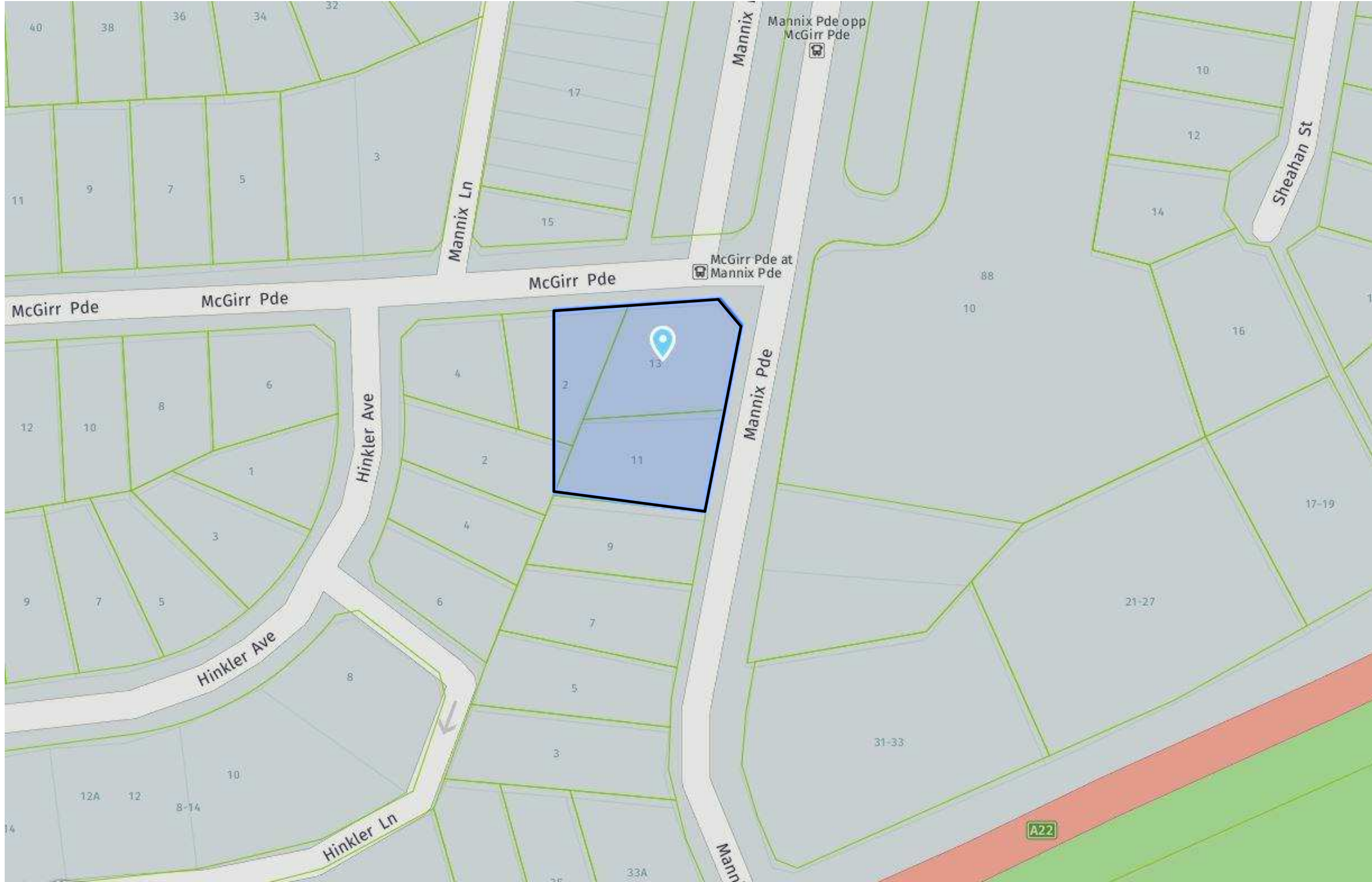


# 11-13 MANNIX PARADE, WARWICK FARM

## 20023 - CIVIL DOCUMENTATION

<u>DRG No.</u>	<u>DRAWING TITLE</u>
000	COVER SHEET
001	CIVIL NOTES
050	SEDIMENT AND EROSION CONTROL PLAN
060	SEDIMENT AND EROSION CONTROL TYPICAL DETAILS
070	CUT AND FILL PLAN
090	BASEMENT - STORMWATER DRAINAGE PLAN
100	GROUND FLOOR - STORMWATER DRAINAGE PLAN
105	GROUND FLOOR - ON-SITE DETENTION PLAN
106	GROUND FLOOR - PROPOSED STORMWATER CATCHMENT AREA
107	GROUND FLOOR CIVIL SECTIONS
150	OVERLAND FLOW PATH PLAN
200	TYPICAL CIVIL DETAILS - SHEET 1
210	TYPICAL CIVIL DETAILS - SHEET 2
300	TYPICAL PAVEMENT DETAILS



