

DESCRIPTION

REVISIONS

Issue Date

CONCRETE FOOTING NOTES:

- 1. This drawing is to be read in conjunction with the Architectural drawing and specifications.
- 2. Workmanship and materials to comply with AS3600 and associated Australian Standards.
- 3. Concrete to be in accordance with AS3600 and the following:

Element	Slump	Max Agg Size	Cement Type	Grade in MPa
Footings	100mm	20mm	Α	25MPa
Dincel Walls	140mm	20mm	Α .	32MPa
Dincel Columns	100mm	20mm	Α.	<u>50MPa</u>

4. Reinforcement to be supported on bar chairs spaced at every 5th wire in both directions.

All footing beams to bear directly onto hard shaly clay or be supported by 600mm x 1200mm piers spaced at 3.0m maximum centres to uniform hard shaly clay with a safe bearing capacity of at least 500kPa. If required, deepen internal footing pads below concrete columns to bear directly onto hard shaly clay.

FOOTING PAD SCHEDULE

PAD 'A' - 3000 x 1500 x 600mm min. deep PAD 'B' - 2500 x 1400 x 600mm min. deep PAD 'C' - 2200 x 1200 x 600mm min. deep

WALL PANEL SCHEDULE

PAD 'A' - 1333 x 200mm Dincel Panels PAD 'B' - 1333 x 200mm Dincel Panels PAD 'C' - 1350 x 200mm Dincel Panels

ALL BASEMENT LEVEL PERIMETER AND INTERNAL SUPPORT WALLS CTO BE 200mm DINCEL WALL PANELS, REINFORCED AS DETAILED AND CONCRETE FILLED FULL HEIGHT OF WALLS.

CLIENT: NORSIDE INVESTMENTS PTY LTD PROPOSED RESIDENTIAL DEVELOPMENT DRAWING NUMBER

"LETHBRIDGE APARTMENTS" 104-108 LETHBRIDGE STREET, PENRITH

FOOTINGS PLAN AND DETAILS

105930-1

ISSUE

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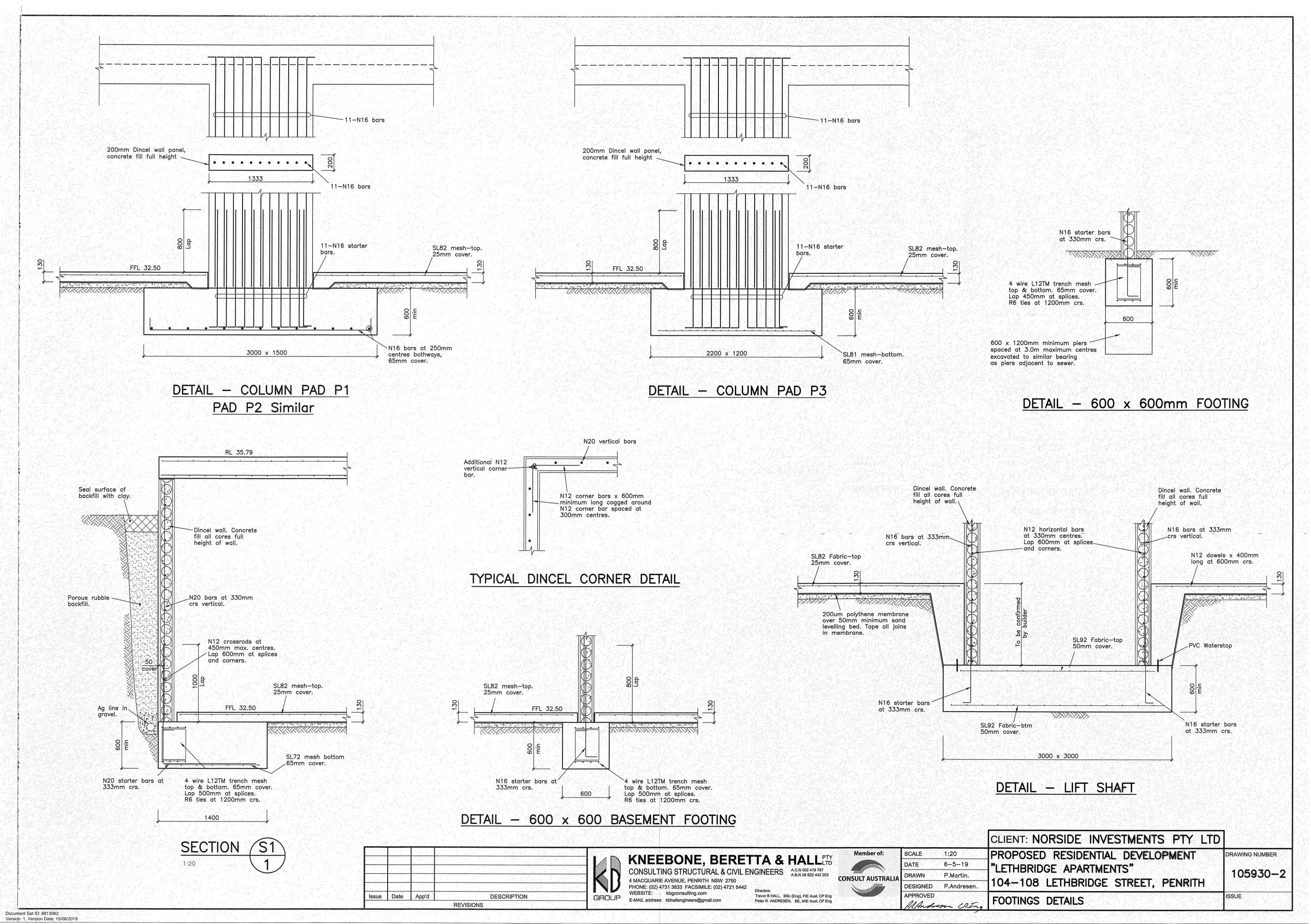
Trevor B HALL, BSc (Eng), FIE Aust, CP Eng Peter R. ANDRESEN, BE, MIE Aust, CP Eng

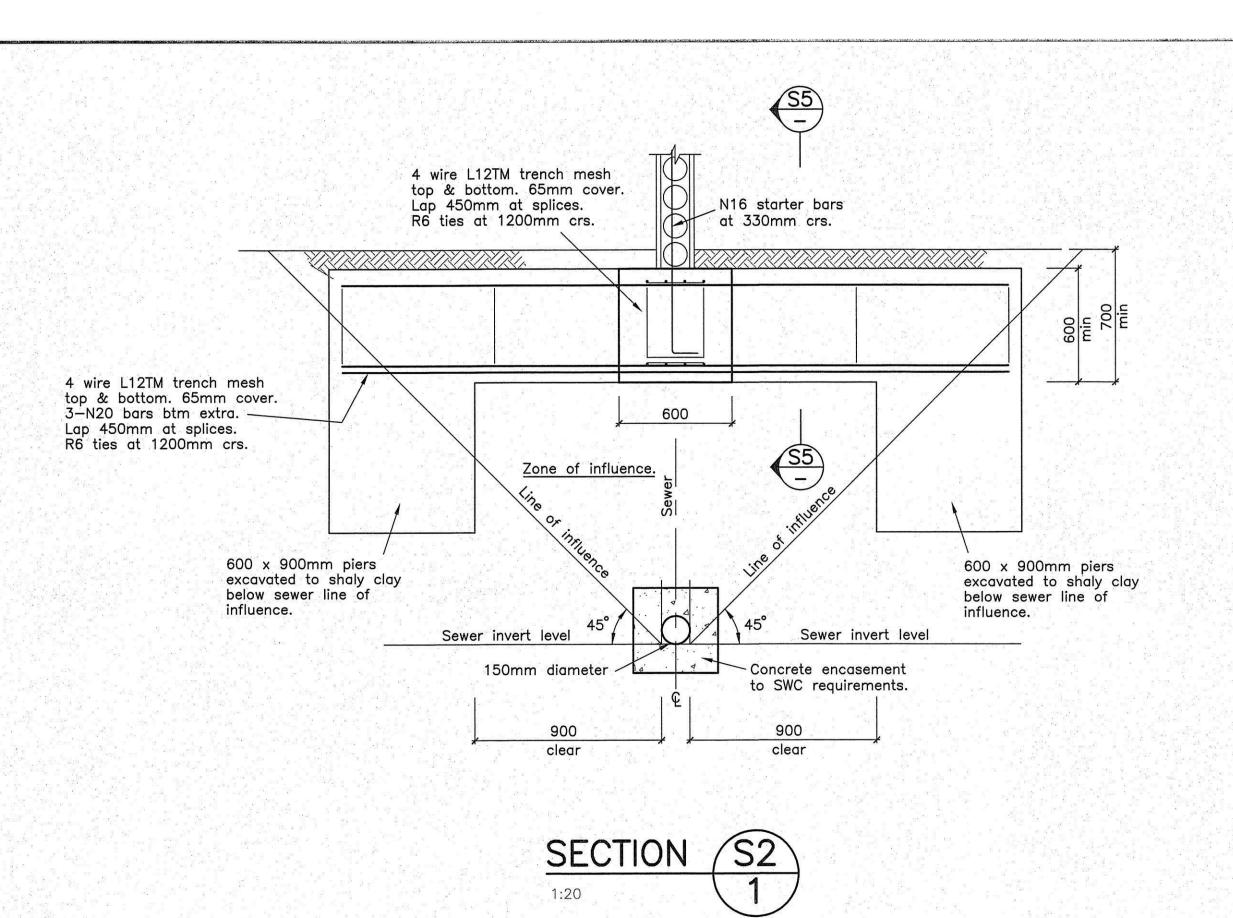
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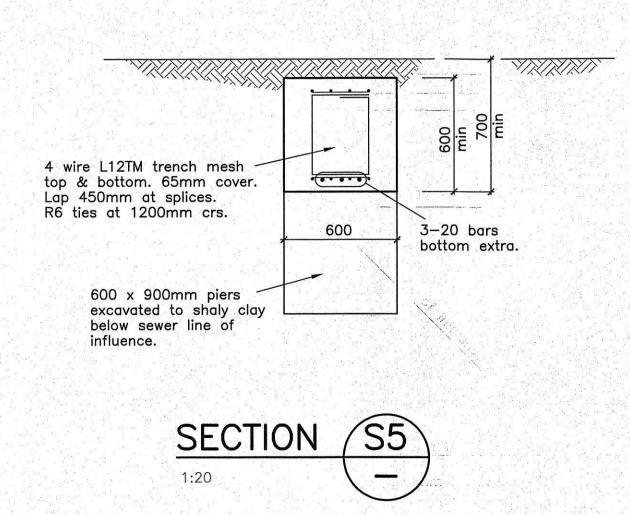
P.Martin. DRAWN **CONSULT AUSTRALI** DESIGNED P.Andresen. APPROVED MAndreson Oling

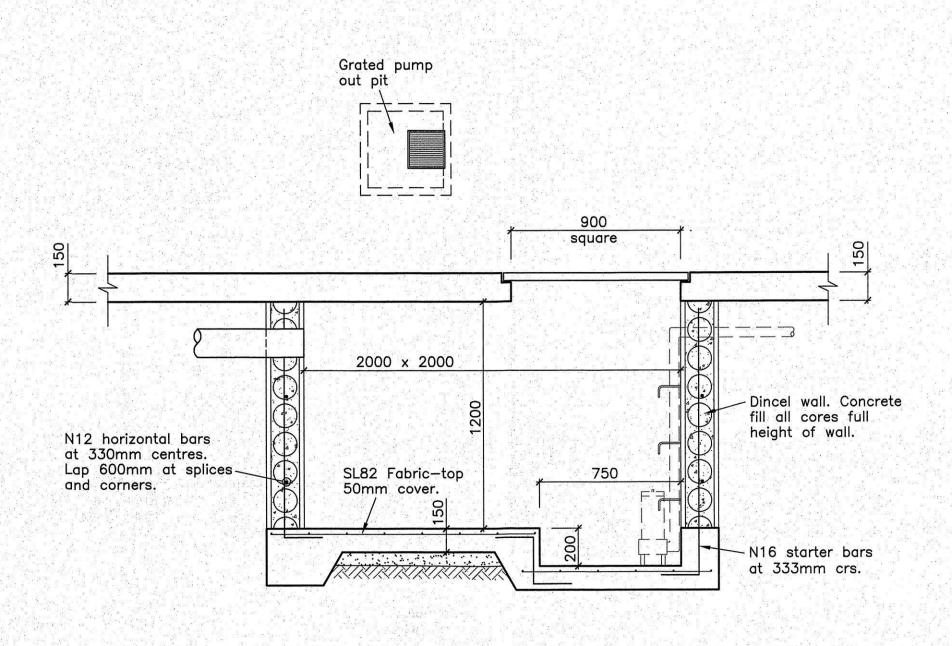
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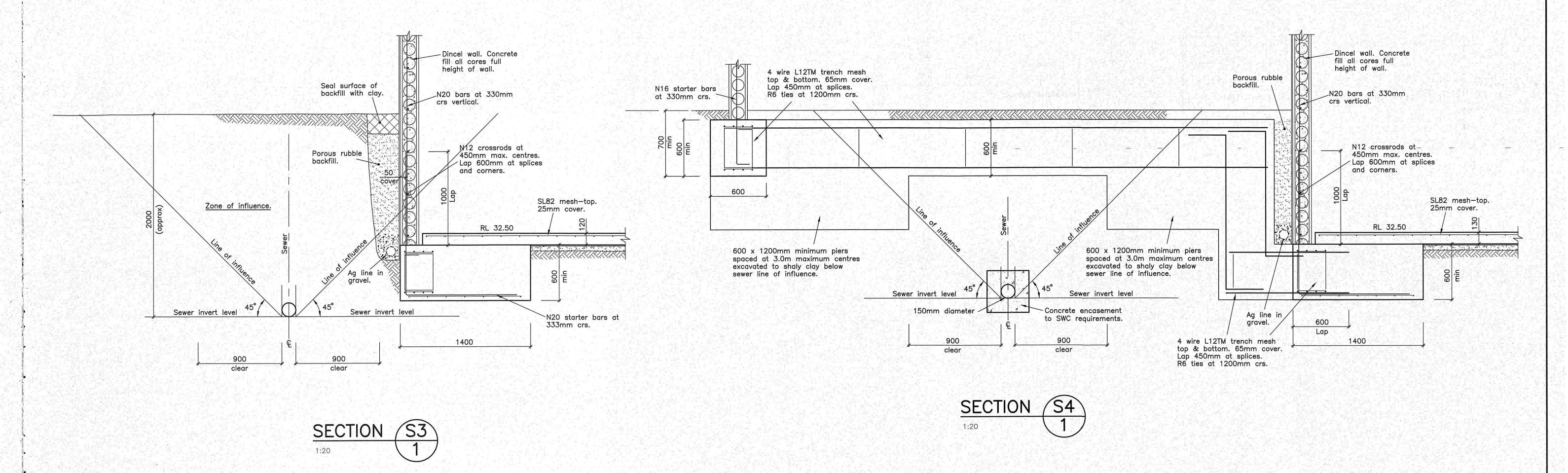






