

# PROPOSED MIXED-USE DEVELOPMENT

## 1 ALEXANDER & 4 COLLAROY STREETS, COLLAROY NSW

### GENERAL NOTES

- G1 THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH ALL OTHER CONSULTANTS DRAWINGS AND SPECIFICATIONS.
- G2 ANY DISCREPANCIES SHALL BE REFERRED TO THE PROJECT MANAGER/ CONTRACT ADMINISTRATOR FOR DECISION BEFORE PROCEEDING WITH THE WORK.
- G3 DIMENSIONS SHALL NOT BE OBTAINED BY SCALING THE DRAWINGS.
- G4 ANY SETTING OUT DIMENSIONS SHOWN ON THE DRAWING SHALL BE VERIFIED BY THE BUILDER.
- G5 DURING CONSTRUCTION THE CONTRACTOR SHALL MAINTAIN STRUCTURES IN A STABLE CONDITION.
- G6 ALL WORK SHALL COMPLY WITH THE BUILDING CODE OF AUSTRALIA AND RELEVANT AUSTRALIAN STANDARD CODES.
- G7 THE DESIGN AND DETAILS SHOWN ON THESE DRAWINGS ARE APPLICABLE TO THIS PROJECT ONLY AND MAY NOT BE REPRODUCED IN WHOLE OR IN PART, OR BE USED FOR ANY OTHER PROJECT OR PURPOSE, WITHOUT THE WRITTEN PERMISSION OF WOOLACOTTS WITH WHOM COPYRIGHT RESIDES.
- G8 THE CONTRACTOR SHALL MAKE GOOD ADJACENT TO NEW WORKS, ENSURING A SMOOTH TRANSITION WITH EXISTING INFRASTRUCTURE.
- G9 LIMIT OF WORKS TO MATCH LANDSCAPE ARCHITECT'S DRAWINGS.
- G10 PROVIDE SILT PROTECTION AT STORMWATER PITS AS REQUIRED DURING CONSTRUCTION.

### EROSION CONTROL NOTES

- E1 INSTALL SILT FENCES ON LOW SIDE OF SITE AND AS REQUIRED BY LOCAL COUNCIL PRIOR TO COMMENCEMENT OF TOPSOIL STRIPPING.
- E2 INSTALL DRAINAGE SYSTEM AND SILT FENCES AROUND NEW AND EXISTING PITS AS SOON AS PRACTICABLE.
- E3 REINSTATE GRASS COVER AS SOON AS PRACTICABLE.
- E4 INSTALL CONSTRUCTION ENTRY/EXIT IN ACCORDANCE WITH SOILS AND CONSTRUCTION VOLUME 1 "BLUE BOOK"

### DRAINAGE NOTES

- D1 ALL WORKS SHALL BE IN ACCORDANCE WITH AS 3500.3
- D2 FOR PIPE DIAMETERS NOT EXCEEDING 225mm  
USE SEWER GRADE UPVC TO AS 1260
- D3 FOR PIPE DIAMETERS EXCEEDING 225mm, USE:  
- CLASS 2 REINFORCED CONCRETE PIPE TO AS 4058 OR  
- CLASS 2 FIBRE REINFORCED CONCRETE TO AS 4139
- D4 PVC PIPES SHALL BE SOLVENT WELDED. ALL OTHER PIPES SHALL BE RUBBER RING JOINTED UNLESS NOTED OTHERWISE.
- D5 UNLESS SPECIFIED OTHERWISE, BED & BACKFILL SHALL BE COMPACTED SAND TO 100mm AROUND THE PIPE AND 100mm THICK LAYER OF 5mm AGGREGATE AROUND THE PIPE IF UNDER CONCRETE. REMAINDER OF BACKFILL SHALL BE COMPACTED EXCAVATED MATERIAL. WHEN UNDER VEHICULAR PAVEMENT, REMAINDER OF BACKFILL SHALL BE COMPACTED BASECOURSE.
- D6 LOADS ON PIPES DURING CONSTRUCTION SHALL NOT EXCEED THE REQUIREMENT OF AS 3725, OR THE RECOMMENDATIONS OF THE PIPE MANUFACTURER.
- D7 TRENCH WIDTHS SHALL BE IN ACCORDANCE WITH AS 3500, BUT NOMINALLY THE GREATER OF 1.5 PIPE DIAMETER OR PIPE DIAMETER PLUS 300.
- D8 IN LOCATIONS WHERE NEW STORMWATER PIPES CONNECT TO EXISTING STORMWATER PITS, CONFIRM THE INVERT LEVEL OF ALL EXISTING STORMWATER PITS AT THE START OF THE WORKS.

