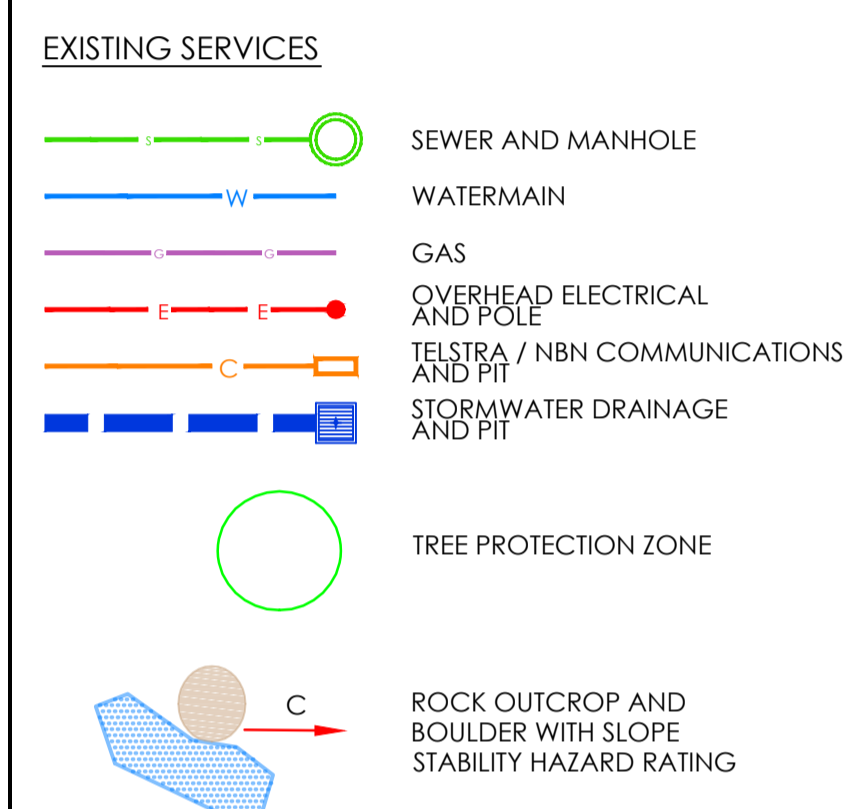


ISSUE	AMENDMENT	DATE	DRAWN	APP
A	DRAFT TENDER ISSUE	30.10.23	JB	NP
B	70% TENDER ISSUE	10.11.23	JB	NP



- EXISTING SERVICES NOTES**
- EXISTING SERVICE ALIGNMENTS HAVE BEEN PLOTTED UTILISING INFORMATION OBTAINED FROM DIAL BEFORE YOU DIG AND AS SUCH ALL ALIGNMENTS ARE APPROXIMATE ONLY. THE CONTRACTOR IS TO DETERMINE LOCATION AND DEPTH OF ALL EXISTING SERVICES PRIOR TO THE COMMENCEMENT OF ANY WORKS.
  - REFER TO SITE ARBORIST REPORT FOR FURTHER INFORMATION REGARDING TREES TO BE RETAINED AND THE RELEVANT TREE PROTECTION ZONE AREA.
  - REFER TO SITE GEOTECHNICAL REPORT FOR FURTHER INFORMATION REGARDING ROCK OUTCROP AND SLOPE STABILITY ASSESSMENT.

CLIENT  
**REGIS AGED CARE**

PO BOX 658  
 GORDON NSW 2072  
 PHONE : (02) 8467 9333



ARCHITECT  
**mdp**  
 architecture

CIVIL ENGINEER  
**ENTEC**  
 CONSULTANTS



PROJECT  
**REGIS BELROSE**

181 FOREST WAY  
 BELROSE NSW 2085

DRAWING TITLE  
 CIVIL SERVICES  
 EXISTING SITE PLAN

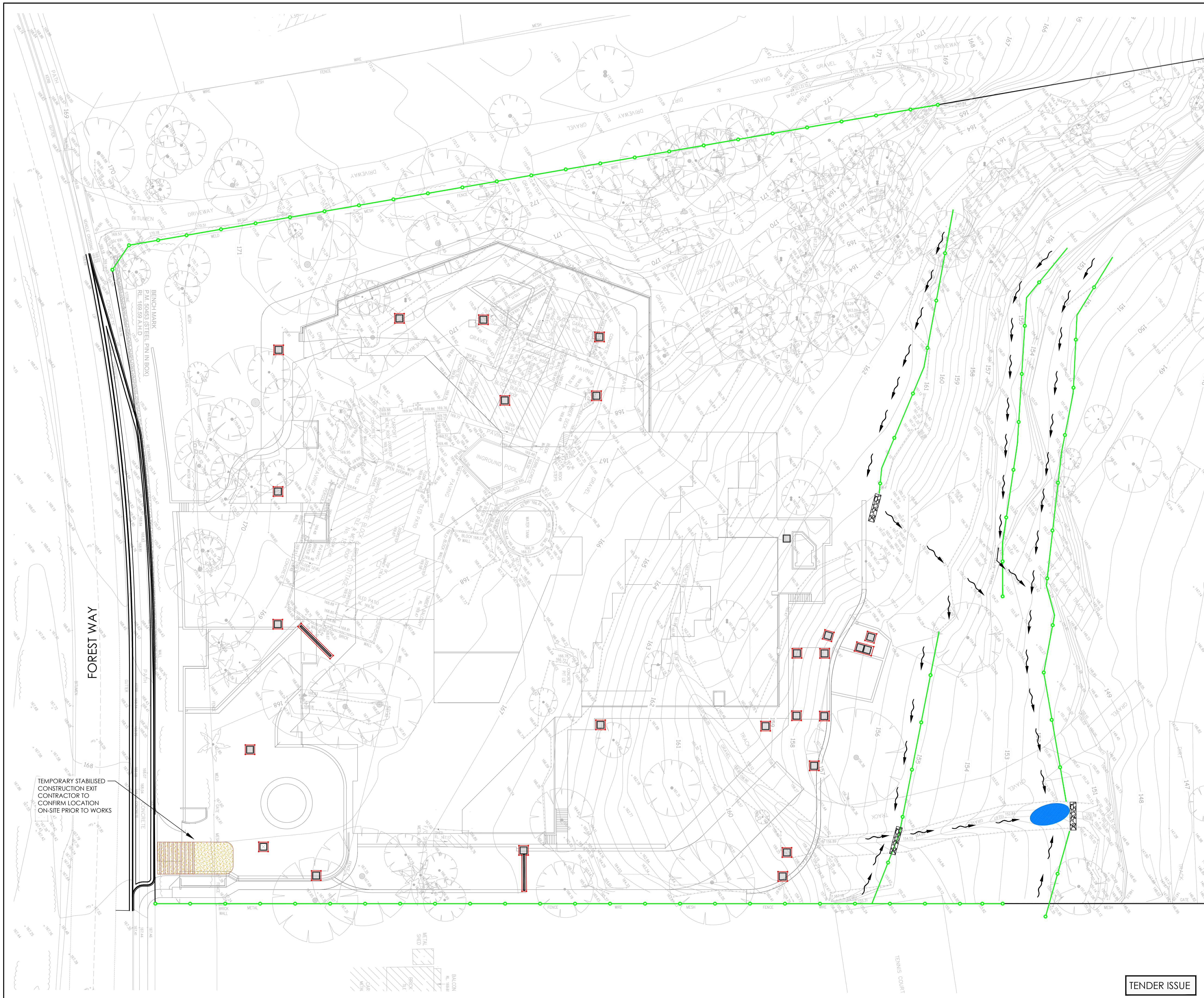
DRAWN	DATE	SCALE	A1	QA CHECK	DATE
JB	OCT 23	1:250		NP	
DESIGNED	PROJECT NO.	DRAWING No.	ISSUE		
NP	230074-01	C201	B		

TENDER ISSUE

ROCK OUTCROPS AND BOULDERS WITH SLOPE STABILITY RISK RATINGS. REFER TO SITE GEOTECHNICAL REPORT FOR FURTHER DETAIL

SCALE 1:250





NORTH POINT

ISSUE	AMENDMENT	DATE	DRAWN	APP
A	DRAFT TENDER ISSUE	30.10.23	JB	NP
B	70% TENDER ISSUE	10.11.23	JB	NP

**NOTE**  
 EXACT LOCATION OF STABILISED SITE ACCESS AND TEMPORARY STOCKPILE TO BE DETERMINED ON-SITE DURING CONSTRUCTION BY CONTRACTOR.

**LEGEND**

	SEDIMENT FENCE
	GEOTEXTILE INLET FILTER
	STABILISED SITE ACCESS
	DIRECTION OF OVERLAND FLOW
	SANDBAG, TEMPORARY GUTTER GROSS SEDIMENT / POLLUTION TRAP
	MESH AND GRAVEL INLET FILTER
	STOCKPILES

CLIENT  
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**ENTEC**  
 CONSULTANTS



PROJECT  
**REGIS BELROSE**

181 FOREST WAY  
 BELROSE NSW 2085

DRAWING TITLE  
 CIVIL SERVICES  
 SOIL EROSION CONTROL PLAN

DRAWN	DATE	SCALE	A1	QA CHECK	DATE
JB	OCT 23	1:250		NP	
DESIGNED	PROJECT NO.			DRAWING No.	ISSUE
NP	230074-01			C301	B

TENDER ISSUE

TEMPORARY STABILISED CONSTRUCTION EXIT CONTRACTOR TO CONFIRM LOCATION ON-SITE PRIOR TO WORKS

FOREST WAY

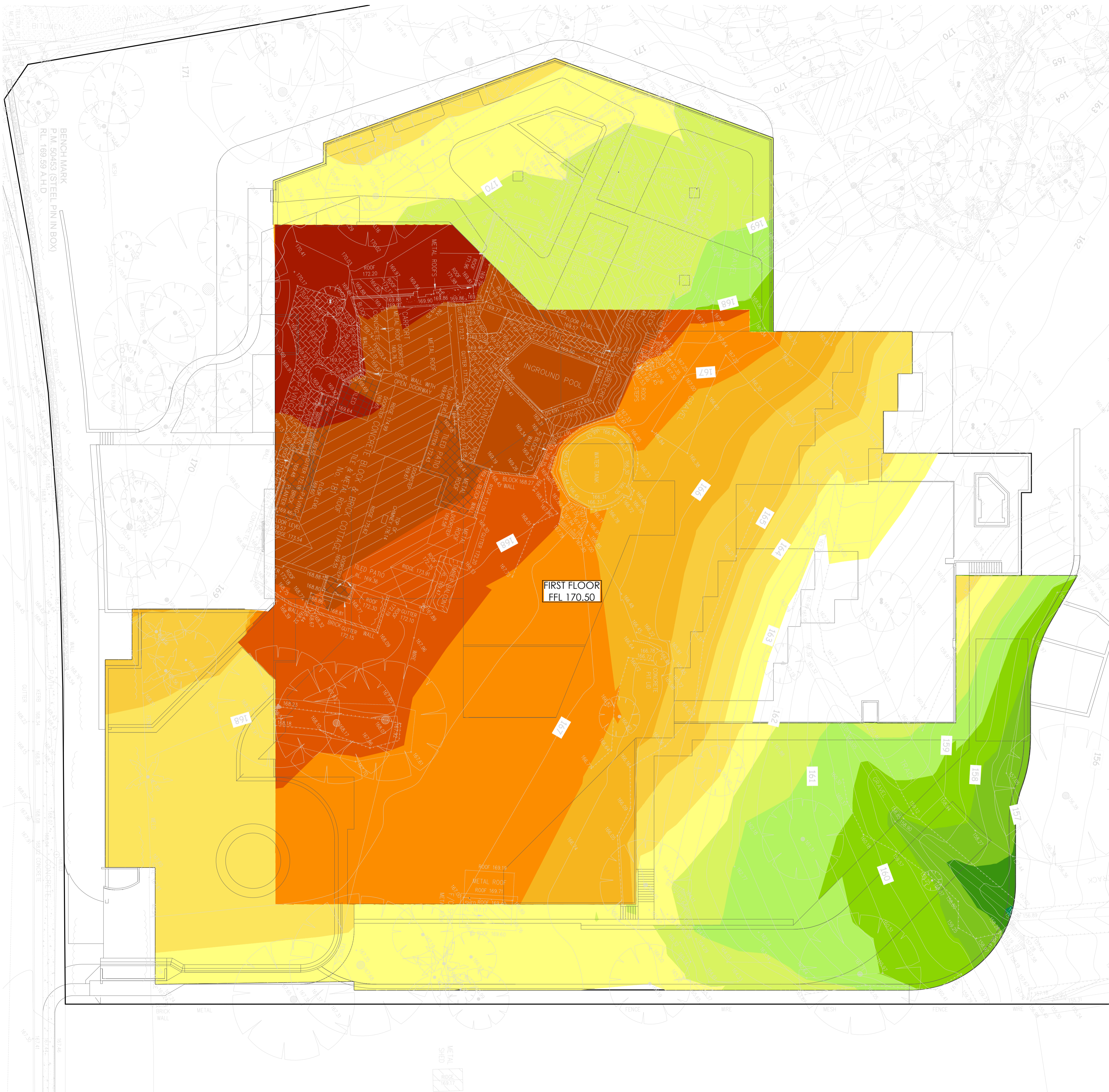
BENCHMARK  
 P.M. 50453 (STEEL PIN IN BOX)  
 RL. 169.99 AHD

DATE PLOTTED: 10/11/23 11:52 AM









**LEGEND**

[Dark Red]	CUT GREATER THAN 8m
[Red]	CUT BETWEEN 7m AND 8m
[Dark Orange]	CUT BETWEEN 6m AND 7m
[Orange]	CUT BETWEEN 5m AND 6m
[Light Orange]	CUT BETWEEN 4m AND 5m
[Yellow-Orange]	CUT BETWEEN 3m AND 4m
[Yellow]	CUT BETWEEN 2m AND 3m
[Light Yellow]	CUT BETWEEN 1m AND 2m
[Yellow-Green]	CUT LESS THAN 1m
[Light Green]	FILL LESS THAN 1m
[Green]	FILL BETWEEN 1m AND 2m
[Light Green]	FILL BETWEEN 2m AND 3m
[Green]	FILL BETWEEN 3m AND 4m
[Light Green]	FILL BETWEEN 4m AND 5m
[Green]	FILL BETWEEN 5m AND 6m
[Light Green]	FILL BETWEEN 6m AND 7m
[Green]	FILL BETWEEN 7m AND 8m
[Dark Green]	FILL GREATER THAN 8m

