 Private open space



Section E - West Parade Interface

Legend

01 Existing Street Tree
02 0.9m footpath
03 Proposed buffer planting / tree
04 Existing grass verge
05 Private open space

Native trees

Section F - West Parade Interface

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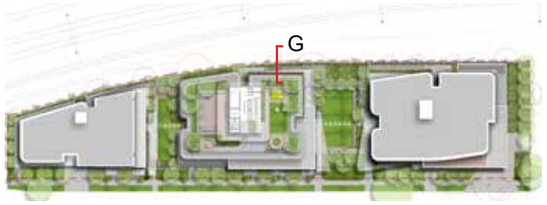
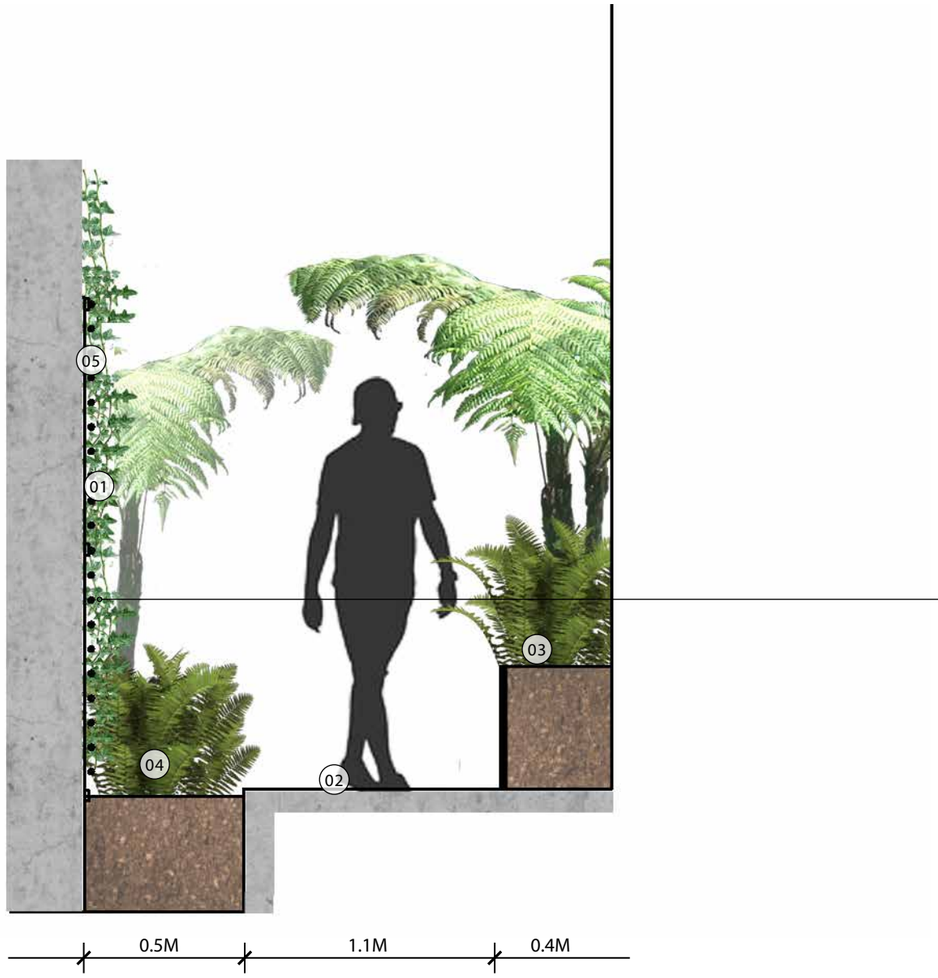
2.13 Revised Landscape Sections - Noise Wall Greening



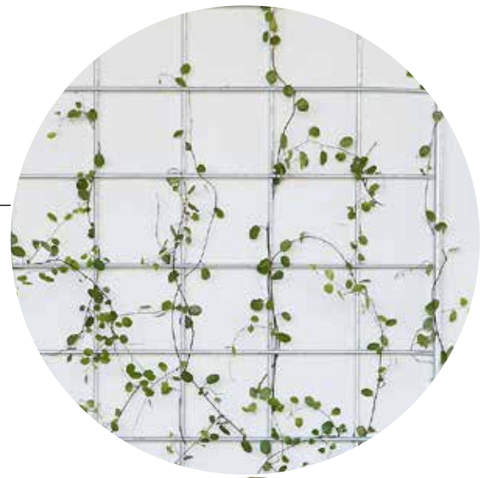
Section Reference

Legend

01 Noise wall
02 1.1m wide stepping stone egress path
03 Raised planter
04 650mm wide deep soil planter with shade tolerant species
05 Galvinised steel grid trellis anchored to wall



Section G - Noise Wall Greening



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3.1 Planting Schedule and Palette - Ground

CODE	BOTANIC NAME	COMMON NAME	MATURE SIZE (h x w) (m)	PROPOSED POT SIZE	QUANTITY	NATIVE
	TREES & PALMS					
Ca	Cupaniopsis anacardioides	Tuckeroo	6 x 4	75L	6	*
Cs	*Corymbia citriodora 'Scentuous'*	Dwarf Lemon Scented Gum	6 x 4	75L	41	*
Ee	*Elaeocarpus eumundii*	Quandong	6 x 3	75L	14	*
Er	*Elaeocarpus reticulatus*	Blueberry Ash	15 x 5	75L	4	*
Tl	*Tristaniopsis laurina 'Luscious'*	Water Gum	8 x 8	75L	1	*
	SHRUBS AND ACCENTS					
Bbc	*Banksia spinulosa 'Giant Candles'*	Giant Candles Banksia	1.5 x 1	200mm	5	*
Cg	*Cordyline glauca*	Green Ti Palm	1.5 x 0.8	200mm	115	
Cmc	*Callistemon 'McCarthur"*	McCarthur Callistemon	1 x 1	200mm	43	
Cor	*Correa alba*	White Correa	1.5 x 1.5	200mm	17	*
Gm	*Grevillea 'Moonlight'*	Moonlight Grevillea	3 x 2	200mm	8	*
De	*Doryanthes excelsa*	Gymea Lily	3 x 1.5	200mm	78	*
Re	*Rhapis excelsa*	Lady Palm	1 x 1	200mm	4	
Pc	*Philodendron 'Congo'*	Congo	0.6 x 0.6	200mm	100	
Px	*Philedondron xanadu*	Xanadu	0.8 x 0.8	200mm	18	
Pt	*Phormium tenax*	NZ Flax	2 x 2	200mm	5	
Syz	*Syzygium luehmannii*	Riberry Lilly Pilly	1.5 x 1.5	75L	88	
Wf	*Westringia fruticosa*	Coastal Rosemary	1.5 x 1.5	200mm	53	*
Xa	*Xanthorrhoea australis*	Grass Tree	3 x 1.5	75L	1	
	GRASSES AND RUSHES					
Dcb	*Dianella caerulea 'Breeze'*	Blue flax lily	0.5 x 0.5	200mm	90	*
Lh	*Lomandra hystrix*	Mat Rush	1.5 x 1.5	200mm	172	*
Ltu	*Lomandra 'Lime Tuff'*	Mat Rush	0.6 x 0.6	200mm	218	*
Lt	*Lomandra 'Tanika'*	Mat Rush	0.6 x 0.6	200mm	143	*
Pn	*Pennisetum 'Nafray'*	Swamp Foxtail	1 x 1	200mm	94	*
Pl	*Poa labillardieri 'Eskdale'*	Tussock Grass	0.6 x 0.6	200mm	175	
Ljr	*Liriope muscari 'Just Right'*	Lily Turf	0.45 x 0.45	150mm	90	
	FERNS AND CYCADS					
Aa	*Asplenium australasicum*	Birds Nest Fern	1.5 x 1.5	200mm	TBC	*
Bsl	*Blechnum 'Silver Lady Ferrn'*	Silver Lady Fern	1.5 x 1.5	200mm	TBC	*
Da	*Doodia aspera*	Prickly Rasp Fern	0.4 x 0.4	200mm	TBC	*
	GROUNDCOVERS AND CLIMBERS					
Cb	*Carpobrotus glaucescens*	Pig Face	0.25 x spreading	150mm	121	*
Cci	*Casuarina glauca*	Cousin It	0.2 x spreading	150mm	16	*
Dr	*Dichondra repens*	Kidney Weed	0.15 x spreading	150mm	68	
Dsf	*Dichondra 'Silver Falls'*	Silver Falls	0.15 x spreading	150mm	85	
Mp	*Myoporum parvifolium*	Creeping Boobialla	0.15 x spreading	150mm	73	*
Tr	*Trachelospermum jasminoides*	Star Jamine	0.15 x spreading	150mm	144	
Vh	*Viola hederacea*	Native Violet	0.2 x 0.5	150mm	168	*

TREES

Cupaniopsis anacardioides

Corymbia citridora 'Scentuous'

Elaeocarpus eumundii

Elaeocarpus reticulatus

Tristaniopsis laurina 'Luscious'

SHRUBS + ACCENTS

Banksia spinulosa

Cordyline glauca

Doryanthes excelsa

Rhapis excelsa

Philodendron xanadu

GRASSES + RUSHES

Dianella Breeze

Lomandra tanika

Lomandra hystrix

Penisetum Nafray

Poa labilladieri

FERNS + CYCADS

Asplenium australasicum

Blechnum gibbum 'Silver Lady'

Doodia aspera

GROUNDCOVERS

Carpobrotus glaucescens

Myoporum parvifolium

Dichindra silver falls

Trachelospermum jasminoides

Viola hederacea

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3.2 Planting Schedule and Palette - Roof

CODE	BOTANIC NAME	COMMON NAME	MATURE SIZE (h x w) (m)	PROPOSED POT SIZE	QUANTITY	NATIVE
	TREES AND PALMS					
Ca	*Cupaniopsis anacardioides*	Tuckeroo	8 x 6	75L	5	*
	SHRUBS AND ACCENTS					
Ae	*Aspidistra elatior*	Cast iron plant	0.8 x 0.5	150mm	19	*
Cor	*Correa alba*	White Correa	1 x 1.5	200mm	9	*
Pt	*Phormium tenax*	New Zealand flax	2 x 1.5	200mm	29	
Px	*Philodendron 'Xanadu'*	Xanadu	1 x 1	150mm	18	
We	*Westringia fruticosa*	Coastal Rosemary	0.8 x 0.8	200mm	3	
	GRASSES AND RUSHES					
Db	*Dietes bicolor*	Fortnight Lily	0.5 x 0.5	150mm	26	
Ltu	*Lomandra 'Lime Tuff'*	Lime Tuff Tanika	0.6 x 0.6	200mm	10	*
Lt	*Lomandra tanika*	Mat rush	0.6 x 0.6	200mm	150	*
Lh	*Lomandra hystrix*	Green Mat-Rush	0.6 x 0.6	200mm	21	
Ng	*Neomarica gracilis*	Walking Iris	0.6 x 0.6	200mm	12	*
Pn	*Pennisetum 'Nafray'*	Swamp Foxtail	0.6 x 0.6	200mm	150	
	GROUNDCOVERS & CLIMBERS					
Cc	*Casuarina 'Cousin It'*	Sheoak	0.25 x 0.25	150mm	14	*
Cb	*Carpobrotus glaucescens*	Pig Face	0.25 x spreading	150mm	8	*
Dr	*Dichondra repens*	Kidney Weed	0.2 x spreading	150mm	14	*
Mp	*Myoporum parvifolium*	Creeping Booblialla	0.2 x spreading	150mm	48	*
Vh	*Viola hederacea*	Native Violet	0.25 x spreading	150mm	168	*

TREES

Cupaniopsis anacardioides

Lagerstroemia indica

SHRUBS + ACCENTS

Aspidistra elatior

Westringia fruticosa

Doryanthes excelsa

Correa alba

Philodendron xanadu

GRASSES + RUSHES

Dietes bicolor

Lomandra tanika

Neomarica gracilis

Liriope 'Just Right'

GROUNDCOVERS

Casuarina glauca

Carpobrotus glaucescens

Dichondra repens

Viola hederacea

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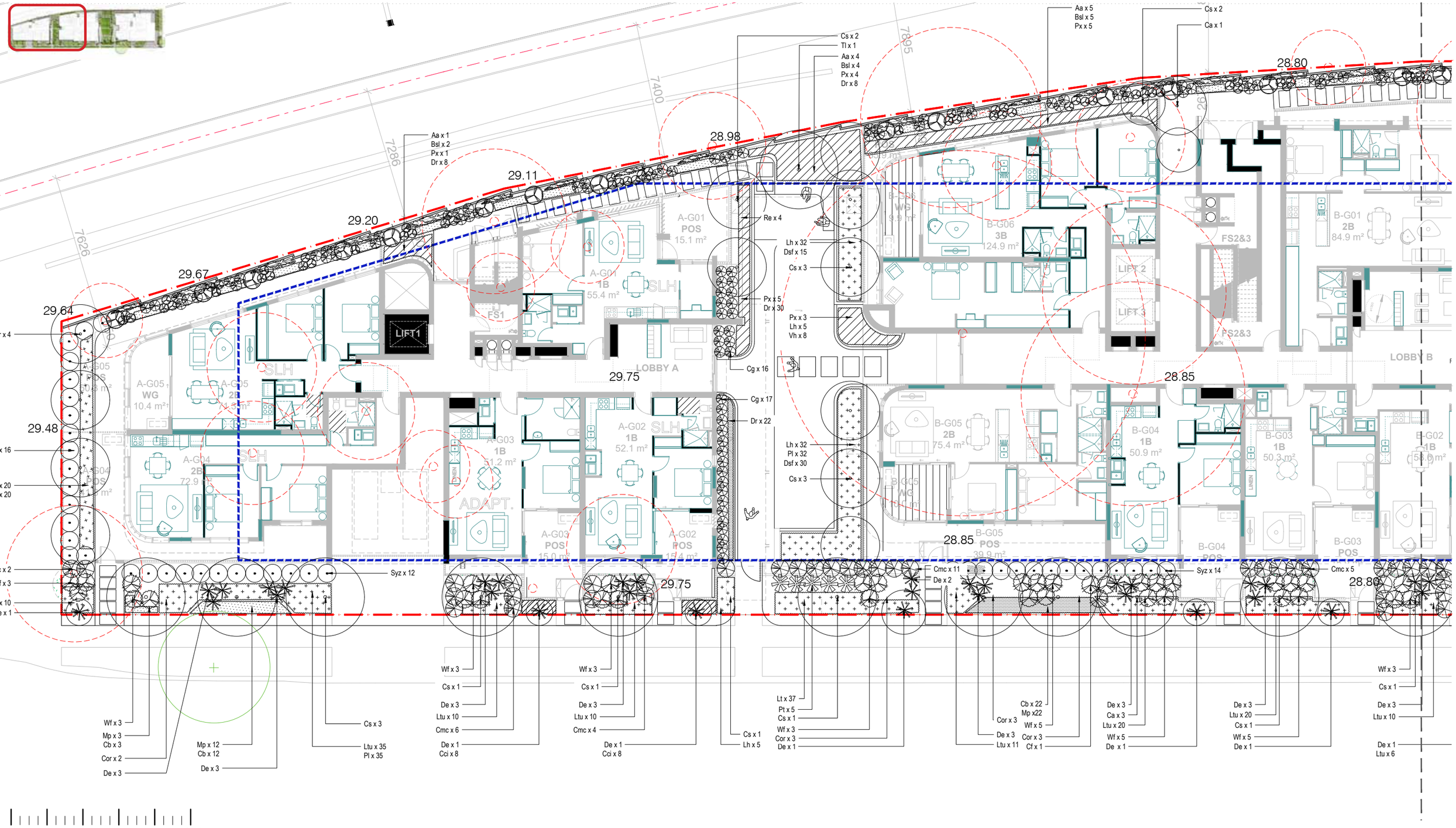
3.3 Landscape Softworks Plan - Ground



0 2 4 6 8 10M

SCALE 1:200 @ A3

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Tyler Christian

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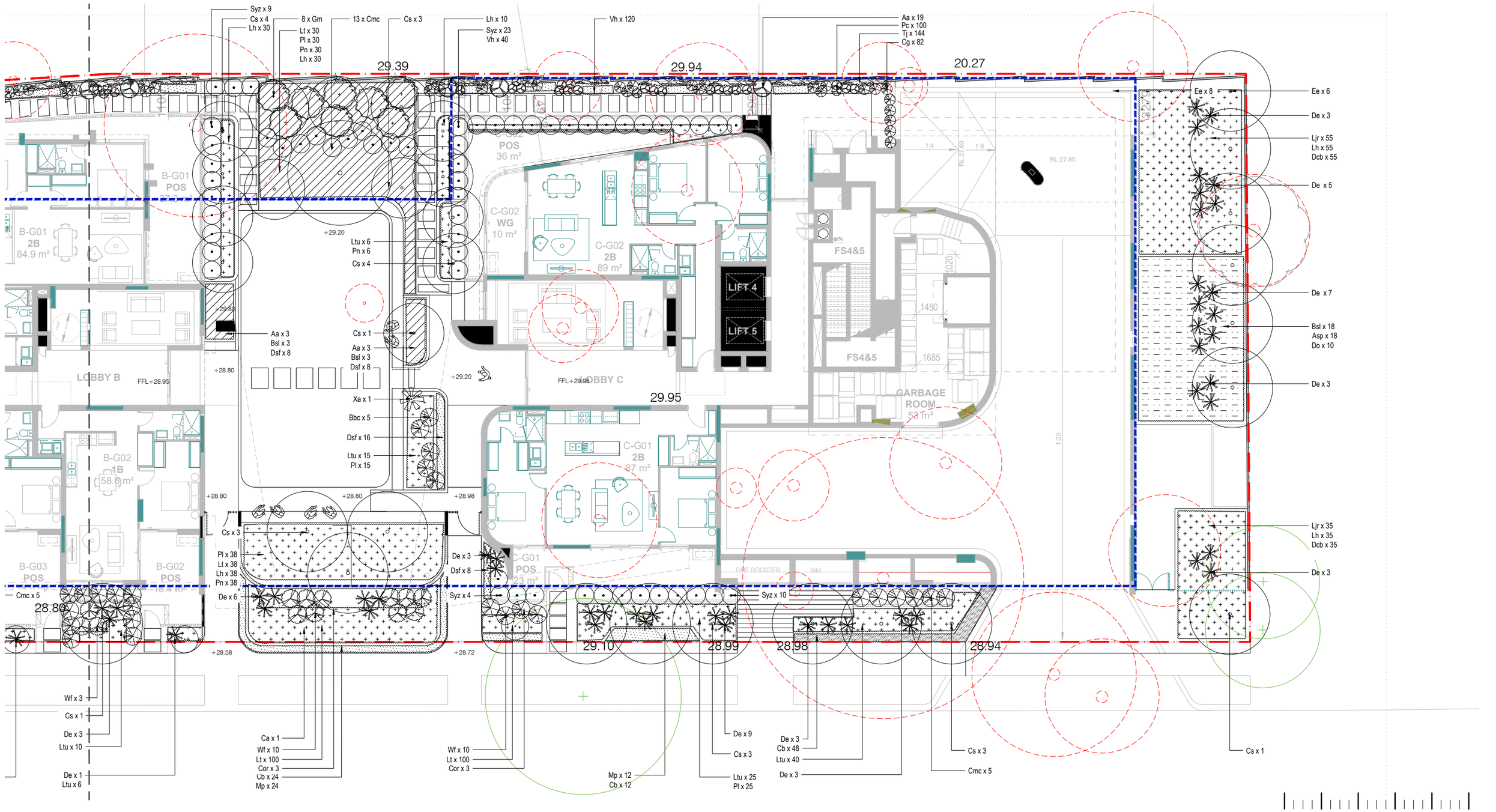
3.4 Landscape Softworks Plan - Ground