### DRAWING LIST

- SW00 STANDARD NOTES AND DRAWING LIST
- SW01 STORMWATER MANAGEMENT PLAN - GROUND FLOOR
- SW02 STORMWATER MANAGEMENT PLAN - BASEMENT
- SW03 STORMWATER DETAILS
- SW04 STORMWATER LONG SECTION
- SW05 STORMWATER CATCHMENT PLAN
- ES01 SEDIMENT AND EROSION CONTROL PLAN & DETAILS

### NOTES:

1. STORMWATER MANAGEMENT DESIGN IN ACCORDANCE WITH NORTHERN BEACHES COUNCIL - WATER MANAGEMENT FOR DEVELOPMENT POLICY (AUGUST 2020).  
- MINOR DRAINAGE SYSTEM = 100YR ARI  
- MAJOR DRAINAGE SYSTEM = 100YR ARI
2. ON-SITE STORMWATER DETENTION (OSD)
- DESIGN IN ACCORDANCE WITH SECTION 9.3.2 OF COUNCILS POLICY.  
- TO MATCH PRE-DEVELOPED (100% PERVIOUS) PEAK FLOWRATES FOR THE 20%, 5% AND 1% AEP STORM EVENTS.

#### OSD SUMMARY - DRAINS MODEL

- PRE-DEVELOPMENT  
 $A_{TOTAL} = 2,570m^2$   
 $A_{IMPERVIOUS} = 0m^2$   
 $Q_{20\%} = 52 L/S$   
 $Q_{5\%} = 83 L/S$   
 $Q_{1\%} = 118 L/S$   
 $T_c = 10 MIN$
- POST-DEVELOPMENT TO OSD  
 $A_{TOTAL} = 2,350m^2$   
 $A_{IMPERVIOUS} = 2,350m^2$   
STORAGE VOLUME =  $67m^3$  @ 0.75m DEEP  
ORIFICE = 0.20m  
 $Q_{20\%} = 49 L/S$   
 $Q_{5\%} = 63 L/S$   
 $Q_{1\%} = 77 L/S$   
 $T_c = 5 MIN$
- CATCHMENT BYPASSING OSD  
 $A_{TOTAL} = 220m^2$   
 $A_{IMPERVIOUS} = 76m^2$   
 $T_c = 5 MIN$
- < PSD, THEREFORE OK

3. STORMWATER QUALITY  
- DESIGN IN ACCORDANCE WITH SECTION 4.1 OF COUNCIL POLICY.  
POLLUTANT LOAD REDUCTION MUST BE A MINIMUM PERCENTAGE REDUCTION OF THE POST DEVELOPMENT AVERAGE ANNUAL LOAD OF POLLUTANTS IN ACCORDANCE WITH THOSE OUTLINED BELOW:

POLLUTANT	POST DEVELOPMENT AVERAGE ANNUAL LOAD REDUCTION TARGETS (%)
GROSS POLLUTANTS (GP)	90%
TOTAL SUSPENDED SOLIDS (TSS)	85%
TOTAL PHOSPHORUS (TP)	65%
TOTAL NITROGEN (TN)	45%