DETAIL - STORMWATER PUMP WELL

Basement pump—out oit to be constructed in accordance with drawings E293145—D1 to D8 prepared by Donovan Associates.



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AP

DATE 6-5-19
DRAWN P.Martin.
DESIGNED P.Andresen.

APPROVED

APPROVED

DATE 6-5-19
TLETHBRIDGE APAF
104-108 LETHBRIDGE
FOOTINGS DETAILS

CLIENT: NORSIDE INVESTMENTS PTY LTD
PROPOSED RESIDENTIAL DEVELOPMENT
"LETHBRIDGE APARTMENTS"
104-108 LETHBRIDGE STREET, PENRITH

105930-3

ISSUE

DRAWING NUMBER

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STORMWATER MANAGEMENT PLAN (FOR CC) PROPOSED APARTMENTS 104-108, LETHBRIDGE STREET, PENRITH

GENERAL NOTES

- 1. FINAL LOCATION OF NEW DOWNPIPES TO BE DETERMINED BY BUILDER/ARCHITECT AT TIME OF CONSTRUCTION.
- 2. THESE DRAWINGS TO BE READ IN CONJUNCTION WITH ARCHITECTS AND OTHER CONSULTANTS DRAWINGS.
 ANY DISCREPANCIES TO BE REFERRED TO THE ENGINEER BEFORE PROCEEDING WITH WORK.
- 3. ALL MATERIALS AND WORKMANSHIP TO BE IN ACCORDANCE WITH AS/NZS 3500.3:2003 STORMWATER DRAINAGE, BCA AND LOCAL COUNCIL POLICY/CONSENT/REQUIREMENTS.
- 4. ALL DIMENSIONS AND LEVELS TO BE VERIFIED BY BUILDER ON-SITE PRIOR TO COMMENCEMENT OF WORKS.

 THESE DRAWINGS ARE NOT TO BE SCALED FOR DIMENSIONS NOR TO BE USED FOR SETOUT PURPOSES.
- 5. ALL SURVEY INFORMATION AND PROPOSED BUILDING AND FINISHED SURFACE LEVELS SHOWN IN THESE DRAWINGS ARE BASED ON LEVELS OBTAINED FROM DRAWINGS BY OTHERS.

- **6.** ALL STORMWATER DRAINAGE PIPES ARE TO BE uPVC AT MINIMUM 1% GRADE UNLESS NOTED OTHERWISE.
- 7. IT IS THE CONTRACTORS RESPONSIBILITY TO LOCATE AND LEVEL ALL EXISTING SERVICES OR OTHER STRUCTURES WHICH MAY AFFECT/BE AFFECTED BY THIS DESIGN PRIOR TO COMMENCEMENT OF WORKS.
- 8. ALL PITS WITHIN DRIVEWAYS TO BE 150mm THICK CONCRETE OR EQUAL.
- 9. THIS PLAN IS THE PROPERTY OF DONOVAN ASSOCIATES AND MAY NOT BE USED OR REPRODUCED WITHOUT WRITTEN PERMISSION FROM DONOVAN ASSOCIATES.

PLAN SPECIFIC NOTES

- 1. ROOF DRAINAGE NOTE: AS 3500 ROOF DRAINAGE REQUIRES EAVES GUTTERS TO BE SIZED FOR 20 YEAR 5 MIN. STORM = 205mm/hr. FOR EAVES GUTTERS, AS 3500.3:2003 THEN HAS THE FOLLOWING REQUIREMENTS:
- i) FOR TYPICAL STANDARD QUAD GUTTER WITH Ae = 6000mm² AND GUTTER SLOPE 1:500 AND STEEPER, THIS REQUIRES ONE DOWNPIPE PER 30m² ROOF AREA.
- ii) DOWNPIPES TO BE MINIMUM 90mm DIA. OR 100 x 50mm FOR GUTTERS SLOPE 1:500 AND STEPPER.
- iii) OVERFLOW METHOD TO FIGURE G1 OF AS 3500.3:2003
 IT IS THE RESPONSIBILITY OF THE PLUMBER AND / OR BUILDER TO COMPLY WITH THIS. THIS DRAWING SHOWS PRELIMINARY LOCATIONS / NUMBERS OF DOWNPIPES ONLY WHICH ARE TO BE VERIFIED BY BUILDER / PLUMBER
- 2. TREE PRESERVATION: IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN ANY PRIOR APPROVAL REQUIRED FROM COUNCIL WITH RESPECT TO POTENTIAL IMPACT ON TREES FOR ANY WORKS SHOWN ON THIS DRAWING PRIOR TO THE COMMENCEMENT OF THOSE WORKS
- **3.** ALL ROOF GUTTERS TO HAVE OVERFLOW PROVISION IN ACCORDANCE WITH AS 3500.3:2003 AND SECTIONS 3.5.3, 3.7.5 AND APPENDIX G OF AS 3500.3:2003
- 4. THIS DRAWING IS NOT TO BE USED FOR SET-OUT PURPOSES REFER TO ARCHITECTURAL DRAWINGS
- 5. LOCATION OF SURFACE STORMWATER GRATED INLET PITS MAY BE VARIED OR NEW PITS INSTALLED AT THE CONSTRUCTION STAGE PROVIDED DESIGN INTENT OF THIS DRAWING IS MAINTAINED

	GRATED TRENCH DRAIN	E LEG	SURFACE INLET PIT
	ABSORPTION TRENCH		SURFACE INLET PIT (WITH ENVIROPOD 200 MICRON)
	PROPOSED ROOF GUTTER FALL		ACCESS GRATE
⊢● SP	PROPOSED DOWNPIPE SPREADER		(WITH ENVIROPOD 200 MICRON)
	WATER PIPE 100mm DIA. MIN. UNO	450 X 450	450 SQUARE INTERVAL
— a—— a—— a—— a—	SUBSOIL PIPE	SL 75.50	GRATE LEVEL = 75.50
sw sw	EXISTING STORMWATER PIPE	IL 75.20	INVERT LEVEL = RL 75.20
O IR	INSPECTION RISER	DP 90	PROPOSED DOWNPIPE 90mm DIA. OR 100mm x 50mm MIN.
■ RWH	RAINWATER HEAD	× 10.00	NATURAL GROUND FINISHED DESIGN LEVEL

DRAINAGE NOTES

PIPE SIZE:

THE MINIMUM PIPE SIZE SHALL BE:

- 90mm DIA WHERE THE LINE ONLY RECEIVES ROOFWATER RUNOFF; OR
 100mm DIA WHERE THE LINE RECEIVES BUNDEE FROM PAVED OR
- 100mm DIA WHERE THE LINE RECEIVES RUNOFF FROM PAVED OR UNPAVED AREAS ON THE PROPERTY

THE MINIMUM PIPE VELOCITY SHOULD BE 0.6 m/s AND A MAXIMUM PIPE VELOCITY OF 6.0 m/s DURING THE DESIGN STORM.

PIPE GRADE:

THE MINIMUM PIPE GRADE SHALL BE:

- 1.0% FOR PIPES LESS THAN 225mm DIA (UNO)
- 0.5% FOR ALL LARGER PIPES (UNO)

PIPES WITH A GRADIENT GREATER THAN 20% WILL REQUIRE ANCHOR BLOCKS AT THE TOP AND BOTTOM OF THE INCLINED SECTION; AND AT INTERVALS NOT EXCEEDING 3.0m

ANCHOR BLOCKS ARE DESIGNED ACCORDING TO CLAUSE 3.5.3 OF AS3500.3-1990

DEPTH OF COVER FOR PVC PIPES:
MINIMUM PIPE COVER SHALL BE AS FOLLOWS:

LOCATION	MINIMUM COVER
NOT SUBJECT TO VEHICLE LOADING	100mm SINGLE RESIDENTIAL 300mm ALL OTHER DEVELOPMENTS
SUBJECT TO VEHICLE LOADING UNDER A SEALED ROAD UNSEALED ROAD	450mm WHERE NOT IN A ROAD 600mm 750mm
PAVED DRIVEWAY	100mm PLUS DEPTH OF CONCRETE

SEE AS2032 INSTALLATION OF UPVC PIPES FOR FURTHER INFORMATION.

CONCRETE PIPE COVER SHALL BE IN ACCORDANCE WITH AS3725-1989 LOADS ON BURIED CONCRETE PIPES. HOWEVER A MINIMUM COVER OF 450mm WILL APPLY.

WHERE INSUFFICIENT COVER IS PROVIDED, THE PIPE SHALL BE COVERED AT LEAST 50mm THICK OVERLAY AND SHALL THEN BE PAVED WITH AT LEAST:

- 150mm REINFORCED CONCRETE WHERE SUBJECT TO HEAVY VEHICLE TRAFFIC;
- 75mm THICKNESS OF BRICK OR 100mm OF CONCRETE PAVING WHERE SUBJECT TO LIGHT VEHICLE TRAFFIC: OR
- 50mm THICK BRICK OR CONCRETE PAVING WHERE NOT SUBJECT TO VEHICLE TRAFFIC.

CONNECTIONS TO STORMWATER DRAINS UNDER BUILDINGS:

SHALL BE CARRIED OUT IN ACCORDANCE WITH SECTION 3.10 OF AS3500.3-1990

CONNECTIONS TO COUNCIL SYSTEM:

IF PROPOSED DRAINAGE SYSTEM IS DESIGNED TO CONNECT TO COUNCIL'S DRAINAGE SYSTEM, IT IS ADVISED THAT A 'WORKS PERMIT' IS OBTAINED FROM THE RESPECTIVE COUNCIL PRIOR TO COMMENCEMENT OF WORKS

ABOVE GROUND PIPEWORK:

SHALL BE CARRIED OUT IN ACCORDANCE WITH SECTION 6 OF AS3500.3-1990

DETAILS, NOTES & LEGEND

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PIT SIZES AND DESIGN:

DEPTH (mm)	MINIMUM PIT SIZE (mm)
UP TO 450mm	450 x 450
450mm TO to 600mm	600 x 600
600mm TO 900mm	600 x 900
900mm TO 1500mm	900 x 900 (WITH STEP IRONS)
1500mm TO 2000mm	1200 x 1200 (WITH STEP IRONS)

ALL PIPES SHOULD BE CUT FLUSH WITH THE WALL OF THE PIT.

PITS GREATER THAN 600mm DEEP SHALL HAVE A MINIMUM ACCESS OPENING OF 600 x 600mm

THE GRATED COVERS OF PITS LARGER THAN 600 x 600mm ARE TO BE HINGED TO PREVENT THE GRATE FROM FALLING INTO THE PIT.

THE BASE OF THE DRAINAGE PITS SHOULD BE AT THE SAME LEVEL AS THE INVERT OF THE OUTLET PIPE. RAINWATER SHOULD NOT BE PERMITTED TO POND WITHIN THE STORMWATER SYSTEM

• TRENCH DRAINS:

CONTINUOUS TRENCH DRAINS ARE TO BE OF WIDTH NOT LESS THAN 150mm AND DEPTH NOT LESS THAN 100mm. THE BARS OF THE GRATING ARE TO BE PARALLEL TO THE DIRECTION OF SURFACE FLOW.