0 2 4 6 8 10M

SCALE 1:200 @ A3

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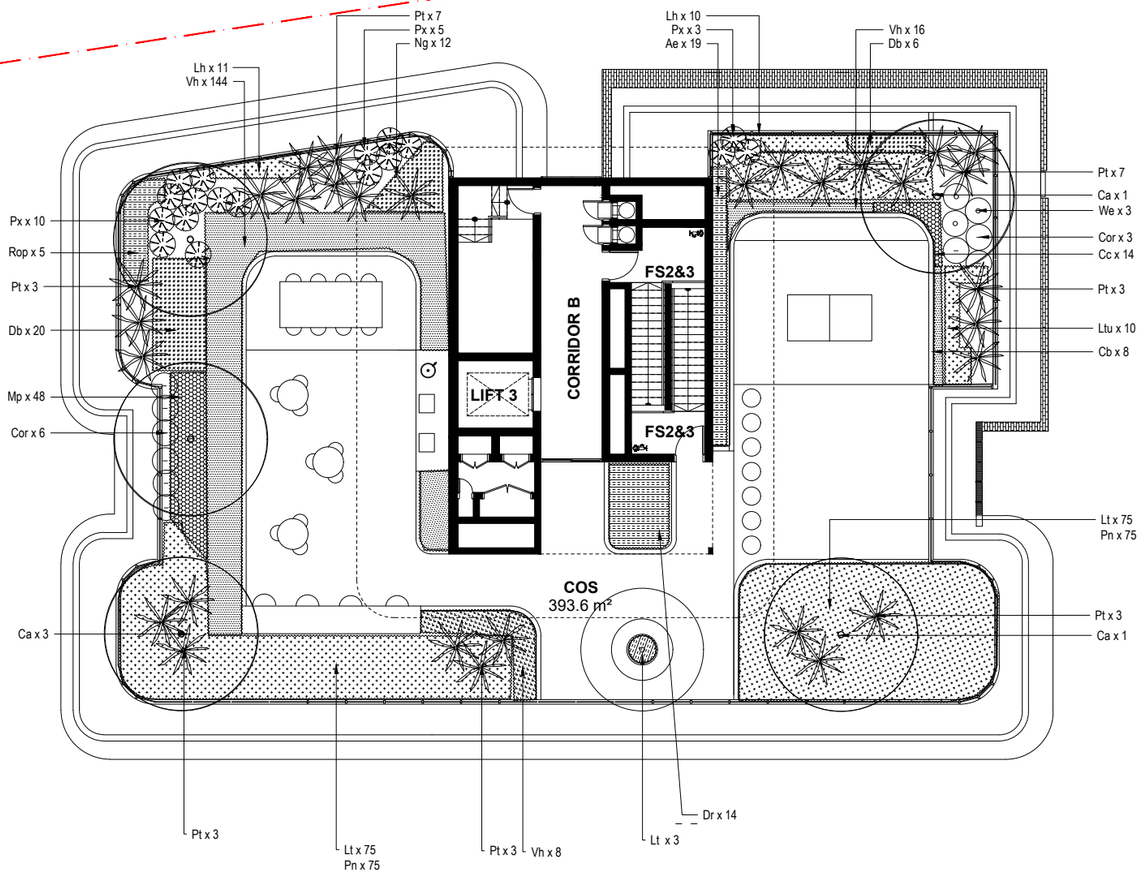
3.5 Landscape Softworks Plan - Roof



0 2 4 6 8 10M

SCALE 1:200 @ A3

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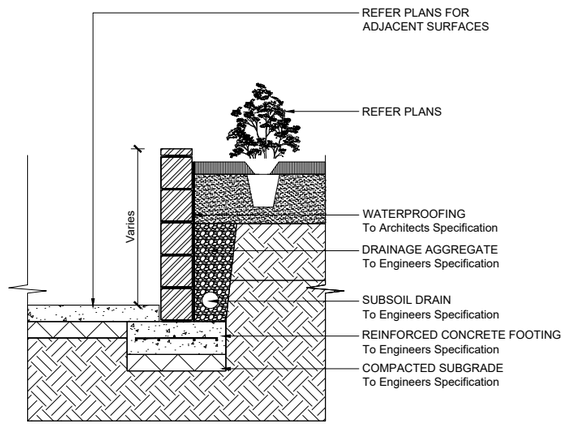
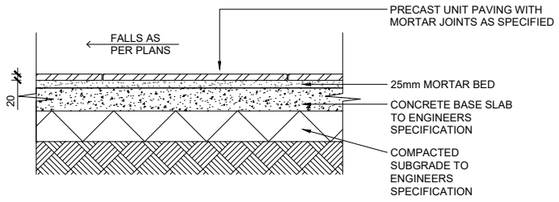
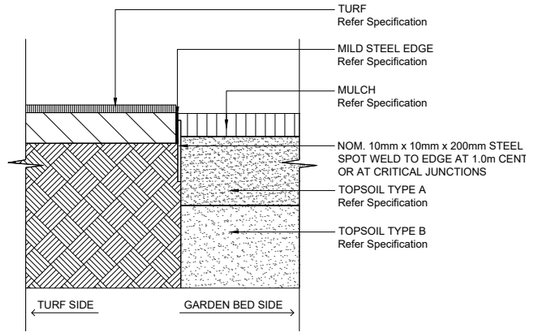
3.6 General Landscape Details



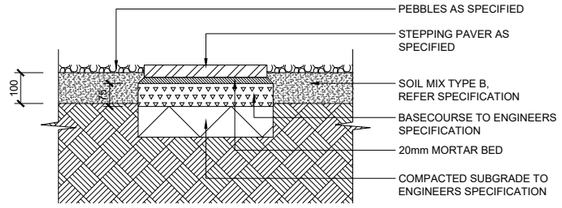
05/502 BLOCKWORK RETAINING WALL
SCALE 1:20



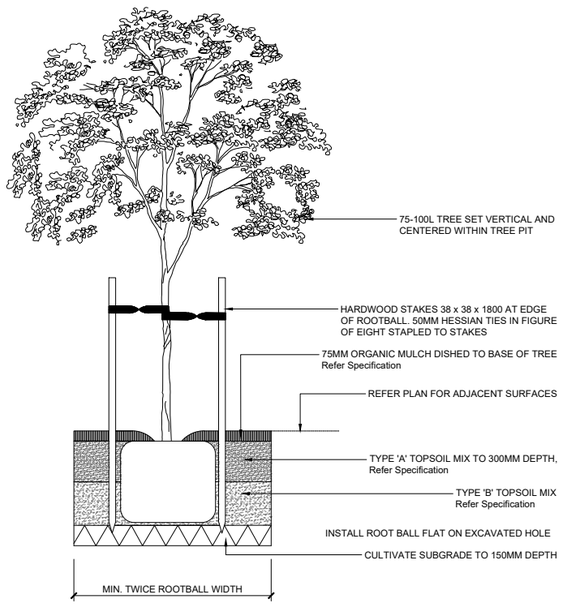
02/501 PAVING TYPE P1 ON GRADE
SCALE 1:10



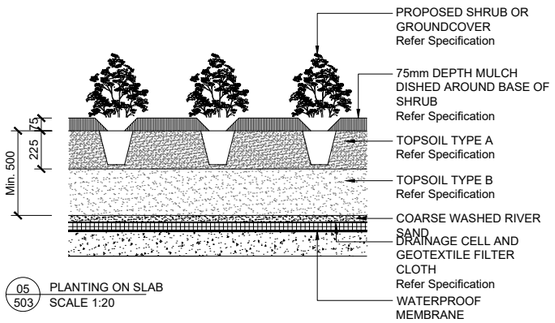
02/502 TYPICAL MILD STEEL EDGE
SCALE 1:10



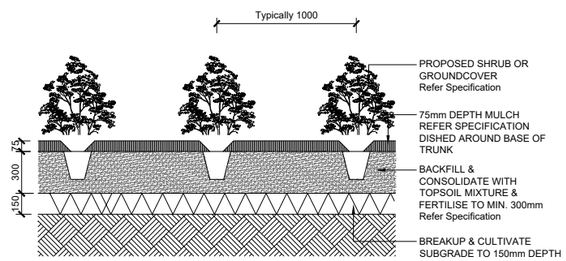
03/501 STEPPING PAVER IN ON GRADE
SCALE 1:10



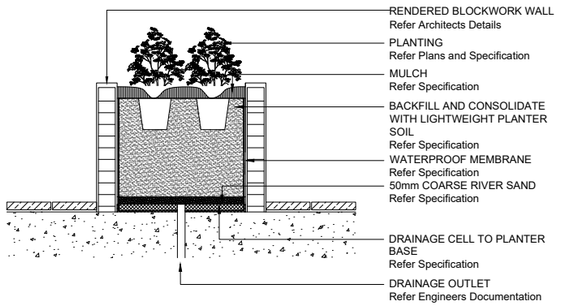
07/503 TREE PLANTING 75-100L
SCALE 1:20



05/503 PLANTING ON SLAB
SCALE 1:20



04/503 LARGE SHRUB IN PLANTING BED
SCALE 1:20



05/503 RAISED PLANTER ON SLAB
SCALE 1:20

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3.7 General Landscape Specification

Landscape specification notes

Services
Before landscape work is commenced the landscape contractor is to establish the Position of all service lines and ensure tree planting is carried out at least 3 metres Away from these services. Service lids, vents and hydrants shall be left exposed and not Covered by any landscape finishes (turfing, paving, garden beds etc.) Finish adjoining Surfaces flush with pit lids.

Aborist management of tree protection
A qualified and approved aborist is to be contracted to undertake or manage the Installation of protective fencing, and to undertake such measures as he deems appropriate to preserve the subject trees to be retained. The arborist is to be retained for the entire contract period to undertake ongoing management and review of the Trees.

Drainage cell and filter fabric
For on-slab areas install an approved ‘drainage cell’ product to comprehensively cover the bottom of all planters. Over drainage cell to on-slab areas, a polyfelt geotextile lining (as supplied by ‘polyfelt ts’ or approved equivalent) is to be installed to cover the bottom of all planters, turned up 300mm and taped to the planter sides to ensure soil mix does not escape into drainage outlets/holes. Install min. 50Mm coarse river sand over all geotextile lining prior to installation of soil mix.

Planting mixture
Shall be homogenous blend of soil and additives in the following proportions:
Existing site soil if suitable or imported topsoil 50% Compost 30% D/w sand 20%
soil testing of existing site soil is to be undertaken to assess suitability of use as planting topsoil and compliance with australian standards.(As4419 - soils for landscaping)

Mulch application
Place mulch to the required depth, (refer to drawings) clear of plant stems, and rake to an even surface finishing 25mm below adjoining levels. Ensure mulch is watered in and tamped down during installation.

Mulch type
Forest litter or pine bark: from mature trees, graded in size from 15mm to 30mm, free from wood slivers. Dark brown in colour and texture.
All mulch to be free of deleterious material such as rock, soil, weeds and sticks

Compost
Shall be well rotted vegetative material or animal manure, or other approved material, free from harmful chemicals, grass and weed growth and with neutral ph. Provide a Certificate of proof of ph upon request.

Plant material
All plants supplied are to conform with those species listed in the plant schedule on the drawings. Generally plants shall be vigorous, well established, hardened off, of good form consistent with species or variety, not soft or forced, free from disease or insect pests with large healthy root systems and no evidence of having been restricted or damaged. Trees shall have a leading shoot. Immediately reject dried out, damaged or Unhealthy plant material before planting. All stock is to be container grown for a Minimum of six (6) months prior to delivery to site

Turf
Shall be soft leaf buffalo. To consist of 25mm depth dense, well rooted, vigorous grass growth with minimum 15mm on an average of 100mm topsoil .
Shirleys no. 17 Or approved equal lawn food shall be thoroughly mixed into the topsoil prior to placing turf. Obtain turf from an approved grower. Furnish a warranty from the grower that the turf is free from weeds and other foreign matter. Deliver turf to the site within 24 hours of being cut, and lay it within 24 hours of being delivered.

Trees in grass and super advanced trees:
Pellets shall be in the form intended to uniformly release plant food elements for a period of approximately nine months equal to shirleys kokei pellets, analysis 6.3:1.8:2.9.
Kokei pellets shall be placed at the time of planting to the base of the plant, 50mm minimum From the root ball at a rate of two pellets per 300mm of top growth to a maximum of 8 pellets per tree.
Tree trunks to be a minimum of 700mm from street kerb or guttering.
All tree planting holes are minimum 1.5M diameter and twice the depth of the rootball
Root directors
Install root directors to manufacturers specificatons to protect assets, structures and underground servives

Staking and tying
Stakes shall be straight hardwood, free from knots and twists, pointed at one end. Size shall be 2x38x38x1800mm and shall sit 600mm within ground. Secure the tree firmly with 2no. Hessianties fitted to the stem separately in opposite directions.
Of plants to be staked.
A. 5-15 Litre size plant 1x(1200x25x25mm)
B. 35-75 Litre size plant 2x(1500x38x38mm)
C. 100-Greater than 200litre 3x(1800x50x50mm)
Ties shall be 50mm wide hessian webbing or approved equivalent nailed or stapled to stake. Drive stakes a minimum one third of their length, avoiding damage to the root system, on The windward side of the plant.

Irrigation system
Supply an automatic watering system using ‘toro irrigation system’ or similar approved, with micro-jet sprinkler heads and low density, rubber modified polypropylene reticulation, to include filters, bends junctions, ends and other ancillary equipment. The Landscaper shall nominate his source of supply for the watering system and obtain approval from the superintendent before placing orders for equipment or supply.
A schematic plan of the proposed irrigation system is to be prepared by the contractor, showing solenoids, pipe diameters, and all nozzle and trickle attachment types (including spray/head angle), for review by the superintendent prior to installation
the contractor is to liaise with the hydraulic engineer and council as necessary, to ensure the irrigation system conforms with all the council and water board codes and requirements.
Provide an automatic controller that provides for two week scheduling and hourly multi-cycle operation. The controller shall manual override. Programming shall be undertaken by the contractor who shall advise on the operation of the system.
provision of secure housing for the automatic irrigation controller to be located in association with the landscape contractor and location confirmed by the superintendent. Wiring to connect remote solenoid locations is to be provided. The controller shall be located in a dry place, protected from the weather, and all cable connections shall be made with waterproof connectors.

Installation shall be tested under known working conditions. Acceptance of the installed Plant and equipment shall be subject to these being satisfactory.
Timber or steel edging
N/a
Soft edges
All soft edges (mulch, turf, grassed) to be finished to appropriate falls and flush with Adjacent surface treatment.
Turf
Turf all landscape areas as shown on the landscape drawings. Turf is to have
To prepare graded areas to receive turf, excavate the area and cultivate so as to allow For importing of 100mm of turf underlay soil. Remove all stones over 50mm ø and remove All weeds and foreign matter. Spread soil mix a.B.S to a depth of 100mm and grade to Appropriate levels to achieve general even grades to drainage outlets installed by Others.
Lay the turf along the land contours with staggered, close butted joints, so that the Finished turf surface is flush with adjacent finished surfaces of paving and the like. As Soon as practicable after laying, roll the turf with a roller weighing not more than 90kg Per metre of width for sandy or light soils.
Water as necessary to keep the soil moist to a depth of 100mm. Protect newly turfed Areas against traffic until grass is established. Fertilise two weeks after laying fertilise A.B.S
‘Top dress’ the turf when it is established to a depth of 10mm with coarse washed river Sand. Rub the dressing well into the joints and correct any unevenness in the turf Surfaces.

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REVISIONS / AMENDMENTS

Rev	Date	Description	Verified
P3	24.07.20	PRELIMINARY ISSUE	J.S.