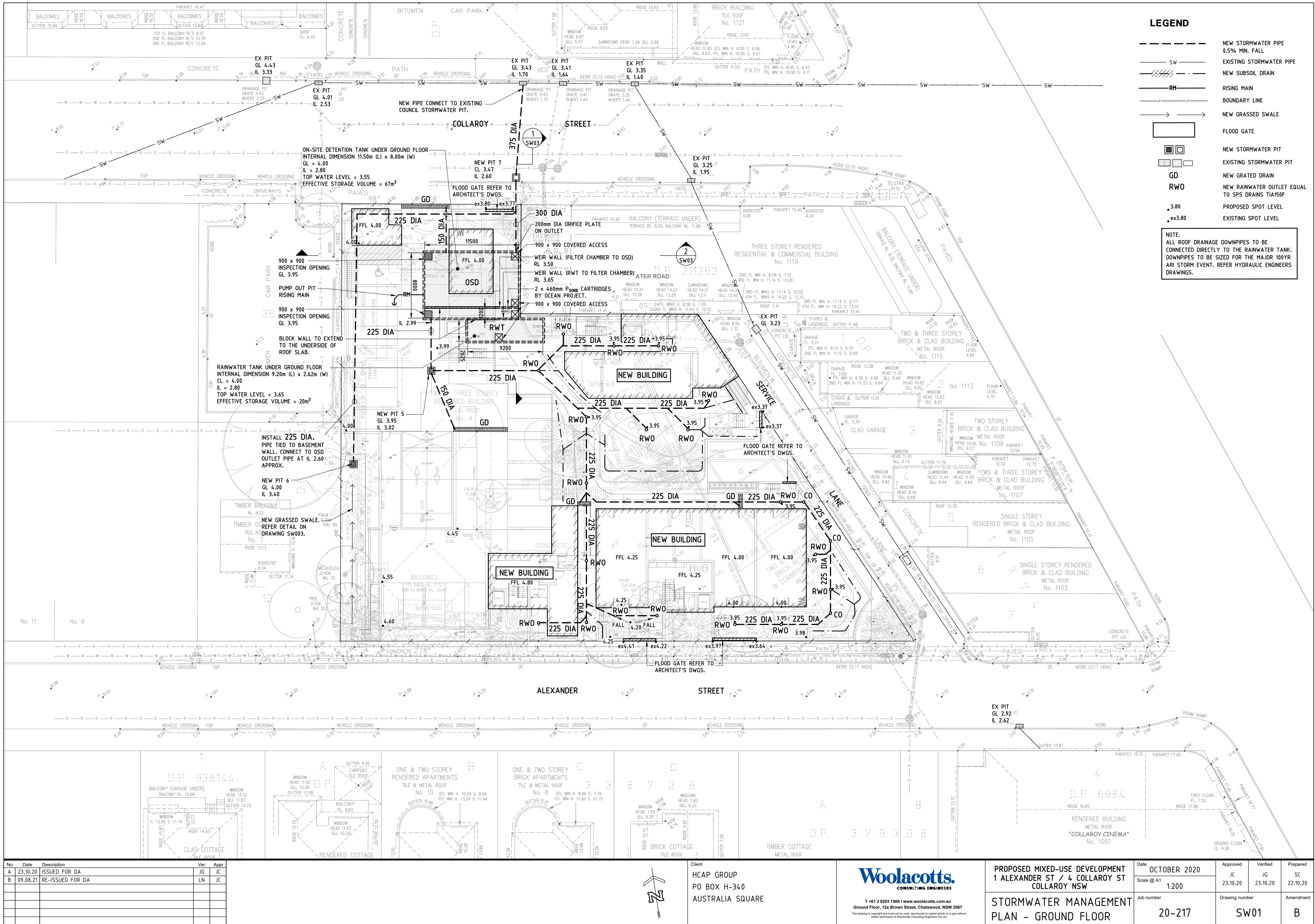
#### TREATMENT DEVICES :

RAINWATER TANK = 20KL  
OSD TANK =  $67m^3$   
2 x 460mm PSORB CARTRIDGES BY OCEAN PROTECT.