## CIVIL GA - LOCALITY MAP

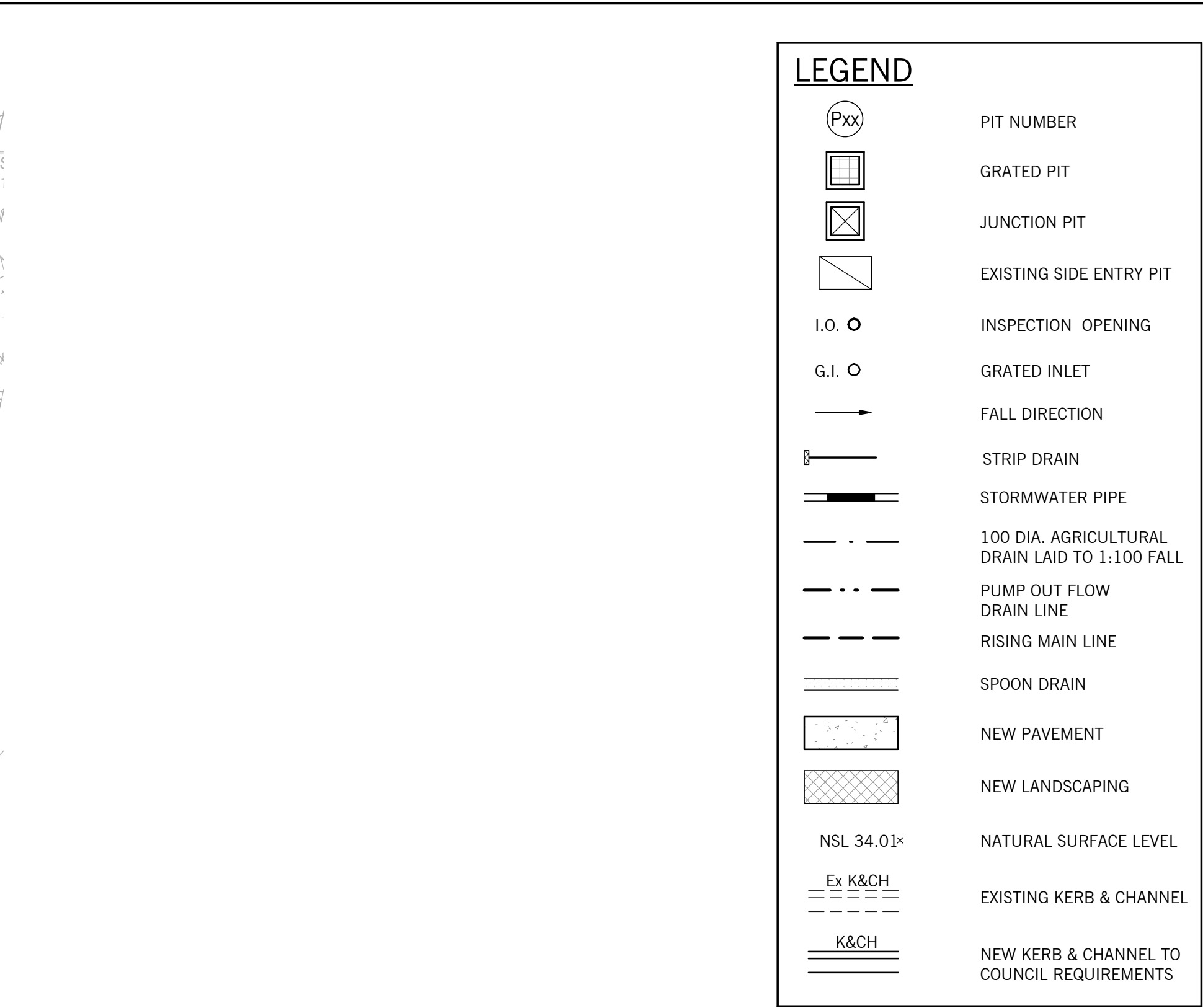
# STRUCTURAL ENGINEERING

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	DATE	DESIGNED BY	CHECKED BY																		
		GP	GP																		
	SCALES AT A1	DRAWN BY	APPROVED BY																		
	1 : 100	GP	PW																		
	JOB No.	DRAWING No.	REV.																		
	20023	CIV-WEB-000	3																		









STORMWATER PIT SCHEDULE					
MARK	SIZE	COVER TYPE	COVER CLASS	COVER LEVEL	REMARKS
P1	1800DIA.	GRATED	CLASS C HEEL GUARD	9.45	
P2	600x600	GRATED	CLASS C HEEL GUARD	9.45	
P3	600x600	GRATED	CLASS C HEEL GUARD	9.45	
P4	600x600	GRATED	CLASS C HEEL GUARD	9.45	
P6	900x1500	GRATED	CLASS B HEEL GUARD	13.05	
P7	900x1500	GRATED	CLASS B HEEL GUARD	T.B.C. (LANDSCAPING FINISH LEVEL)	TO BE FITTED WITH 900 x 900 SPEL STORMSACK
P8	900x900	GRATED	CLASS B HEEL GUARD	12.90	
P9	900x900	GRATED	CLASS B HEEL GUARD	12.77	
P10	900x900	GRATED	CLASS B HEEL GUARD	12.40	TO BE FITTED WITH 900 x 900 SPEL STORMSACK
P11	900x900x900	GRATED & GATIC	CLASS B HEEL GUARD	12.10	TO BE FITTED WITH 900 x 900 SPEL STORMSACK