REVISIONS / AMENDMENTS

Rev	Date	Description	Verified

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PROJECT

WEST RYDE BILLBERGIA

63-77 WEST PARADE, WEST RYDE

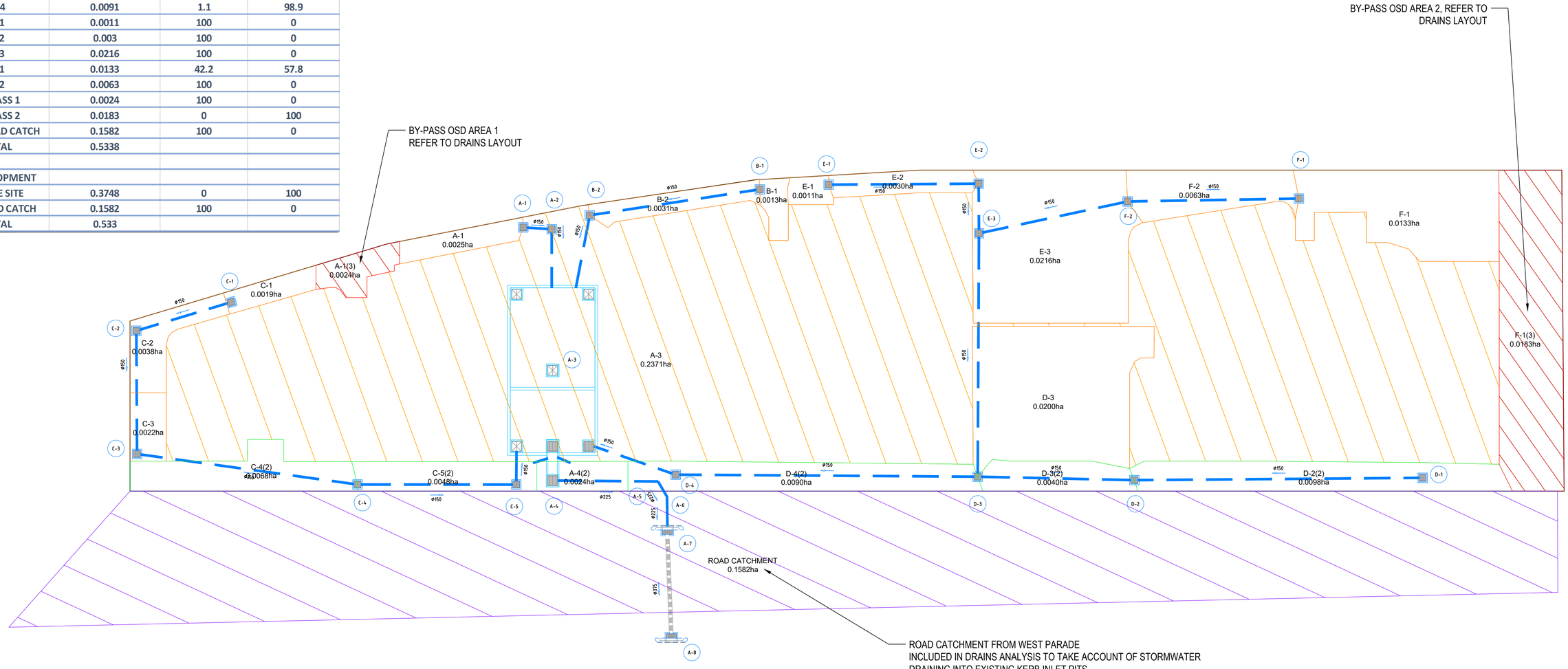
TITLE

STORMWATER SERVICES
GROUND LEVEL
STORMWATER LAYOUT

PRELIMINARY ISSUE
NOT FOR CONSTRUCTION

DRAWN	J.S.	SCALE @ A1
CHECKED	J.S.	1:200
APPROVED	J.S.	
CREATED	07/20	
JOB No.	DRAWING No.	REV
190166	C101	P3

POST-DEVELOPMENT			
		PERCENTAGE	PERCENTAGE
LOCATION	CATCHMENT (HA)	IMPERMEABLE	PERMEABLE
A-1	0.0025	50.7	49.3
A-3	0.2373	100	0
A-4	0.0025	3.9	96.1
A-7	0.0001	100	0
B-1	0.0013	100	0
B-2	0.0031	100	0
C-1	0.0019	100	0
C-2	0.0038	100	0
C-3	0.0022	100	0
C-4	0.0069	1.5	98.5
C-5	0.0049	2	98
D-1	0.0001	100	0
D-2	0.0099	1	99
D-3	0.024	83.5	16.5
D-4	0.0091	1.1	98.9
E-1	0.0011	100	0
E-2	0.003	100	0
E-3	0.0216	100	0
F-1	0.0133	42.2	57.8
F-2	0.0063	100	0
BY-PASS 1	0.0024	100	0
BY-PASS 2	0.0183	0	100
POST ROAD CATCH	0.1582	100	0
TOTAL	0.5338		
PRE-DEVELOPMENT			
ENTIRE SITE	0.3748	0	100
PRE ROAD CATCH	0.1582	100	0
TOTAL	0.533		



NOTES:

1) CATCHMENTS ANALYSIS IS CALCULATED BY 12D. EACH PIT OR NODE CAN BE ASSIGNED WITH 3 GROUPS OF CATCHMENTS.
2) THE FIRST GROUP IS FOR 100% IMPERMEABLE SUCH AS ROOF AND CONCRETE PAVEMENTS. THE SECOND GROUP DENOTED WITH SUFFIX (2) IS FOR 100% PERMEABLE AREAS SUCH AS LANDSCAPE AND DEEP SOIL AREAS.
3) THE THRID GROUP DENOTED WITH SUFFIX (3) IS FOR AREAS THAT BY PASS OSD. TOTAL BY PASS OSD AREA IS ABOUT 207 m² WHICH IS ABOUT 6% OF THE ENTIRE SITE.
4) 12D COULD NOT EXPORT CATCHMENTS OF GROUP 2 TO DRAINS SOFTWARE, IF GROUP 1 IS ZERO AREA FOR PITS THAT HAVE ONLY LANDSCAPE AREAS.
5) IT IS INTENTIONAL TO ADD 1m² OF GROUP 1 TO THOSE PITS FOR EXPORT TO DRAINS SOFTWARE. HENCE, THE POST DEVELOPMENT AREA IS 8m² MORE THAN PRE DEVELOPMENT.
6) REFER TO C501 TO C506 FOR DRAINS ANALYSIS RESULTS. POST DEVELOPMENT DISCHARGE IS LESS THAN PRE DEVELOPMENT DISCHARGE FOR ALL STORM EVENTS.
7) THE CATCHMENT OF WEST PARADE ROAD DRAINING INTO EXISTING KERB INLET PIT IS INCLUDED IN ANALYSIS TO TAKE ACCOUNT OF THE PARTIAL SUBMERGED SITUATION OF EXISTING PIT.

Application Number:LDA 2020 / 133

DA Approved Engineering Plans
Date: 17 November 2020
Council Officer:Daniel Pearse

10 5 0 10 m

1 : 200-A1 1 : 400-A3

REVISIONS / AMENDMENTS

Rev	Date	Description	Verified
P3	24.07.20	PRELIMINARY ISSUE	J.S.

REVISIONS / AMENDMENTS

Rev	Date	Description	Verified

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PROJECT
WEST RYDE BILLBERGIA
63-77 WEST PARADE, WEST RYDE

TITLE
STORMWATER SERVICES
GROUND LEVEL
CATCHMENTS LAYOUT

PRELIMINARY ISSUE
NOT FOR CONSTRUCTION

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CHECKED	J.S.	1:200
APPROVED	J.S.	
CREATED	07/20	
JOB No.	DRAWING No.	REV
190166	C102	P3

Aug 04, 2020 – 7:03pm D:\WORK\190166 63 77 West Parade West Ryde\Drawings\190166-C102.dwg

Application Number:LDA 2020 / 133

DA Approved Engineering Plans
Date: 17 November 2020
Council Officer:Daniel Pearse

10 5 0 10 m

1 : 200-A1 1 : 400-A3

REVISIONS / AMENDMENTS				REVISIONS / AMENDMENTS			
Rev	Date	Description	Verified	Rev	Date	Description	Verified
A	18.08.20	DA ISSUE	D.G.M.				

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PROJECT
WEST RYDE BILLBERGIA
63-77 WEST PARADE, WEST RYDE

TITLE
HYDRAULIC SERVICES
GROUND FLOOR
STORMWATER DRAINAGE
LAYOUT

DA ISSUE
NOT TO BE USED FOR CONSTRUCTION

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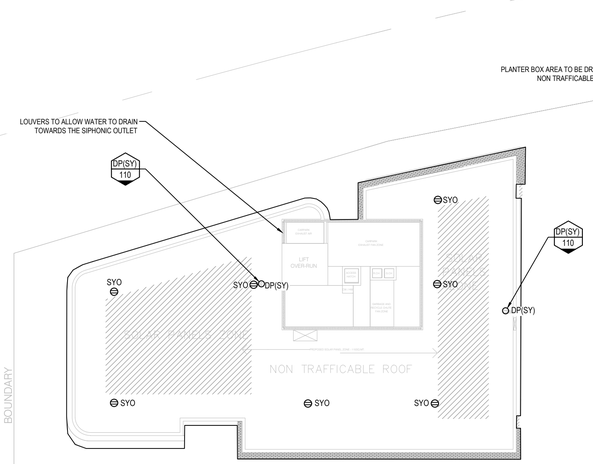
CHECKED	A.B.	1:200
APPROVED	D.G.M.	
CREATED	JULY 2020	
JOB No. 190166	DRAWING No. H100	REV A

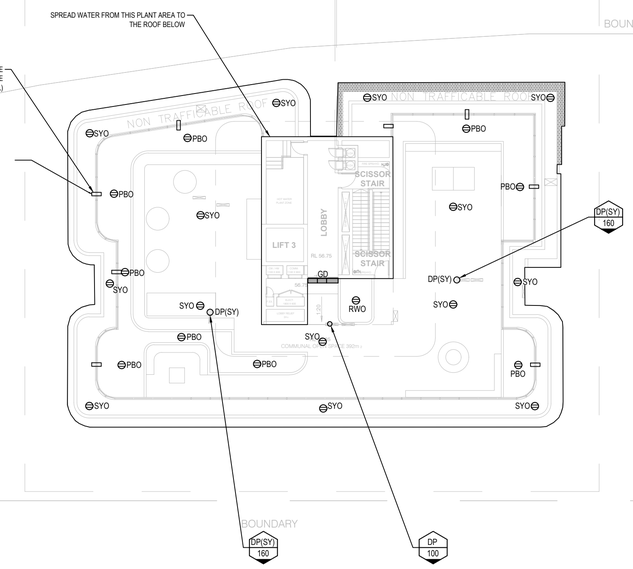
NOTE:

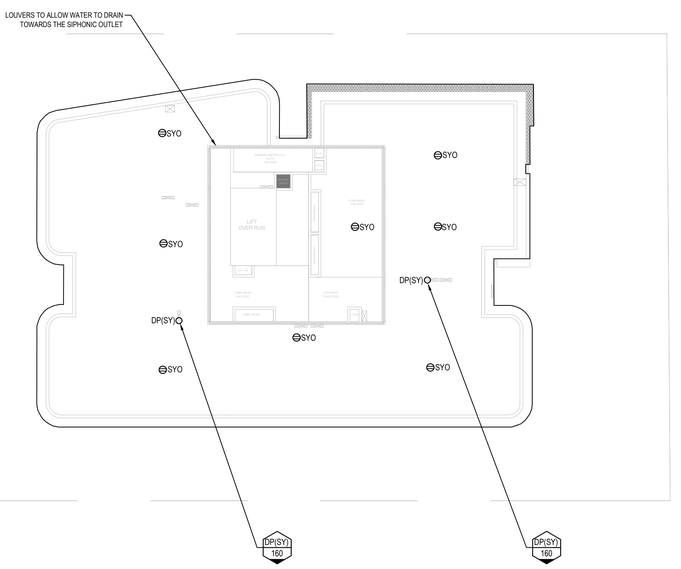
- ROOF DRAINAGE DESIGNED TO 1 IN 20 ARI(176 mm/hr)
- SIPHONIC OUTLET (SYO) LOCATIONS TO TO BE CONFIRMED BY THE ARCHITECT
- LIFT OVERRUN TO BE DRAINED DOWN TO ROOF BELOW

LEGEND

SYO - SYPHONIC ROOF OUTLET
PBO - PLANTER BOX OUTLET
RWO - RAIN WATER OUTLET
DP - DOWNPIPE







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NSW Nominated Architects
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PROJECT
WEST RYDE BILLBERGIA
63-77 WEST PARADE, WEST RYDE

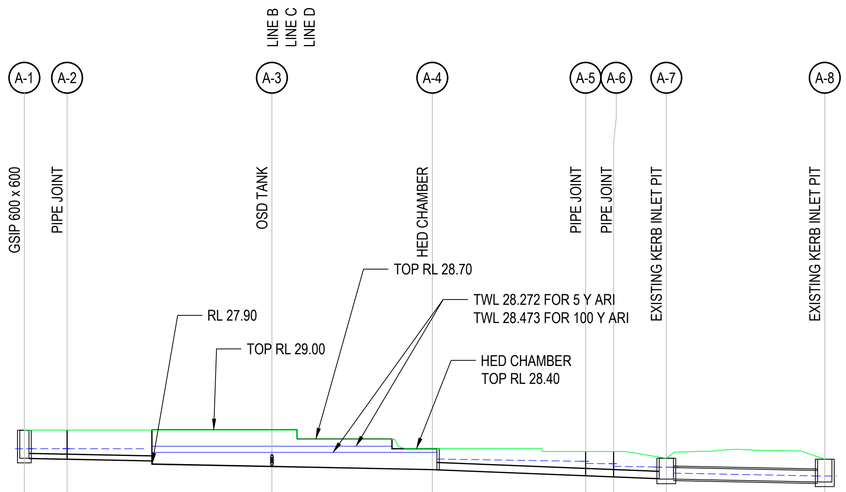
TITLE
HYDRAULIC SERVICES
ROOF
STORMWATER DRAINAGE
LAYOUT

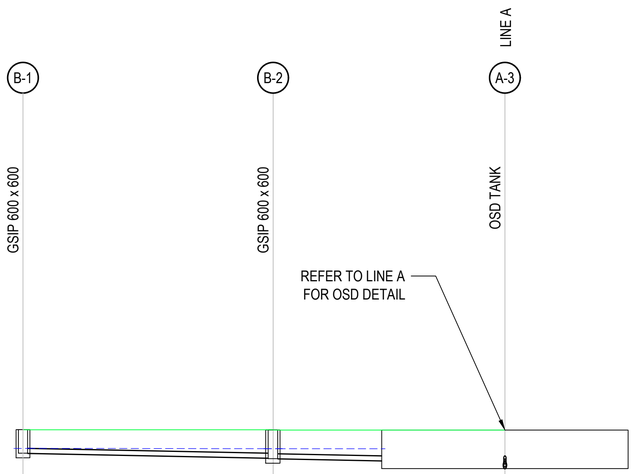
DA ISSUE
NOT TO BE USED FOR CONSTRUCTION

DRAWN	K.S.	SCALE @ A1
CHECKED	A.B.	**1:200**
APPROVED	D.G.M.	
CREATED	JULY 2020	

JOB No.	DRAWING No.	REV
190166	**H150**	**A**

Aug 18, 2020 - 12:41pm S:\JOB No\Job No 20190100-20190199\190166 63 77 West Parade West Ryde\Drawings\Hydraulics\190166-H150.dwg


A-1
A-2
LINE B
LINE C
LINE D
A-3
A-4
A-5
A-6
A-7
A-8
GSIP 600 x 600
PIPE JOINT
OSD TANK
HED CHAMBER
PIPE JOINT
PIPE JOINT
EXISTING KERB INLET PIT
EXISTING KERB INLET PIT
TOP RL 28.70
TWL 28.272 FOR 5 Y ARI
TWL 28.473 FOR 100 Y ARI
RL 27.90
TOP RL 29.00
HED CHAMBER
TOP RL 28.40


B-1
B-2
LINE A
A-3
GSIP 600 x 600
GSIP 600 x 600
OSD TANK
REFER TO LINE A
FOR OSD DETAIL

| | | |

DATUM (m)	10.00					
PIPE CLASS	UPVC	UPVC	UPVC	UPVC	UPVC	
PIPE SIZE (mm)	150	150	150	150	150	
PIPE COVER MIN (m)	0.28	0.39	0.51	0.71	0.63	
PIPE GRADE (%)	1.00	1.00	1.00	1.00	1.00	
FULL PIPE VELOCITY (m/s)	0.40	0.63	0.59	0.26	0.38	
PEAK FLOW (L/s)	1	2	3	5	7	
DESIGN SURFACE LEVEL	29.010	29.000	28.990	28.975	28.970	29.000
HYDRAULIC GRADE LINE	28.576	28.501 / 28.482	28.390 / 28.362	28.296 / 28.292	28.282 / 28.276	28.272 / 28.078
INVERT LEVEL	28.557	28.470 / 28.450	28.339 / 28.319	28.113 / 28.093	27.949 / 27.929	27.900 / 27.743
PIPE CHAINAGE	0.000	9.403	21.099	42.228	57.302	68.686

ALL SURFACE RL'S TO BE ADJUSTED CONSISTENT WITH APPROVED ARCHITECTURAL PLANS.

ANY SURCHARGE FLOWS MUST BE CONVEYED IN A SAFE AND CONTROLLED MANNER TO THE POINT OF DISCHARGE AND CLEAR OF INUNDATING HABITABLE AREAS.

LINE C

HORT SCALE 1: 200

VERT SCALE 1 : 100

Application Number:LDA 2020 / 133

DA Approved Engineering Plans
Date: 17 November 2020
Council Officer:Daniel Pearse

NOTES:

5) GULLY SURFACE INLET PIT (GSIP) LOCATIONS ARE APPROXIMATE AND THEY MAY REPRESENT TRENCH DRAINS AND GARDEN OUTLETS FOR STORMWATER ANALYSIS.
6) PIT SURFACE GRATE LEVELS ARE APPROXIMATE AND REFER TO LATEST ARCHITECTURAL PAVEMENT DESIGN.
7) REFER TO C301 FOR THE DETAIL OF THE ON SITE DETENTION (OSD) TANK.
8) ORIFICE PLATE, HED WEIR AND TRASH SCREEN ARE NOT SHOWN IN THIS DRAWING. REFER TO C302 FOR DETAIL.

REVISIONS / AMENDMENTS

Rev	Date	Description	Verified
P3	24.07.20	PRELIMINARY ISSUE	J.S.