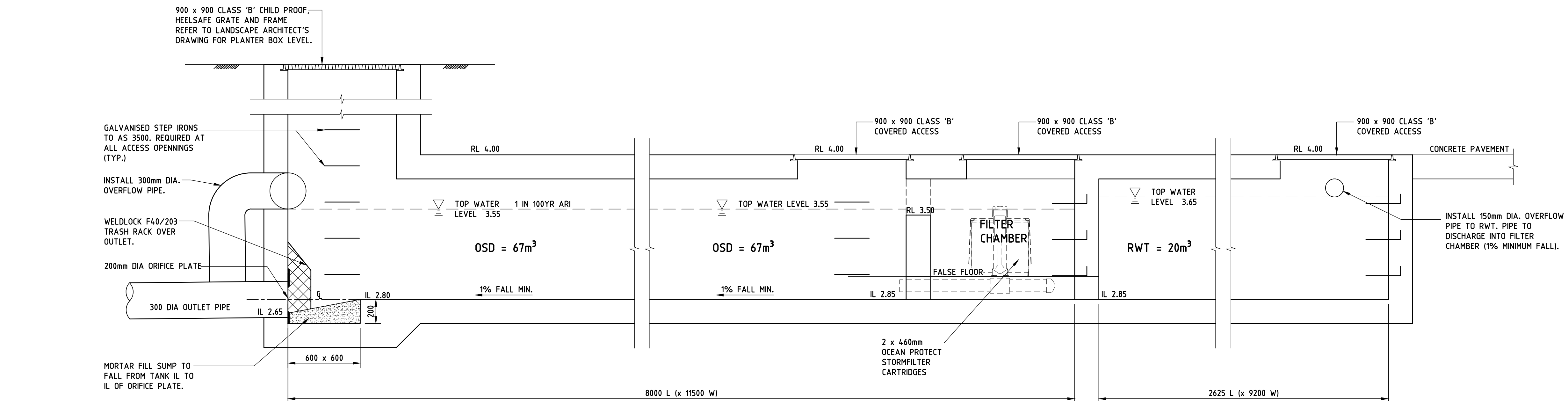
POLLUTANT	REDUCTION VALUES ACHIEVED (%)
GROSS POLLUTANTS (GP)	99.1%
TOTAL SUSPENDED SOLIDS (TSS)	89.1%
TOTAL PHOSPHORUS (TP)	78.2%
TOTAL NITROGEN (TN)	63.3%

No.	Date	Description	Ver.	Appr.	Client HCAP GROUP PO BOX H-340 AUSTRALIA SQUARE  T +61 2 8203 1500   www.woolacotts.com.au Ground Floor, 12a Brown Street, Chatswood, NSW 2067 <small>This drawing is copyright and must not be used, reproduced or copied wholly or in part without written permission of Woolacotts Consulting Engineers Pty Ltd.</small>	 T +61 2 8203 1500   www.woolacotts.com.au Ground Floor, 12a Brown Street, Chatswood, NSW 2067 <small>This drawing is copyright and must not be used, reproduced or copied wholly or in part without written permission of Woolacotts Consulting Engineers Pty Ltd.</small>	PROPOSED MIXED-USE DEVELOPMENT 1 ALEXANDER ST / 4 COLLAROY ST COLLARROY NSW		Date OCTOBER 2020	Approved JC 23.10.20	Verified JG 23.10.20	Prepared SC 22.10.20
A	23.10.20	ISSUED FOR DA	JG	JC			STANDARD NOTES AND DRAWING LIST		Scale @ A1 -			
B	09.08.21	RE-ISSUED FOR DA	LN	JC					Job number 20-217	Drawing number SW00	Amendment B	