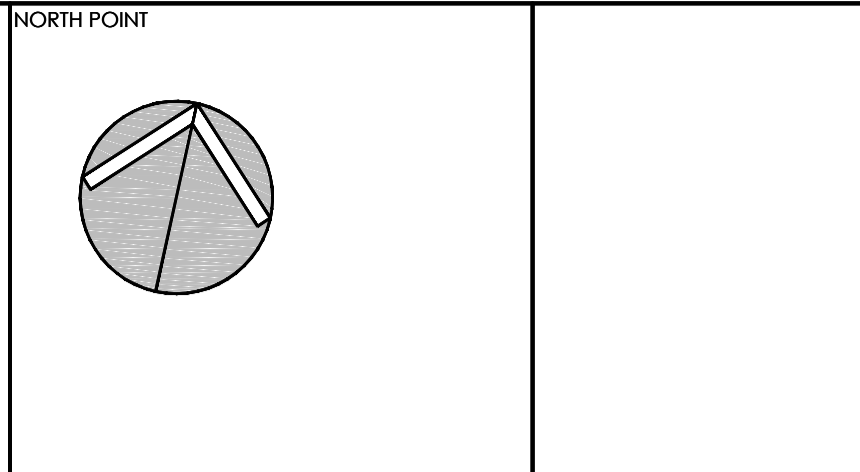
**CUT/FILL QUANTITIES**

TOTAL CUT	16,600m³
TOTAL FILL	2,100m³
TOTAL BALANCE	14,500m³

- CUT / FILL ASSUMPTIONS**
1. A NOMINAL 200mm DEPTH ALLOWANCE FOR STRIPPING OF TOPSOIL HAS BEEN INCLUDED.
  2. A BOXING OF 220mm FOR THE BASEMENT SLAB HAS BEEN ALLOWED FOR IN ACCORDANCE WITH STRUCTURAL ENGINEERS DETAILS. REFER TO LEVELS AS SHOWN ON THE PLAN ABOVE.
  3. BOXING OUT FOR PAVEMENTS HAVE BEEN APPLIED IN ACCORDANCE WITH THE PAVEMENT PLAN.
  4. DETAILED BULKING AND CUT/FILL QUANTITIES FOR FOOTINGS, TRENCHING AND THE LIKE HAS NOT BEEN INCLUDED.
  5. NO ALLOWANCE FOR TOPSOIL AND FRIABLE SOIL LAYERS HAVE BEEN ALLOWED FOR LANDSCAPE AREAS. IT ASSUMES THAT STRIPPED TOPSOIL WILL BE STOCKPILED AND REUSED IN LANDSCAPE AREAS.
  6. IT IS ASSUMED THAT STRIPPED TOP SOIL WILL BE STOCKPILED AND REUSED IN LANDSCAPE AREAS.
  7. CLASSIFICATION AND QUANTITIES OF EXCAVATED MATERIAL HAS NOT BEEN UNDERTAKEN. CONTRACTOR TO ENSURE APPROPRIATE ALLOWANCES FOR EXCAVATION IN ROCK, CRUSHING AND REUSE ON SITE AND/OR DISPOSAL OFFSITE.
  8. ALL EARTHWORKS ARE TO BE COMPLETED IN STRICT ACCORDANCE WITH THE SITE GEOTECHNICAL REPORT COMPLETED BY JK GEOTECHNICS REFERENCE: 3022Smrp1 DATED : 03/09/2018.
  9. BOREHOLE LOCATIONS HAVE BEEN EXTRACTED FROM THE GEOTECHNICAL ASSESSMENT REPORT.
  10. ALL EARTHWORK QUANTITIES ARE THEORETICAL AND INDICATIVE ONLY, BASED UPON BANKED VOLUMES WITH NO BULKING FACTORS. THE CONTRACTOR IS TO MAKE THEIR OWN ASSESSMENT OF EARTHWORKS QUANTITIES.



TENDER ISSUE



ISSUE	AMENDMENT	DATE	DRAWN	APP
A	DRAFT TENDER ISSUE	30.10.23	JB	NP
B	70% TENDER ISSUE	10.11.23	JB	NP

**CLIENT**  
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**ARCHITECT**  
mdp architecture

**CIVIL ENGINEER**  
ENTEC CONSULTANTS

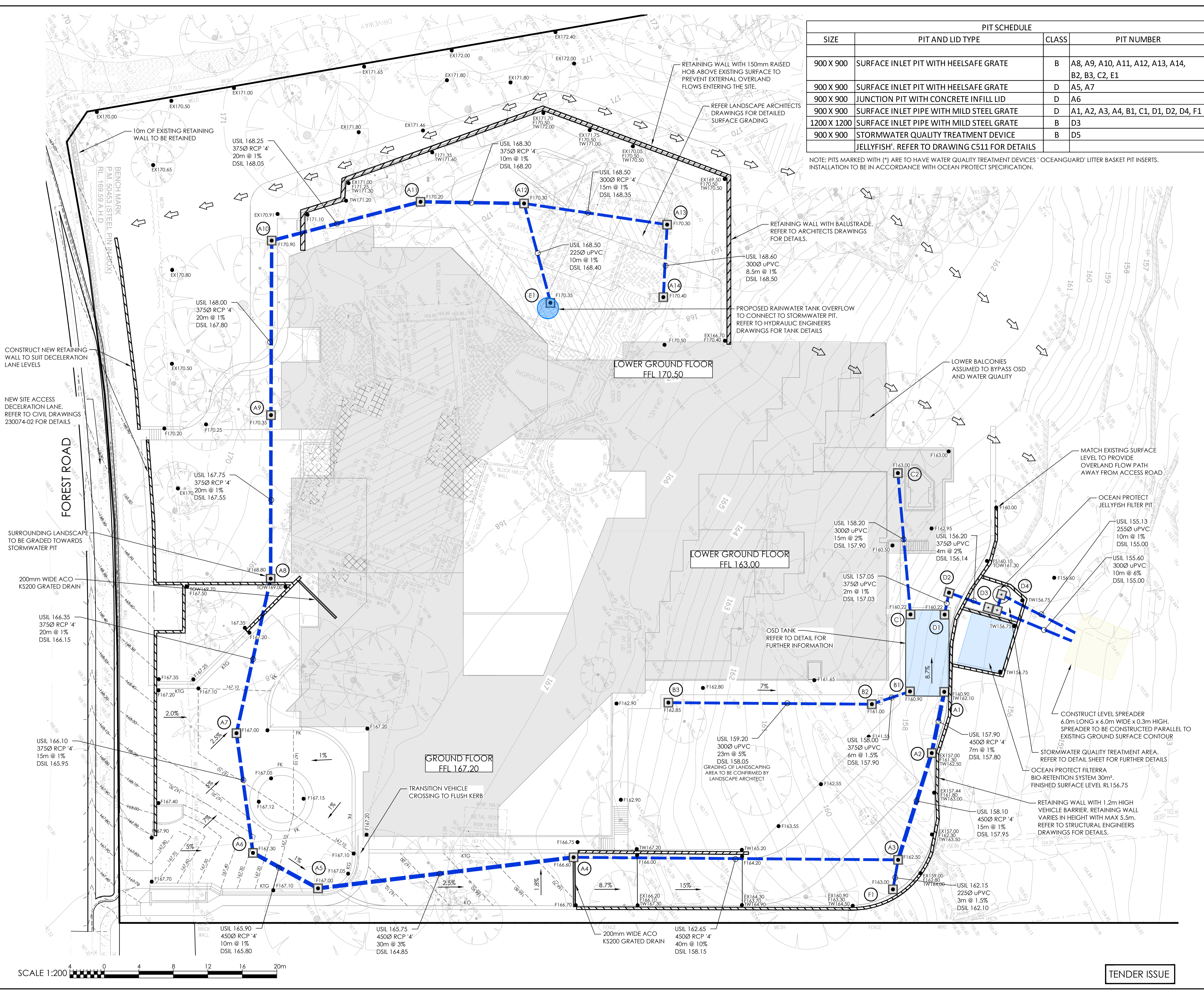
**PROJECT**  
REGIS BELROSE

181 FOREST WAY  
BELROSE NSW 2085

**DRAWING TITLE**  
CIVIL SERVICES  
BULK EARTHWORKS PLAN

DRAWN JB	DATE OCT 23	SCALE 1:200	A1	QA CHECK NP	DATE
DESIGNED NP	PROJECT NO. 230074-01	DRAWING No. C401	ISSUE B		





PIT SCHEDULE			
SIZE	PIT AND LID TYPE	CLASS	PIT NUMBER
900 X 900	SURFACE INLET PIT WITH HEELSAFE GRATE	B	A8, A9, A10, A11, A12, A13, A14, B2, B3, C2, E1
900 X 900	SURFACE INLET PIT WITH HEELSAFE GRATE	D	A5, A7
900 X 900	JUNCTION PIT WITH CONCRETE INFILL LID	D	A6
900 X 900	SURFACE INLET PIPE WITH MILD STEEL GRATE	D	A1, A2, A3, A4, B1, C1, D1, D2, D4, F1
1200 X 1200	SURFACE INLET PIPE WITH MILD STEEL GRATE	B	D3
900 X 900	STORMWATER QUALITY TREATMENT DEVICE	B	D5
	JELLYFISH'. REFER TO DRAWING C511 FOR DETAILS		

NOTE: PITS MARKED WITH (\*) ARE TO HAVE WATER QUALITY TREATMENT DEVICES 'OCEANGUARD' LITTER BASKET PIT INSERTS. INSTALLATION TO BE IN ACCORDANCE WITH OCEAN PROTECT SPECIFICATION.

NORTH POINT

ISSUE	AMENDMENT	DATE	DRAWN	APP
A	DRAFT TENDER ISSUE	30.10.23	JB	NP
B	70% TENDER ISSUE	10.11.23	JB	NP

NOTES:

- THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH OTHER CONSULTANT DRAWINGS, INCLUDING ARCHITECTS, STRUCTURAL ENGINEER, LANDSCAPE ARCHITECT AND HYDRAULIC CONSULTANT.
- THESE DRAWINGS ARE FOR PRICING ONLY AND ARE NOT FOR CONSTRUCTION. FURTHER COORDINATION AND DESIGN FINALISATION IS TO OCCUR PRIOR TO DBP ACT SIGN OFF.