REVISIONS / AMENDMENTS

Rev	Date	Description	Verified

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PROJECT
WEST RYDE BILLBERGIA
63-77 WEST PARADE, WEST RYDE

TITLE
CIVIL SERVICES
DRAINAGE PROFILE
HGL FOR 5 YEARS ARI
LINE C

PRELIMINARY ISSUE
NOT FOR CONSTRUCTION

DRAWN	J.S.	SCALE @ A1
CHECKED	J.S.	1 : 200
APPROVED	J.S.	
CREATED	JULY 20	
JOB No.	DRAWING No.	REV
190166	C202	P3

Aug 04, 2020 – 5:26pm D:\WORK\190166 63 77 West Parade West Ryde\Drawings\190166-C201-C204.dwg

DATUM (m)	11.00				
PIPE CLASS	UPVC	UPVC	UPVC	UPVC	
PIPE SIZE (mm)	150	150	150	150	
PIPE COVER MIN (m)	0.39	0.58	0.39	0.24	
PIPE GRADE (%)	1.00	1.00	1.00	1.00	
FULL PIPE VELOCITY (m/s)	0.14	0.35	0.94	1.35	
PEAK FLOW (L/s)	2	6	17	24	
DESIGN SURFACE LEVEL	29.200	29.200	29.100	29.000	29.000
HYDRAULIC GRADE LINE	28.980	28.966 / 28.965	28.960 / 28.870	28.604 / 28.492	28.272 / 28.078
INVERT LEVEL	28.648	28.380 / 28.360	28.217 / 28.197	27.917 / 27.897	27.800 / 27.743
PIPE CHAINAGE	0.000	27.385	42.254	70.927	86.249

ALL SURFACE RL'S TO BE ADJUSTED CONSISTENT WITH APPROVED ARCHITECTURAL PLANS.

ANY SURCHARGE FLOWS MUST BE CONVEYED TO WEST PARADE VIA PIPED OVERFLOW SO AS TO PREVENT INUNDATION OF FOOTPATH AREAS.

LINE D

HORT SCALE 1: 200
VERT SCALE 1 : 100

Application Number:LDA 2020 / 133

DA Approved Engineering Plans
Date: 17 November 2020
Council Officer:Daniel Pearse

REVISIONS / AMENDMENTS

Rev	Date	Description	Verified
P3	24.07.20	PRELIMINARY ISSUE	J.S.

REVISIONS / AMENDMENTS

Rev	Date	Description	Verified

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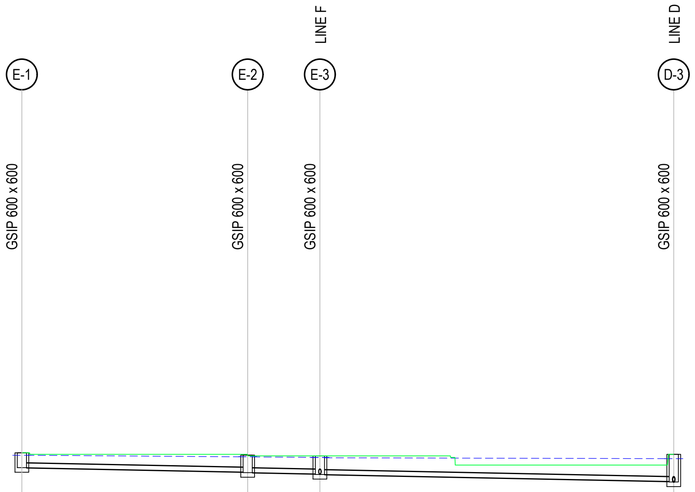
PROJECT
WEST RYDE BILLBERGIA
63-77 WEST PARADE, WEST RYDE

TITLE
CIVIL SERVICES
DRAINAGE PROFILE
HGL FOR 5 YEARS ARI
LINE D

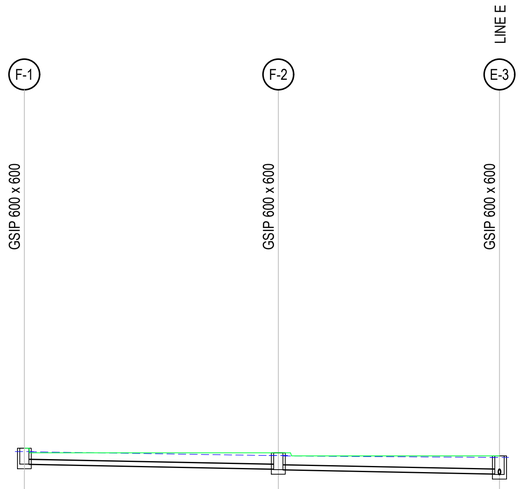
PRELIMINARY ISSUE
NOT FOR CONSTRUCTION

DRAWN	J.S.	SCALE @ A1
CHECKED	J.S.	1 : 200
APPROVED	J.S.	
CREATED	JULY 20	
JOB No.	DRAWING No.	REV
190166	C203	P3



DATUM (m)	11.00			
PIPE CLASS	UPVC	UPVC	UPVC	
PIPE SIZE (mm)	150	150	150	
PIPE COVER MIN (m)	0.27	0.38	0.23	
PIPE GRADE (%)	1.00	1.00	1.00	
FULL PIPE VELOCITY (m/s)	0.12	0.24	0.75	
PEAK FLOW (L/s)	2	4	13	
DESIGN SURFACE LEVEL	29.150	29.100	29.080	29.100
HYDRAULIC GRADE LINE	29.127	29.066 / 29.066	29.050 / 29.022	28.960 / 28.870
INVERT LEVEL	28.665	28.523 / 28.503	28.462 / 28.442	28.217 / 28.197
PIPE CHAINAGE	0.000	14.745	19.461	42.565

LINE E



DATUM (m)	11.00		
PIPE CLASS	UPVC	UPVC	
PIPE SIZE (mm)	150	150	
PIPE COVER MIN (m)	0.20	0.29	
PIPE GRADE (%)	1.00	1.00	
FULL PIPE VELOCITY (m/s)	0.28	0.44	
PEAK FLOW (L/s)	5	8	
DESIGN SURFACE LEVEL	29.300	29.150	29.080
HYDRAULIC GRADE LINE	29.182	29.074 / 29.071	29.050 / 29.022
INVERT LEVEL	28.780	28.621 / 28.601	28.462 / 28.442
PIPE CHAINAGE	0.000	16.586	31.025

LINE F

ALL SURFACE RL'S TO BE ADJUSTED CONSISTENT WITH APPROVED ARCHITECTURAL PLANS.

ANY SURCHARGE FLOWS MUST BE CONVEYED IN A SAFE AND CONTROLLED MANNER TO THE POINT OF DISCHARGE AND CLEAR OF INUNDATING HABITABLE AREAS.

HORT SCALE 1: 200

VERT SCALE 1 : 100

Application Number:LDA 2020 / 133

DA Approved Engineering Plans
Date: 17 November 2020
Council Officer:Daniel Pearse

REVISIONS / AMENDMENTS

Rev	Date	Description	Verified
P3	24.07.20	PRELIMINARY ISSUE	J.S.

REVISIONS / AMENDMENTS

Rev	Date	Description	Verified

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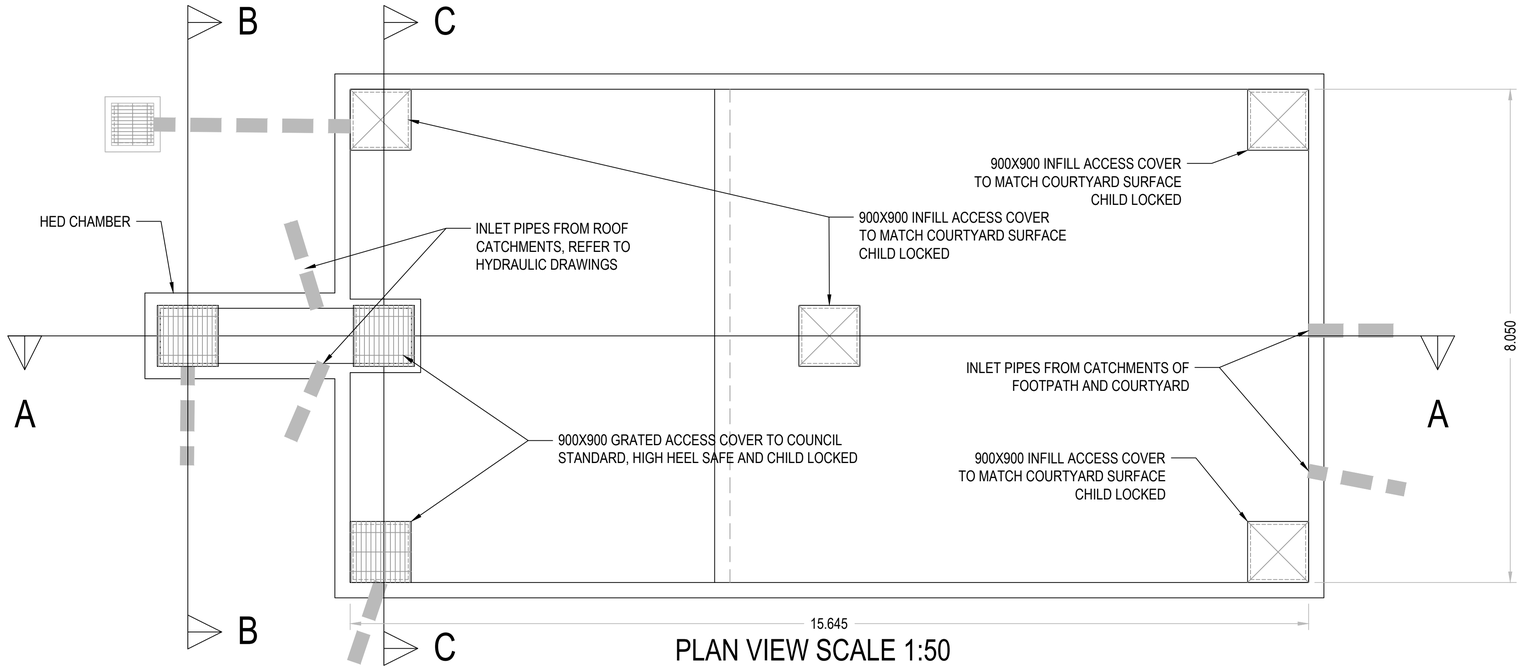
PROJECT
WEST RYDE BILLBERGIA
63-77 WEST PARADE, WEST RYDE

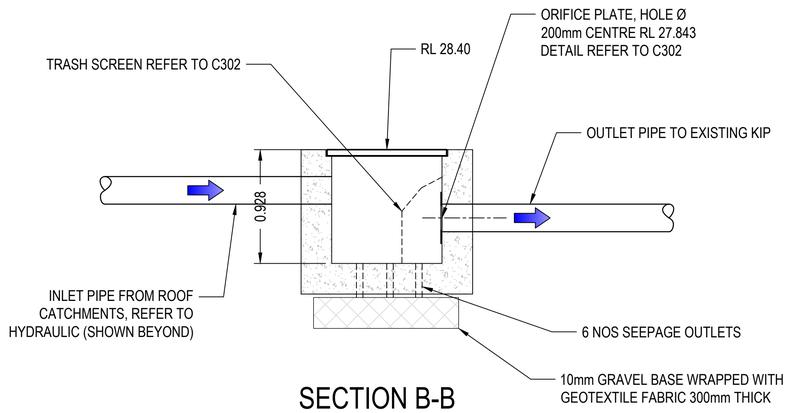
TITLE
CIVIL SERVICES
DRAINAGE PROFILE
HGL FOR 5 YEARS ARI
LINE E AND LINE F

PRELIMINARY ISSUE
NOT FOR CONSTRUCTION

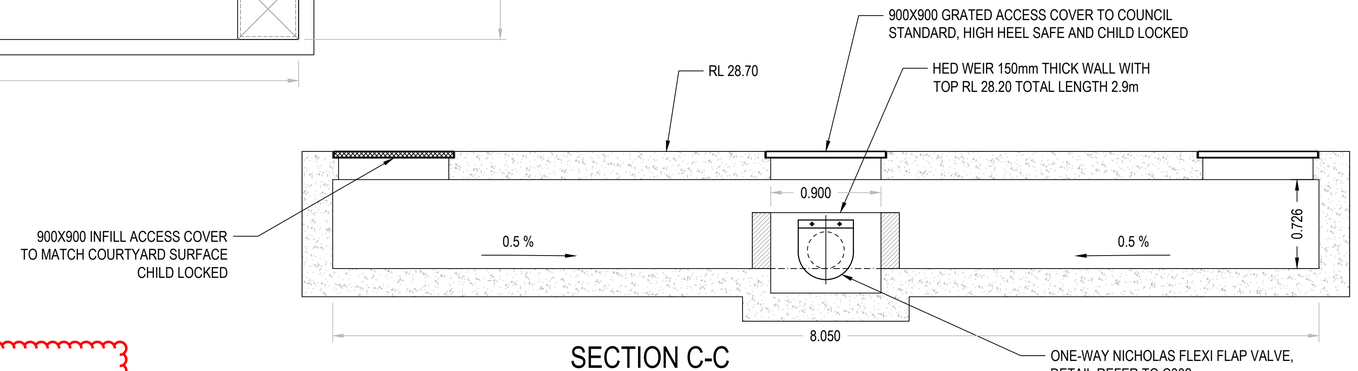
DRAWN	J.S.	SCALE @ A1
CHECKED	J.S.	1 : 200
APPROVED	J.S.	
CREATED	JULY 20	
JOB No.	DRAWING No.	REV
190166	C204	P3



PLAN VIEW SCALE 1:50



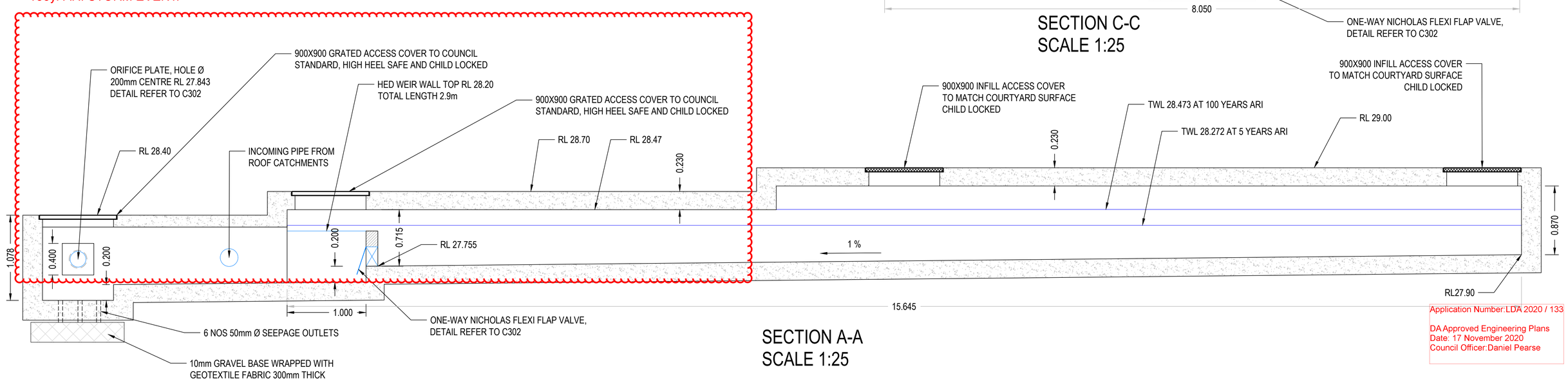
SECTION B-B
SCALE 1:25



SECTION C-C
SCALE 1:25

REFER TO CONDITION "Stormwater Management".

OSD MUST ACCOMODATE ALL RUNOFF UP TO THE 100yr ARI STORM EVENT.



SECTION A-A
SCALE 1:25

Application Number:LDA 2020 / 133

DA Approved Engineering Plans
Date: 17 November 2020
Council Officer:Daniel Pearse

1000 500 0 1000 2000 mm

1 : 25-A1 1 : 50-A3

REVISIONS / AMENDMENTS

Rev	Date	Description	Verified
P3	24.07.20	PRELIMINARY ISSUE	J.S.