1. THIS DRAINAGE DESIGN IS BASED ON LPD ADVICE BY CITY OF LIVERPOOL, DATED 16 MARCH 2020. REFERENCE JASON KUMAR AND IS SUBJECT TO AUTHORITY REVIEW AND APPROVAL. BUILDER TO MAKE NECESSARY ALLOWANCE WHERE DEEM REQUIRED.
2. FOOTPATH RL SUBJECT TO ARCHITECTURAL AND COUNCIL REVIEW. BUILDER TO MAKE NECESSARY ALLOWANCE WHERE DEEMED REQUIRED. (ALL LEVELS APPROXIMATE BASED FROM DEGOTARDI SMITH & PARTNERS REF: 34441A01 DATED: 16/06/2016)
3. GROUND WATER IS NOT ENCOUNTERED WITHIN THE BASEMENT EXCAVATION, BASED ON GEOTECHNICAL REPORT No 20/0955, REFERENCE No 30364/36230 G, DATED APRIL 2020. HOWEVER, SOME MINOR PERCHED WATER SEEPAGE MAY FLOW INTO THE EXCAVATION FROM SOIL ROCK, SHOULD GROUND WATER BE IDENTIFIED WITHIN REPORT RE DESIGN OF BASEMENT DRAINAGE SYSTEM MAY BE REQUIRED WITH POTENTIAL SEALED BASEMENT. SUBJECT TO AUTHORITY REVIEW AND APPROVAL.
4. SUBJECT TO VERIFICATION OF THE GROUNDWATER DEPTH ON SITE.
5. SUBJECT TO REVIEW BY TRAFFIC ENGINEER.
6. THIS DRAWING NEED TO BE READ IN CONJUNCTION WITH HYDRAULIC DRAWING PREPARED BY STANTEC.
7. SUBJECT TO RECEIVED UP TO DATE FEATURE LEVEL SURVEY AND IN GROUND SERVICES SURVEY.
8. THIS DESIGN IS BASED ON ARCHITECTURE PLANS ISSUED FOR PRELIMINARY DATED 23 NOVEMBER 2020.