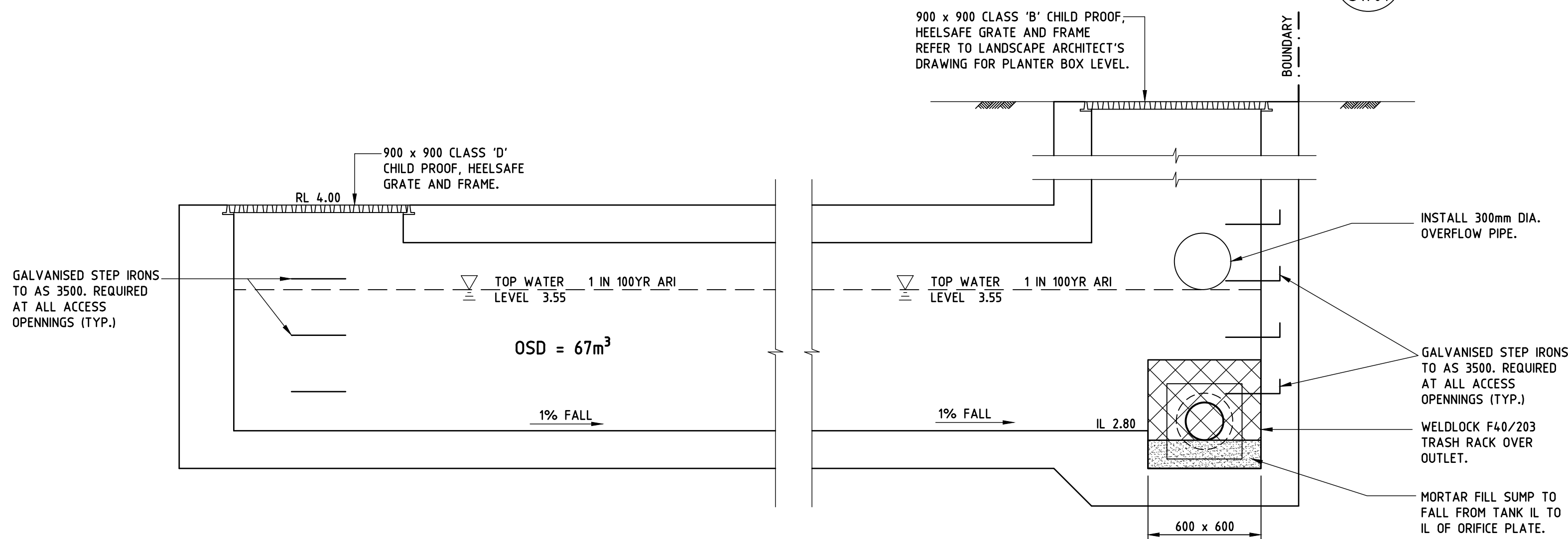




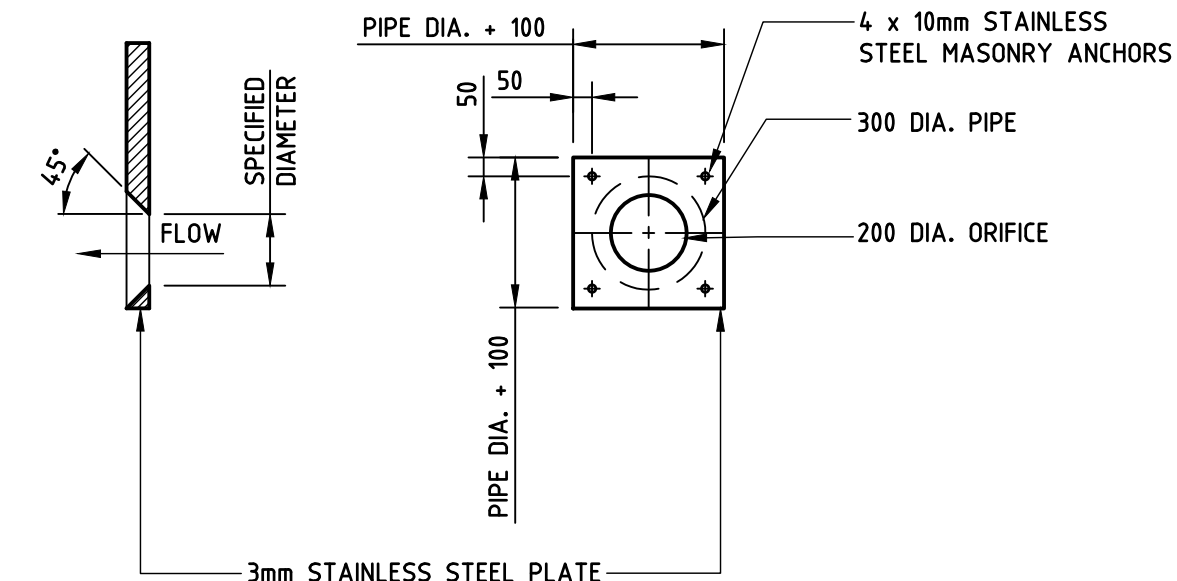




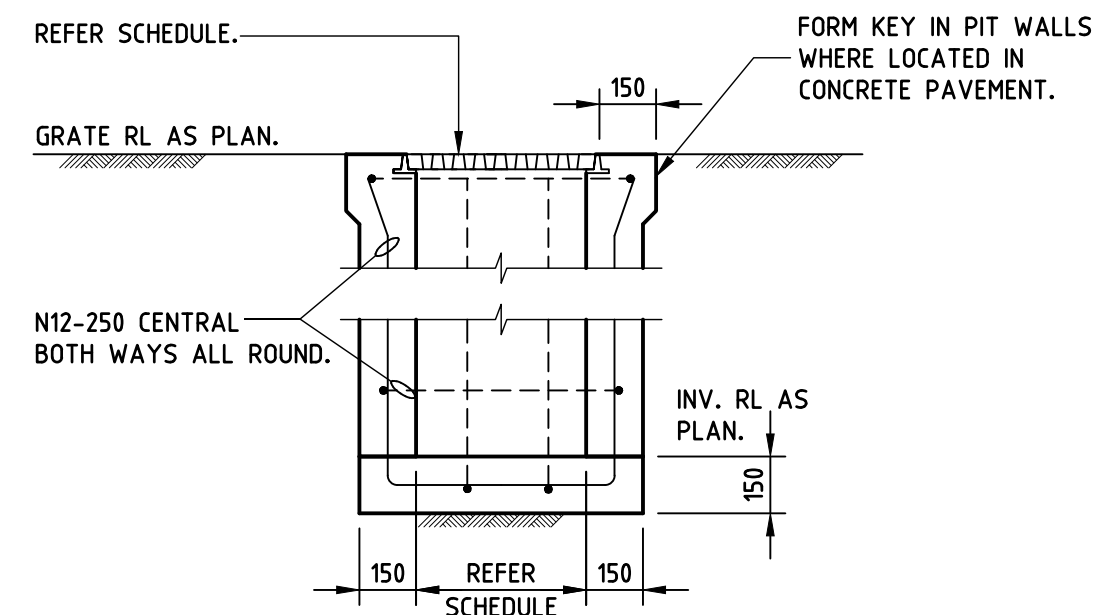
SECTION 1  
SW01



SECTION 2  
SW01



ORIFICE DETAIL  
NOT TO SCALE