SCALE 1:200

TENDER ISSUE

CLIENT  
**REGIS AGED CARE**

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GORDON NSW 2072  
PHONE : (02) 8467 9333

ARCHITECT  
**mdp architecture**

CIVIL ENGINEER  
**ENTEC CONSULTANTS**

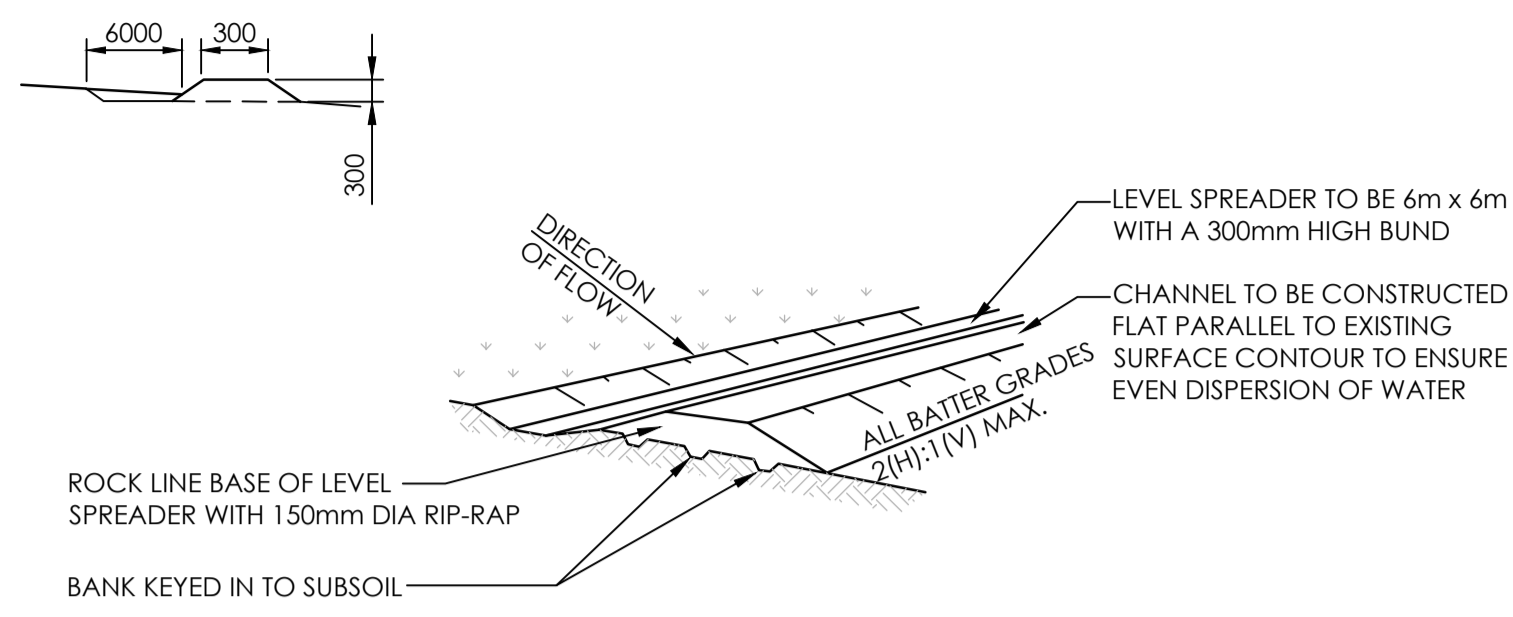
PROJECT  
**REGIS BELROSE**

181 FOREST WAY  
BELROSE NSW 2085

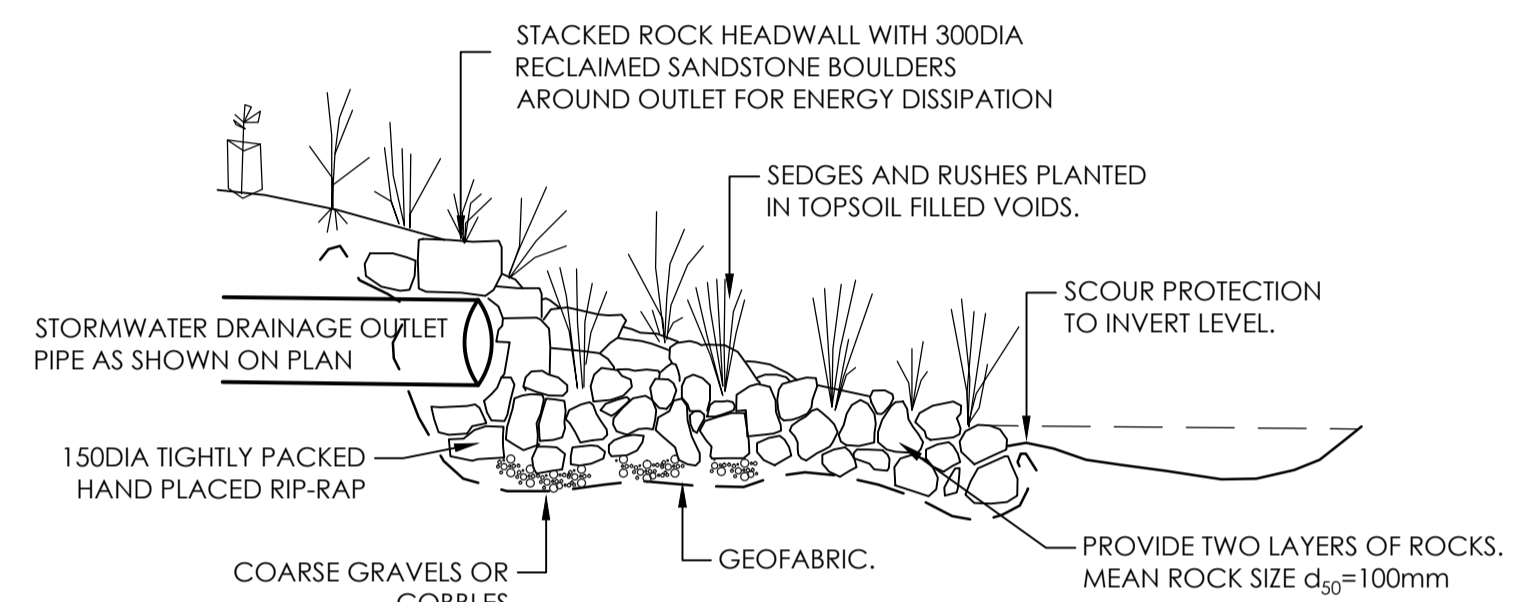
DRAWING TITLE  
CIVIL SERVICES  
STORMWATER MANAGEMENT PLAN

DRAWN JB	DATE OCT 23	SCALE 1:200	A1	QA CHECK NP	DATE
DESIGNED NP	PROJECT NO. 230074-01			DRAWING NO. C.501	ISSUE B

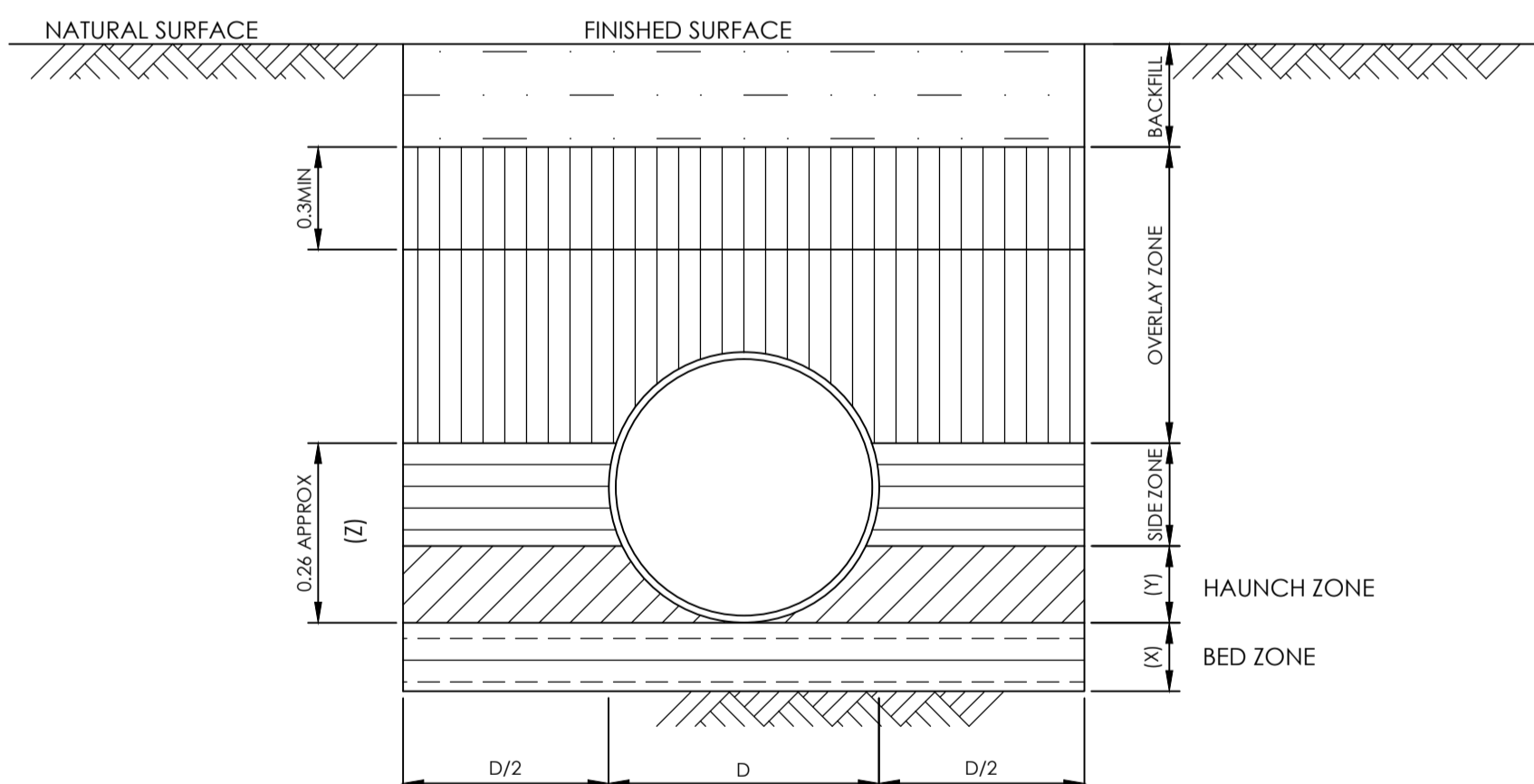




**LEVEL SPREADER DETAIL**  
NOT TO SCALE



**TYPICAL STONE HEADWALL DETAIL**  
NOT TO SCALE



**STORMWATER TRENCH DETAIL**

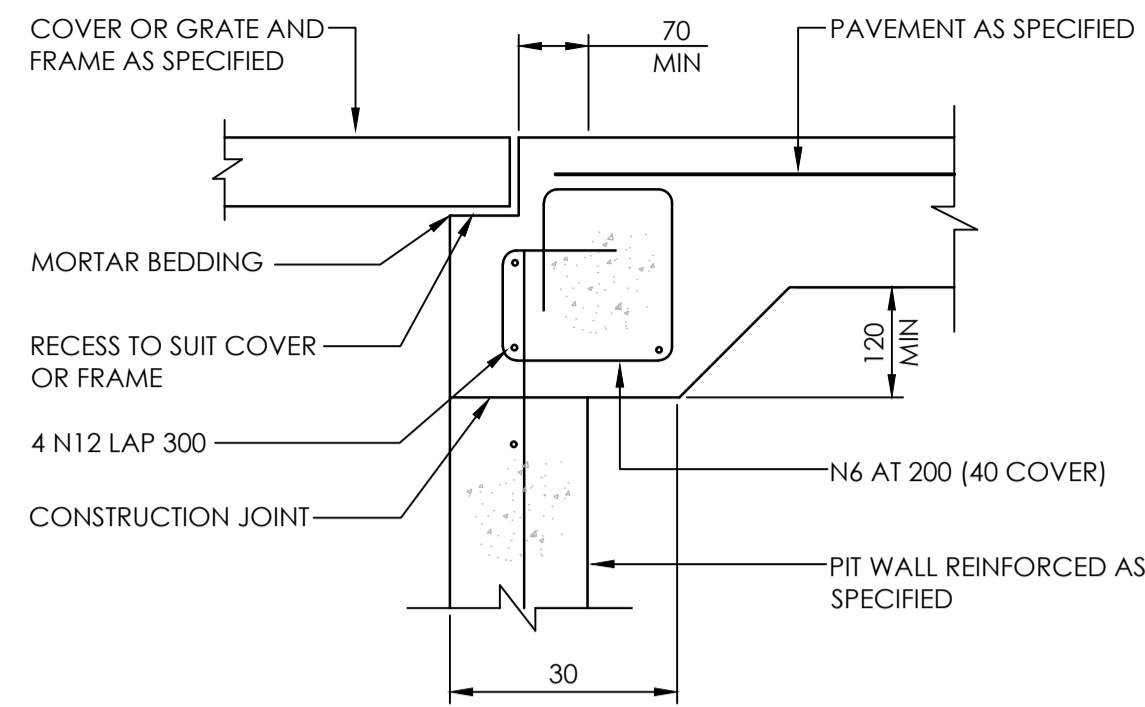
BEDDING MATERIAL FOR THE BED, HAUNCH AND SIDE ZONES AND OVERLAY UP TO A MINIMUM OF 150mm FROM TOP OF THE PIPE SHALL CONSIST OF 20mm AGGREGATE CONSISTING OF CLEAN HARD DURABLE MATERIAL HAVING A GRADING COMPLYING WITH TABLE BELOW

RECYCLED CONCRETE AGGREGATE SHALL ONLY BE USED WHERE THE MATERIAL IS CERTIFIED FREE FROM FOREIGN MATTER SUCH AS REINFORCING STEEL, CEMENT DUST, TIMBER AND OTHER WASTE MATERIALS.