REVISIONS / AMENDMENTS

Rev	Date	Description	Verified

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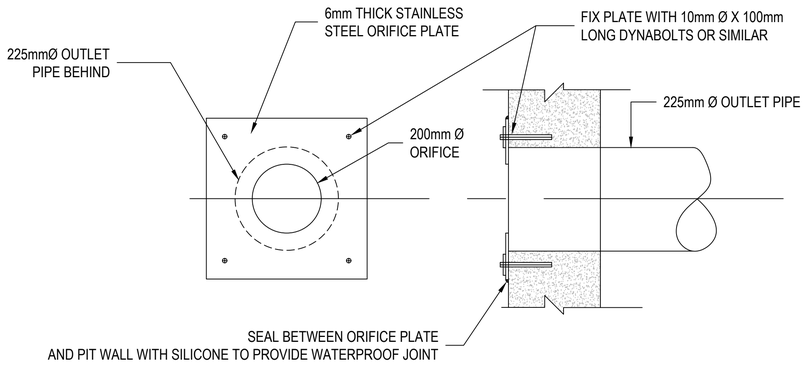
PROJECT
WEST RYDE BILLBERGIA
63-77 WEST PARADE, WEST RYDE

TITLE
STORMWATER SERVICES
OSD TANK SECTIONS

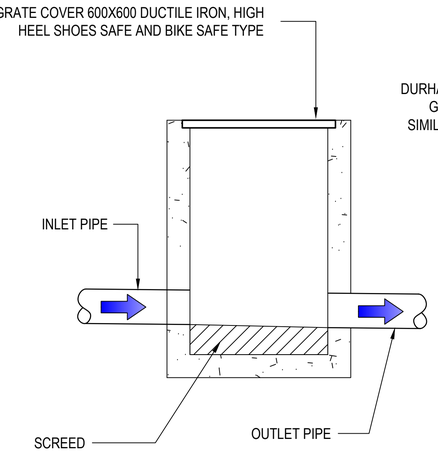
PRELIMINARY ISSUE
NOT FOR CONSTRUCTION

DRAWN	J.S.	SCALE @ A1
CHECKED	J.S.	1:25 , 1:50
APPROVED	J.S.	
CREATED	07/20	
JOB No.	DRAWING No.	REV
190166	C301	P3



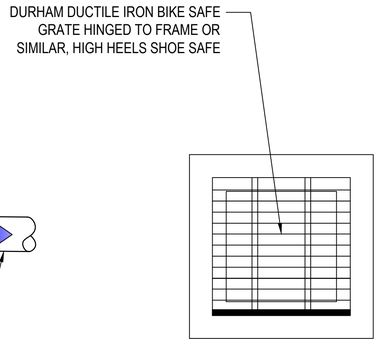
ORIFICE PLATE DETAIL

SCALE: NTS



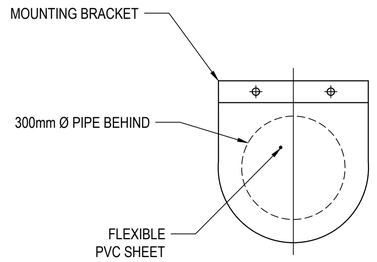
TYPICAL PIT SECTION VIEW

SCALE : NTS



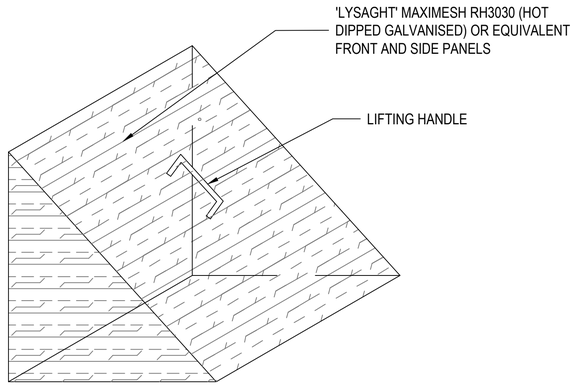
TYPICAL PIT PLAN VIEW

SCALE : NTS



FLAP VALVE SCALE: NTS

NICHOLAS FLEXI FLAP VALVE OR APPROVED EQUIVALENT



TRASH SCREEN DETAIL AT OSD CHAMBER

SCALE: NTS

ORIFICE PLATE NOTES

1. HOLE IN ORIFICE PLATE TO BE PRECISION CUT WITH SHARP EDGES TO THE SPECIFIED DIAMETER.
2. ORIFICE PLATE TO BE PLACED CENTRALLY OVER THE OUTLET PIPE.
3. PLATE TO BE MADE FROM STAINLESS STEEL. HOT DIPPED GALVANISED OR OTHERS NOT ACCEPTABLE.
4. OUTLET PIPE TO BE CAST INTO THE WALL OF THE PIT.
5. HOLE IN PLATE TO BE CENTRALLY PLACED.

TRASH SCREEN NOTES

1. MAXIMESH SCREEN MUST BE PLACED SUCH THAT THE LONG AXIS OF THE OVAL SHAPED HOLES ARE ORIENTATED HORIZONTALLY WITH THE PROTRUDING LIP ANGLED UPWARDS AND FACING TOWARDS THE OUTLET
2. THE SCREEN IS TO BE FORMED BY WELDING TWO TRIANGULAR MAXIMESH (OR EQUIVALENT) PANELS TO A RECTANGULAR FRONT MAXIMESH PANEL (OR EQUIVALENT)

PLACE NEAR BY THE OSD TANK, ON THE WALL OR NEARBY SIGN-POST

PLACE ON EACH TAP THAT SUPPLY BY RAINWATER TANK

Application Number:LDA 2020 / 133

DA Approved Engineering Plans
Date: 17 November 2020
Council Officer:Daniel Pearse

REVISIONS / AMENDMENTS

Rev	Date	Description	Verified
P3	24.07.20	PRELIMINARY ISSUE	J.S.

REVISIONS / AMENDMENTS

Rev	Date	Description	Verified

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PROJECT

WEST RYDE BILLBERGIA

63-77 WEST PARADE, WEST RYDE

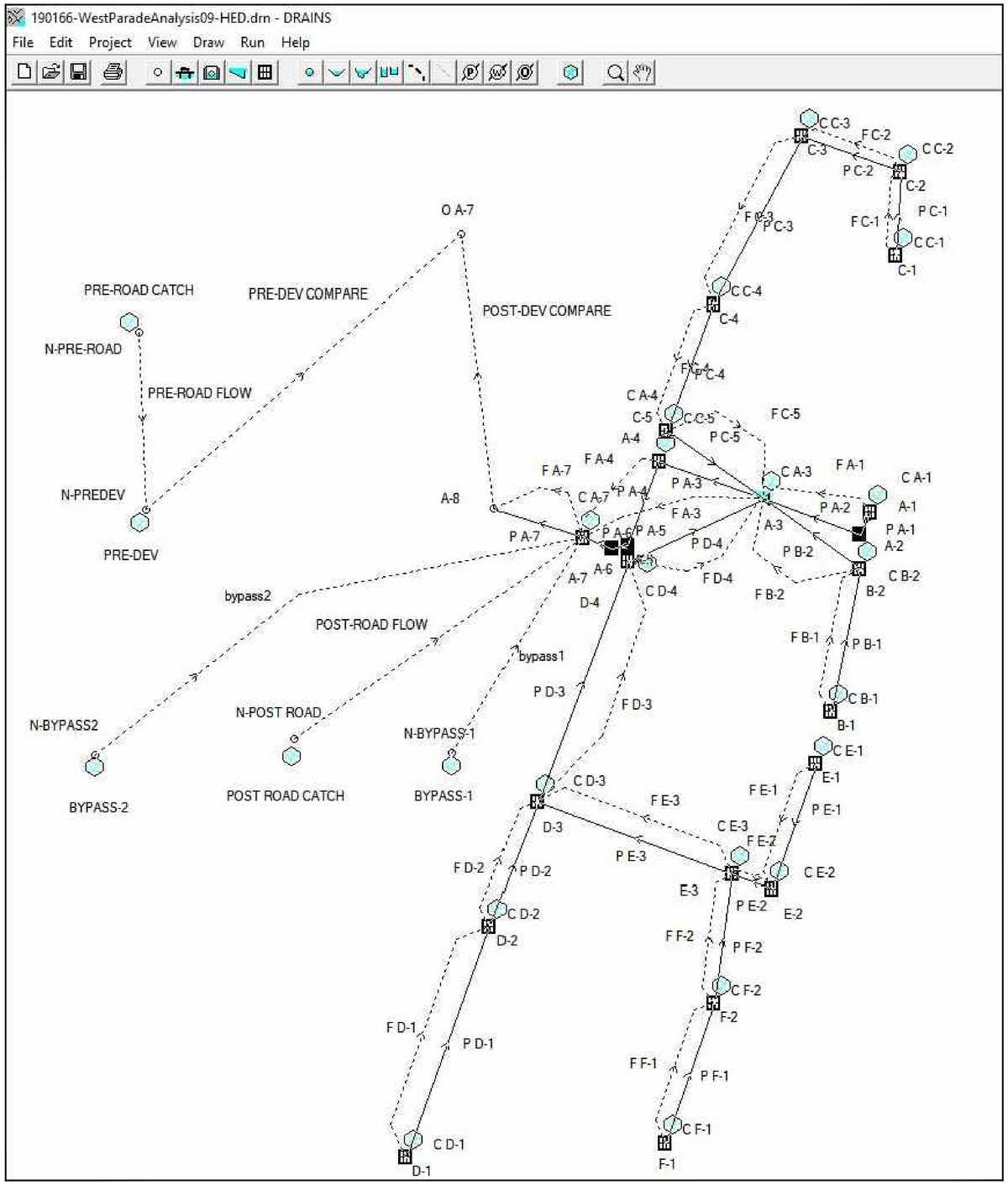
TITLE

STORMWATER SERVICES
DETAIL OF ORIFICE PLATE, FLAP VALVE, TRASH SCREEN AND OTHERS

PRELIMINARY ISSUE
NOT FOR CONSTRUCTION

DRAWN	J.S.	SCALE @ A1
CHECKED	J.S.	NTS
APPROVED	J.S.	
CREATED	07/20	
JOB No.	DRAWING No.	REV
190166	C302	P3

Aug 04, 2020 – 9:38pm D:\WORK\190166 63 77 West Parade West Ryde\Drawings\190166-C301-C304.dwg



PIT / NODE DETAILS — Version 15

Name	Type	Family	Size	Ponding Volume (cu.m)	Pressure Change Coeff. Ku	Surface Elev (m)	Max Pond Depth (m)	Base Inflow (cum/s)	Blocking Factor	x	y	Bolt-down lid	d	Part Full Shock Loss	Inflow Hydrograph	Pit is	Internal Width (mm)	Inflow is Misaligned
A-1	OnGrade	SIP	GSIP 600 x 600		6.8	28.995		0	0	323285.402	6257838.52	No	873888	1 x Ku	No	New		No
A-2	OnGrade	SPECIAL	SPECIAL		1.4	29		0	0	323284.267	6257835.971	Yes	873889	1 x Ku	No	New		No
A-4	OnGrade	SIP	GSIP 600 x 600		1.3	28.4		0	0	323261.871	6257844.163	No	873890	1 x Ku	No	New		Yes
A-5	OnGrade	SPECIAL	SPECIAL		1.4	28.96		0	0	323258.355	6257834.791	Yes	873891	1 x Ku	No	New		No
A-6	OnGrade	SPECIAL	SPECIAL		1.6	28.74		0	0	323256.563	6257834.44	Yes	873892	1 x Ku	No	New		Yes
A-7	OnGrade	KERB INLET	KERB INLET 2.4m LINTEL		5.8	28.08		0	0	323253.354	6257835.487	No	873893	1 x Ku	No	New		No
A-8	Node					28.05		0		323243.503	6257838.852		873894		No			
B-1	OnGrade	SIP	GSIP 600 x 600		2	29.015		0	0	323281.083	6257816.187	No	873895	1 x Ku	No	New		
B-2	OnGrade	SIP	GSIP 600 x 600		5.2	29.005		0	0	323284.316	6257832.197	No	873896	1 x Ku	No	New		No
C-1	OnGrade	SIP	GSIP 600 x 600		2	29.01		0	0	323288.266	6257867.009	No	873897	1 x Ku	No	New		
C-2	OnGrade	SIP	GSIP 600 x 600		5.9	29		0	0	323288.806	6257876.396	No	873898	1 x Ku	No	New		No
C-3	OnGrade	SIP	GSIP 600 x 600		5.9	28.99		0	0	323277.798	6257880.351	No	873899	1 x Ku	No	New		No
C-4	OnGrade	SIP	GSIP 600 x 600		1.6	28.975		0	0	323267.896	6257861.687	No	873900	1 x Ku	No	New		No
C-5	OnGrade	SIP	GSIP 600 x 600		1.6	28.97		0	0	323262.704	6257847.535	No	873901	1 x Ku	No	New		No
D-1	OnGrade	SIP	GSIP 600 x 600		2	28.98		0	0	323233.739	6257766.491	No	873902	1 x Ku	No	New		
D-2	OnGrade	SIP	GSIP 600 x 600		1.3	28.975		0	0	323242.94	6257792.284	No	873903	1 x Ku	No	New		No
D-3	OnGrade	SIP	GSIP 600 x 600		2.5	28.97		0	0	323248.355	6257806.132	No	873904	1 x Ku	No	New		No
D-4	OnGrade	SIP	GSIP 600 x 600		1.2	28.96		0	0	323258.386	6257832.993	No	873905	1 x Ku	No	New		No
E-1	OnGrade	SIP	GSIP 600 x 600		2	29.2		0	0	323279.391	6257810.384	No	873906	1 x Ku	No	New		
E-2	OnGrade	SIP	GSIP 600 x 600		1.5	29.15		0	0	323274.451	6257796.491	No	873907	1 x Ku	No	New		No
E-3	OnGrade	SIP	GSIP 900 x 900		2.6	29.05		0	0	323270.012	6257798.084	No	873908	1 x Ku	No	New		No
F-1	OnGrade	SIP	GSIP 600 x 600		3.2	29.2		0	0	323262.573	6257768.114	No	873909	1 x Ku	No	New		No
F-2	OnGrade	SIP	GSIP 600 x 600		1.3	29.075		0	0	323268.005	6257783.785	No	873910	1 x Ku	No	New		No
O A-7	Node					20		0		323239.832	6257869.358		873911		No			
N-PREDEV	Node					28.05		0		323204.68	6257838.677		1087323		No			
N-BYPASS2	Node					29		0		323198.944	6257811.361		1258445		No			
N-BYPASS-1	Node					29		0		323238.903	6257811.627		1258446		No			
N-PRE-ROAD	Node					28.1		0		323203.942	6257858.499		4400014		No			
N-POST ROAD	Node					29		0		323221.217	6257813.083		4400020		No			

DETENTION BASIN DETAILS

Name	Elev	Surf. Area	Not Used	Outlet Type	K	Dia(mm)	Centre RL	Pit Family	Pit Type	x	y	HED	Crest RL	Crest Length(m)	id
A-3	27.743	0	%	Orifice		200	27.843			323273.522	6257830.992	Yes	28.2	2.9	873912
	27.9	124													
	28.2	124													
	28.4	124													
	28.401	76													
	29	76													

SUB-CATCHMENT DETAILS

Name	Pit or Node	Total Area (ha)	Paved Area %	Grass Area %	Supp Area %	Paved Time (min)	Grass Time (min)	Supp Time (min)	Paved Length (m)	Grass Length (m)	Supp Length (m)	Paved Slope(%) %	Grass Slope %	Supp Slope %	Paved Rough	Grass Rough	Supp Rough	Lag Time or Factor
C A-1	A-1	0.0025	50.7	49.3	0	5	10	0										
C A-3	A-3	0.2373	100	0	0	5	10	0										
C A-4	A-4	0.0025	3.9	96.1	0	5	10	0										
C A-7	A-7	0.0001	100	0	0	5	10	0										
C B-1	B-1	0.0013	100	0	0	5	10	0										
C B-2	B-2	0.0031	100	0	0	5	10	0										
C C-1	C-1	0.0019	100	0	0	5	10	0										
C C-2	C-2	0.0038	100	0	0	5	10	0										
C C-3	C-3	0.0022	100	0	0	5	10	0										
C C-4	C-4	0.0069	1.5	98.5	0	5	10	0										
C C-5	C-5	0.0049	2	98	0	5	10	0										
C D-1	D-1	0.0001	100	0	0	5	10	0										
C D-2	D-2	0.0099	1	99	0	5	10	0										
C D-3	D-3	0.024	83.5	16.5	0	5	10	0										
C D-4	D-4	0.0091	1.1	98.9	0	5	10	0										
C E-1	E-1	0.0011	100	0	0	5	10	0										
C E-2	E-2	0.003	100	0	0	5	10	0										
C E-3	E-3	0.0216	100	0	0	5	10	0										
C F-1	F-1	0.0133	42.2	57.8	0	5	10	0										
C F-2	F-2	0.0063	100	0	0	5	10	0										
PRE-DEV	N-PREDEV	0.1748	0	100	0	5	10	5										0
BYPASS-2	N-BYPASS2	0.0183	0	100	0	5	10	5										0
BYPASS-1	N-BYPASS-1	0.0024	100	0	0	5	10	2										0
PRE-ROAD CATCH	N-PRE-ROAD	0.1582	100	0	0	5	10	5										0
POST ROAD CATCH	N-POST ROAD	0.1582	100	0	0	5	10	5										0

PIPE DETAILS

Name	From	To	Length (m)	U/S IL (m)	D/S IL (m)	Slope (%)	Type	Dia (mm)	I.D. (mm)	Rough	Pipe is	No. Pipes	Chg From	At Chg	Chg	Chg	RI (m)	Chg (m)	RL (m)
P A-1	A-1	A-2	2.49	28.08	28.056	0.96	UPVC	150	150	0.013	New	1	A-1	0	0	0	28.995	0.01	29
P A-2	A-2	A-3	5.553	28.056	28	1.01	UPVC	150	150	0.013	NewFixed	1	A-2	0	0	0	29	0.602	29
P A-3	A-3	A-4	2.35	27.743	27.72	0.98	UPVC	225	225	0.013	NewFixed	1	A-3	0	0	0	29	1.613	29
P A-4	A-4	A-5	9.71	27.71	27.516	2	UPVC	225	225	0.013	New	1	A-4	0	0	0	28.4	4.182	28.4
P A-5	A-5	A-6	1.825	27.516	27.48	1.97	UPVC	225	225	0.013	New	1	A-5	0	0	0	28.96	1.061	28.96
P A-6	A-6	A-7	2.977	27.48	27.42	2.02	UPVC	225	225	0.013	New	1	A-6	0	0	0	28.74	0.005	28.739
P A-7	A-7	A-8	9.417	27.4	27.306	1	RCP CLASS 4	375	369	0.012	New	1	A-7	0	0	0	28.356	0.371	28.306
P B-1	B-1	B-2	15.709	28.245	28.088	1	UPVC	150	150	0.013	New	1	B-1	0	0	0	29.015	0.01	29.01
P B-2	B-2	A-3	6.79	28.068	28	1	UPVC	150	150	0.013	NewFixed	1	B-2	0	0	0	29.005	0.011	29
P C-1	C-1	C-2	8.79	28.557	28.47	0.99	UPVC	150	150	0.013	New	1	C-1	0	0	0	29.01	0.44	29.01
P C-2	C-2	C-3	11.094	28.45	28.339	1	UPVC	150	150	0.013	New	1	C-2	0	0	0	29	4.964	29
P C-3	C-3	C-4	20.526	28.319	28.155	0.8	UPVC	150	150	0.013	New	1	C-3	0	0	0	28.99	0.381	28.99
P C-4	C-4	C-5	14.459	28.093	27.949	1	UPVC	150	150	0.013	New	1	C-4	0	0	0	28.975	0.01	28.97
P C-5	C-5	A-3	2.875	27.929	27.9	1.01	UPVC	150	150	0.013	NewFixed	1	C-5	0	0	0	28.97	2.28	28.97
P D-1	D-1	D-2	26.785	28.648	28.38	1	UPVC	150	150	0.013	New	1	D-1	0	0	0	28.98	10.876	28.98
P D-2	D-2	D-3	14.269	28.36	28.217	1	UPVC	150	150	0.013	New	1	D-2	0	0	0	28.975	0.011	28.97
P D-3	D-3	D-4	27.982	28.197	27.917	1	UPVC	150	150	0.013	New	1	D-3	0	0	0	28.97	0.377	28.97
P D-4	D-4	A-3	9.745	27.897	27.8	1	UPVC	150	150	0.013	NewFixed	1	D-4	0	0	0	28.96	0.013	28.96
P E-1	E-1	E-2	14.145	28.665	28.523	1	UPVC	150	150	0.013	New	1	E-1	0	0	0	29.15	0.499	29.15
P E-2	E-2	E-3	4.116	28.503	28.462	1	UPVC	150	150	0.013	New	1	E-2	0	0	0	29.05	0.017	29
P E-3	E-3	D-3	22.504	28.442	28.217	1	UPVC	150	150	0.013	New	1	E-3	0	0	0	29	0.009	29
P F-1	F-1	F-2	15.98	28.78	28.621	0.99	UPVC	150	150	0.013	New	1	F-1	0	0	0	29.2	0.316	29.2
P F-2	F-2	E-3	13.832	28.601	28.462	1	UPVC	150	150	0.013	New	1	F-2	0	0	0	29.075	0.01	29