BUILDER TO CONFIRM EXACT LOCATION, DEPTH AND SIZE OF EXISTING SERVICES PRIOR COMMENCEMENT OF ANY WORKS.

IF ANY PROPOSED DRAINAGE SYSTEM INTERSECT WITH EXISTING SERVICES, CONTACT WEBBER DESIGN OFFICE FOR FURTHER ASSESSMENT.



# GROUND FLOOR - STORMWATER DRAINAGE PLAN

[illegible]

The logo for WDR DESIGN is prominently displayed in a large, bold, black, sans-serif font. The letters 'W', 'D', and 'R' are stacked vertically, while 'E', 'S', 'I', 'G', 'N' are arranged horizontally to the right of 'R'. Below the logo, the text 'STRUCTURAL ENGINEERING' is written in a smaller, all-caps, sans-serif font. At the bottom of the advertisement, two columns of contact information are provided. The left column, under the heading 'STONYRIDGE OFFICE:', lists the address 'SUITE 301, LEVEL 3, 19A BOUNDARY STREET', 'NORTHCUITERS BAY, NSW, AUSTRALIA 2011', and the phone number 'T: +61 2 9690 2488'. The right column, under the heading 'MELBOURNE OFFICE:', lists the address 'LEVEL 2, 31 QUEEN STREET', 'MELBOURNE, VIC, AUSTRALIA 3000', and the phone number 'T: +61 3 9614 7155'.

60% DD ISSUE

TAYLOR

MANNIX PARADE WARWICK  
FARM  
11-13 MANNIX PARADE,  
WARWICK FARM

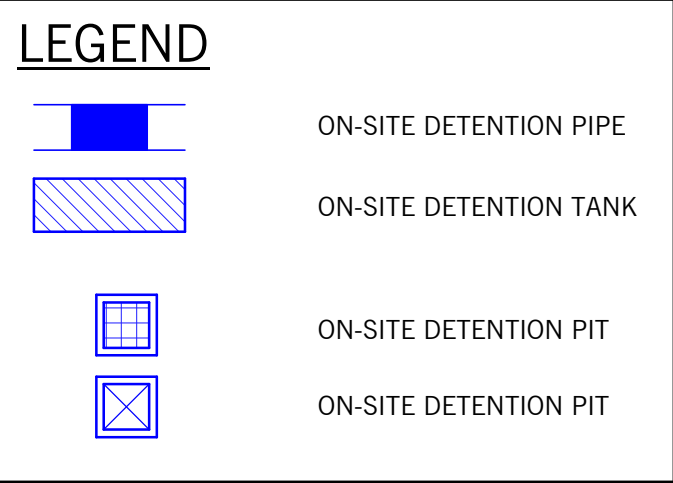
**TITLE**

## GROUND FLOOR - STORMWATER DRAINAGE PLAN

# CIVIL DRAWING

DATE	DESIGNED BY GP	CHECKED BY GP
SCALES AT A1 As indicated	DRAWN BY GP	APPROVED BY PW
JOB No. 20023	DRAWING No. CIV-WEB-100	REV. 3