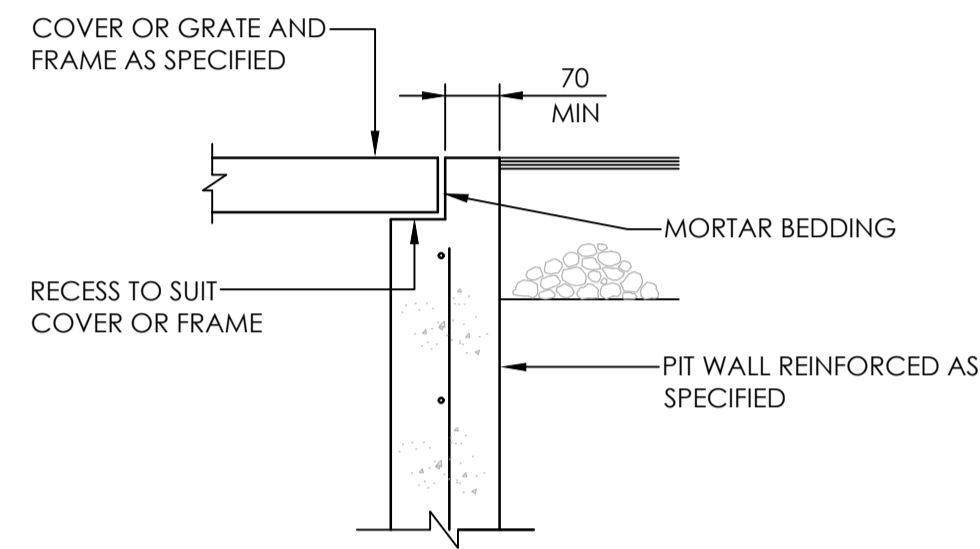
		PIPE SUPPORT						
		U	H1	H2	H3	HS1	HS2	HS3
Dimension (minimum)	X	75 on rock Nil on soil	100 for D < 1500 150 for D > 1500	0.25 D BUT < 100	100 for D < 1500 150 for D > 1500	0.1D	0.3D	0.3D
	Y	-	0.1D	0.3D	0.3D	0.1D	0.3D	0.3D
	Z	-	-	-	-	-	-	≥ 0.7D