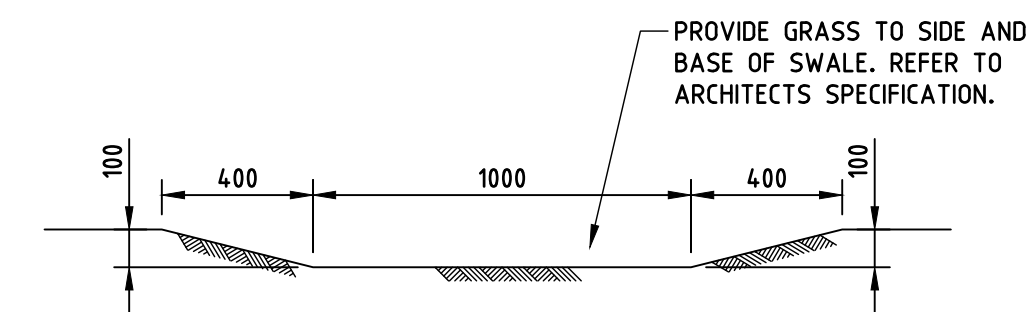


STORMWATER PIT DETAIL

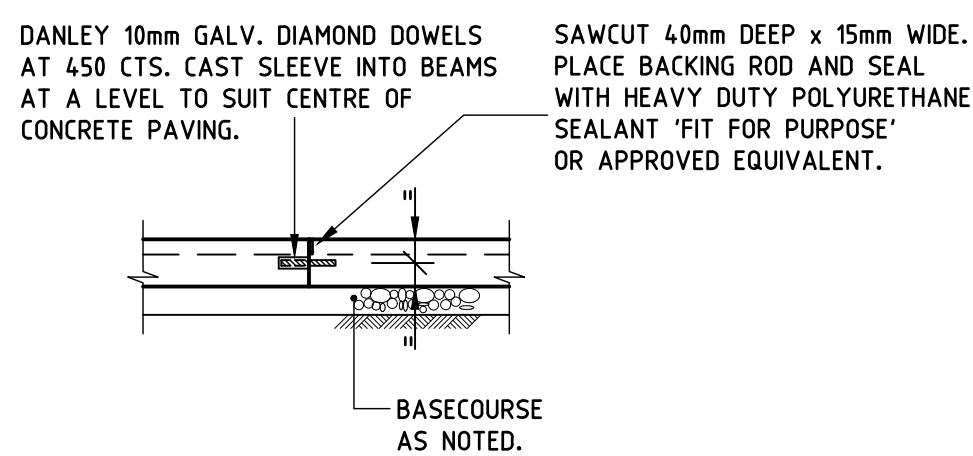
- NOTE:
- PROVIDE GALVANISED STEP IRONS AT PITS DEEPER THAN 1.2m IN ACCORDANCE WITH AS 3500.
  - ALL PITS TO HAVE LOCKABLE SECURE GRATES