TOTAL SITE AREA (APPROX)=	1683 m <sup>2</sup> (APPROXIMATE)
DESIGN METHOD =	OSD4W
PRE-DEVELOPED IMPERVIOUS AREA =	ASSUMED STATE OF NATURE CONDITION
POST-DEVELOPED IMPERVIOUS AREA=	76%
TIME OF CONCENTRATION =	7 min
AREA BYPASS =	67 m <sup>2</sup>
IMPERVIOUS=	100% (WORST CASE, SOIL FULLY SATURATED)

PRE-DEVELOPMENT FLOW RATE (L/S)				
1:5 YEAR ARI	1:10 YEAR ARI	1:20 YEAR ARI	1:50 YEAR ARI	1:100 YEAR ARI
17.40	19.46	22.21	25.79	28.50
BYPASS 1:100 YEAR ARI DISCHARGE RATE (INTENSITY = 198 mm/hr)				
3.6 (L/S)				
1:100 YEAR ON-SITE DETENTION TANK WITH BYPASS OFFSET (Q = 17.40 - 3.6 = 13.80 L/s ALLOWABLE)				
53.45 m³; ADAPT 54 m³				

<u>OSD TANK VOLUME</u>	
OSD SURFACE AREA =	27.5 m <sup>2</sup>
100 YEAR ARI DEPTH =	1.0 m
ACTUAL VOLUME =	27.5 m <sup>3</sup>

<u>QSD PIPE VOLUME</u>	
4.7m x 450Ø =	0.74 m³
96.2m x 600Ø =	27.1 m³

TOTAL VOLUME =  $55.34\text{m}^3 > 54\text{ m}^3$

ORIFICE PLATE	
ORIFICE OPENING =	800 mm
INVERT LEVEL OF OVERFLOW =	11.90 m
INVERT LEVEL OF OUTFLOW =	10.99 m
WATER LEVEL HEIGHT TO CENTER OF ORIFICE =	0.870 m
FLOWRATE OUT =	12.46L/s < 13.80 L/s

GROUND FLOOR - ON-SITE DETENTION PLAN  
SCALE: 1 : 100

[illegible]

60% DD ISSUE

TAYLOR

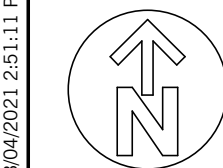
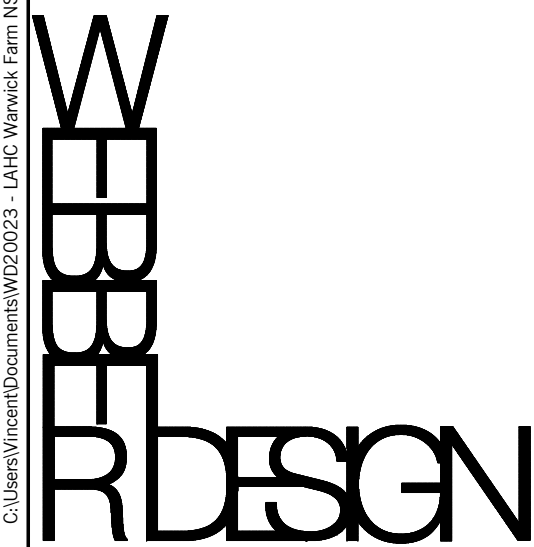
MANNIX PARADE WARWICK  
FARM  
11-13 MANNIX PARADE,  
WARWICK FARM

## GROUND FLOOR - ON-SITE DETENTION PLAN

CIVIL DRAWING			
DATE	DESIGNED BY GP	CHECKED BY GP	
SCALES AT A1 1 : 100	DRAWN BY GP	APPROVED BY PW	
JOB No. 20023	DRAWING No. CIV-WEB-105		REV. 3