STEP IRONS:

PITS BETWEEN 1.2m AND 6m ARE TO HAVE STEP IRONS IN ACCORDANCE WITH AS1657. FOR PITS GREATER THAN 6m OTHER MEANS OF ACCESS MUST BE PROVIDED.

• PVC PITS:

PVC PITS WILL ONLY BE PERMITTED IF THEY ARE NOT A
GREATER SIZE THAN 450 x 450mm (MAXIMUM DEPTH 450mm) AND
ARE HEAVY DUTY

• IN-SITU PITS:

IN-SITU PITS ARE TO BE CONSTRUCTED ON A CONCRETE BED OF AT LEAST 150mm THICK. THE WALLS ARE TO BE DESIGNED TO MEET THE MINIMUM REQUIREMENTS OF CLAUSE 4.6.3 OF AS3500.4-1990. PITS DEEPER THAN 1.8m SHALL BE CONSTRUCTED WITH REINFORCED CONCRETE.

• GRATES:

GRATES.

GRATES ARE TO BE GALVANISED STEEL GRID TYPE. GRATES

ARE TO BE OF HEAVY-DUTY TYPE IN AREAS WHERE THEY MAY

BE SUBJECT TO VEHICLE LOADING.

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S.SINGH	05.06.2018	ARCHITECTURALS AMENDED	D	104 -108
R.S	10.05.2019	ISSUED FOR CC	F	LETHBRIDGE STREET
PRO	JECT	PROPOSED APARTMENTS		PENRITH

SHEET No.

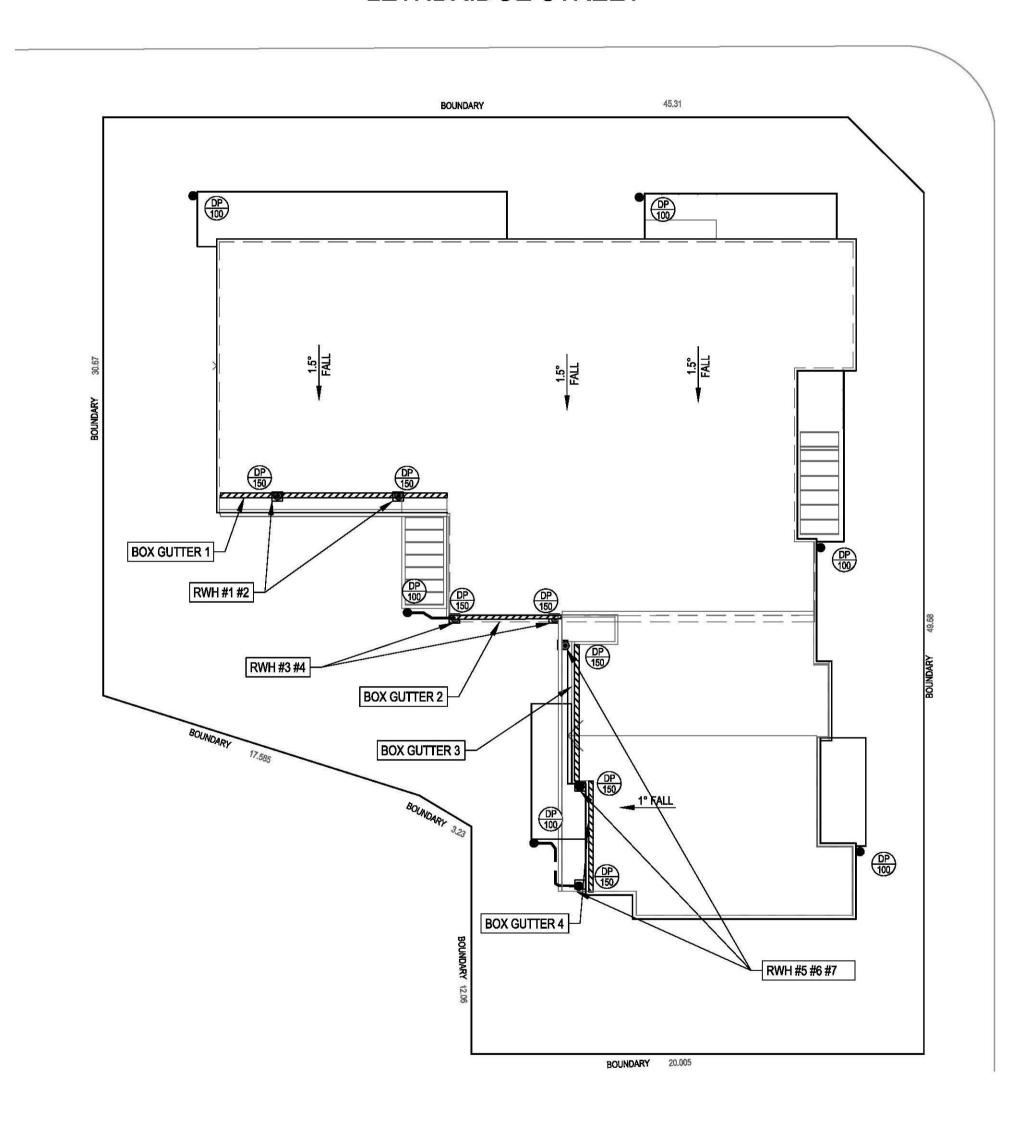
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ROOF DRAINAGE

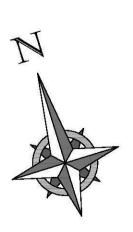
- BOX GUTTER #1 & #2 300mm WIDE x 200mm HIGH
- RAINWATER HEAD SUMP #1, #2, #3 & #4 250mm SQUARE x 250mm NOTE: DOWNPIPES TO BE 150mm DIA PVC OR 100x100 COLORBOND
- BOX GUTTER #3 & #4 400mm WIDE x 200mm HIGH
- RAINWATER HEAD SUMP #5, #6, #7 350mm SQUARE x 250mm DEEP NOTE: DOWNPIPES TO BE 150mm DIA PVC OR 150x150 COLORBOND RWH (EXTERNAL)

NOTE: ALL RAINHEADS TO HAVE OVERFLOW SLOT 50mm LOWER THAN TOP OF BOX GUTTER

LETHBRIDGE STREET



ROOF PLAN







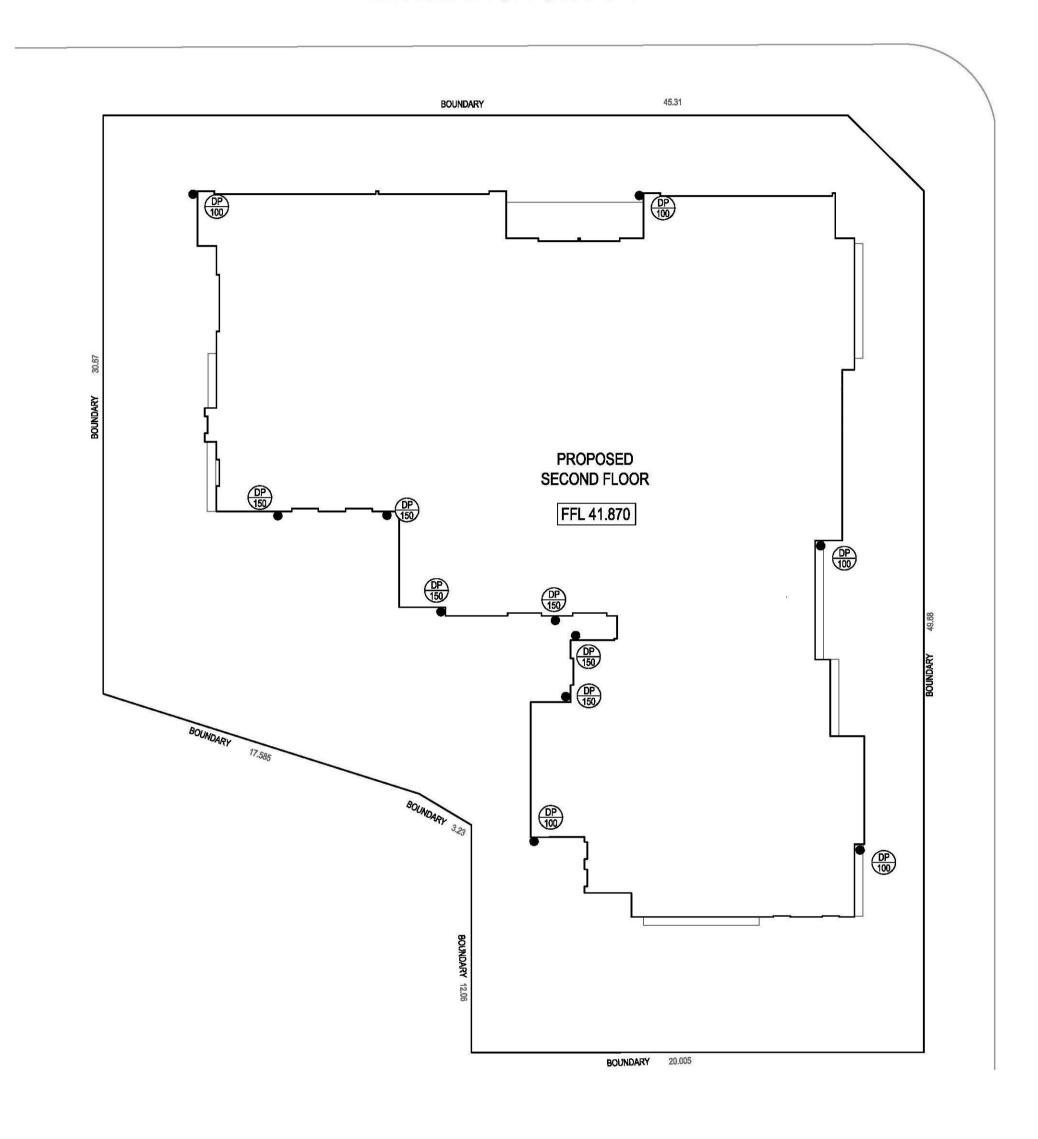
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LETHBRIDGE STREET

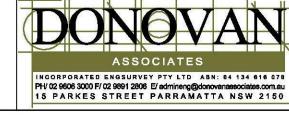


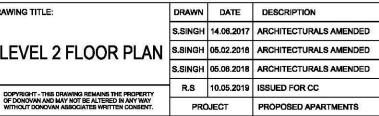
EVAN STREET

LEVEL 2 FLOOR PLAN









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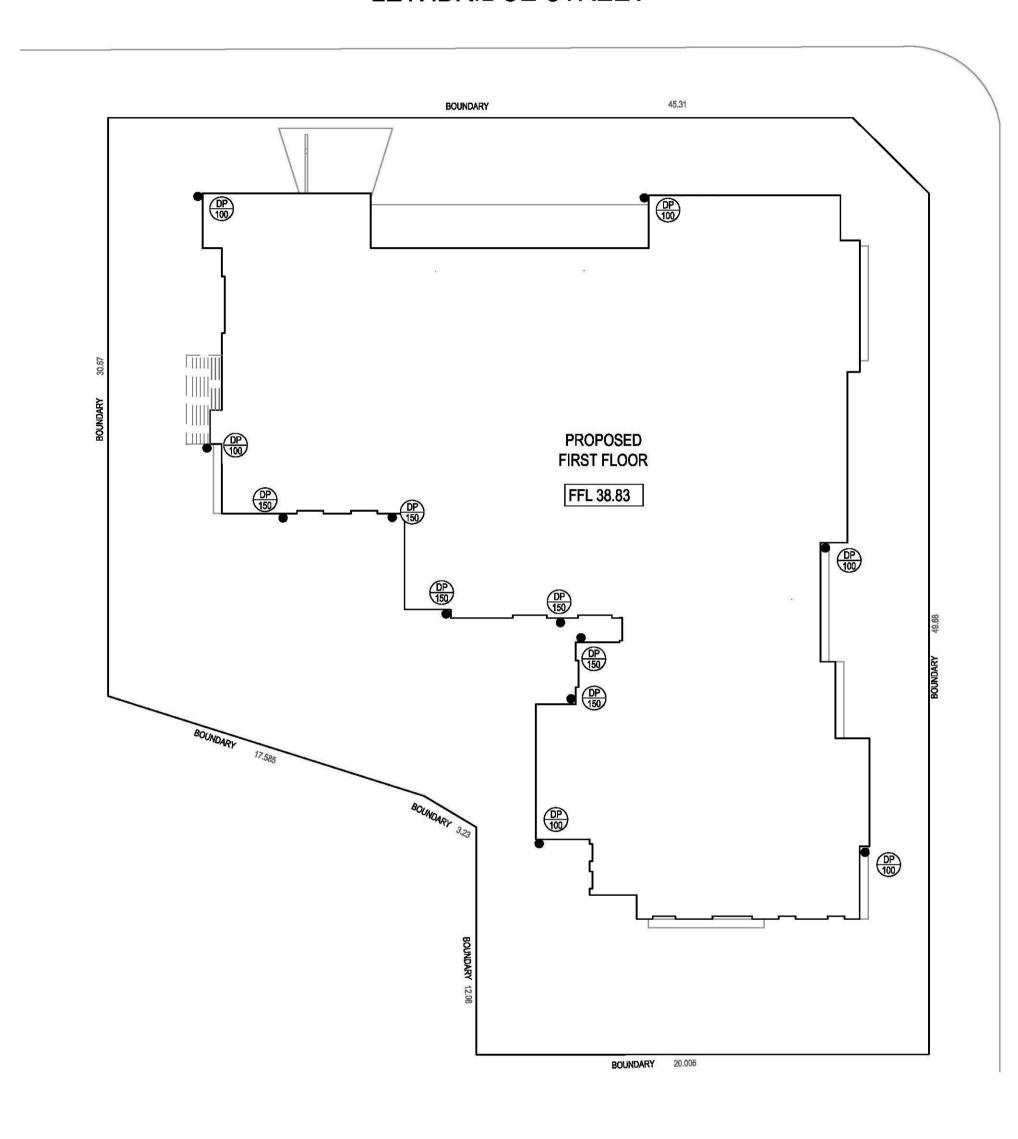
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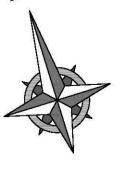
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LETHBRIDGE STREET