D = External diameter of pipe

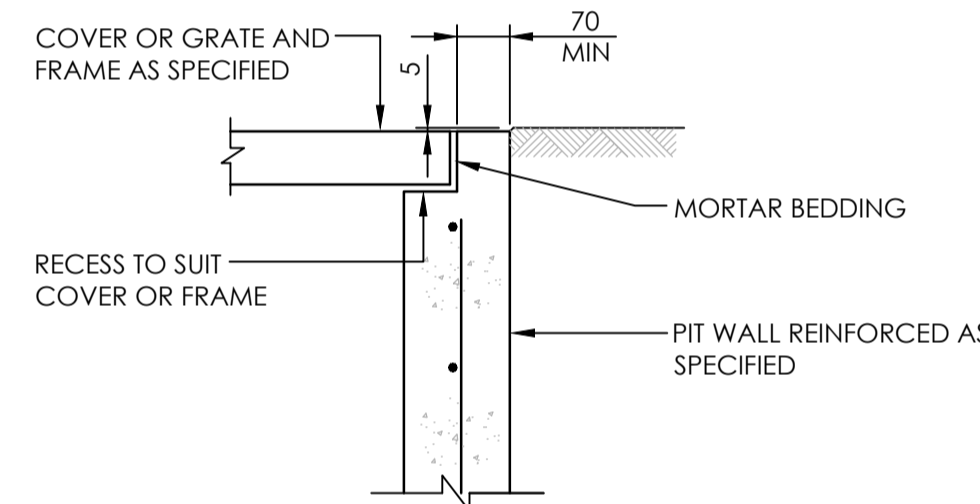
**PIPE INSTALLATION DIMENSIONS**



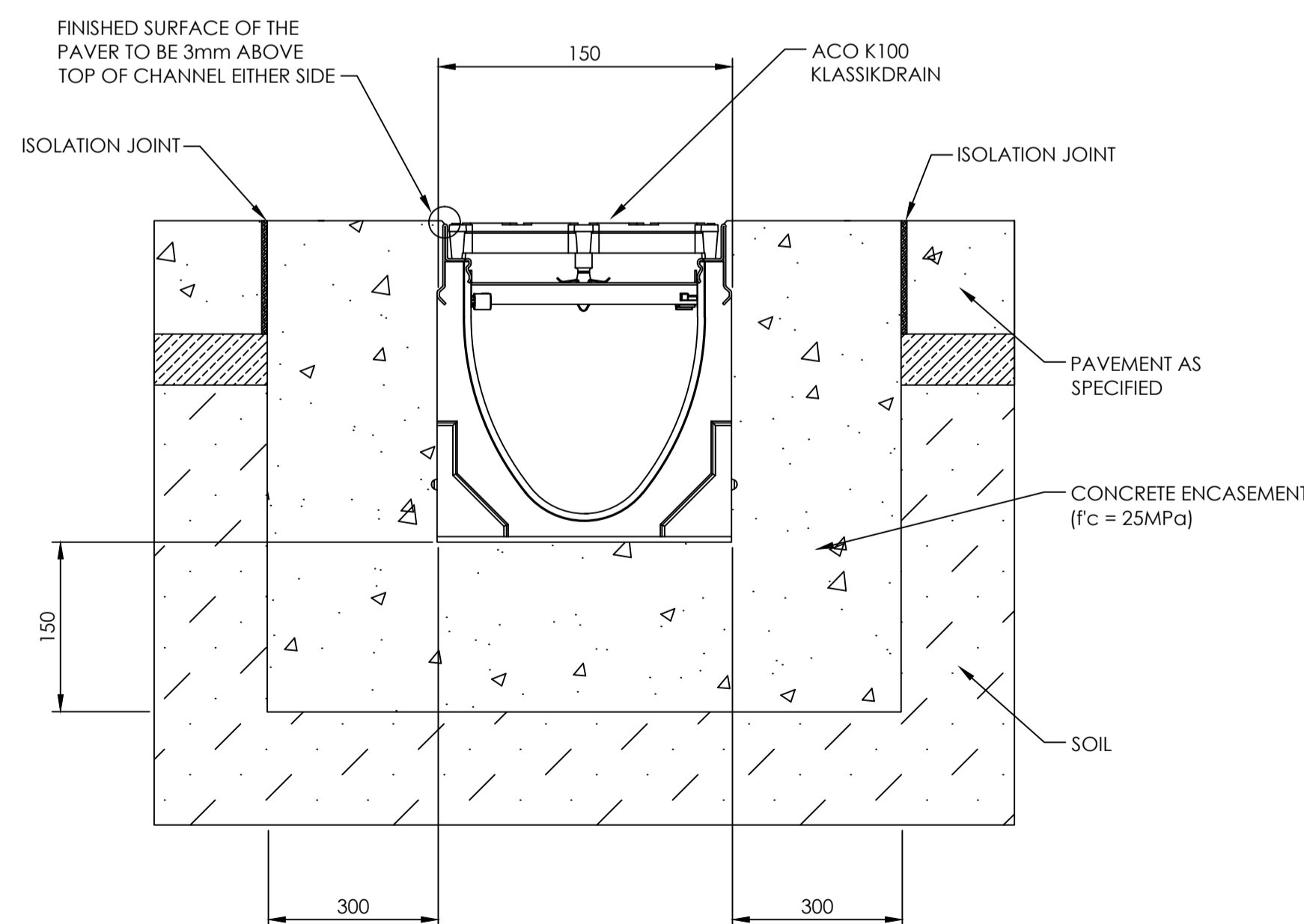
**PIT EDGE DETAIL "A"**  
SCALE 1:10



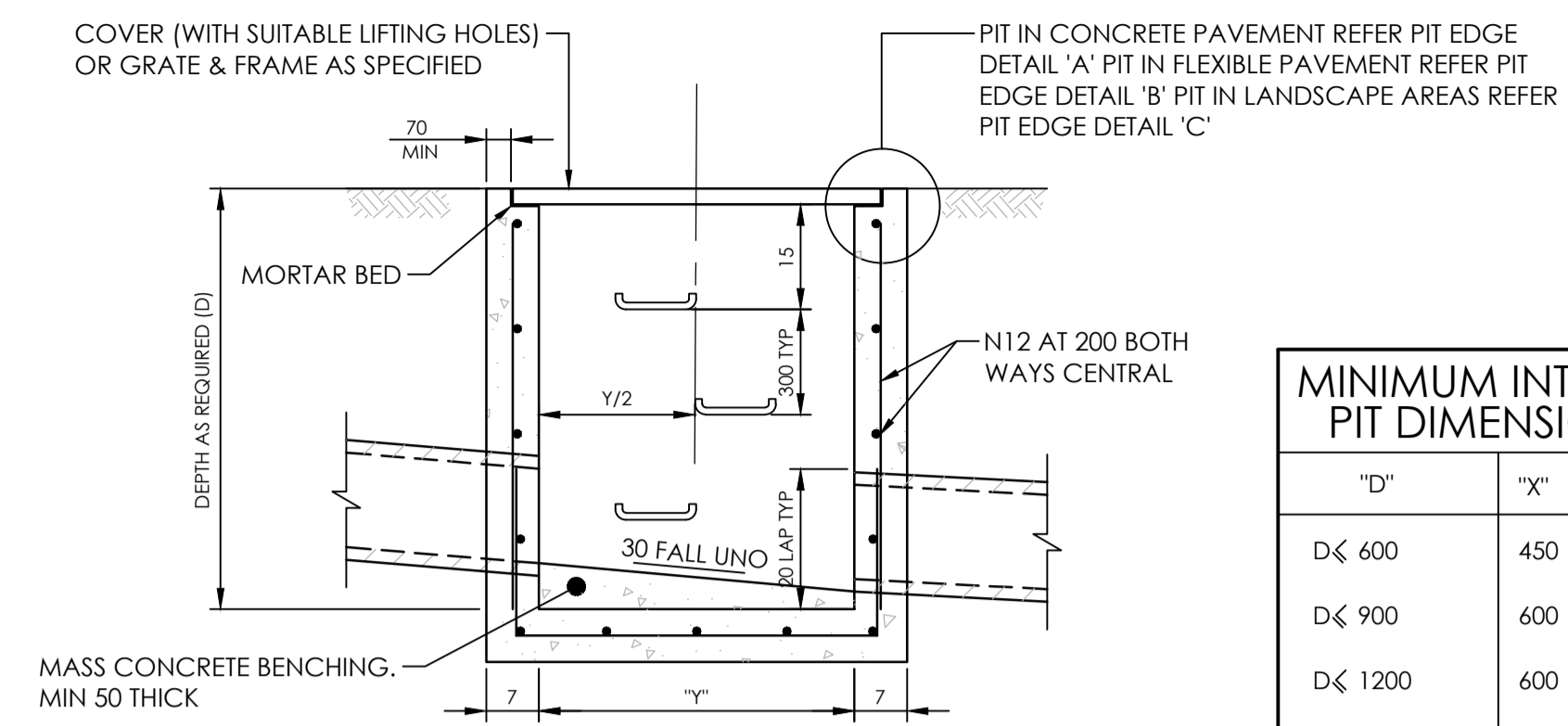
**PIT EDGE DETAIL "B"**  
SCALE 1:10



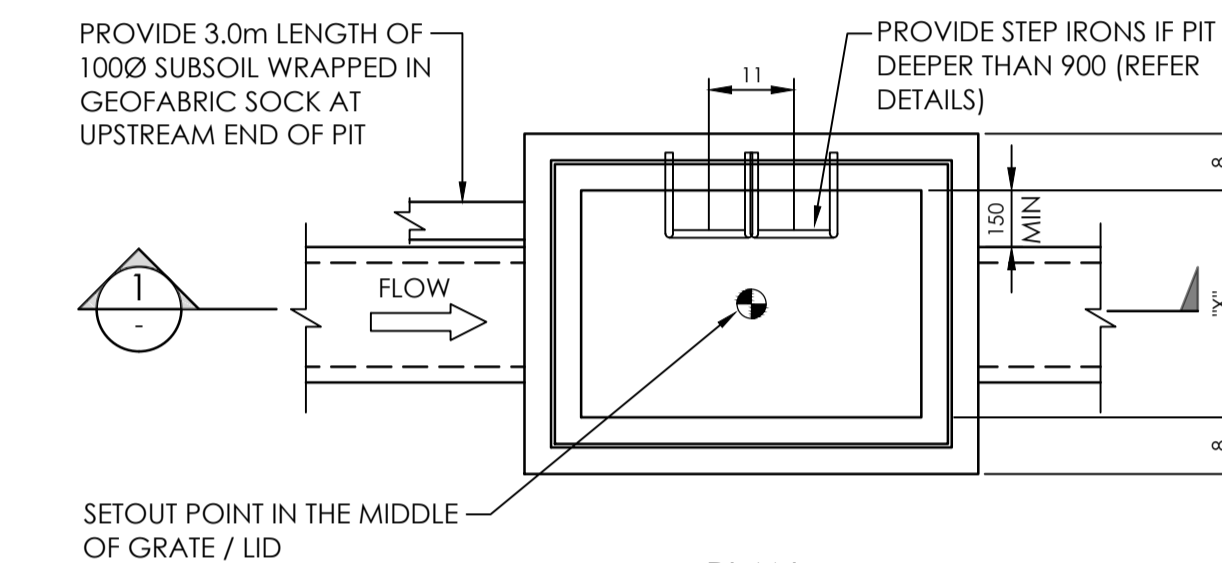
**PIT EDGE DETAIL "C"**  
SCALE 1:10



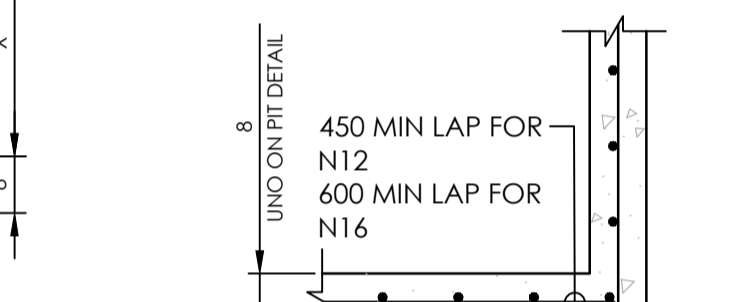
**GRATED DRAIN IN CONCRETE DETAIL**  
NOT TO SCALE



**SECTION 1**  
SCALE 1:20



**SURFACE INLET/JUNCTION PIT**  
SCALE 1:20

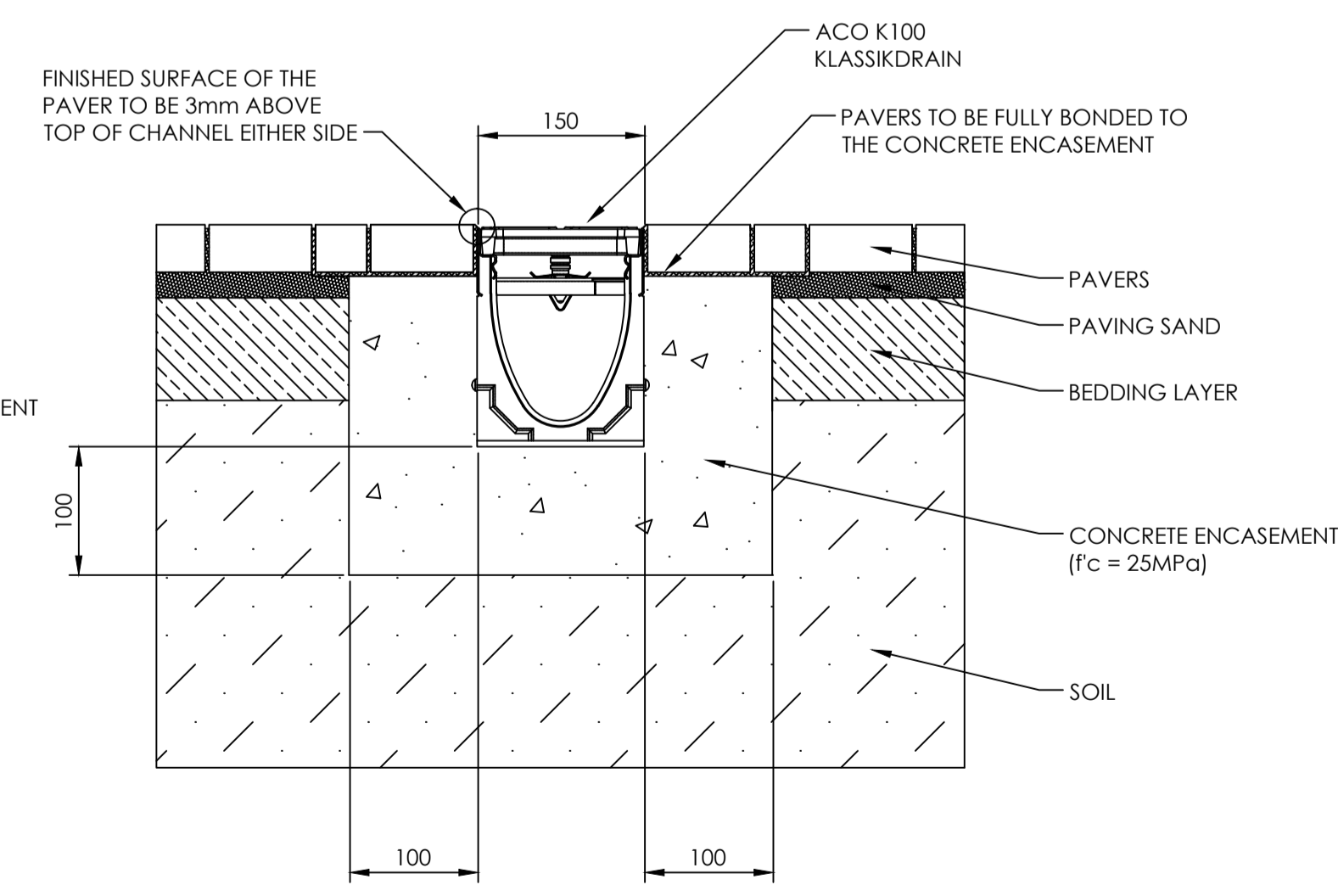


**TYPICAL PIT CORNER DETAIL**  
SCALE 1:20

Span <= 1.5m	Wall Dimensions (mm)	Base thickness "c"	Wall thickness "w"	Vertical reinf.	Hor.reinf.	Base Reinf. BW
up to 2m	150.0	150.0	150.0	N12@200	N12@200	N12@200
up to 4m	200.0	175.0	175.0	N12@200	N12@200	N12@200
Span 1.5 to 2.5m	Wall Dimensions (mm)	Base thickness "c"	Wall thickness "w"	Vertical reinf.	Hor.reinf.	Base Reinf. BW
up to 2m	150.0	200.0	200.0	N12@200	N12@200	N12@200
up to 4m	200.0	200.0	200.0	N16@200	N16@200	N16@200

**PIT DIMENSION TABLE**

NOTE: FOR PIT DIMENSIONS AND REINFORCEMENT REFER TABLE ABOVE



**GRATED DRAIN IN PAVERS DETAIL**  
NOT TO SCALE

ISSUE	AMENDMENT	DATE	DRAWN	APP
A	DRAFT TENDER ISSUE	30.10.23	JB	NP
B	70% TENDER ISSUE	10.11.23	JB	NP

NORTH POINT	

CLIENT  
**REGIS AGED CARE**

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GORDON NSW 2072  
PHONE : (02) 8467 9333

ARCHITECT  
**mdp architecture**

CIVIL ENGINEER  
**ENTEC CONSULTANTS**

PROJECT  
**REGIS BELROSE**

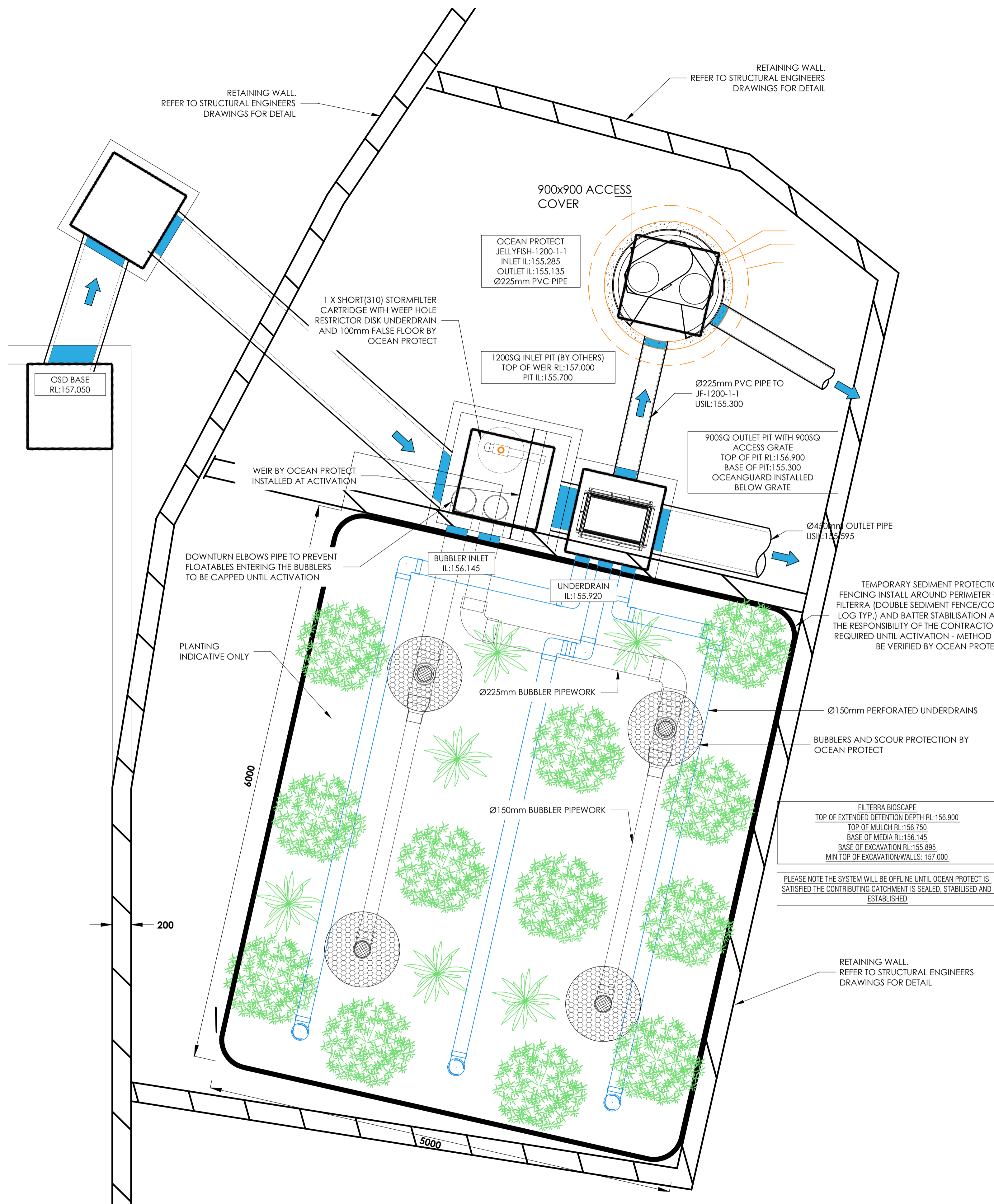
181 FOREST WAY  
BELROSE NSW 2085

DRAWING TITLE  
CIVIL SERVICES  
STORMWATER DETAILS SHEET 1

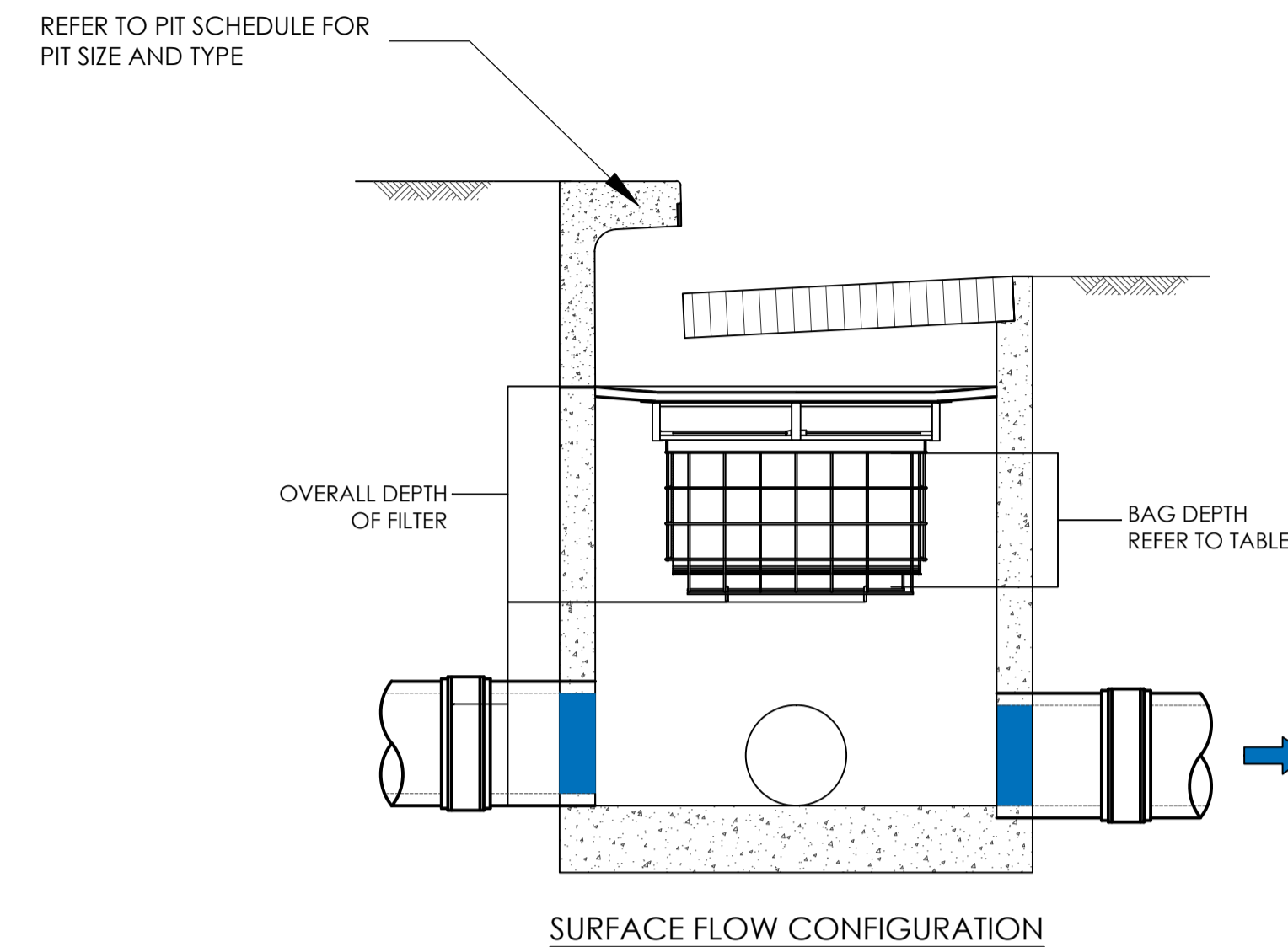
DRAWN	DATE	SCALE	A1	QA CHECK	DATE
JB	OCT 23	NTS		NP	
DESIGNED	PROJECT NO.	DRAWING No.	ISSUE		
NP	230074-01	C510	A		