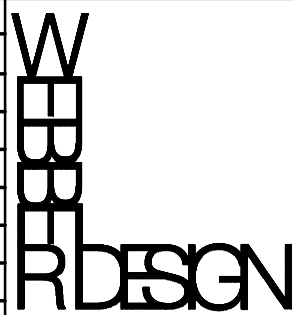
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13/04/2023 2:51:11 PM  
PRINT TIME:



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Rev	Description	Eng	Draft	Date	Rev	Description	Eng	Draft	Date
P1	FOR DA SUBMISSION	GP	GP	27.05.20					
P2	REVISED FOR DA	GP	GP	14.08.20					
1	ISSUED FOR 60% DD	GP	GP	27.11.20					
2	60% DD FINAL ISSUE	GP	ALN	18.12.20					
3	REVISED AS PER NEW ARCHITECT	GP	VH	09.04.21					
4	REVISED AS ARCHITECT ALIGNMENT	GP	VH	13.04.21					



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MELBOURNE, VIC, AUSTRALIA 3000  
T: +61 3 9514 7195

60% DD ISSUE
TAYLOR

PROJECT
MANNIX PARADE WARWICK FARM
11-13 MANNIX PARADE, WARWICK FARM

TITLE
GROUND FLOOR - PROPOSED STORMWATER CATCHMENT AREA

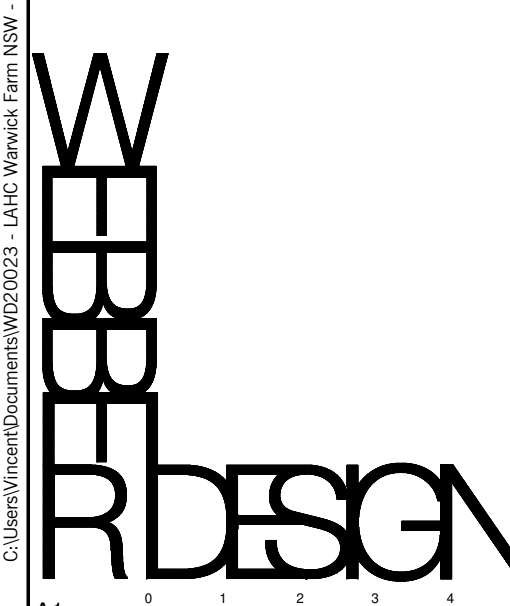
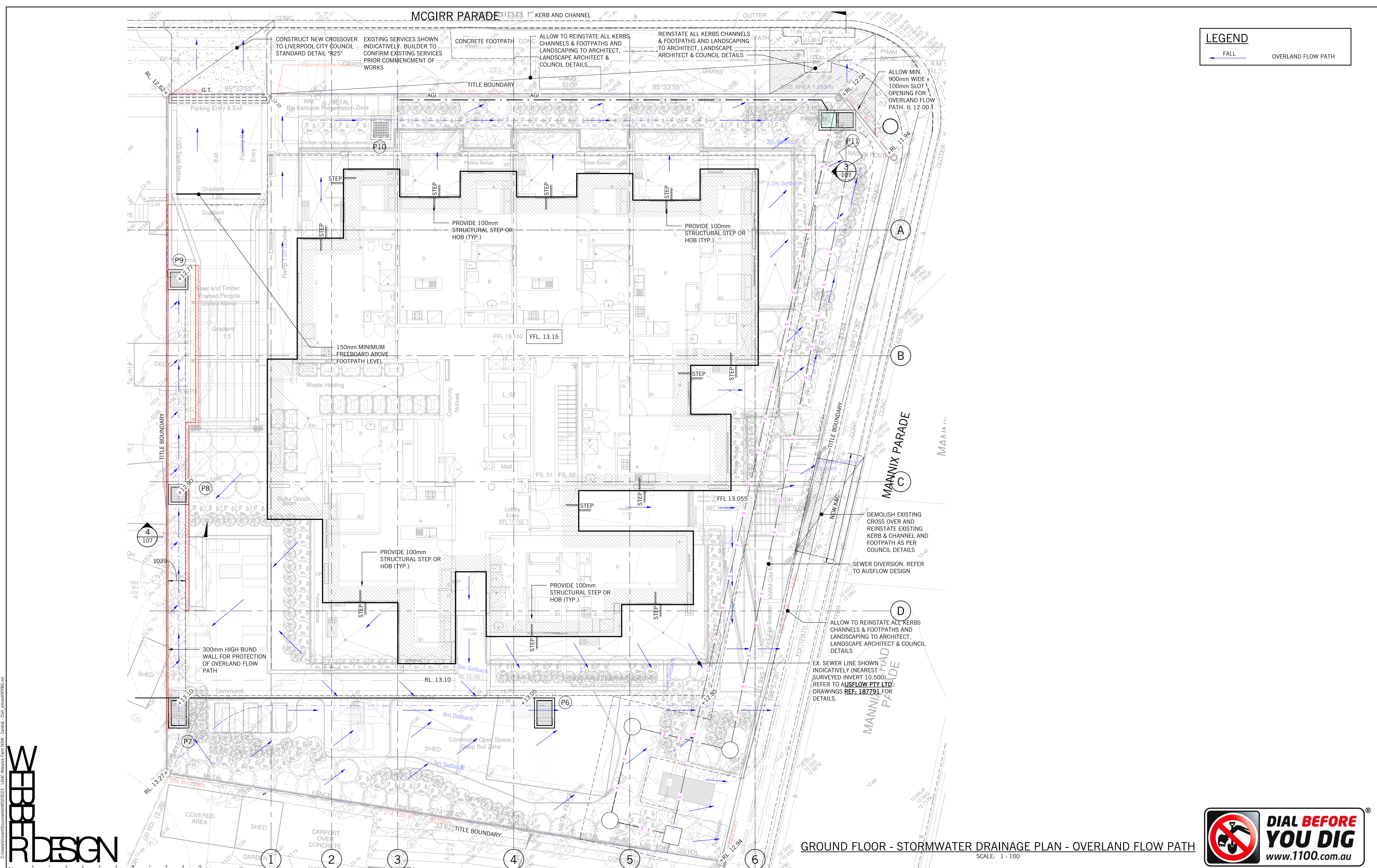