PIT SCHEDULE

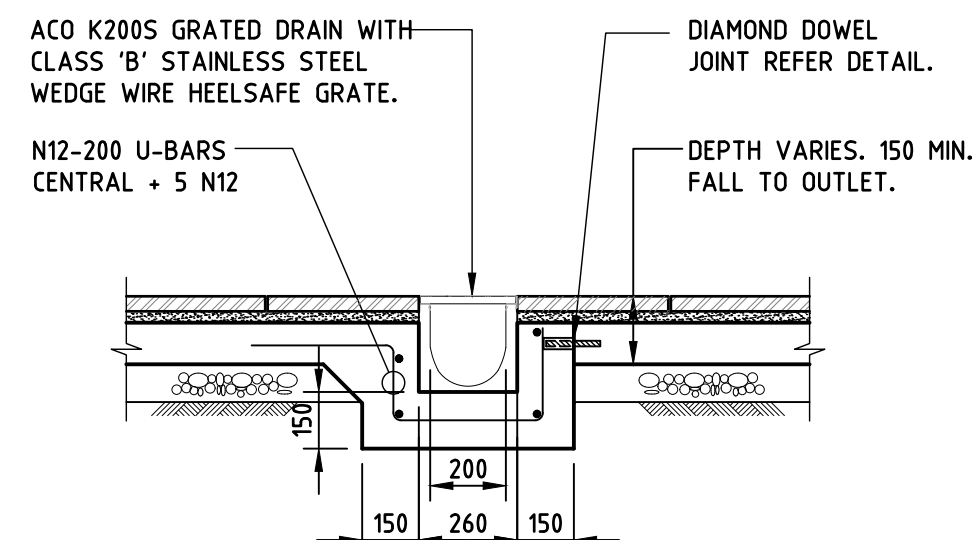
PIT No.	SIZE	GRATE/COVER & FRAME TYPE
1	450 x 450	CLASS 'D' HEELSAFE GRATE AND FRAME
2	450 x 450	CLASS 'D' HEELSAFE GRATE AND FRAME
3	600 x 600	CLASS 'D' HEELSAFE GRATE AND FRAME
4	600 x 600	CLASS 'D' HEELSAFE GRATE AND FRAME
5	900 x 900	CLASS 'D' HEELSAFE GRATE AND FRAME
6	600 x 600	CLASS 'B' HEELSAFE GRATE AND FRAME
7	600 x 600	CLASS 'D' COVER AND FRAME



NEW GRASSED SWALE



DIAMOND DOWEL JOINT



GRATED DRAIN (GD) DETAIL

No.	Date	Description	Ver.	Appr.
A	23.10.20	ISSUED FOR DA	JG	JC
B	09.08.21	RE-ISSUED FOR DA	LN	JC