TENDER ISSUE

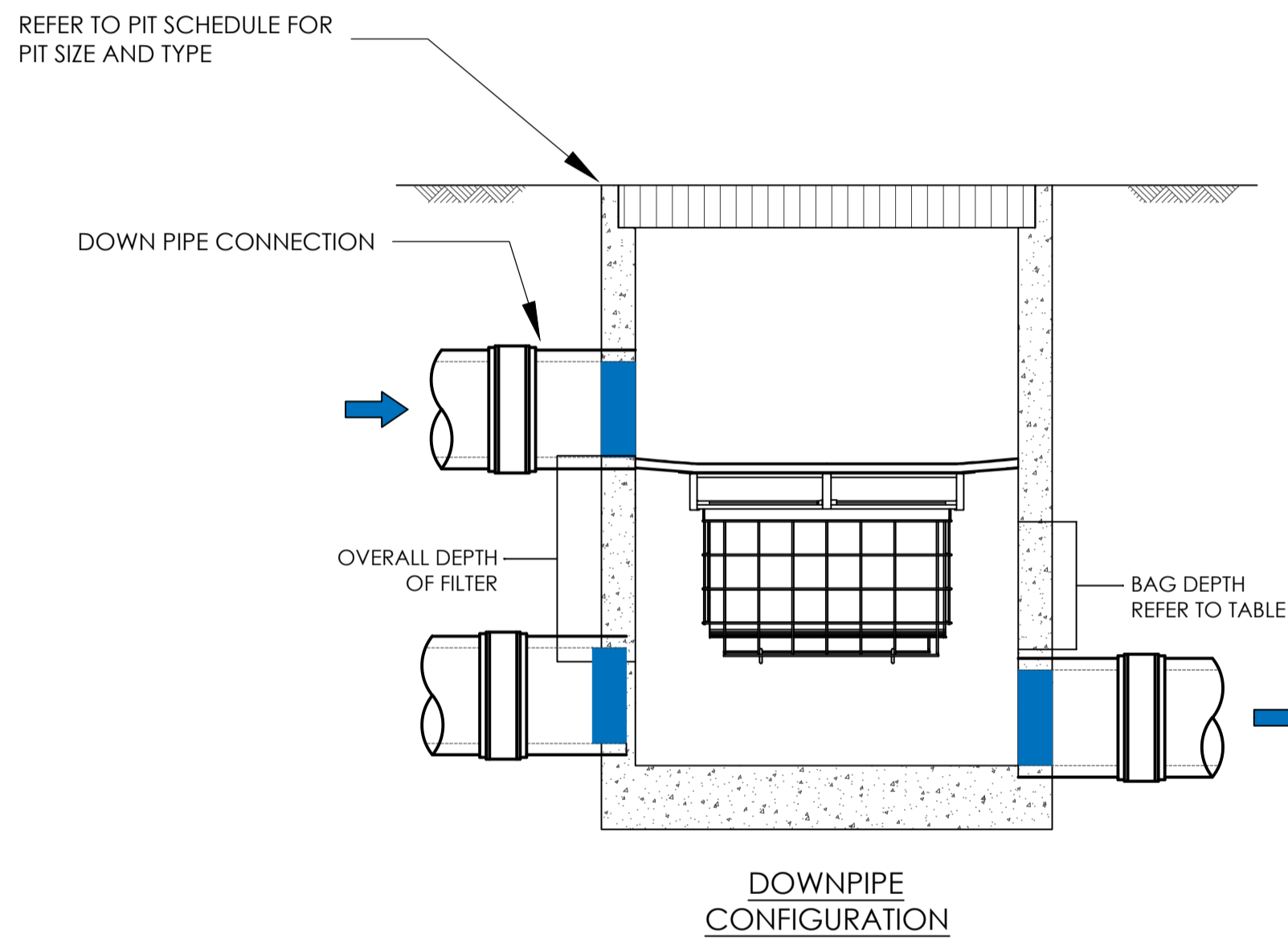




**FILTERRA BIOSCAPE 30m BIOSCAPE SYSTEM**  
NOT TO SCALE



**SURFACE FLOW CONFIGURATION**



**DOWNPIPE CONFIGURATION**

PLAN ID	MAXIMUM PIT PLAN DIMENSIONS
S	450mm x 450mm
M	600mm x 600mm
L	900mm x 900mm
XL	1200mm x 1200mm

DEPTH ID	BAG DEPTH	OVERALL DEPTH
1	170	270
2	300	450
3	600	700

PLAN ID	DEPTH ID		
	1	2	3
S	■	■	■
M	■	■	■
L	■	■	■
XL	■	■	■

**OCEANGUARD TYPICAL ARRANGEMENTS**  
NOT TO SCALE

NORTH POINT

ISSUE	AMENDMENT	DATE	DRAWN	APP
A	DRAFT TENDER ISSUE	30.10.23	JB	NP
B	70% TENDER ISSUE	10.11.23	JB	NP

CLIENT  
**REGIS AGED CARE**

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PHONE : (02) 8467 9333

ARCHITECT  
**mdp architecture**  
CIVIL ENGINEER

CONSULTANTS  
**ENTEC**

**CADIGAL GROUP**

PROJECT  
**REGIS BELROSE**

181 FOREST WAY  
BELROSE NSW 2085

DRAWING TITLE  
CIVIL SERVICES  
STORMWATER DETAILS SHEET 2

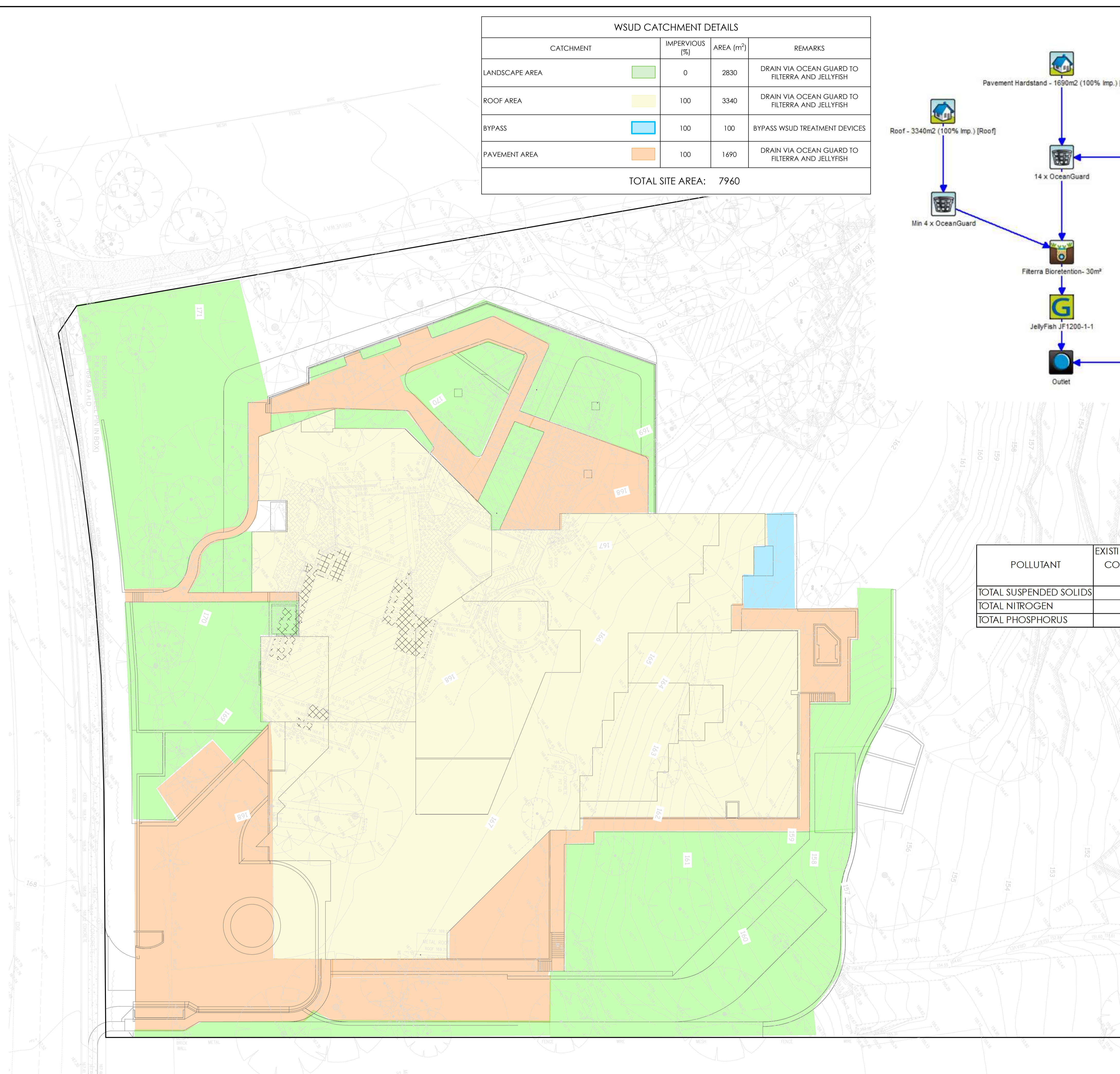
DRAWN	DATE	SCALE	AI	QA CHECK	DATE
JB	OCT 23	NTS		NP	
DESIGNED	PROJECT NO.	DRAWING No.	ISSUE		
NP	230074-01	C511	B		