EVAN STREET

LEVEL 1 FLOOR PLAN







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	S.SINGH	14.06.2017	ARCHITECTURALS AMENDED
PLAN	S.SINGH	05.02.2018	ARCHITECTURALS AMENDED
	S.SINGH	05.06.2018	ARCHITECTURALS AMENDED
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c site address:
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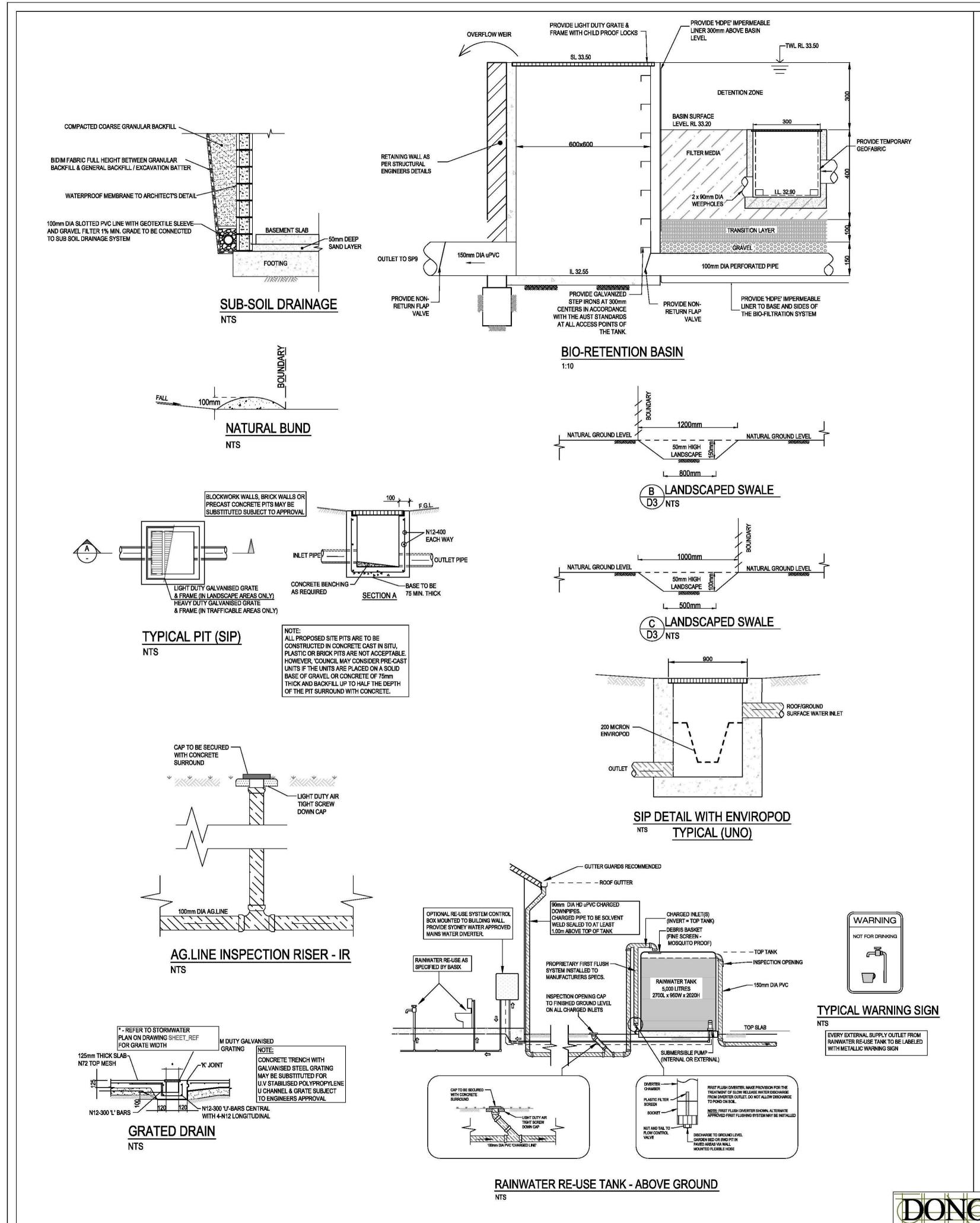
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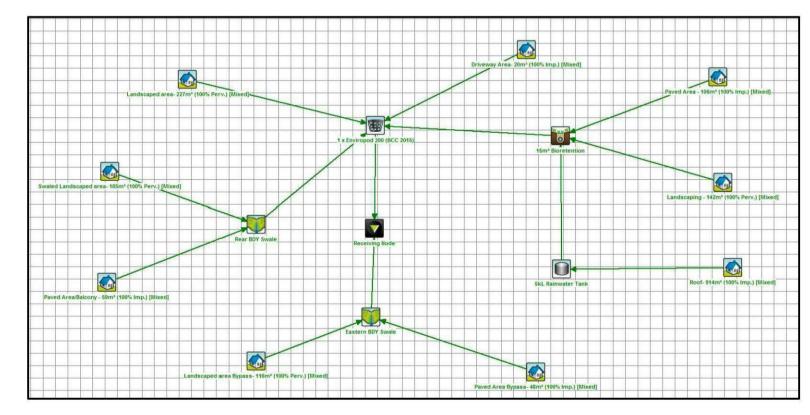
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MUSIC MODEL

SOURCES	RESIDUAL LOAD	% REDUCTION
75.3	7.52	90.0
0.187	0.0527	71.8
1.66	0.647	61.0
19.1	0.000559	100
	75.3 0.187 1.66	75.3 7.52 0.187 0.0527 1.66 0.647

MUSIC RESULTS

WSUD ANALYSIS

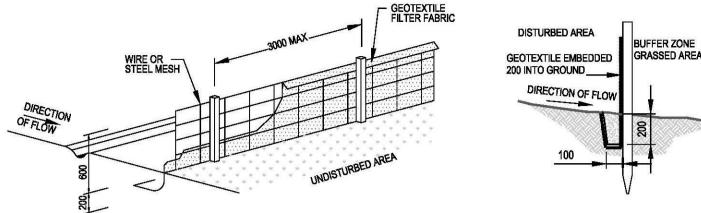


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DRAWING TITLE:	DRAWN	DATE	DESCRIPTION	ISSUE	FOR
STORMWATER	S.SINGH	14.06.2017	ARCHITECTURALS AMENDED	В	COLPANI CONSTRUCTION PTY LTD
DETAILS	S.SINGH	05.02.2018	ARCHITECTURALS AMENDED	С	SITE ADDRESS:
	S.SINGH	05.06.2018	ARCHITECTURALS AMENDED	D	104 -108
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DESIGNED BY:

SS CHECKED BY: SS SCALE AS NOTED A1 SHEET SIZE SHEET No. D7 CE17058 E293145

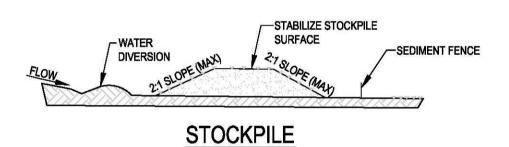


SEDIMENT FENCE DETAIL

CONSTRUCTION NOTES:

CONSTRUCT SEDIMENT FENCES AS CLOSE AS POSSIBLE TO BEING PARALLEL TO THE CONTOURS OF THE SITE, BUT WITH SMALL RETURNS AS SHOWN IN THE DRAWING TO LIMIT THE CATCHMENTS AREA OF ANY ONE SECTION. THE CATCHMENTS AREA SHOULD BE SMALL ENOUGH TO LIMIT WATER FLOW IF CONCENTRATED AT ONE POINT TO 50 LITRES PER SECOND IN THE DESIGN STORM EVENT, USUALLY THE 10 YEAR EVENT. CUT A 150mm DEEP TRENCH ALONG THE UPSLOPE LINE OF THE FENCE

- FOR THE BOTTOM OF THE FABRIC TO BE ENTRENCHED. DRIVE 1.5m LONG STAR PICKETS INTO GROUND AT 2.5m INTERVALS (MAX) AT THE DOWNSLOPE EDGE OF THE TRENCH. ENSURE ANY STAR PICKETS ARE FITTED WITH SAFETY CAPS.
- FIX SELF-SUPPORTING GEOTEXTILE TO THE UPSLOPE SIDE OF THE POSTS ENSURING IT GOES TO THE BASE OF THE TRENCH. FIX THE GEOTEXTILE WITH WIRE TIES OR AS RECOMMENDED BY THE MANUFACTURER. ONLY USE GEOTEXTILE SPECIFICALLY PRODUCED FOR SEDIMENT FENCING. THE USE OF SHADE CLOTH FOR THIS PURPOSE IS NOT SATISFACTORY.
- JOIN SECTIONS OF FABRIC AT A SUPPORT POST WITH 150mm OVERLAP. BACKFILL THE TRENCH OVER THE BASE OF THE FABRIC AND COMPACT IT THOROUGHLY OVER THE GEOTEXTILE.

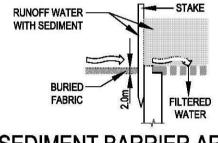


PLACE STOCKPILES MORE THAN 2 (PREFERABLY 5) METRES FROM EXISTING VEGETATION, CONCENTRATED WATER FLOW, ROADS AND HAZARD AREAS. CONSTRUCT ON THE CONTOUR AS LOW, FLAT, ELONGATED MOUNDS. WHERE THERE IS SUFFICIENT AREA, TOPSOIL STOCKPILES SHALL BE LESS THAN 2

WHERE THEY ARE TO BE IN PLACE FOR MORE THAN 10 DAYS, STABILIZE FOLLOWING THE APPROVED ESCP OR SWMP TO REDUCE THE C-FACTOR TO LESS THAN 0.10.

CONSTRUCT EARTH BANKS (LOW FLOW) ON THE UPSLOPE SIDE TO DIVERT WATER

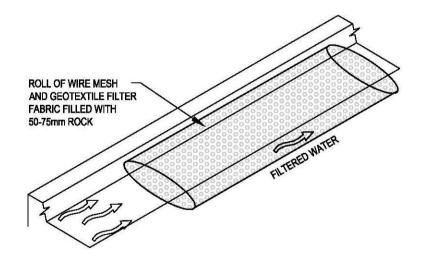
AROUND STOCKPILES AND SEDIMENT FENCES 1 TO 2 METRES ON THE DOWNSLOPE.



SEDIMENT BARRIER AROUND PIT

CONSTRUCTION NOTES:

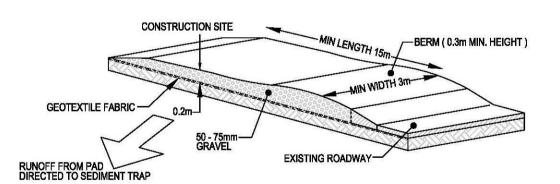
- FABRICATE A SEDIMENT BARRIER MADE FROM GEOTEXTILE OR
- FOLLOW STRAW FILTER AND SEDIMENT FENCE FOR INSTALLATION PROCEDURES FOR THE STRAW BALES OR GEOFABRIC. REDUCE THE PICKET SPACING TO 1 METRE CENTRES.
- SANDBAGS OR EARTH BANKS AS SHOWN IN THE DRAWING. DO NOT COVER THE INLET WITH GEOTEXTILE UNLESS THE DESIGN IS ADEQUATE TO ALLOW FOR ALL WATERS TO BYPASS IT.



MESH AND GRAVEL FILTER

CONSTRUCTION NOTES:

- INSTALL FILTERS TO KERB INLETS ONLY AT SAG POINTS
- FABRICATE A SLEEVE MADE FROM GEOTEXTILE OR WIRE MESH LONGER THAN THE LENGTH OF THE INLET PIT AND FILL IT WITH 25mm TO 50mm GRAVEL.
- FORM AN ELLIPTICAL CROSS-SECTION ABOUT 150mm(h) x 400mm(w). PLACE THE FILTER AT THE OPENING LEAVING AT LEAST 100mm SPACE BETWEEN
- IT AND THE KERB INLET. MAINTAIN THE OPENING WITH SPACER BLOCKS. FORM A SEAL WITH THE KERB TO PREVENT SEDIMENT BYPASSING THE FILTER.
- SANDBAGS FILLED WITH GRAVEL CAN SUBSTITUTE FOR THE MESH OR GEOTEXTILE PROVIDING THEY ARE PLACED SO THAT THEY FIRMLY ABUT EACH OTHER AND SEDIMENT-LADEN WATERS CANNOT PASS BETWEEN.