LS of SERVICES CROSSING PIPES

Pipe	Chg (m)	Bottom Elev (m)	Height of Service (m)	Chg (m)	Bottom Elev (m)	Height of Service (m)	Chg (m)	Bottom Elev (m)	Height of Service (m)	etc	etc

CHANNEL DETAILS

Name	From	To	Type	Length (m)	U/S IL (m)	D/S IL (m)	Slope (%)	Base Width (m)	L.B. Slope (1:?)	R.B. Slope (1:?)	Manning n	Depth (m)	Roofed

OVERFLOW ROUTE DETAILS

Name	From	To	Travel Time (min)	Spill Level (m)	Crest Length (m)	Weir Coeff. C	Cross Section	Safe Depth Major Storms (m)	SafeDepth Minor Storms (m)	Safe DxV (sq.m/sec)	Bed Slope (%)	D/S Area Contributing %	id	U/S IL	D/S IL	Length (m)
F A-1	A-1	A-3	1				8 m wide road (half section)	0.14	0.14	0.6	1	0	873956	28.845	28.7	14.2
F A-3	A-3	A-7	1	28.4	3.6	1.6	8 m wide road (half section)	0.14	0.14	0.6	1	0	873957	28.7	28.08	12.065
F A-4	A-7	A-8	1				8 m wide road (half section)	0.14	0.14	0.6	1	0	873958	28.4	28.08	12.065
F A-7	A-8		1				8 m wide road (half section)	0.14	0.14	0.6	1	0	1228450			10
POST-DEV COMPARE	A-8	O A-7	0.1				Dummy used to model flow ac	0.2	0.05	0.4	1	0	946285			10
F B-1	B-1	B-2	1				8 m wide road (half section)	0.14	0.14	0.6	1	0	873960	29.015	28.855	16.333
F B-2	B-2	A-3	1				8 m wide road (half section)	0.14	0.14	0.6	1	0	873961	28.855	28.7	13.314
F C-1	C-1	C-2	1				8 m wide road (half section)	0.14	0.14	0.6	1	0	873962	29.01	29	9.403
F C-2	C-2	C-3	1				8 m wide road (half section)	0.14	0.14	0.6	1	0	873963	29	28.99	11.697
F C-3	C-3	C-4	1				8 m wide road (half section)	0.14	0.14	0.6	1	0	873964	28.99	28.975	22.152
F C-4	C-4	C-5	1				8 m wide road (half section)	0.14	0.14	0.6	1	0	873965	28.975	28.97	15.074
F C-5	C-5	A-3	1				8 m wide road (half section)	0.14	0.14	0.6	1	0	873966	28.97	28.7	3.374
F D-1	D-1	D-2	1				8 m wide road (half section)	0.14	0.14	0.6	1	0	873967	28.98	28.975	27.385
F D-2	D-2	D-3	1				8 m wide road (half section)	0.14	0.14	0.6	1	0	873968	28.975	28.97	14.869
F D-3	D-3	D-4	1				8 m wide road (half section)	0.14	0.14	0.6	1	0	873969	28.97	28.96	28.673
F D-4	D-4	A-3	1				8 m wide road (half section)	0.14	0.14	0.6	1	0	873970	28.96	28.7	16.675
F E-1	E-1	E-2	1				8 m wide road (half section)	0.14	0.14	0.6	1	0	873971	29.015	29.005	14.244
F E-2	E-2	E-3	1				8 m wide road (half section)	0.14	0.14	0.6	1	0	873972	29.005	29	4.726
F E-3	E-3	D-3	1				8 m wide road (half section)	0.14	0.14	0.6	1	0	873973	29	28.97	23.104
F F-1	F-1	F-2	1				8 m wide road (half section)	0.14	0.14	0.6	1	0	873974	29.015	29.005	16.26
F F-2	F-2	E-3	1				8 m wide road (half section)	0.14	0.14	0.6	1	0	873975	29.005	29	14.439
PRE-DEV COMPARE	N-PREDEV	O A-7	0.1				Dummy used to model flow ac	0.2	0.05	0.4	1	0	1087329			10
bypass2	N-BYPASS2	A-7	0.1				Dummy used to model flow ac	0.2	0.05	0.4	1	0	1298451			10
bypass1	N-BYPASS-1	A-7	0.1				Dummy used to model flow ac	0.2	0.05	0.4	1	0	1298447			10
PRE-ROAD FLOW	N-PRE-ROAD	N-PREDEV	0.1				Dummy used to model flow ac	0.2	0.05	0.4	1	0	4460015			10
POST-ROAD FLOW	N-POST ROAD	A-7	0.1				Dummy used to model flow ac	0.2	0.05	0.4	1	0	4460023	29	28.08	10

PIPE COVER DETAILS

Name	Type	Dia (mm)	Safe Cover (m)	Cover (m)	
P A-1	UPVC	150	0.6	0.76	
P A-2	UPVC	150	0.6	0.04	Unsafe
P A-3	UPVC	225	0.6	0.22	Unsafe
P A-4	UPVC	225	0.6	0.45	Unsafe
P A-5	UPVC	225	0.6	1.02	
P A-6	UPVC	225	0.6	0.42	Unsafe
P A-7	RCP CLASS 4	369	0.6	0.27	Unsafe
P B-1	UPVC	150	0.6	0.61	
P B-2	UPVC	150	0.6	0.04	Unsafe
P C-1	UPVC	150	0.6	0.29	Unsafe
P C-2	UPVC	150	0.6	0.39	Unsafe
P C-3	UPVC	150	0.6	0.51	Unsafe
P C-4	UPVC	150	0.6	0.72	
P C-5	UPVC	150	0.6	0.14	Unsafe
P D-1	UPVC	150	0.6	0.17	Unsafe
P D-2	UPVC	150	0.6	0.45	Unsafe
P D-3	UPVC	150	0.6	0.4	Unsafe
P D-4	UPVC	150	0.6	0.24	Unsafe
P E-1	UPVC	150	0.6	0.28	Unsafe
P E-2	UPVC	150	0.6	0.34	Unsafe
P E-3	UPVC	150	0.6	0.24	Unsafe
P F-1	UPVC	150	0.6	0.21	Unsafe
P F-2	UPVC	150	0.6	0.24	Unsafe

Application Number:LDA 2020 / 133

DA Approved Engineering Plans
Date: 17 November 2020
Council Officer:Daniel Pearse

REVISIONS / AMENDMENTS

Rev	Date	Description	Verified
P3	24.07.20	PRELIMINARY ISSUE	J.S.

REVISIONS / AMENDMENTS

Rev	Date	Description	Verified

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PROJECT

WEST RYDE BILLBERGIA

63-77 WEST PARADE, WEST RYDE

TITLE

STORMWATER SERVICES
DRAINS ANALYSIS
DRAINS DATA SETUP

PRELIMINARY ISSUE
NOT FOR CONSTRUCTION

DRAWN	J.S.	SCALE @ A1
CHECKED	J.S.	
APPROVED	J.S.	**NTS**
CREATED	07/20	
JOB No.	DRAWING No.	REV
190166	**C501**	**P3**

190166-WestParadeAnalysis09-HED.drn - DRAINS

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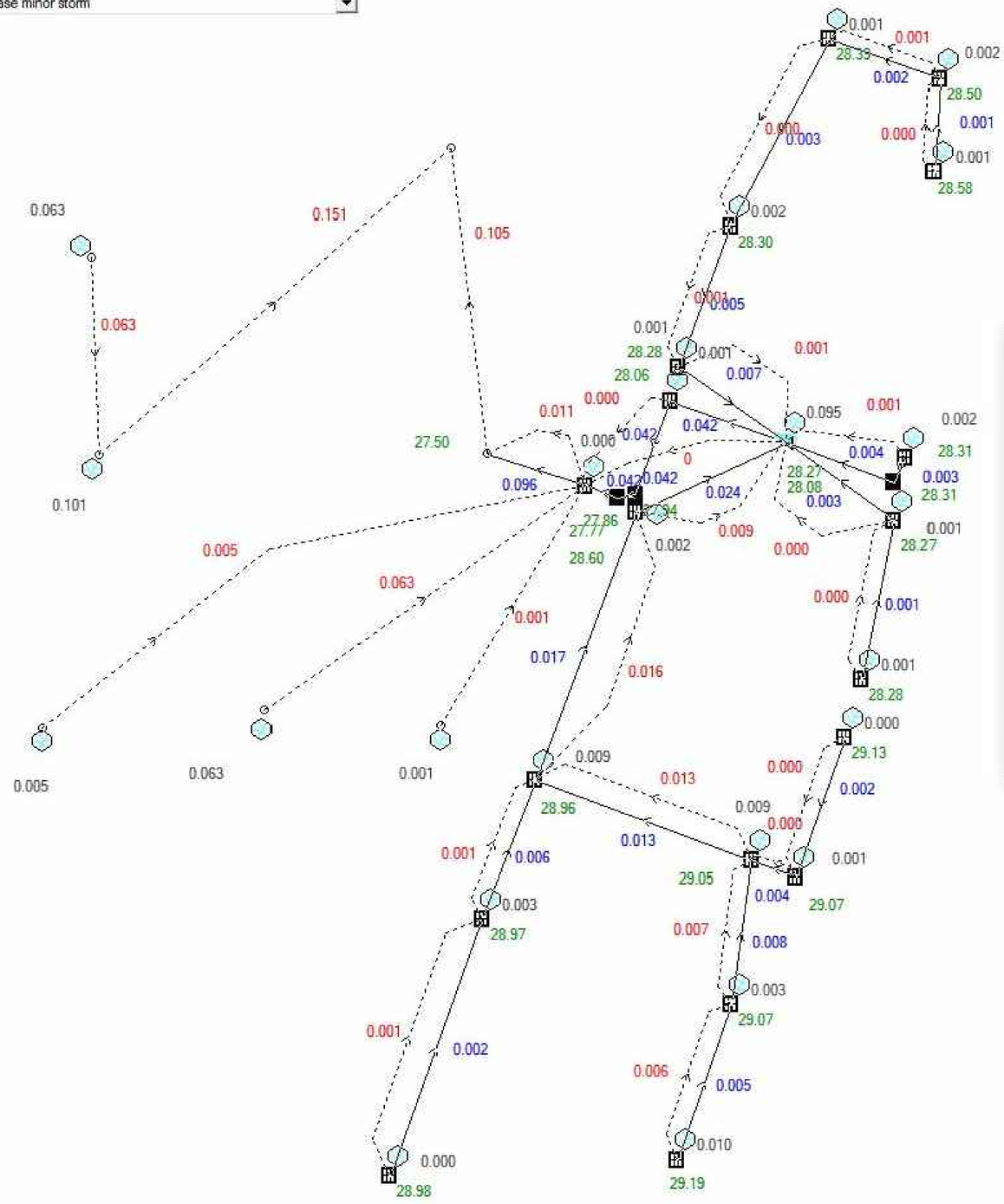
Worst case minor storm



Run Log for 190166 run at 11:38:18 on 2/8/2020 using version 2020.04

No water upwelling from any pit.
Freeboard was less than 0.15m at F-2, F-1, E-3, E-2, E-1, D-3, D-2, D-1
Flows were safe in all overflow routes.

Hint: You can copy this report and paste it into a word processor. If you need to find say a problem overflow route you can then copy its name and paste it into a search window (Ctrl-f) in DRAINS.

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Application Number:LDA 2020 / 133

DA Approved Engineering Plans
Date: 17 November 2020
Council Officer:Daniel Pearse

REVISIONS / AMENDMENTS

Rev	Date	Description	Verified
P3	24.07.20	PRELIMINARY ISSUE	J.S.

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PROJECT
WEST RYDE BILLBERGIA
63-77 WEST PARADE, WEST RYDE

TITLE
STORMWATER SERVICES
DRAINS ANALYSIS
5 YEARS ARI RESULTS

PRELIMINARY ISSUE
NOT FOR CONSTRUCTION

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JOB No.	DRAWING No.	REV
190166	C502	P3

Aug 04, 2020 – 3:34pm D:\WORK\190166 63 77 West Parade West Ryde\Drawings\190166-C501.dwg

190166-WestParadeAnalysis09-HED.drn - DRAINS

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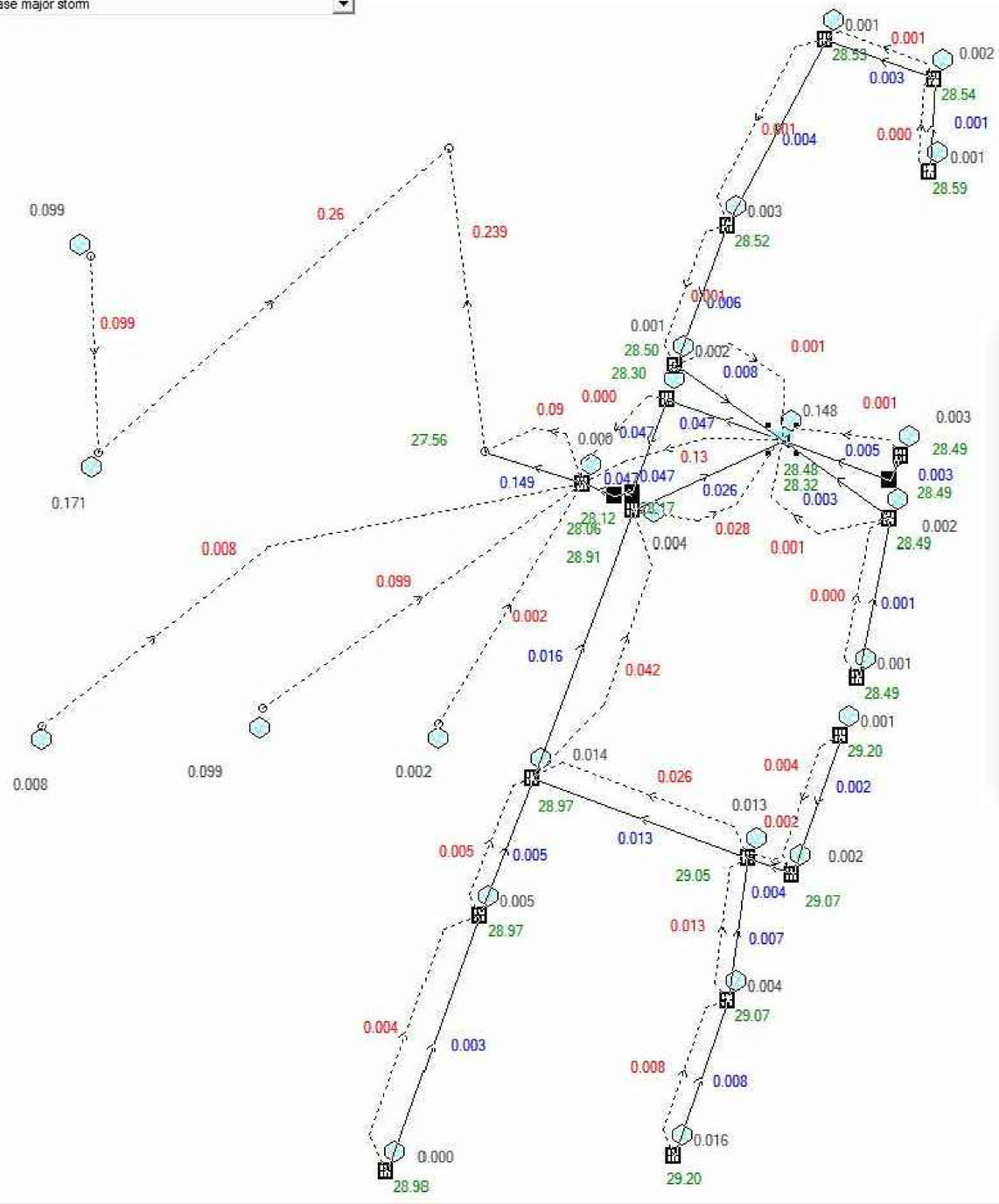
Worst case major storm



Run Log for 190166 run at 11:42:07 on 2/8/2020 using version 2020.04

Upwelling occurred at: F-2, E-1, D-1
Freeboard was less than 0.15m at F-1, E-3, E-2, D-4, D-3, D-2, A-7, A-4
Flows were safe in all overflow routes.

Hint: You can copy this report and paste it into a word processor. If you need to find say a problem overflow route you can then copy its name and paste it into a search window (Ctrl-f) in DRAINS.

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Application Number:LDA 2020 / 133

DA Approved Engineering Plans
Date: 17 November 2020
Council Officer:Daniel Pearse

REVISIONS / AMENDMENTS			
Rev	Date	Description	Verified
P3	24.07.20	PRELIMINARY ISSUE	J.S.