TENDER ISSUE

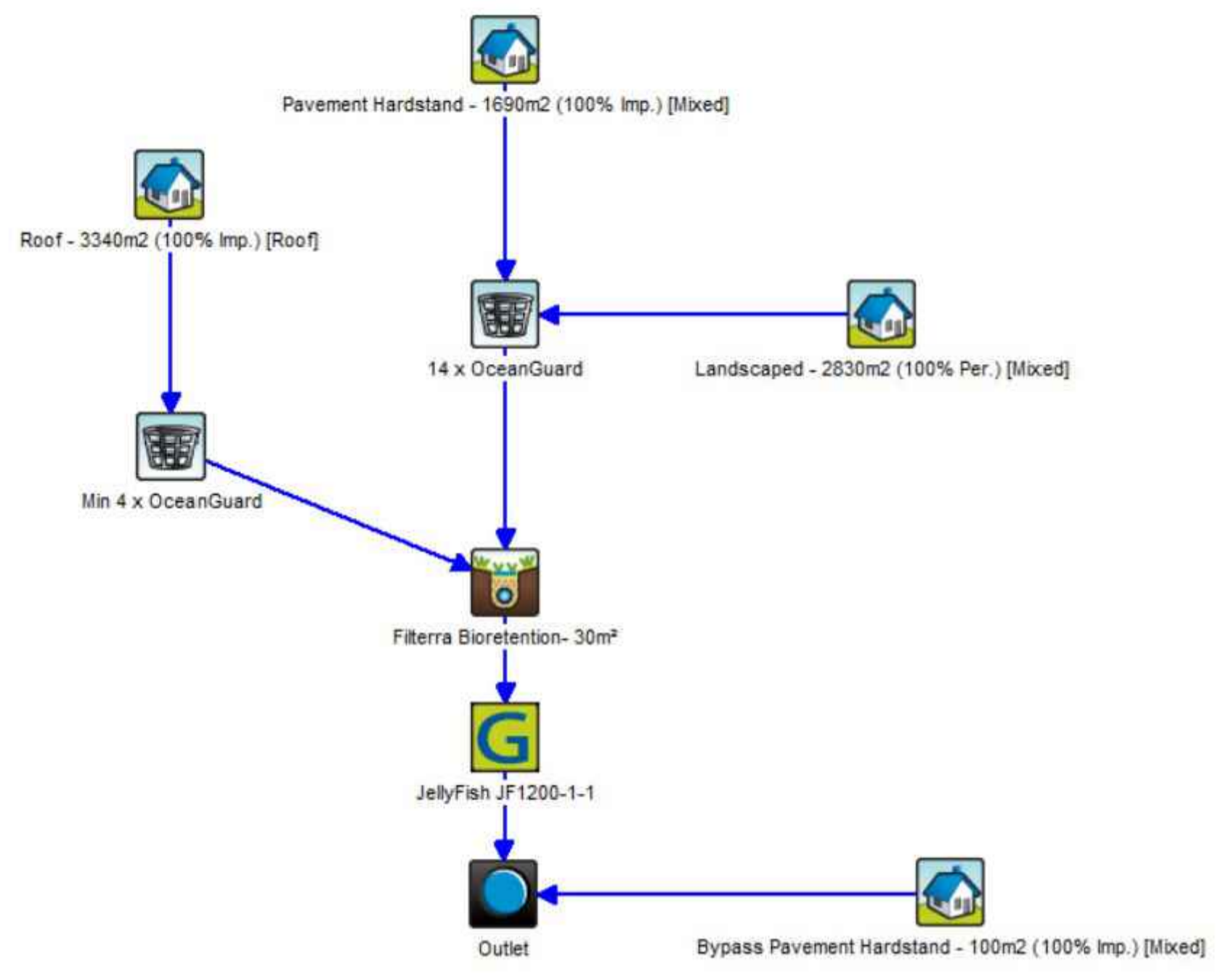








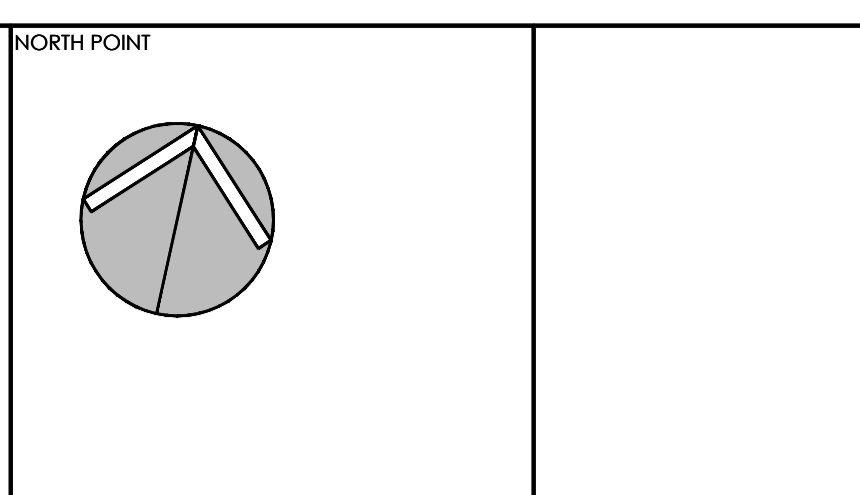
WSUD CATCHMENT DETAILS				
CATCHMENT		IMPERVIOUS (%)	AREA (m <sup>2</sup> )	REMARKS
LANDSCAPE AREA		0	2830	DRAIN VIA OCEAN GUARD TO FILTERRA AND JELLYFISH
ROOF AREA		100	3340	DRAIN VIA OCEAN GUARD TO FILTERRA AND JELLYFISH
BYPASS		100	100	BYPASS WSUD TREATMENT DEVICES
PAVEMENT AREA		100	1690	DRAIN VIA OCEAN GUARD TO FILTERRA AND JELLYFISH
TOTAL SITE AREA:			7960	



MUSIC MODEL

POLLUTANT	EXISTING SNAKE CREEK CONCENTRATIONS (mg/L)	POST-DEVELOPMENT MEAN DISCHARGE CONCENTRATIONS (mg/L)
TOTAL SUSPENDED SOLIDS	1	0.67
TOTAL NITROGEN	0.3	0.241
TOTAL PHOSPHORUS	<0.01	0.00767

MUSIC RESULTS



ISSUE	AMENDMENT	DATE	DRAWN	APP
A	DRAFT TENDER ISSUE	30.10.23	JB	NP
B	70% TENDER ISSUE	10.11.23	JB	NP

SCALE 1:250

TENDER ISSUE

CLIENT  
**REGIS AGED CARE**

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PHONE : (02) 8467 9333

ARCHITECT  
**mdp architecture**

CIVIL ENGINEER  
**ENTEC CONSULTANTS**

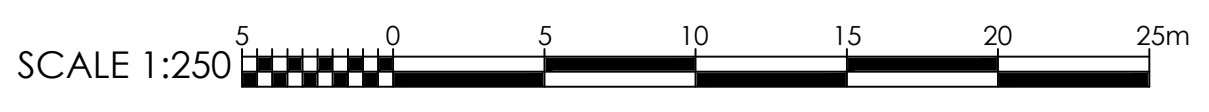
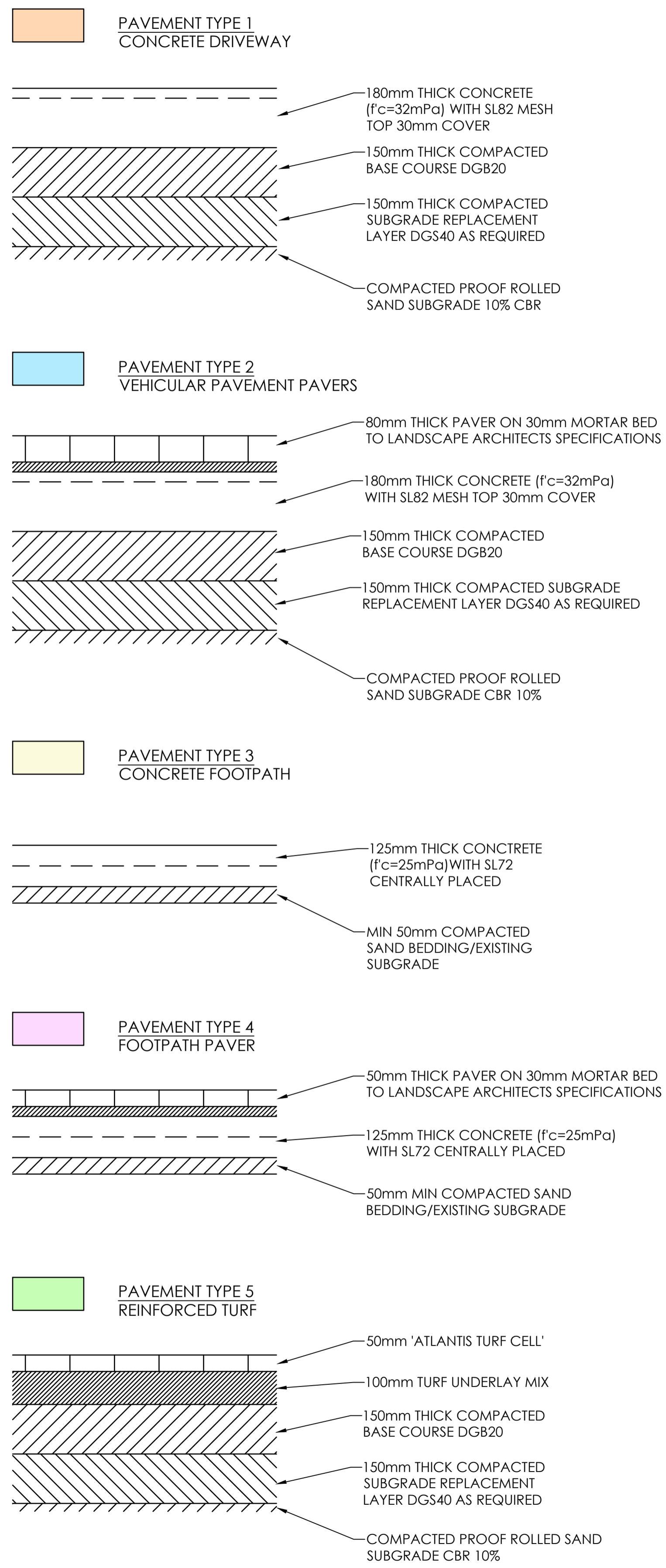
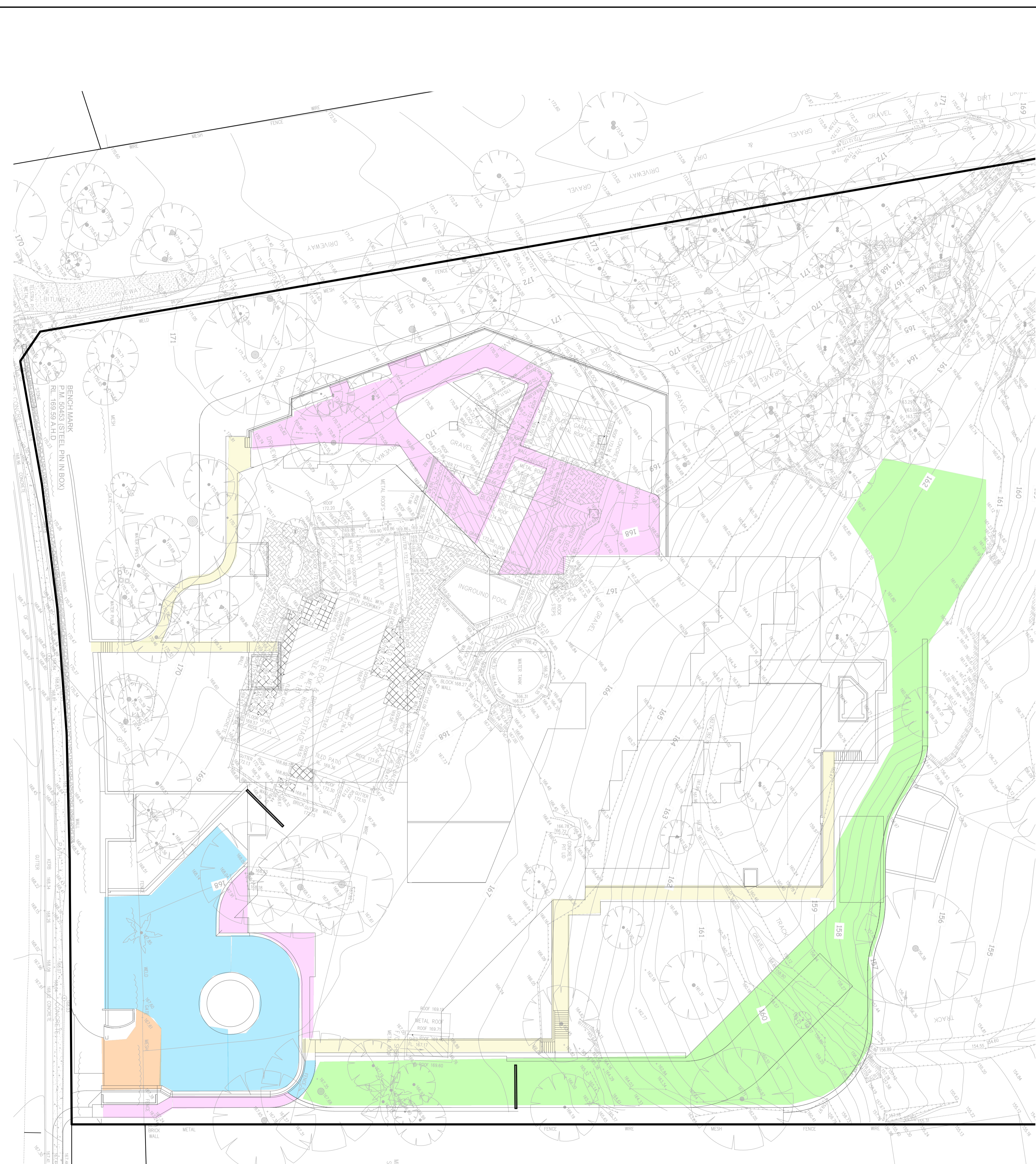
PROJECT  
**REGIS BELROSE**

181 FOREST WAY  
BELROSE NSW 2085

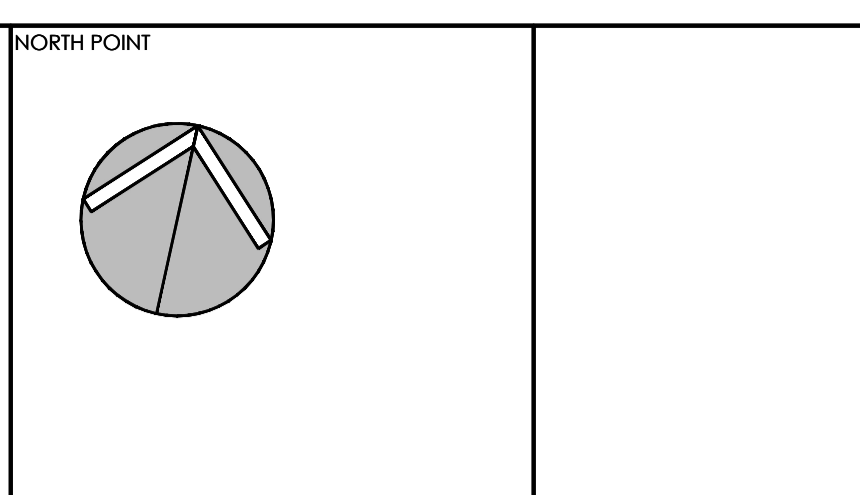
DRAWING TITLE  
CIVIL SERVICES  
STORMWATER CATCHMENT PLAN

DRAWN JB	DATE OCT 23	SCALE NTS	A1	QA CHECK NP	DATE
DESIGNED NP	PROJECT NO. 230074-01	DRAWING No. C.520		ISSUE B	





TENDER ISSUE



ISSUE	AMENDMENT	DATE	DRAWN	APP
A	DRAFT TENDER ISSUE	30.10.23	JB	NP
B	70% TENDER ISSUE	10.11.23	JB	NP

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ARCHITECT  
**mdp architecture**  
CIVIL ENGINEER