STABILIZED SITE ACCESS

CONSTRUCTION NOTES:

THE SEDIMENT FENCE.

- STRIP THE TOPSOIL, LEVEL THE SITE AND COMPACT THE SUBGRADE COVER THE AREA WITH NEEDLE-PUNCHED GEOTEXTILE
- CONSTRUCT A 200mm THICK PAD OVER THE GEOTEXTILE USING ROAD
- **BASED OR 30mm AGGREGATE** ENSURE THE STRUCTURE IS AT LEAST 15m LONG OR TO BUILD ALIGNMENT
- AND AT LEAST 3 METRES WIDE. WHERE A SEDIMENT FENCE JOINS ONTO THE STABILIZED ACCESS, CONSTRUCT A HUMP IN THE STABILIZED ACCESS TO DIVERT WATER TO

INCORPORATED ENGSURVEY PTY LTD ABN: 84 134 616 078

DUST CONTROL:

NOTE: DURING EXCAVATION, DEMOLITION AND CONSTRUCTION, ADEQUATE MEASURES SHALL BE

PHYSICAL BARRIERS SHALL BE ERECTED AT RIGHT ANGLES TO PREVENT WIND DIRECTION OR SHALL BE

PLACED AROUND OR OVER DUST SOURCES TO PREVENT WIND OR ACTIVITY FROM GENERATING DUST.

. EARTHWORKS AND SCHEDULING ACTIVITIES SHALL BE MANAGED TO COINCIDE WITH THE NEXT STAGE

. ALL VEHICLES CARRYING SOIL OR RUBBLE TO OR FROM THE SITE SHALL AT ALL TIMES BE COVERED TO

9. ALL BUILDERS REFUSE, SPOIL AND/OR MATERIAL UNSUITABLE FOR USE IN LANDSCAPE AREAS SHALL BE

OF DEVELOPMENT TO MINIMISE THE AMOUNT OF TIME THE SITE IS LEFT TO CUT OR EXPOSED.

. THE GROUND SURFACE SHOULD BE DAMPENED SLIGHTLY TO PREVENT DUST FROM BECOMING

B. ALL EQUIPMENT WHEELS SHALL BE WASHED BEFORE EXISTING THE SITE USING MANUAL OR

. GATES SHALL BE CLOSED BETWEEN VEHICLE MOVEMENTS SHALL BE FITTED WITH SHADE CLOTH.

ALL MATERIALS SHALL BE STORED OR STOCKPILED AT THE BEST LOCATIONS.

AUTOMATED SPRAYERS AND DRIVE - THROUGH WASHING BAYS.

REMOVED FROM SITE ON COMPLETION OF THE BUILDING WORKS.

B. CLEANING OF FOOTPATHS AND ROADWAYS SHALL CARRIED OUT DAILY.

AIRBORNE BUT SHOULD NOT BE WET TO THE EXTENT THAT RUN-OFF OCCURS.

TAKEN TO PREVENT DUST FROM AFFECTING THE AMENITY OF THE NEIGHBORHOOD.

THE FOLLOWING MEASURES MUST BE ADOPTED:

PREVENT THE ESCAPE OF DUST.

UNDISTURBED VEGETATION * * * * * MEASURES TO BE INSPECTED AND MAINTAINED DAILY BY SITE MANAGER IN ACCORDANCE WITH SEDIMENT FENCE —x—x—x—x— 2. ALL STOCKPILES TO BE CLEAR FROM DRAINS, STOCK PILES STABILIZED SITE ACCESS STORMWATER SYSTEM AS SOON AS POSSIBLE. 4. ROADS AND FOOTPATH TO BE SWEPT DAILY AS MESH & GRAVEL INLET FILTER WATER DIVERSION REQUIREMENTS & DOCUMENTATION, YOU MAY BE Г¬ LIABLE TO PROSECUTION FROM GOVERNMENT STORMWATER PIT WITH LJ SEDIMENT BARRIER STORMWATER PIT WITH HAY BALES

1. ALL EROSION AND SEDIMENT CONTROL

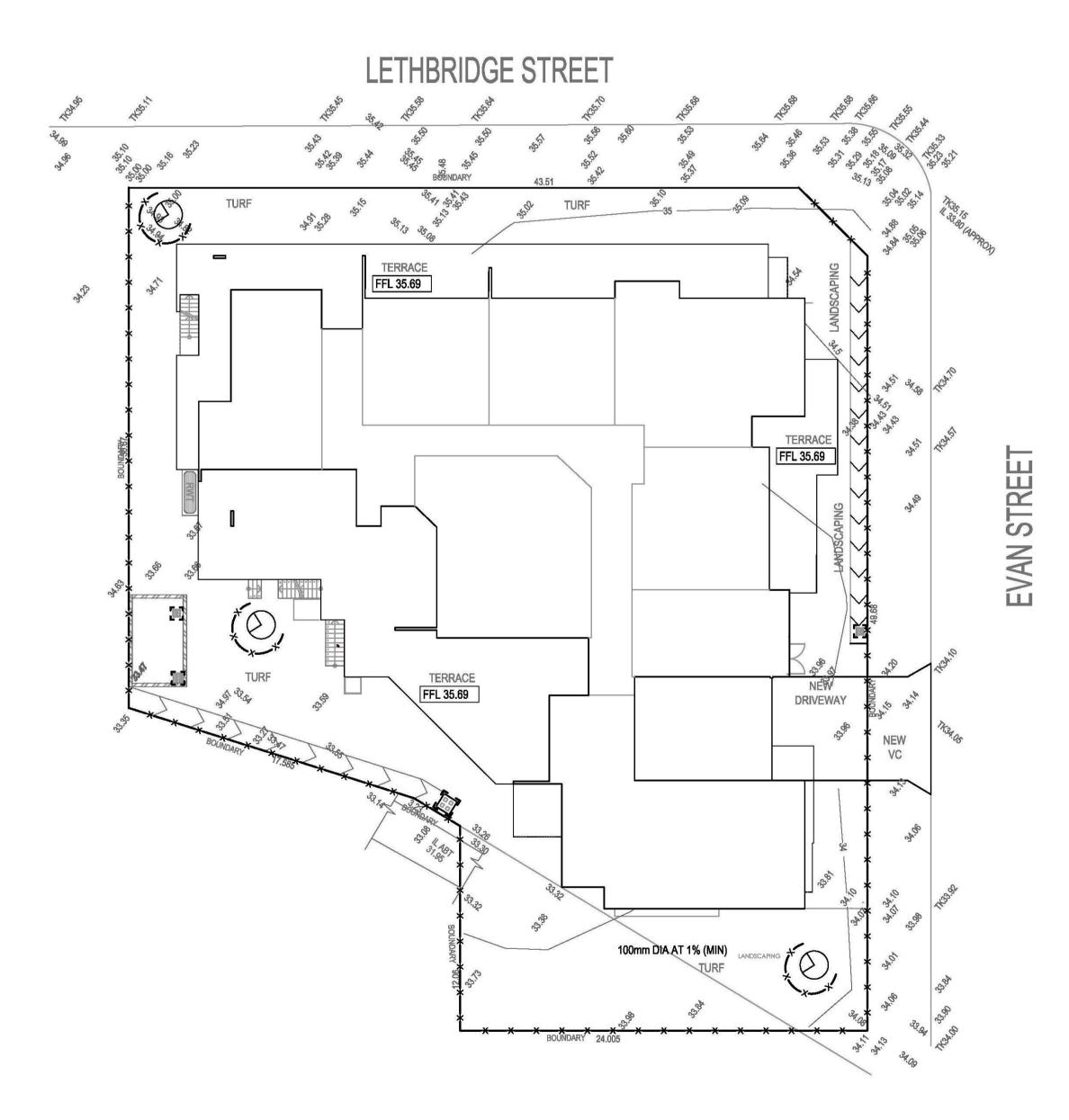
5. IF YOU DO NOT COMPLY WITH COUNCIL

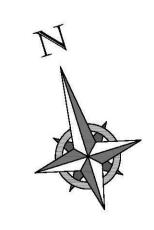
COUNCIL REQUIREMENTS.

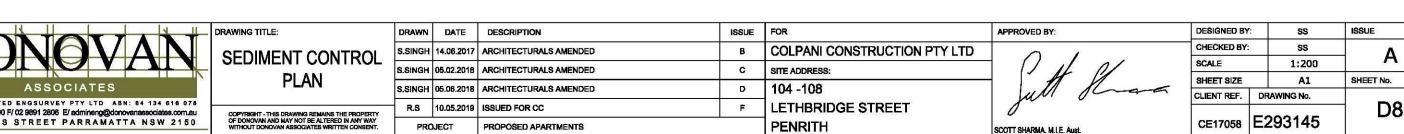
GUTTERS AND FOOTPATHS. 3. DRAINAGE IS TO BE CONNECTED TO

REQUIRED BY COUNCIL.

AUTHORITIES.

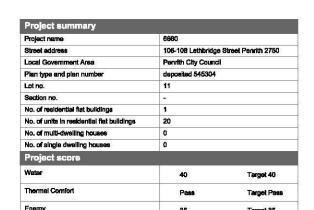


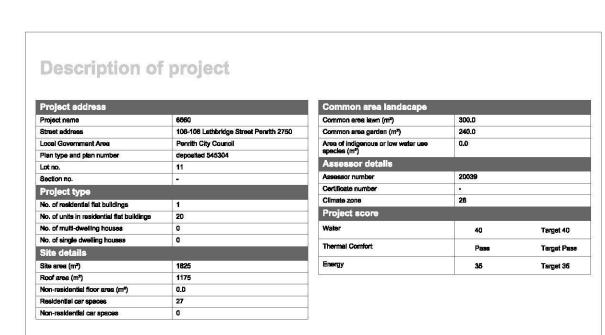




BASIX Report

Building Sustainability Index www.basix.nsw.gov.au





- IO	DOIUM	uooui iud	ule uw	ellings a	IN COLL	IIVII -	a1045 W	numi ur	o projec													
der	tial fla	t bullo	lings -	Bulldi	ng, 20	dw	elling	s, 3 st	огеуз	above	groun	ıd										
	Conditioned floor area (m²)	Unconditioned floor area (m²)	Area of garden & lawn (m²)	Indigenous species (min area m²)	Dwelling no.	No. of bedrooms	Conditioned floor area (m²)	Unconditioned floor area (m²)	Ares of garden & lawn (m²)	Indigenous species (min ares m²)	Dwelling no.	No. of bedrooms	Conditioned floor area (m²)	Unconditioned floor area (m²)	Area of garden & lawn (m²)	Indigenous species (min area m²)	Dwelling no.	No. of bedrooms	Conditioned Roor area (m²)	Unconditioned floor area (m²)	Area of garden & lawn (m²)	Indigenous species (min area m²)
2	84.8	0.0	0.0	0.0	2	1	55.0	0.0	0.0	0.0	3	1	63.9	0.0	0.0	0.0	4	2	93.1	0.0	0.0	0.0
2	93.1	0.0	0.0	0.0	6	3	98.7	0.0	0.0	0.0	7	2	84.5	0.0	0.0	0.0	8	2	81.4	0.0	0.0	0.0
2	90.9	3.9	0.0	0.0	10	2	84.9	0.0	0.0	0.0	11	2	87.2	0.0	0.0	0.0	12	3	98.7	0.0	0.0	0.0
2	84.5	0.0	0.0	0.0	14	2	81.4	0.0	0.0	0.0	15	2	90.9	3.9	0.0	0.0	16	2	84.9	0.0	0.0	0.0
2	87.2	0.0	0.0	0.0	18	2	99.8	0.0	0.0	0.0	19	3	98.7	0.0	0.0	0.0	20	2	84.5	0.0	0.0	0.0

The tables below describe the	dwellings and common a	reas within the project			
Common areas of unit b	uliding - Building				
Common area	Floor area (m²)	Common area	Floor area (m*)	Common area	Floor area (r
Basement Car park area	777.0	Lift car (No.1)	i -	Services Cupboard	6.0
Services Room	41.0	Garbage Room/Bulky Waste	28.0	Stairwells (total)	86.0
Circulation areas (total)	324.0		(2)		

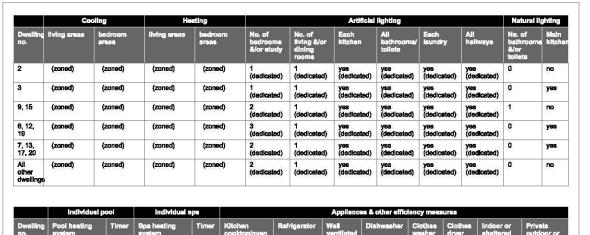
Schedule of BASIX commitments 1. Commitments for Residential flat buildings - Building (a) Dwellings (i) Water (ii) Energy (iii) Thermal Comfort (b) Common areas and central systems/facilities (i) Water (ii) Energy 2. Commitments for multi-dwelling houses 3. Commitments for single dwelling houses 4. Commitments for common areas and central systems/facilities for the development (non-building specific) (i) Water (ii) Energy