REVISIONS / AMENDMENTS			
Rev	Date	Description	Verified

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PROJECT
WEST RYDE BILLBERGIA
63-77 WEST PARADE, WEST RYDE

TITLE
STORMWATER SERVICES
DRAINS ANALYSIS
100 YEARS ARI RESULTS

PRELIMINARY ISSUE
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DRAWN	J.S.	SCALE @ A1
CHECKED	J.S.	NTS
APPROVED	J.S.	
CREATED	07/20	
JOB No.	DRAWING No.	REV
190166	C503	P3

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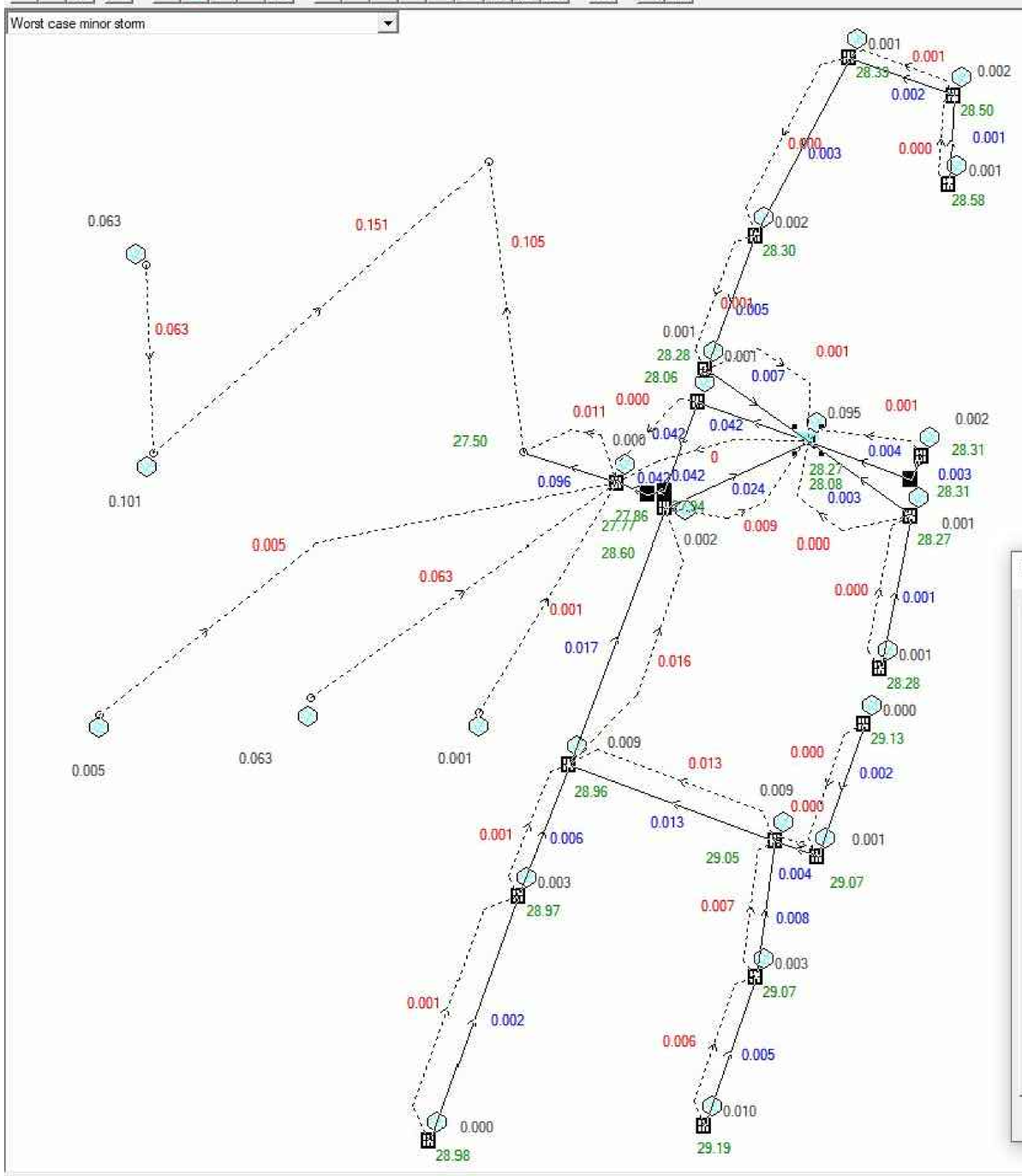
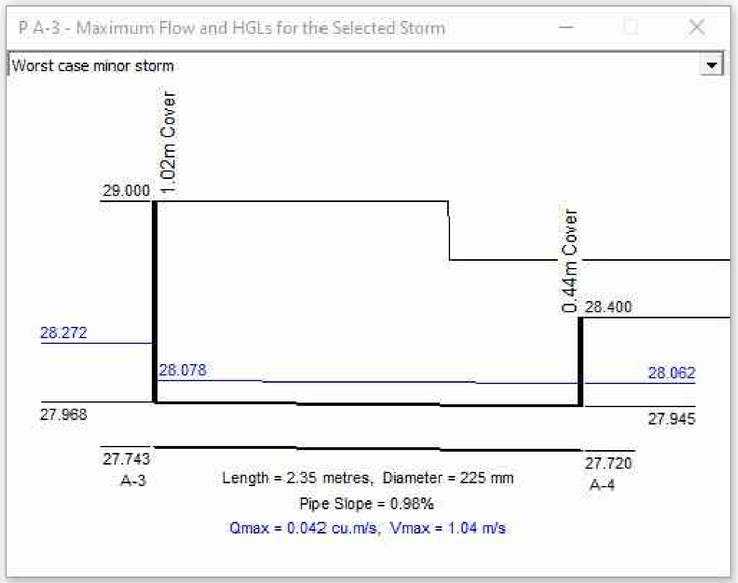
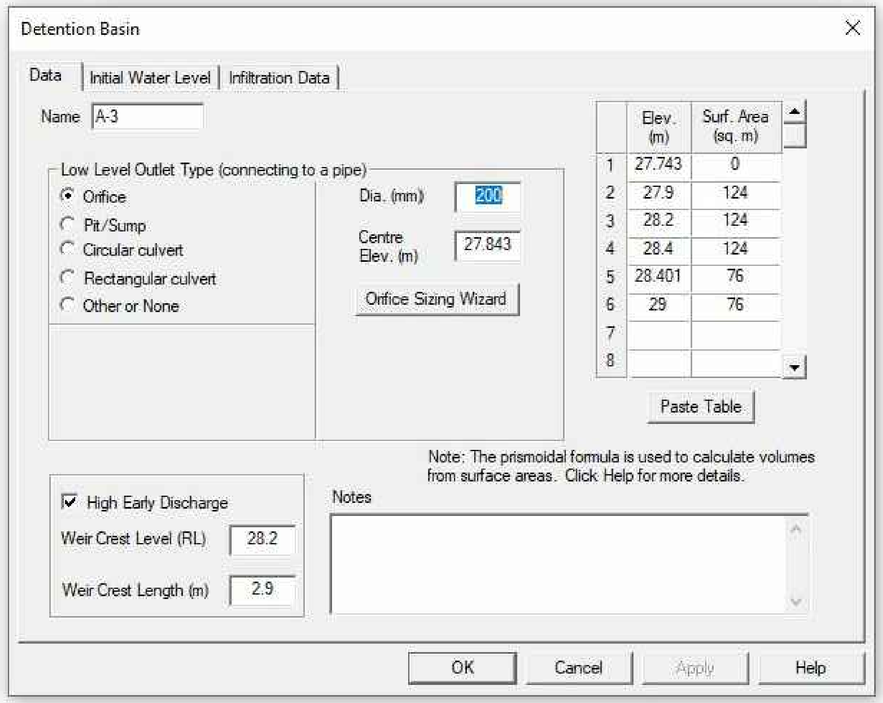
190166-WestParadeAnalysis09-HED.drn - DRAINS

File Edit Project View Draw Run Help







Application Number:LDA 2020 / 133

DA Approved Engineering Plans
Date: 17 November 2020
Council Officer:Daniel Pearse

REVISIONS / AMENDMENTS				REVISIONS / AMENDMENTS			
Rev	Date	Description	Verified	Rev	Date	Description	Verified
P3	24.07.20	PRELIMINARY ISSUE	J.S.				

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PROJECT
WEST RYDE BILLBERGIA
63-77 WEST PARADE, WEST RYDE

TITLE
STORMWATER SERVICES
DRAINS ANALYSIS
TWL AT OSD TANK
AT 5 YEARS ARI

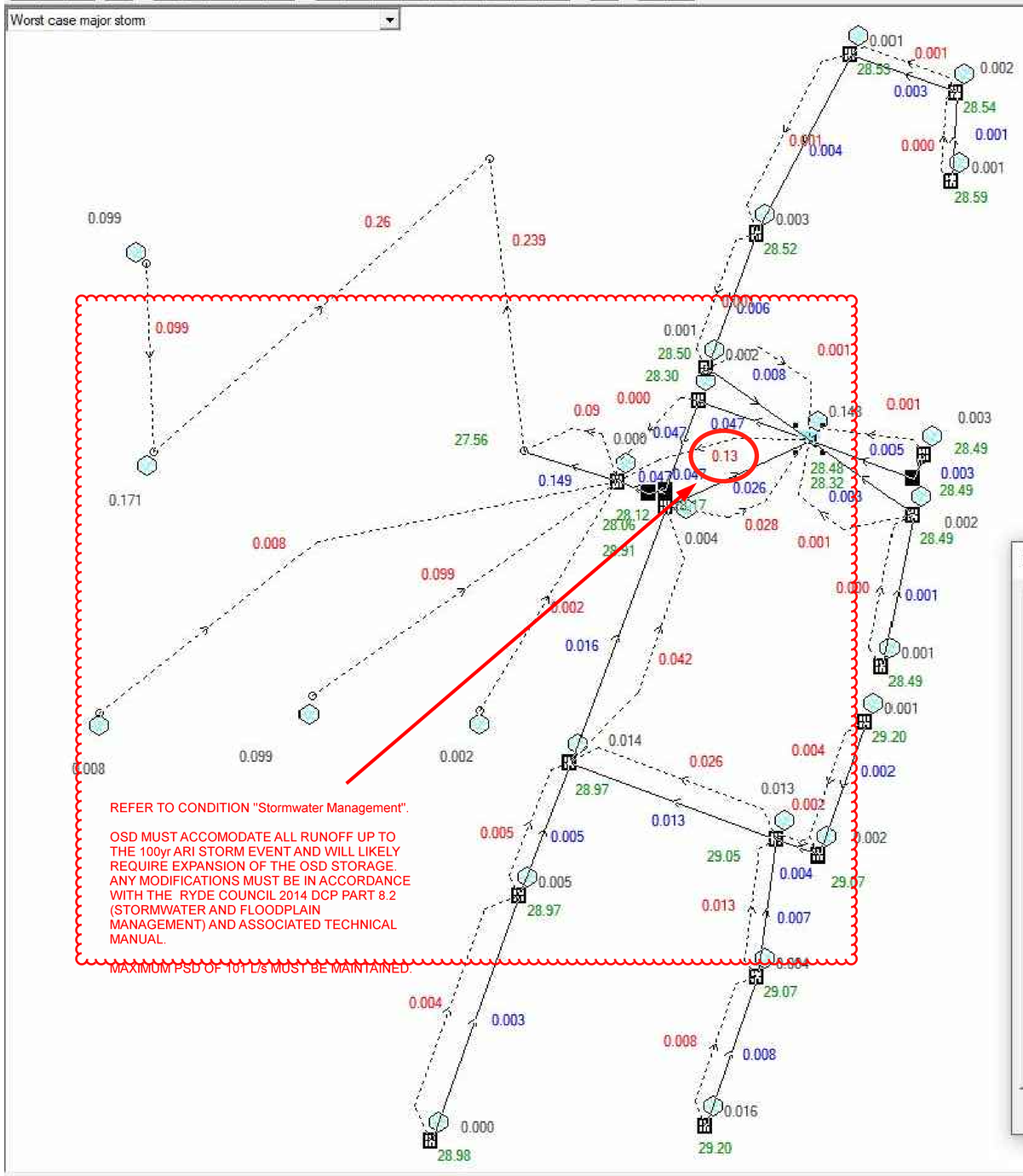
PRELIMINARY ISSUE
NOT FOR CONSTRUCTION

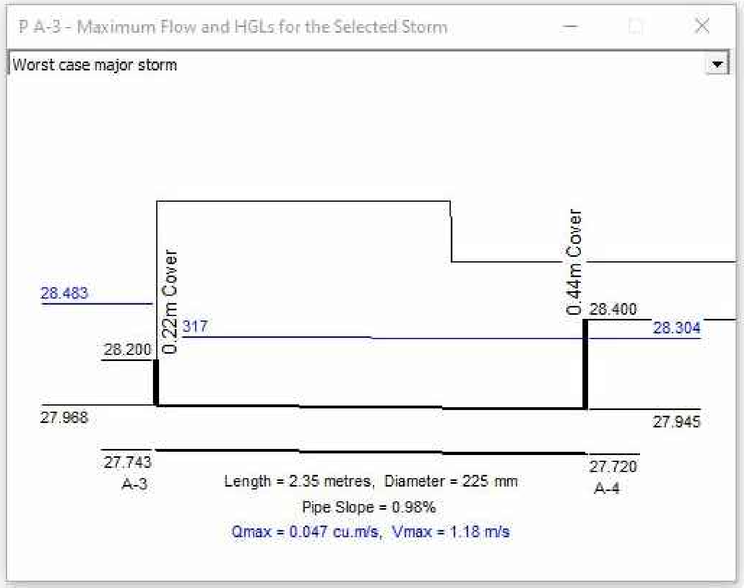
DRAWN	J.S.	SCALE @ A1
CHECKED	J.S.	
APPROVED	J.S.	NTS
CREATED	07/20	
JOB No.	DRAWING No.	REV
190166	C504	P3

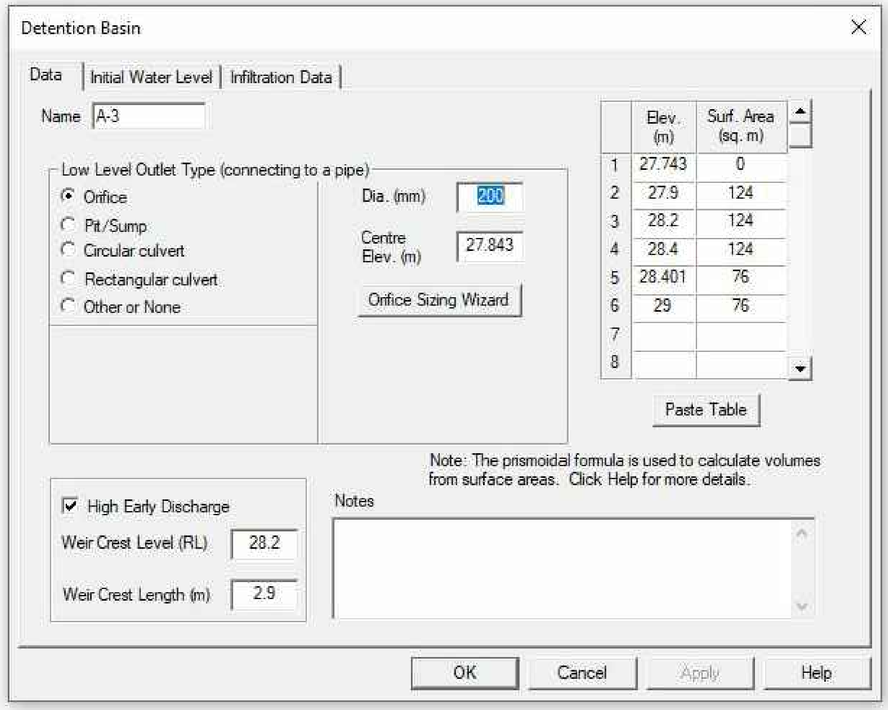
Aug 04, 2020 - 3:35pm D:\WORK\190166 63 77 West Parade West Ryde\Drawings\190166-C501.dwg

190166-WestParadeAnalysis09-HED.drn - DRAINS

File Edit Project View Draw Run Help







Application Number:LDA 2020 / 133

DA Approved Engineering Plans
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PROJECT: WEST RYDE BILLBERGIA
63-77 WEST PARADE, WEST RYDE

TITLE: STORMWATER SERVICES
DRAINS ANALYSIS
TWL AT OSD TANK
AT 100 YEARS ARI

PRELIMINARY ISSUE
NOT FOR CONSTRUCTION

DRAWN	J.S.	SCALE @ A1
CHECKED	J.S.	NTS
APPROVED	J.S.	
CREATED	07/20	
JOB No.	DRAWING No.	REV
190166	C505	P3

Aug 04, 2020 – 3:36pm D:\WORK\190166 63 77 West Parade West Ryde\Drawings\190166-C501.dwg

ILSAX CALCULATION SUMMARY SHEET

DRAINS results prepared from Version 2020.04

			Entire Catchment Area	
Soil Type	Rather wet	Paved	0.636 ha	(58.5%)
		Supplementary	0 ha	(0%)
AMC	3	Grassed	0.45 ha	(41.4%)
		Total Area	1.087 ha	