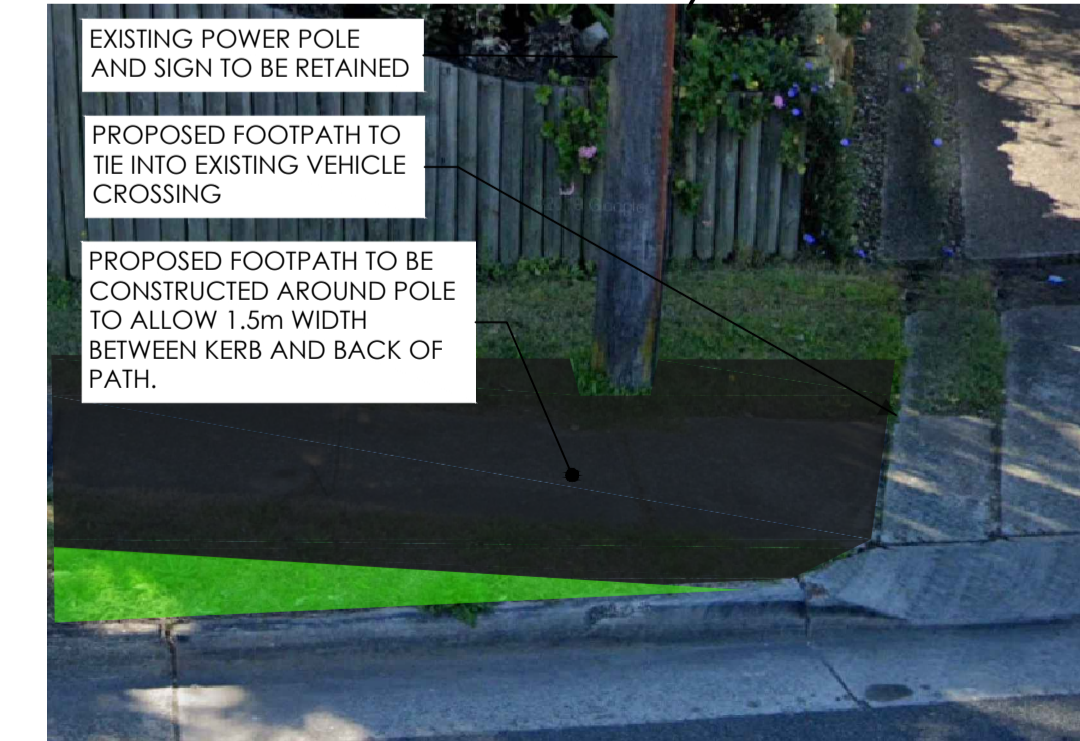
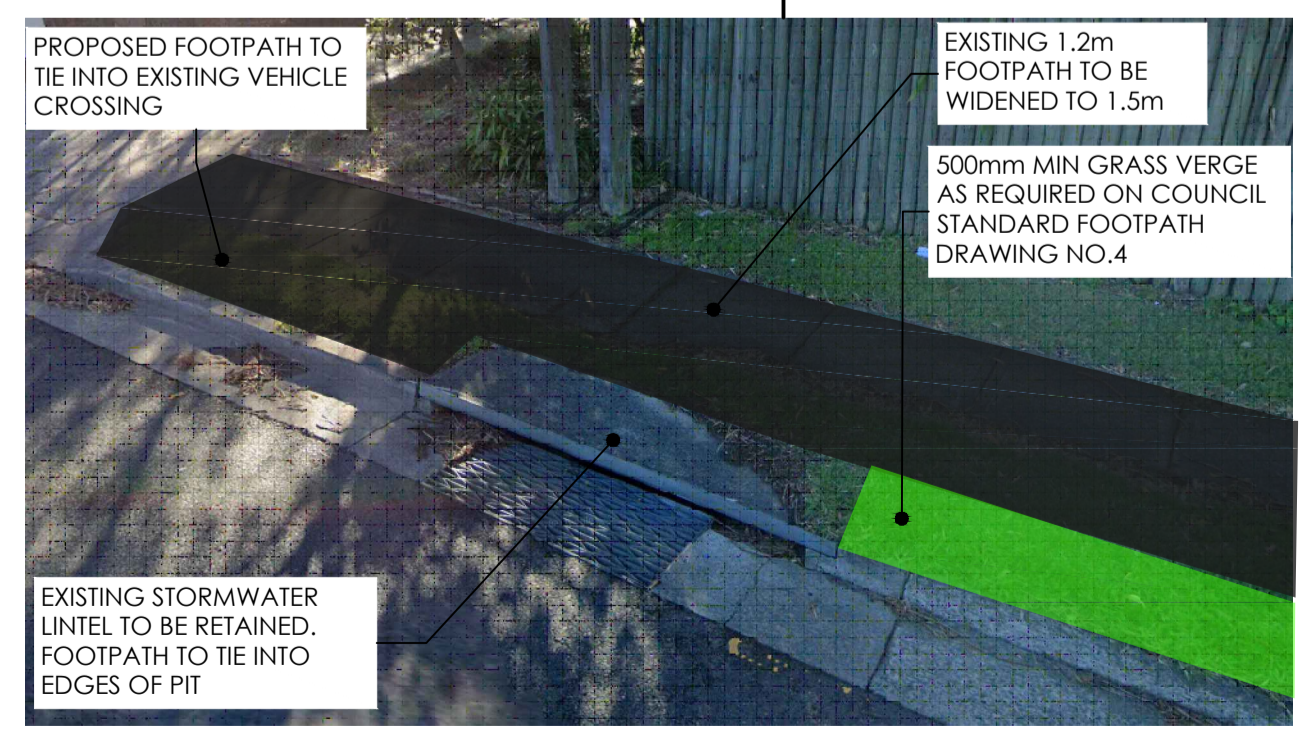
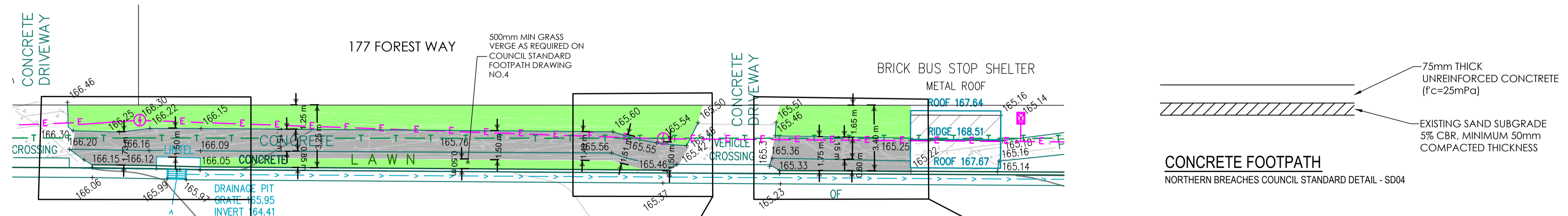
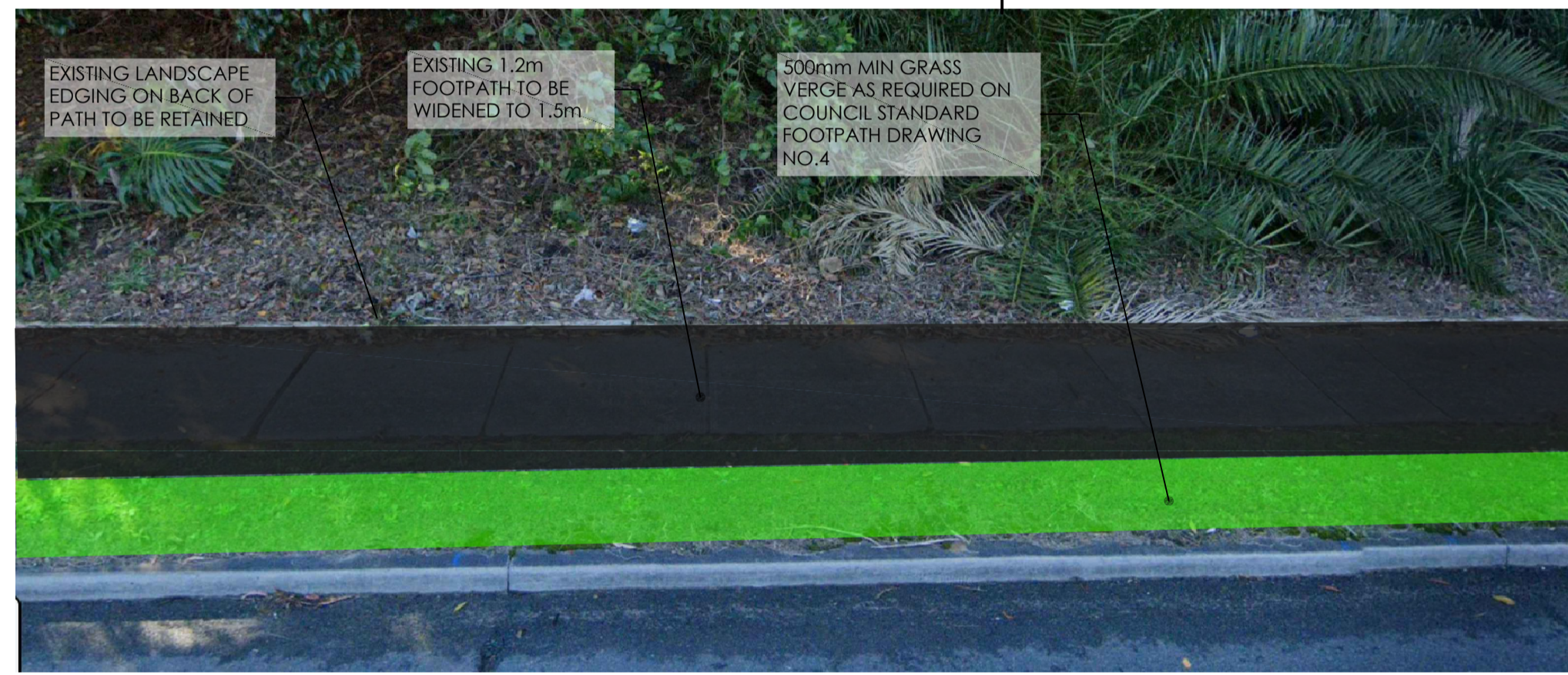
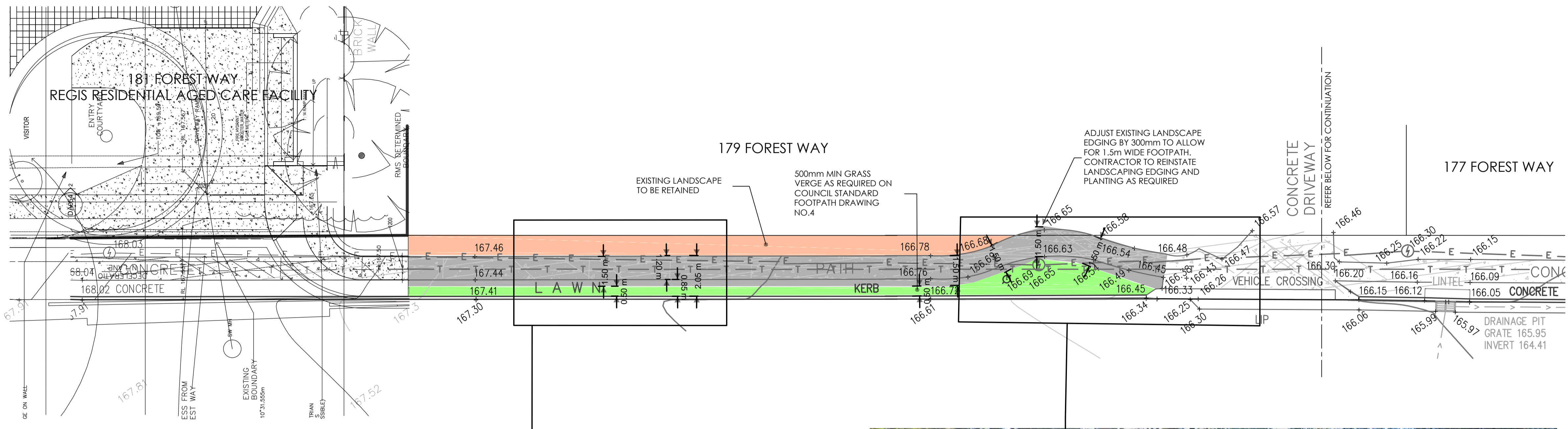
PROJECT  
**REGIS BELROSE**

181 FOREST WAY  
BELROSE NSW 2085

DRAWING TITLE  
CIVIL SERVICES  
PAVEMENT PLAN

DRAWN	DATE	SCALE	A1	QA CHECK	DATE
JB	OCT 23	NTS		NP	
DESIGNED	PROJECT NO.	DRAWING NO.	ISSUE		
NP	230074-01	C701	B		





NORTH POINT				
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ISSUE	AMENDMENT	DATE	DRAWN	APP
A	DRAFT TENDER ISSUE	30.10.23	JB	NP
B	70% TENDER ISSUE	10.11.23	JB	NP

CLIENT  
**REGIS AGED CARE**  
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ARCHITECT  
**mdp**  
 architecture

CIVIL ENGINEER  
**ENTEC**  
 CONSULTANTS



PROJECT  
**REGIS BELROSE**  
 181 FOREST WAY  
 BELROSE NSW 2085

DRAWING TITLE  
 CIVIL SERVICES  
 COUNCIL PUBLIC DOMAIN

DRAWN	DATE	SCALE	AI	QA CHECK	DATE
JB	OCT 23	NTS		NP	
DESIGNED	PROJECT NO.	DRAWING No.	ISSUE		
NP	230074-01	C801	B		

TENDER ISSUE