Schedule of BASIX commitments			
he commitments set out below regulate how the proposed development is to be carried out. It is a condition of any development certificate issued, for the proposed development, that BASIX commitments be complied with.	ment conser	it granted, or complyl	ng
. Commitments for Residential flat buildings - Building			
a) Dwellings			
(I) Water	Show on DA plans	Show on CC/CDC plans & specs	Certif
(a) The applicant must comply with the commitments listed below in carrying out the development of a dwelling listed in a table below.		a.	
(b) The applicant must plant indigenous or low water use species of vegetation throughout the area of land specified for the dwelling in the "indigenous species" column of the latie below, as private landscaping for that dwelling. (This area of indigenous vegetation is to be contained within the "Area of garden and lawn" for the dwelling specified in the "Description of Project" table).	~	~	
(c) If a rating is specified in the table below for a fixture or appliance to be installed in the dwelling, the applicant must ensure that each such fixture and appliance meets the rating specified for it.		~	V
(d) The applicant must Install an on demand hot water recirculation system which regulates all hot water use throughout the dwelling, where indicated for a dwelling in the "HW recirculation or diversion" column of the table below.		~	V
(e) The applicant must install:			
(aa) a hot water diversion system to all showers, kitchen sinks and all basins in the dwelling, where indicated for a dwelling in the "HW recirculation or diversion" column of the table below; and		~	V
(bb) a separate diversion tank (or tanks) connected to the hot water diversion systems of at least 100 litres. The applicant must connect the hot water diversion tank to all tollets in the dwelling.		~	•
(e) The applicant must not install a private swimming pool or spa for the dwelling, with a volume exceeding that specified for it in the table below.	~	~	
(f) if specified in the table, that pool or spa (or both) must have a pool cover or shading (or both).		~	
(g) The pool or spa must be located as specified in the table.	~	~	
(h) The applicant must install, for the dwelling, each alternative water supply system, with the specified size, listed for that dwelling in the table below. Each system must be configured to collect run-off from the areas specified (excluding any area which supplies any other alternative water supply system), and to divent overflow as specified. Each system the connected as specified.	~	~	

			Fixtur	**		Арр	llances		Indh	idual pool	<u> </u>			individ	rai eba
Dwelling no.	All shower- heads	All tollet flushing systems	All kitchen tape	All bathroom tape	HW recirculation or diversion	All clothes washers	All dish- washers	Volume (max volume)	Pool cover	Pool location	Po	ol eded	Volum (max volum	COA	
All dwellings	3 star (> 4.5 but <= 6 L/mln)	4 ster	5 ster	5 star	-	2-2	-	-	-	2 2 3	140		-	1=3	-
	ī						Alternative v	ration source	:0						
Dwelling :		mative wate by systems		Size	Configurati	lon			Landscape		tion	Laundry connect		dn-do Jool	Spe top
None	-			-				10-	0	-		-	10.		-
	pplicant mu				ed below in carry			33			Show DA p		Show o plans &	n CC/CDC specs	Cartifia check
suppl	led by that:	system. If the	e table spe	cifies a centra	cified for the dwe al hot water syste not water is supp	ern for the dw	elling, then the				•	•		~	~
					and laundry of the				fled for that	room in				V	~
	headings oling or hea	of the "Cooli ating system If the term "z	ng" and "h Is specifie soned" is e	leating" colun d in the table pecified besid	stem/s specified in the table befor "Living areas" to an air condition	elow, in/for a	t least 1 living/t n areas", then r	oedroom are no systems i	e of the dw	elling. If alled i n				~	~
no co	g between	IIAIIR SEGRE					n a heading to	Ham PANISAIA	م جمعتلماسنا ال		-				-

(II) Energy						Show on DA plans	Show on CC/CD plans & specs	Certific
` the tal		extent specified for that	velling which is referred to room or area). The applic			~	~	~
(g) This c	ommitment applies if the	applicant installs a water	r heating system for the dv	welling's pool or spa. Th	e applicant must:			-8
(84			Individual Pool" column of cant must install a timer, to				~	
(bl			ndividual Spa" column of the		atively must not install		~	
(h) The a	pplicant must install in th	e dwelling:				0	8	- 8
(8	 a) the kitchen cook-top a table below; 	nd oven specified for that	t dwelling in the "Appliance	es & other efficiency me	ssures" column of the		~	
		ich a milian in annaifiad fr	or that dwalling in the "Ann	diances & other efficienc	v measures" column of			
(bl	b) each appliance for wh the table, and ensure	that the appliance has th	et minimum rating; and		de la companyone de la		~	~
200	the table, and ensure	that the appliance has th	et minimum rating; and g in the "Appliances & othe				Š	•
(00	the table, and ensure any clothes drying line fied in the table, the app	that the appliance has the specified for the dwelling	at minimum rating; and	er efficiency measures" o	column of the table.	es .	*	_
(co	the table, and ensure e) any clothes drying line filed in the table, the app aled.	that the appliance has the specified for the dwelling licant must carry out the	at minimum rating; and g in the "Appliances & othe development so that each	er efficiency measures" o	column of the table.		Š	
(i) If spec ventile	the table, and ensure c) any clothes drying line filed in the table, the app ated. Hot water	that the appliance has th specified for the dwelling licant must carry out the Bathroom ve	et minimum rating; and g in the "Appliances & other development so that each initiation system	er efficiency measures" or refrigerator space in the Kitchen Ve	oolumn of the table. dwelling is "well nüllationsyctom	- Constant	aundry ventilation	4.444
(co	the table, and ensure e) any clothes drying line filed in the table, the app aled.	that the appliance has the specified for the dwelling licant must carry out the	at minimum rating; and g in the "Appliances & othe development so that each	er efficiency measures" o	column of the table.	L Each laun		system ation contro

(b) Common areas and central systems/facilities



19					(ded)	cated) (dedicated)	ted) (dedica	ited) (dedicate	d) (dedicate	d) (dedi	icated)			(e) The applicant mu
7, 13, 17, 20	(zoned)	(zoned)	(zoned)	(zone	ed) 2 (ded)	(dedicated)	yes ted) (dedica	yes ated) (dedicate	yes d) (dedicate	yes d) (dedi	(Cated)	yes		certificate, if appli development which
All other dwellings	(zoned)	(zoned)	(zoned)	(zone	ed) 2	1 cated) (dedice	yes	yes	yes	yes	(cated)	no		(f) The applicant mus Certificate, and in certificate which w
CHOIII GO														(g) Where there is an
	Individue		Individual		1		Assilan	es & other effic					r	(aa) Install inst
Duellles	3520 3535 5075	There is a second		2000	Kitchen	Buffleanie	100000000000000000000000000000000000000		000000000000000000000000000000000000000		Indoor or	Privata	ý l	(bb) On a susp edges of
Dwelling no.	Pool heating system	Timer	Spa heating system	Timer	coaktop/avsi	Refrigerator	ventilated fridge space	Dishwasher		ryer	sheltered clothes drying line	outdoor or unsheltered clothes drying line	5	(h) The applicant mus below.
All dwellings		-	-	181	electric cooktop & electric oven	1=1	yes				yas	no		
		[S	I.		I.	-1		1				i.	I.	Dwelling no.
														1
														2

(III) Thermal Comfort			Show on DA plans	Show on CC/CDC plans & specs	Certifie
"Assessor Certificate") the applicant is applying	sch the certificate referred to under "Assessor details" on the front pege to the development application and construction certificate application for g for a complying development certificate for the proposed development sessor Certificate to the application for a final occupation certificate for	r the proposed development (or, if to that application). The applicant			
(b) The Assessor Certifica	te must have been issued by an Accredited Assessor in accordance with	the Thermal Comfort Protocol.			12
(c) The details of the propo Certificate, including the	osed development on the Assessor Certificate must be consistent with the details shown in the "Thermal Loads" table below.	e details shown in this BASIX			2
which the Thermal Cor	ow on the plans accompanying the development application for the proportion for the proportion of the plans. Those plans must be or, to certify that this is the case.	sed development, all matters ar a stamp of endorsement from		d.	
certificate, if applicable	ow on the plans accompanying the application for a construction certifica), all thermal performance specifications set out in the Assessor Certifica re used to calculate those specifications.			di st	
Certificate, and in acco	struct the development in accordance with all thermal performance spec relance with those aspects of the development application or application used to calculate those specifications.			~	~
Nest:	ab heating or cooling system, the applicant must:		~	~	~
(bb) On a suspend	on with an R-value of not less than 1.0 around the vertical edges of the p ad floor, Install Insulation with an R-value of not less than 1.0 underneath erimeter of the slab.				
(h) The applicant must con below.	struct the floors and walls of the development in accordance with the sp	ecifications listed in the table	~	~	~
	1	Thermal loads			
Dwelling no.	Area adjusted heating load (in mJ/m²/yr)	Area adjusted coolin	a lood (in m l	(Jan 23, ar)	
Dwaling no.	65.0	30.4	S rosa (iii iiia	um syry	
1E	1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -	1,000			
2	50.0	28.1			

		Thermal loads
Dwelling no.	Area adjusted heating load (in mJ/m²/yr)	Area adjusted cooling load (in mJ/m²/yr)
6	37.5	26.1
7	51.5	12.5
8	32.3	48.1
9	43.0	28.4
10	31.9	22.7
11	26.6	35.4
12	20.3	29.4
13	20.3	15.9
14	50.3	69.6
15	57.7	45.8
16	47.0	37.4
17	46.2	55.5
18	16.1	30.2
19	38.3	49.3
All other dwellings	36.5	24.6

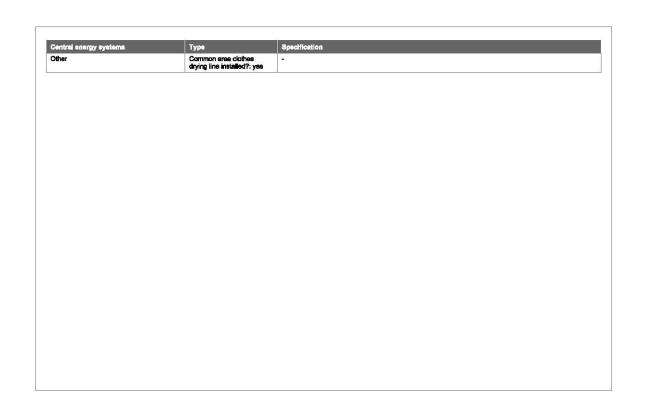
				DA plans	plans & specs	check
	g out the development, the appl neet the specifications listed for		p or clothes washer into a common area, then the	it	~	~
	stems" column of the table below		ternative water supply system(s) specified in the sized, be configured, and be connected, as	~	~	~
(c) A swimming table.	pool or spallisted in the table m	ust not have a volume (in kLs) great	er then that specified for the pool or spe in the	~	V	
(d) A pool or sp	oa listed in the table must have a	cover or sheding if specified for the	pool or spa in the table.		V	
(e) The applica	nt must install each fire sprinkle	system listed in the table so that the	system is configured as specified in the table.		~	~
(f) The applicar	nt must ensure that the central c	ooling system for a cooling tower is o	configured as specified in the table.		-	-
Common area	Showerheads rating	Tollets rating		Clothes washer no common laun		
	22.00000000000000000000000000000000000					
All common ireas	22.00000000000000000000000000000000000					Certifler check
All common areas II) Energy (a) If, in carryin	no common facility	no common facility		Show on	dry facility Show on CC/CDC	
(a) If, in carryin below, then specified in specified in	g out the development, the applicative the development, the applicative the development, the applicative table below, the lightness of the table below, the lightness of table table below.	no common facility cent installs a ventilation system to so of the type specified for that common ant must install, as the "primary type of	3 star	Show on DA plans	dry facility Show on CC/CDC	

	Common area	ventilation system		Common area lighting	
Соптоп агеа	Ventilation system type	Ventilation efficiency measure	Primary type of artificial lighting	Lighting efficiency measure	Lighting control system/BMS
Basement Car park area	ventilation (supply + exhaust)	carbon monoxide monitor + VSD fan	light-emitting diode	daylight sensor and motion sensor	No
Lift car (No.1)			light-emitting diode	попе	No
Services Cupboard	no mechanical ventilation		fluorescent	manual on / manual off	No
Services Room	no mechanical ventilation		fluorescent	manual on / manual off	No
Garbege Room/Bulky Waste	ventilation exhaust only		fluorescent	motion sensors	No
Stalrwells (total)	no mechanical ventilation	-	light-emitting diode	daylight sensor and motion sensor	No
Circulation areas (total)	no mechanical ventilation	-	light-emitting diode	daylight sensor and motion sensor	No

Central energy systems	Туре	Specification
Lift (No. 1)	geared traction with VVAC motor	Number of levels (including basement): 4