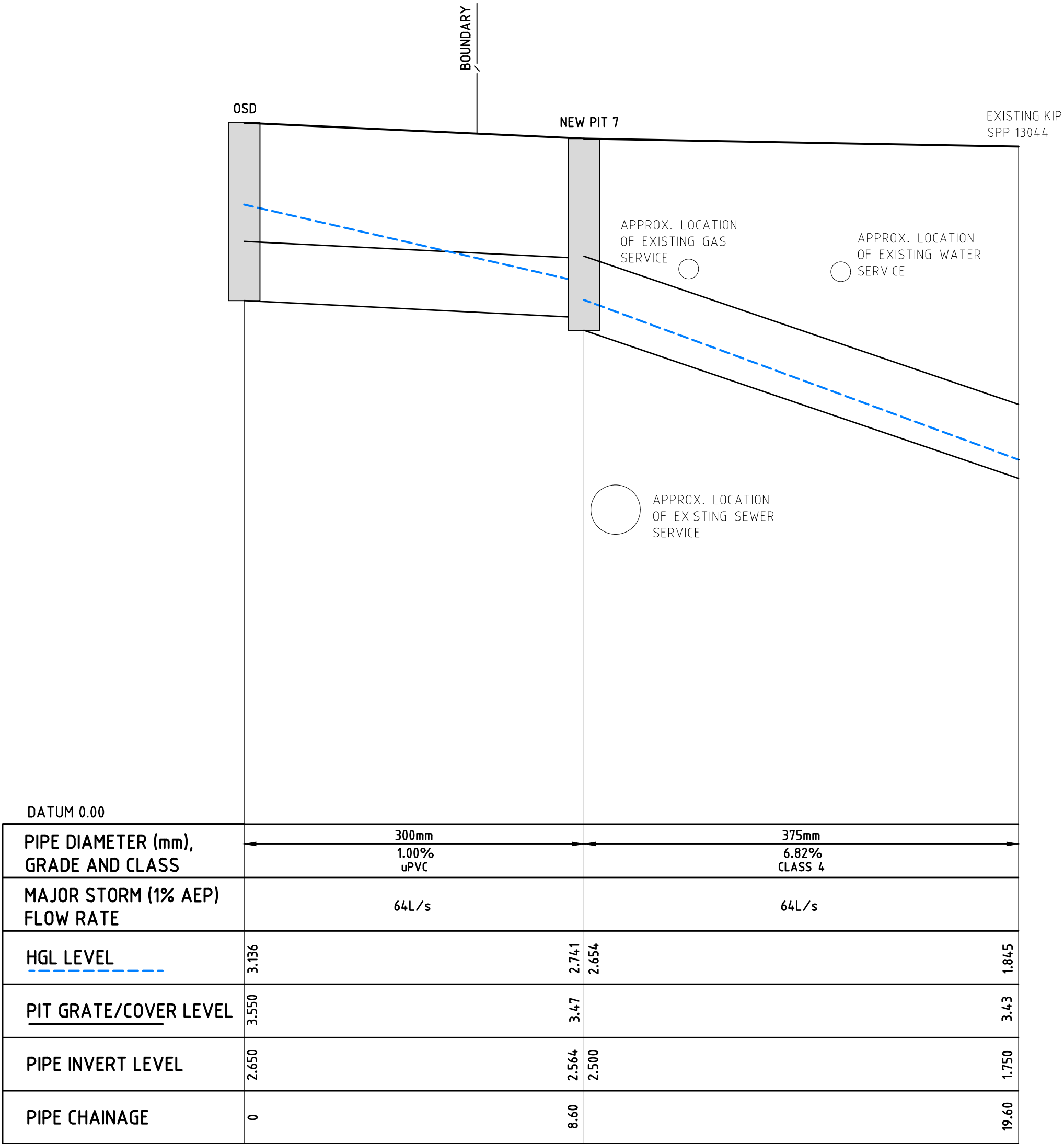
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HCAP GROUP  
PO BOX H-340  
AUSTRALIA SQUARE

**Woolacotts.**  
CONSULTING ENGINEERS  
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PROPOSED MIXED-USE DEVELOPMENT  
1 ALEXANDER ST / 4 COLLAROY ST  
COLLARROY NSW

STORMWATER DETAILS

Date OCTOBER 2020	Approved JC	Verified JG	Prepared SC
Scale @ A1 1:20	23.10.20	23.10.20	22.10.20
Job number 20-217	Drawing number SW03	Amendment A	



DRAINAGE LONG SECTION  
SCALE - 1:20 VERTICAL/1:100 HORIZONTAL





No.	Date	Description	Ver.	Appr.
A	23.10.20	ISSUED FOR DA	JG	JC

Client  
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PROPOSED MIXED-USE DEVELOPMENT  
1 ALEXANDER ST / 4 COLLARROY ST  
COLLARROY NSW

STORMWATER  
CATCHMENT PLAN

Date AUGUST 2021	Approved JC 09.08.21	Verified LN 09.08.21	Prepared TDC 09.08.21
Scale @ A1 1:250	Job number 20-217	Drawing number SW05	Amendment A