LOCATION AND LAND-USE				TIME AND RUNOFF		INLET DESIGN										PIPE SYSTEM DESIGN								PIT RESULTS					
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
Design AEP	Pit Name	Sub-Catchment Area	Land-Use	Percentage	Constant Flow Time	Length	Kinematic Wave or Friends Formula Parameters Slope	Roughness	Total Time tc	Peak Sub-Catchment Flowrate	Origin of Approach	Flowrate	Overflows Approaching Pit Flow Width	Depth x Velocity	Inlet Family	Inlet Size	Total Approach Flow	Bypass Flow	Overflow Leaving Pit Flow Width	Depth x Velocity	Peak Flow in Pipe	Reach Length	Pipe Slope	Pipe Diameter	U/S Pipe Invert Level	D/S Pipe Invert Level	U/S HGL in Pipe	D/S HGL in Pipe	Pipe Flow Velocity	Pressure Change Coeff.	QUDM Chart No.	QUDM Chart Ratios	Water Surface Elevation	Surface Level	Free-board	Pit Name	Remarks
		(ha)			(minutes)	(m)	(%)	n	(minutes)	(m^3/s)	Flows	(m^3/s)	(m)	(m^2/s)			(m^3/s)	(m^3/s)	(m)	(m^2/s)	(m^3/s)	(m)	(m)	(mm)	(m)	(m)	(m)	(m)	(m/s)	Ku	2008 [2013]		(m)	(m)	(m)		
								*w ons storm																											
AR&R	A-1	0.0049	Paved	50.7	5				5	0.002					SIP	GSIP 600 x 600	0.002	0.001	0.16	0.01	0.003	2.49	0.96	150	28.08	28.056	28.312	28.306	0.17	4.8			28.31	28.995	0.68	A-1	
			Supp.	0	0																														
			Grassed	49.3	10				10																										
AR&R	A-1	0.0049	Paved	< - - - - - -	- - - - - - -	as above	- - - - - - -	- - - - - - ->	5	0.003							0.003	0.001	0.19	0.01	0.003						28.485	28.485	0.18	3.18	A1-4 [A2-3]	H/Do=1.7, Vo2/(2gDo)=0.01	28.49	28.995	0.51	A-1	
			Grassed						10																										
AR&R	A-2		Paved												PIPE JOIN	PIPE JOINT	0				0.004	5.553	1.01	150	28.056	28	28.306	28.272	0.25	1.4			28.31	29	0.69	A-2	
			Supp.																																
			Grassed						10																										
AR&R	A-2		Paved	< - - - - - -	- - - - - - -	as above	- - - - - - -	- - - - - - ->									0				0.005						28.485	28.483	0.31	1.74	A1-18 [A2-28 & A2-29]	Du/Do=1.00, Qg/Qo=0.00, S/Do=2.9	28.49	29	0.51	A-2	
			Grassed																																
AR&R	A-4	0.0025	Paved	3.9	5				5	0.001					SIP	GSIP 600 x 600	0.001	0	0	0	0.042	9.71	2	225	27.71	27.516	28.005	27.937	1.05	1.3			28.06	28.4	0.34	A-4	
			Supp.	0	0																														
			Grassed	96.1	10				10																										
AR&R	A-4	0.0025	Paved	< - - - - - -	- - - - - - -	as above	- - - - - - -	- - - - - - ->	5	0.001							0.001	0	0	0	0.047						28.234	28.175	1.19	1.77	A1-18 [A2-28 & A2-29]	Du/Do=1.00, Qg/Qo=0.02, S/Do=2.6	28.3	28.4	0.1	A-4	
			Grassed						10																										
AR&R	A-5		Paved												PIPE JOIN	PIPE JOINT	0				0.042	1.825	1.97	225	27.516	27.48	27.874	27.862	1.05	1.4			27.94	28.96	1.02	A-5	
			Supp.																																
			Grassed																																
AR&R	A-5		Paved	< - - - - - -	- - - - - - -	as above	- - - - - - -	- - - - - - ->									0				0.047						28.13	28.118	1.19	1.13	A1-14 [A2-20 & A2-21]	Du/Do=1.00, Qg/Qo=0.00, S/Do=3.1	28.17	28.96	0.79	A-5	
			Grassed																																
AR&R	A-6		Paved												PIPE JOIN	PIPE JOINT	0				0.042	2.977	2.02	225	27.48	27.42	27.787	27.766	1.05	1.6			27.86	28.74	0.88	A-6	
			Supp.																																
			Grassed																																
AR&R	A-6		Paved	< - - - - - -	- - - - - - -	as above	- - - - - - -	- - - - - - ->									0				0.047						28.076	28.058	1.19	1.06	A1-7 [A2-8 & A2-9]	Du/Do=1.00, Qg/Qo=0.00, S/Do=3.1	28.12	28.74	0.62	A-6	
			Grassed																																
AR&R	A-7	0.0001	Paved	100	5				5	0	A-3	0	0	0	KERB INL	KERB INLET 2.4m	0.069	0.011	0.59	0.04	0.096	9.417	1	375	27.4	27.306	27.589	27.496	1.73	5.8			27.77	28.08	0.31	A-7	
			Supp.	0	0						A-4	0	0	0																					
			Grassed	0	10				10		N-BYPASS2	0.005	3.74	0																					
											N-BYPASS-1	0.001	1.95	0																					
											N-POST ROAD	0.063	10.02	0.01																					
AR&R	A-7	0.0001	Paved	< - - - - - -	- - - - - - -	as above	- - - - - - -	- - - - - - ->	5	0	A-3	0.13	2.81	0.13			0.239	0.09	2.38	0.11	0.149						27.769	27.562	1.88	4.38	A1-4 [A2-3]	H/Do=0.0, Vo2/(2gDo)=0.27	28.06	28.08	0.02	A-7	
			Grassed						10		A-4	0	0	0																					
											N-BYPASS2	0.008	4.64	0																					
											N-BYPASS-1	0.002	2.54	0																					
											N-POST ROAD	0.099	10.91	0.02																					
AR&R	B-1	0.0013	Paved	100	5				5	0.001					SIP	GSIP 600 x 600	0.001	0	0	0	0.001	15.709	1	150	28.245	28.088	28.274	28.274	0.22	2			28.28	29.015	0.74	B-1	
			Supp.	0	0																														
			Grassed	0	10				10																										
AR&R	B-1	0.0013	Paved	< - - - - - -	- - - - - - -	as above	- - - - - - -	- - - - - - ->	5	0.001							0.001	0	0	0	0.001						28.487	28.487	0.05	not calculated			28.49	29.015	0.53	B-1	
			Grassed						10																										
AR&R	B-2	0.0031	Paved	100	5				5	0.001					SIP	GSIP 600 x 600	0.001	0	0	0	0.003	6.79	1	150	28.068	28	28.273	28.272	0.19	5.2			28.27	29.005	0.73	B-2	
			Supp.	0	0																														
			Grassed	0	10				10																										
AR&R	B-2	0.0031	Paved	< - - - - - -	- - - - - - -	as above	- - - - - - -	- - - - - - ->	5	0.002	B-1	0	0	0			0.002	0.001	0.18	0.01	0.003						28.486	28.483	0.18	3.1	A1-4 [A2-3]	H/Do=1.8, Vo2/(2gDo)=0.01	28.49	29.005	0.52	B-2	
			Grassed						10																										
AR&R	C-1	0.0019	Paved	100	5				5	0.001					SIP	GSIP 600 x 600	0.001	0	0	0	0.001	8.79	0.99	150	28.557	28.47	28.576	28.501	0.4	2			28.58	29.01	0.43	C-1	
			Supp.	0	0																														
			Grassed	0	10				10																										
AR&R	C-1	0.0019	Paved	< - - - - - -	- - - - - - -	as above	- - - - - - -	- - - - - - ->	5	0.001							0.001	0	0	0	0.001						28.58	28.541	0.45	not calculated			28.59	29.01	0.42	C-1	
			Grassed						10																										
AR&R	C-2	0.0038	Paved	100	5				5	0.002	C-1	0	0	0	SIP	GSIP 600 x 600	0.002	0.001	0.17	0.01	0.002	11.094	1	150	28.45	28.339	28.482	28.39	0.63	5.9			28.5	29	0.5	C-2	
			Supp.	0	0																														
			Grassed	0	10				10																										
AR&R	C-2	0.0038	Paved	< - - - - - -	- - - - - - -	as above	- - - - - - -	- - - - - - ->	5	0.002	C-1	0	0	0			0.002	0.001	0.2	0.01	0.003						28.533	28.534	0.26	5.93	A1-4 [A2-3]	H/Do=0.0, Vo2/(2gDo)=0.01	28.54	29	0.46	C-2	
			Grassed						10																										
AR&R	C-3	0.0022	Paved	100	5				5	0.001	C-2	0.001	0.17	0.01	SIP	GSIP 600 x 600	0.002	0	0	0	0.003	20.526	0.8	150	28.319	28.155	28.362	28.296	0.59	5.9			28.39	28.99	0.6	C-3	
			Supp.	0	0																														
			Grassed	0	10				10																										
AR&R	C-3	0.0022	Paved	< - - - - - -	- - - - - - -	as above	- - - - - - -	- - - - - - ->	5	0.001	C-2	0.001	0.2	0.01			0.002	0.001	0.18	0.01	0.004						28.531	28.524	0.22	1.96	A1-18 [A2-28 & A2-29]	Du/Do=1.00, Qg/Qo=0.35, S/Do=1.4	28.53	28.99	0.46	C-3	
			Grassed						10																										
AR&R	C-4	0.0069	Paved	1.5	5				5	0.002	C-3	0	0	0	SIP	GSIP 600 x 600	0.002	0.001	0.18	0.01	0.005	14.459	1	150	28.093	27.949	28.292	28.282	0.26	1.6			28.3	28.975	0.68	C-4	
			Supp.	0	0																														
			Grassed	98.5	10				10																										
AR&R	C-4	0.0069	Paved	< - - - - - -	- - - - - - -	as above	- - - - - - -	- - - - - - ->	5	0.003	C-3	0.001	0.18	0.01			0.004	0.001	0.23	0.01	0.006						28.518	28.502	0.34	1.2	A1-5 [A2-4]	Du/Do=1.00, Qg/Qo=0.38, S/Do=2.9	28.52	28.975	0.45	C-4	
			Grassed						10																										
AR&R	C-5	0.0049	Paved	2	5				5	0.001	C-4	0.001	0.18	0.01	SIP	GSIP 600 x 600	0.002	0.001	0.18	0.01	0.007	2.875	1.01	150	27.929	27.9	28.276	28.272	0.38	1.6			28.28	28.97	0.69	C-5	
			Supp.	0	0																														
			Grassed	98	10				10																										
AR&R	C-5	0.0049	Paved	< - - - - - -	- - - - - - -	as above	- - - - - - -	- - - - - - ->	5	0.002	C-4	0.001	0.23	0.01			0.003	0.001	0.22	0.01	0.008						28.489	28.483	0.44	1.41	A1-14 [A2-20 & A2-21]	Du/Do=1.00, Qg/Qo=0.28, S/Do=3.8	28.5	28.97	0.47	C-5	
			Grassed						10																										
AR&R	D-1	0.0001	Paved	100	5				5	0					SIP	GSIP 600 x 600	0	0.001	0.21	0.01	0.002	26.785	1	150	28.648	28.38	28.98	28.966	0.14	2			28.98	28.98	0	D-1	
			Supp.	0	0																														
			Grassed	0	10				10																										
AR&R	D-1	0.0001	Paved	< - - - - - -	- - - - - - -	as above	- - - - - - -	- - - - - - ->	5	0							0	0.004	0.35	0.02	0.003						28.98	28.971	0.18	not calculated			28.98	28.98	0	D-1	
			Grassed						10																										
AR&R	D-2	0.0099	Paved	1	5				5	0.003	D-1	0.001	0.21	0.01	SIP	GSIP 600 x 600	0.004	0.001	0.22	0.01	0.006	14.269	1	150	28.36	28.217	28.965	28.96	0.35	1.3			28.97	28.975	0.01	D-2	
			Supp.	0	0																														
			Grassed	99	10				10																										
AR&R	D-2	0.0099	Paved	< - - - - - -	- - - - - - -	as above	- - - - - - -	- - - - - - ->	5	0.005	D-1	0.004	0.35	0.02			0.009	0.005	0.36	0.03	0.005						28.971	28.97	0.29	2.26	A1-4 [A2-3]	H/Do=3.1, Vo2/(2gDo)=0.03	28.97	28.975	0	D-2	
			Grassed						10																										
AR&R	D-3	0.024	Paved	83.5	5				5	0.009	D-2	0.001	0.22	0.01	SIP	GSIP 600 x 600	0.023	0.016	0.84	0.05	0.017	27.982	1	150	28.197	27.917	28.87	28.604	0.94	2.5			28.96	28.97	0.01	D-3	
			Supp.	0	0						E-3	0.013	0.72	0.05																					
			Grassed	16.5	10				10																										
AR&R	D-3	0.024	Paved	< - - - - - -	- - - - - - -	as above	- - - - - - -	- - - - - - ->	5	0.014	D-2	0.005	0.36	0.03			0.045	0.042	1.63	0.08	0.016						28.953	28.908	0.92	2.73	H-O'L	Qg/Qo=0.48, S/Do=5.8	28.97	28.97	0	D-3	
			Grassed						10		E-3	0.026	1.22	0.06																					
AR&R	D-4	0.0091	Paved	1.1	5				5	0.002	D-3	0.016	0.84	0.05	SIP	GSIP 600 x 600	0.018	0.009	0.52	0.04	0.024	9.745	1	150	27.897	27.8	28.492	28.272	1.35	1.2			28.6	28.96	0.36	D-4	
			Supp.	0	0																														
			Grassed	98.9	10				10																										
AR&R	D-4	0.0091	Paved	< - - - - - -	- - - - - - -	as above	- - - - - - -	- - - - - - ->	5	0.004	D-3	0.042	1.63	0.08			0.046	0.028	1.27	0.07	0.026						28.727	28.483	1.49	1.8	A1-4 [A2-3]	H/Do=4.5, Vo2/(2gDo)=0.75	28.91	28.96	0.05	D-4	
			Grassed						10																										
AR&R	E-1	0.0011	Paved	100	5				5	0					SIP	GSIP 600 x 600	0	0	0	0	0.002	14.145	1	150	28.665	28.523	29.127	29.066	0.12	2			29.13	29.2	0.07	E-1	
			Supp.	0	0																														
			Grassed	0	10				10																										
AR&R	E-1	0.0011	Paved	< - - - - - -	- - - - - - -	as above	- - - - - - -	- - - - - - ->	5	0.001							0.001	0.004	0.34	0.02	0.002						29.2	29.068	0.14	not calculated			29.2	29.2	0	E-1	
			Grassed						10																										
AR&R	E-2	0.003	Paved	100	5				5	0.001	E-1	0	0	0	SIP	GSIP 600 x 600	0.001	0	0	0	0.004	4.116	1	150	28.503	28.462	29.066	29.05	0.24	1.5			29.07	29.15	0.08	E-2	
			Supp.	0	0																														
			Grassed	0	10				10																										
AR&R	E-2	0.003	Paved	< - - - - - -	- - - - - - -	as above	- - - - - - -	- - - - - - ->	5	0.002	E-1	0.004	0.34	0.02			0.006	0.002	0.28	0.02	0.004						29.066	29.05	0.25	2.44	A1-4 [A2-3]	H/Do=2.8, Vo2/(2gDo)=0.02	29.07	29.15	0.08	E-2	
			Grassed						10																										
AR&R	E-3	0.0216	Paved	100	5				5	0.009	E-2	0	0	0	SIP	GSIP 900 x 900	0.016	0.013	0.72	0.05	0.013	22.504	1	150	28.442	28.217	29.022	28.96	0.75	2.6			29.05	29.05	0	E-3	
			Supp.	0	0						F-2	0.007	0.41	0.03																					
			Grassed	0	10				10																										
AR&R	E-3	0.0216	Paved	< - - - - - -	- - - - - - -	as above	- - - - - - -	- - - - - - ->	5	0.013	E-2	0.002	0.28	0.02			0.028	0.026	1.22	0.06	0.013						29.028	28.97	0.74	2.24	A1-4 [A2-3]	H/Do=2.9, Vo2/(2gDo)=0.18	29.05	29.05	0	E-3	
			Grassed						10		F-2	0.013	0.72	0.05																					
AR&R	F-1	0.0316	Paved	42.2	5				5	0.01					SIP	GSIP 600 x 600	0.01	0.006	0.39	0.03	0.005	15.98	0.99	150	28.78	28.621	29.182	29.074	0.28	3.2			29.19	29.2	0.01	F-1	
			Supp.	0	0																														
			Grassed	57.8	10				10																										
AR&R	F-1	0.0316	Paved	< - - - - - -	- - - - - - -	as above	- - - - - - -	- - - - - - ->	5	0.016							0.016	0.008	0.43	0.04	0.008						29.193	29.075	0.47	3.13	A1-4 [A2-3]	H/Do=1.8, Vo2/(2gDo)=0.08	29.2	29.2	0	F-1	
			Grassed						10																										
AR&R	F-2	0.0063	Paved	100	5				5	0.003	F-1	0.006	0.39	0.03	SIP	GSIP 600 x 600	0.009	0.007	0.41	0.03	0.008	13.832	1	150	28.601	28.462	29.071	29.05	0.44	1.3			29.07	29.075	0	F-2	
			Supp.	0	0																														
			Grassed	0	10				10																										
AR&R	F-2	0.0063	Paved	< - - - - - -	- - - - - - -	as above	- - - - - - -	- - - - - - ->	5	0.004	F-1	0.008	0.43	0.04			0.012	0.013	0.72	0.05	0.007						29.074	29.05	0.41	1.19	A1-5 [A2-4]	Du/Do=1.00, Qg/Qo=0.39, S/Do=3.2	29.07	29.075	0	F-2	
			Grassed						10																										
AR&R	A-3	0.2373	Paved	100	5				5	0.095	A-1	0.001	0.16	0.01			0.106	0	0	0	0.042	2.35	0.98	225	27.743	27.72	28.078	28.062	1.04							A-3	
			Supp.	0	0						B-2	0	0	0																					
			Grassed	0	10				10		C-5	0.001	0.18	0.01																					
											D-4	0.009	0.52	0.04																					
AR&R	A-3	0.2373	Paved	< - - - - - -	- - - - - - -	as above	- - - - - - -	- - - - - - ->	5	0.148	A-1	0.001	0.19	0.01			0.179	0.13	2.81	0.13	0.047						28.317	28.304	1.18							A-3	
			Grassed						10		B-2	0.001	0.18	0.01																					
											C-5	0.001	0.22	0.01																					
											D-4	0.028	1.27	0.07																					

Application Number:LDA 2020 / 133

DA Approved Engineering Plans
Date: 17 November 2020
Council Officer:Daniel Pearse

REVISIONS / AMENDMENTS

Rev	Date	Description	Verified
P3	24.07.20	PRELIMINARY ISSUE	J.S.

REVISIONS / AMENDMENTS

Rev	Date	Description	Verified

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PROJECT
WEST RYDE BILLBERGIA
63-77 WEST PARADE, WEST RYDE

TITLE
STORMWATER SERVICES
DRAINS ANALYSIS
RESULTS IN EXCEL FOR
5 AND 100 YEARS ARI
ILSAX CALCULATION

PRELIMINARY ISSUE
NOT FOR CONSTRUCTION

DRAWN	J.S.	SCALE @ A1
CHECKED	J.S.	NTS
APPROVED	J.S.	
CREATED	07/20	
JOB No.	DRAWING No.	REV
190166	C506	P3

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