10 20 30 40 50 100 length in millimeters at full size 150

b) Common aı	reas and central systems/fa	cilities					
(I) Water					Show on DA plans	Show on CC/CDC plans & specs	Certifie
	ig out the development, the applications listed for	licant installs a showerhead, tollet, ta It in the table.	p or clothes washer into a common a	area, then that		~	~
	stems" column of the table below	e development is serviced by) the alf w. In each case, the system must be			~	~	~
(c) A swimming table.	g pool or spa listed in the table n	nust not have a volume (in kLs) great	er than that specified for the pool or	spa in the	~	~	
(d) A pool or s	oa listed in the table must have a	a cover or shading if specified for the	pool or spa in the table.			~	
(e) The applica	int must Install each fire sprinkle	r system listed in the table so that the	a system is configured as specified in	the table.		~	~
(f) The applica	nt must ensure that the central c	cooling system for a cooling tower is o	configured as specified in the table.			~	V
Common area	Showerheads rating	Tollets rating	Tape rating	Ck	thes washer	s rating	
	no common facility	no common facility	3 star	no	common laun	dry facility	
	1						
All common areas (II) Energy					Show on DA plans	Show on CC/CDC plans & specs	Certifie



. In these commitments	, "applicant" means the person carrying out the development.
specifications accom	entify each dwelling, building and common area listed in this certificate, on the plans accompanying any development application, and on the plans and parying the application for a construction certificate / complying development certificate, for the proposed development, using the same identifying letter or to that dwelling, building or common area in this certificate.
residential and non-r	s proposed development involves the erection of a building for both recidential and non-residential purposes (or the change of use of a building for both serial purposes). Commitments in this cartificate which are specified to apply to a "common area" of a building or the development, apply only to that part of springer to be used for residential purposes.
	central system as a commitment for a dwelling or building, and that system will also service any other dwelling or building within the development, then that installed once (even if it is separately listed as a commitment for that other dwelling or building).
5. If a star or other rating	is specified in a commitment, this is a minimum reting.
	ysterns to be installed under these commitments (if any), must be installed in accordance with the requirements of all applicable regulatory authorities. NOTE: t recommend that stormwater, recycled water or private dam water be used to imigate edible plants which are consumed raw, or that rainwater be used for
	In areas with potable water supply.
human consumption	
human consumption	
human consumption gend 1. Commitments identifie	
human consumption agend 1. Commitments identifit development applica 2. Commitments identifit	In areas with potable water supply. In areas with potable water supply. In the "Show on DA plans" column must be shown on the plans accompanying the development application for the proposed development (if a

BUILDING ENVIRONMENTS
PTY LTD
PO BOX 34 EMU PLAINS NSW 2750
ARVI RANNASTE ARCHITECT RN 7085
ph 0428 505 900
email:arvi@buildingenvironments.com.au

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SUE	: A	12	. U	Z. I	7
CI	0	C	וור	NO	

The builder shall check and verify all dimensions and verify all errors and omissions to the Architect. Do not scale the drawings. Drawings shall not be used for construction purposes until issued by the Architect for construction.

Client
NOR-SIDE INVESTMENTS PTY LTD
Project Name
LETHBRIDGE APARTMENTS

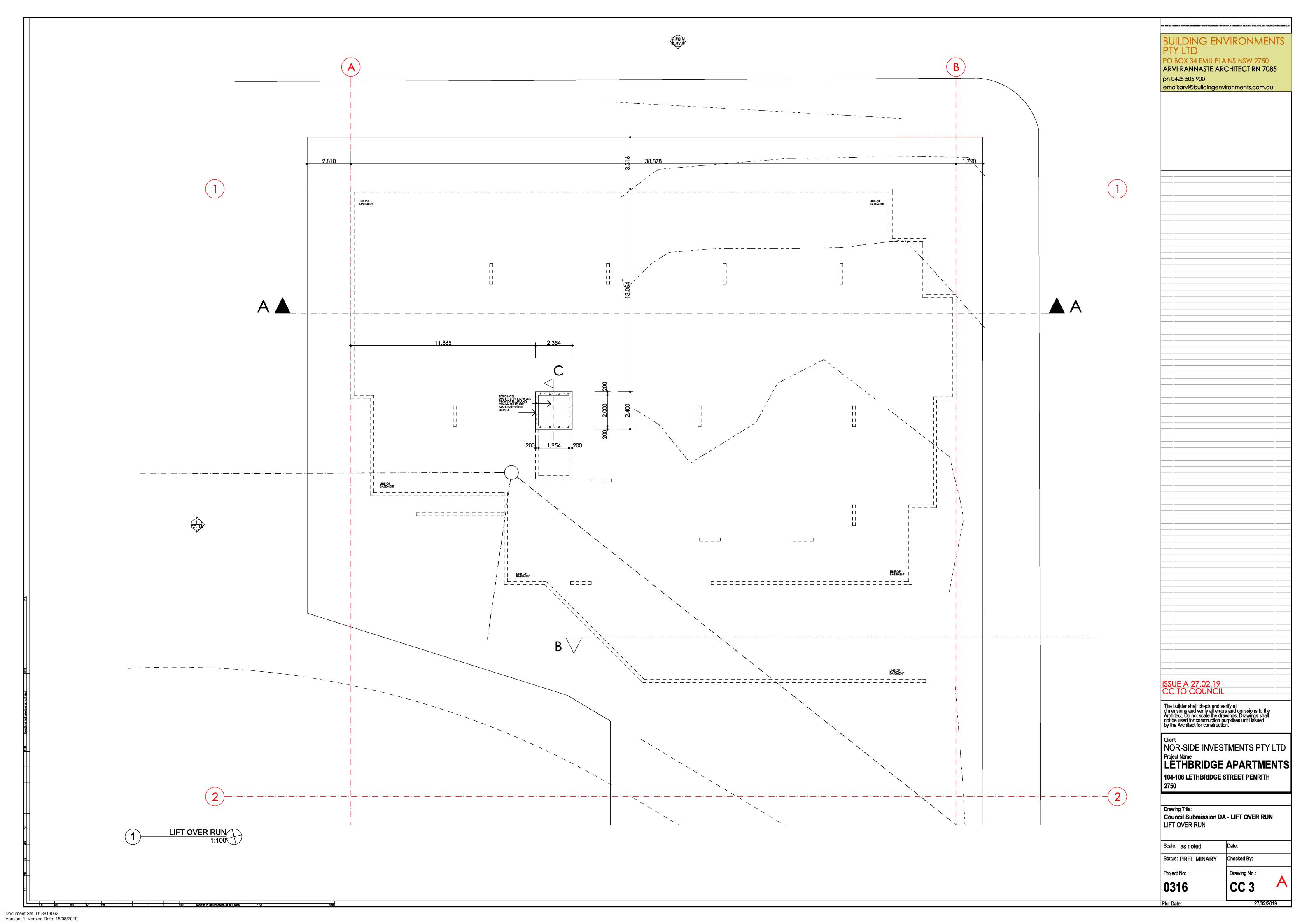
104-108 LETHBRIDGE STREET PENRITH 2750

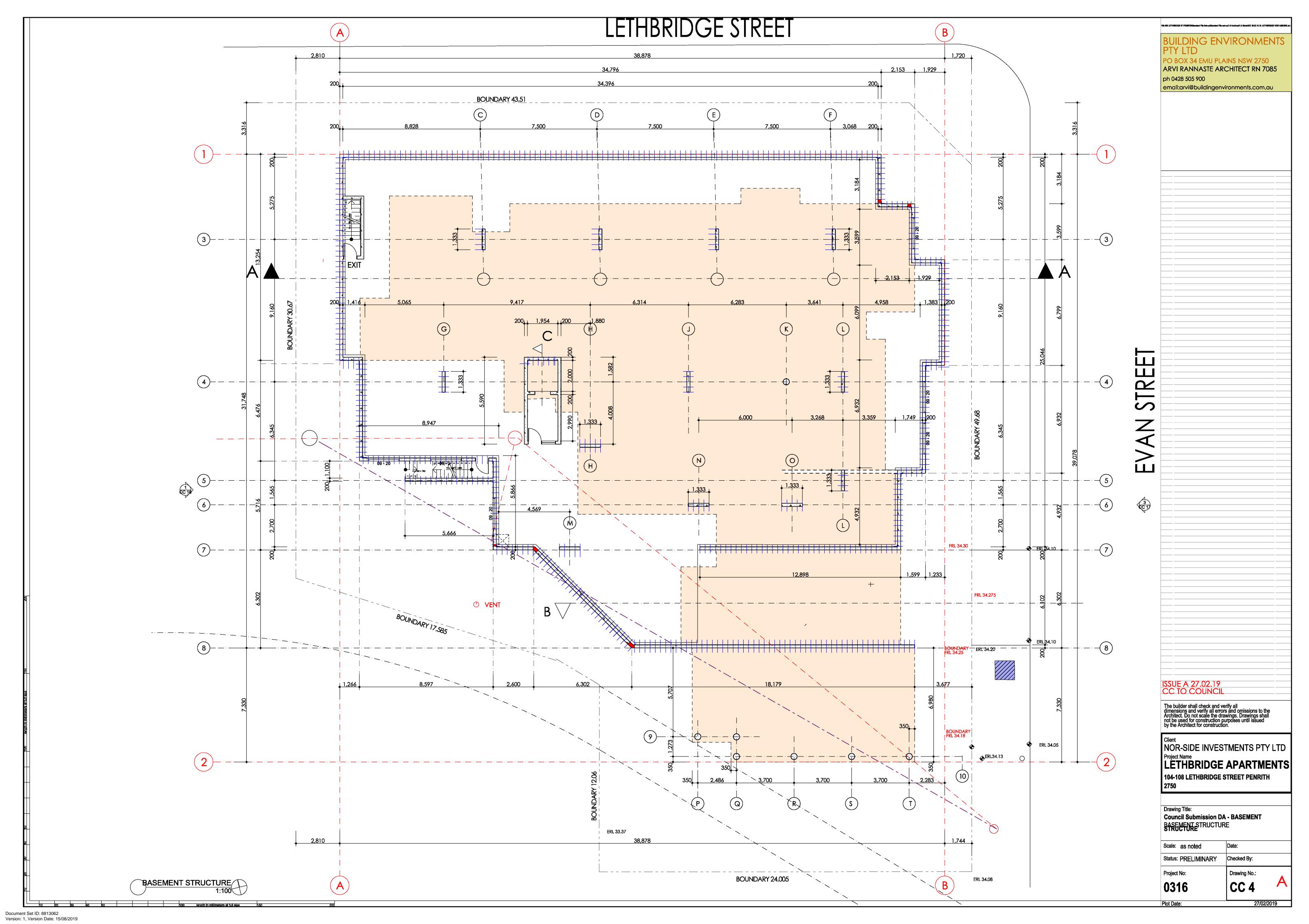
Council Submission DA - Cover Sheet
View List DA, Sheet Index DA, 6660 - 106
LETHBRIDGE ST - Draft BASIX v2
Scale: as noted
Date:
Status: PRELIMINARY
Checked By:

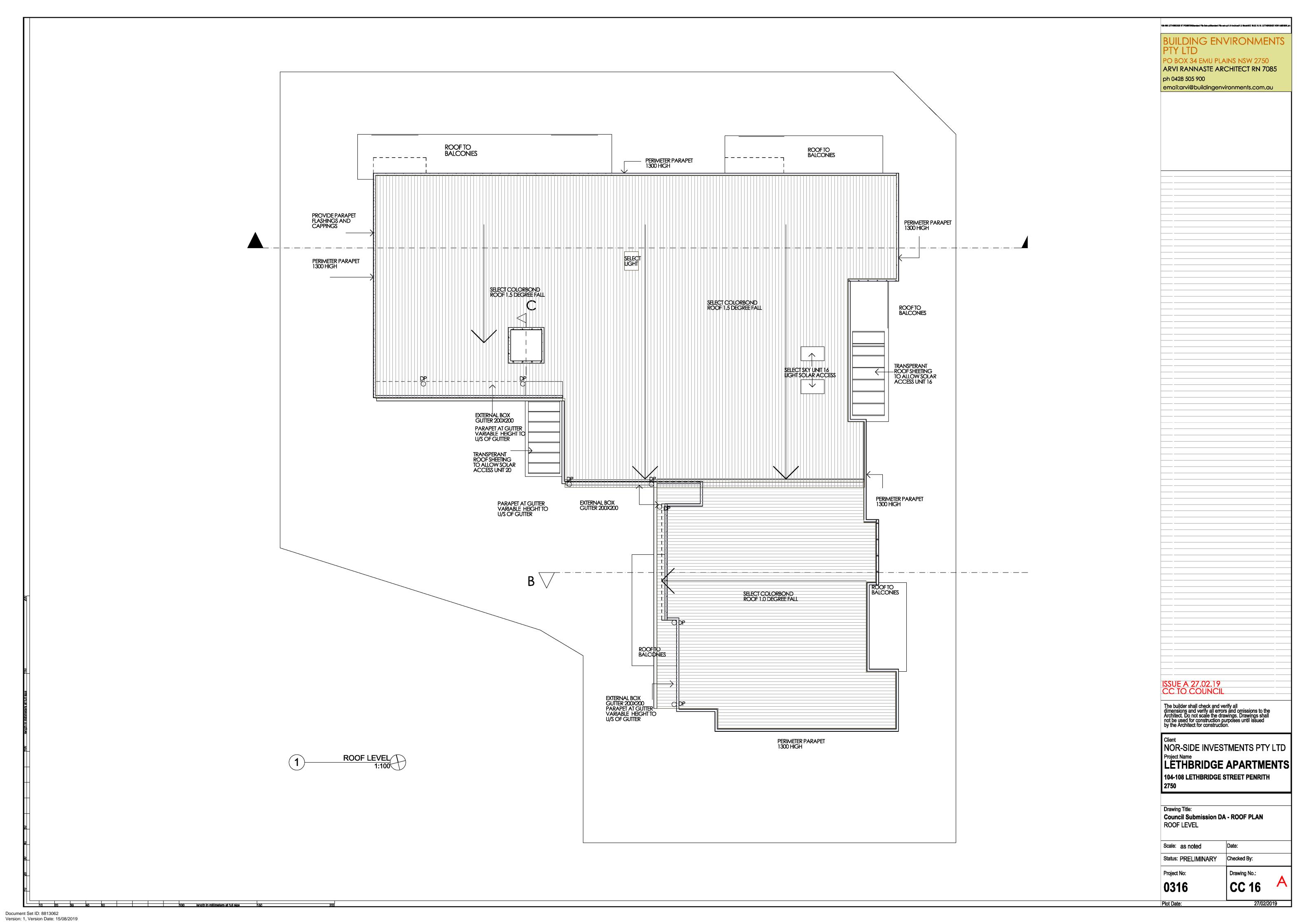
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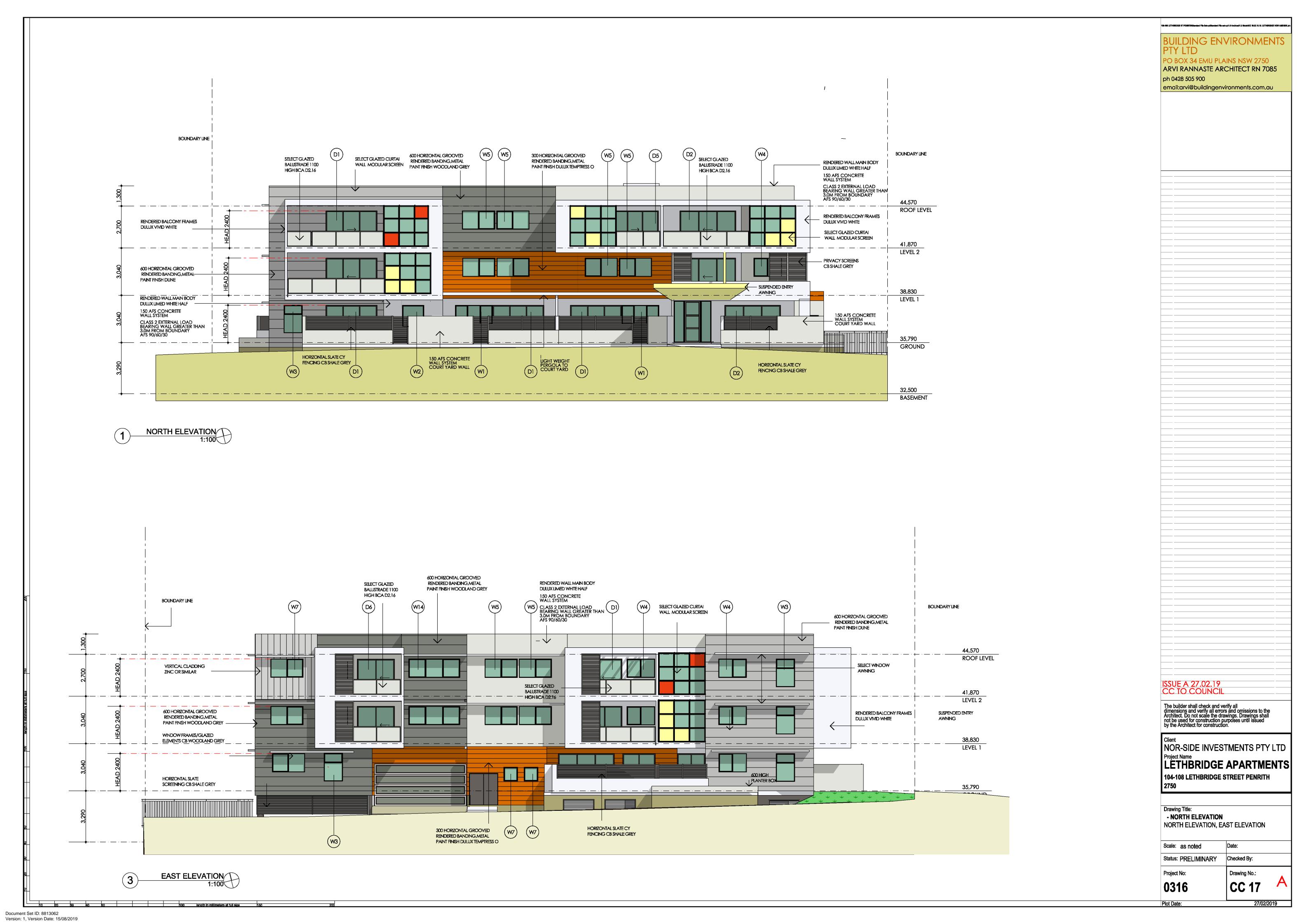
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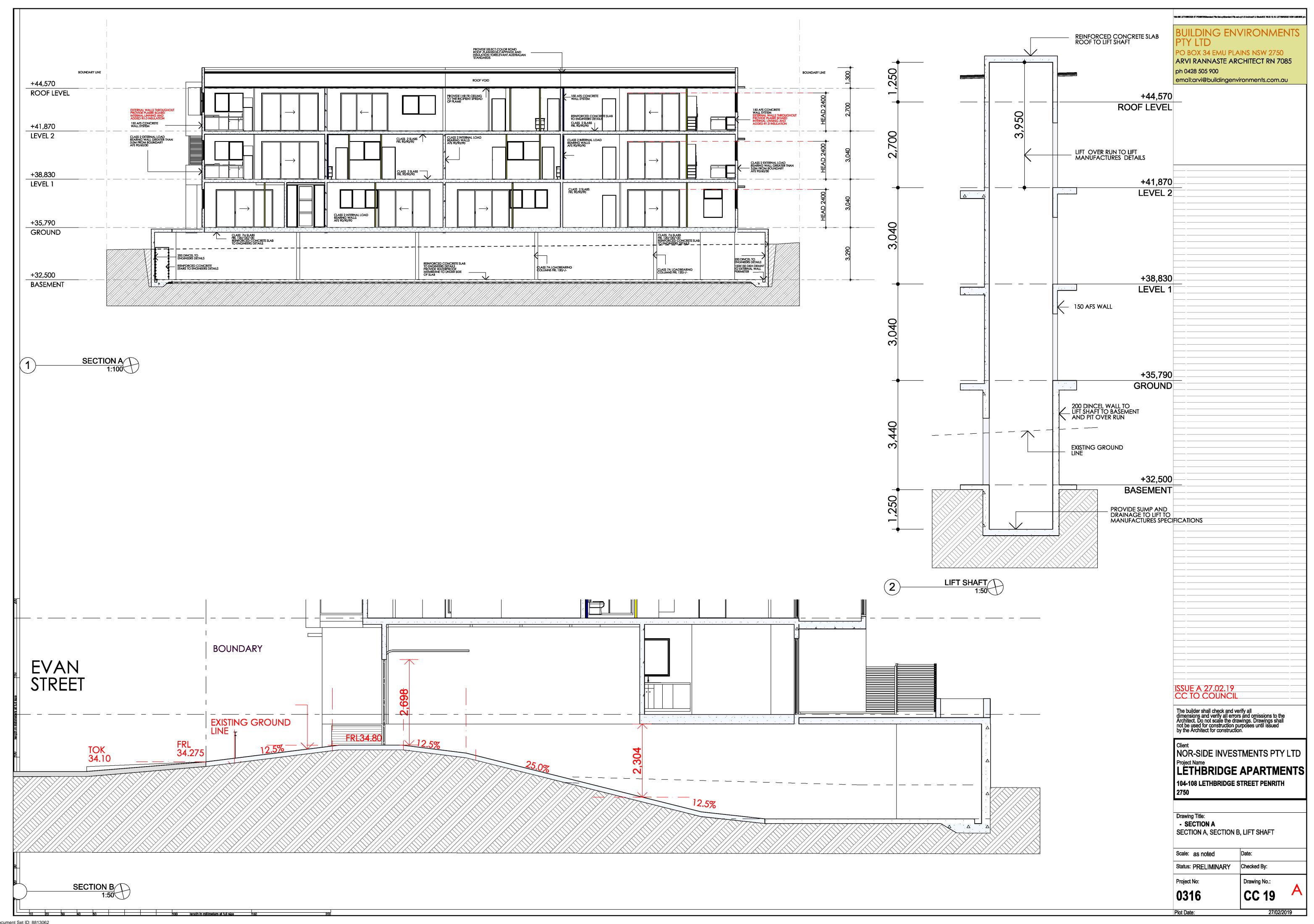


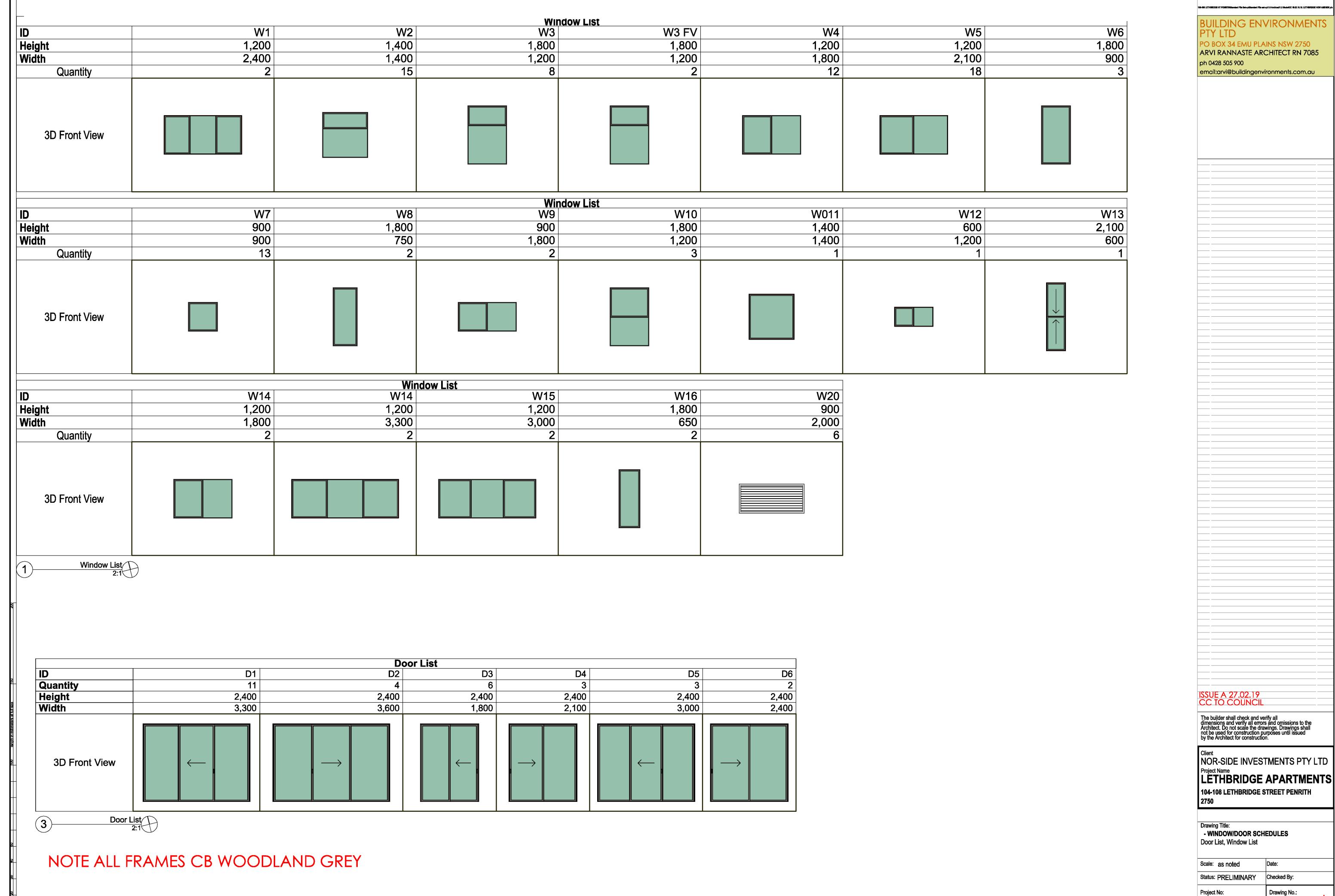












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