CIVIL DRAWING			
DATE	DESIGNED BY	CHECKED BY	
	GP	GP	
SCALES AT A1	DRAWN BY	APPROVED BY	
1 : 100	GP	PW	
JOB No.	DRAWING No.	REV.	
20023	CIV-WEB-106	4	



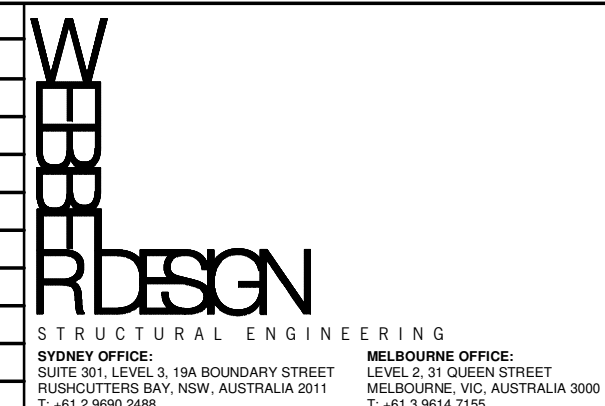






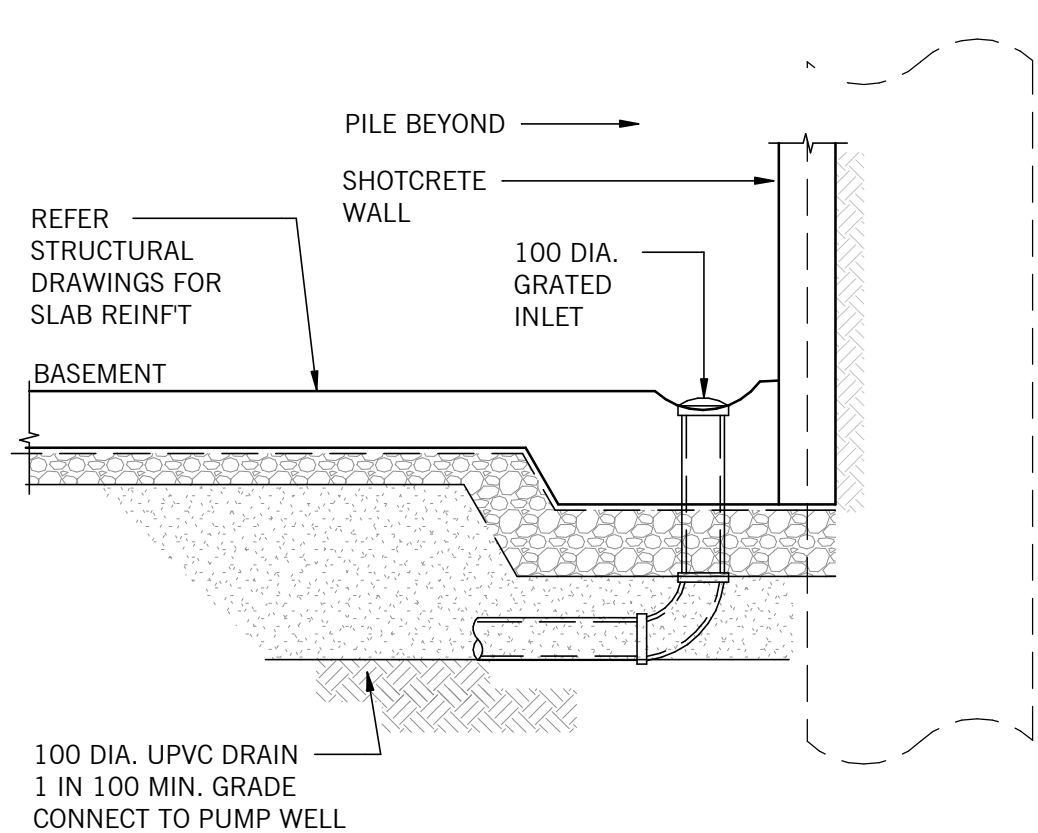
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Rev	Description	Eng	Draft	Date	Rev	Description	Eng	Draft	Date
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1	ISSUED FOR 60% DD	GP	GP	27.11.20					
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3	REVISED AS PER NEW ARCHITECT	GP	VH	09.04.21					
4	REVISED AS ARCHITECT ALIGNMENT	GP	VH	13.04.21					



60% DD ISSUE	PROJECT	MANNIX PARADE WARWICK FARM	TITLE	CIVIL DRAWING
TAYLOR	CLIENT	11-13 MANNIX PARADE, WARWICK FARM	OVERLAND FLOW PATH PLAN	DESIGNED BY: GP, CHECKED BY: GP
				SCALES AT A1: 1:100, DRAWN BY: GP, APPROVED BY: PW
				JOB No: 20023, DRAWING No: CIV-WEB-150, REV: 4





### GRATED INLET (G.I.) DETAIL

NTS

### SPOON DRAIN DETAIL

150

2000 MAX.

1

1

75mm MIN

100Ø SUB-BASE DRAIN STUB  
100mm INLET FOR CONNECTION  
OF ANY AGI DRAINS. (TYPICAL)

SL82 FABRIC CENTRALLY PLACED.  
300 LAPS WHERE REQUIRED.

150

150

REFER PIT SCHEDULE

GRATED GATIC TYPE CLASS 'C' OR APPROVED EQUIVALENT, WITH INSERT FRAME

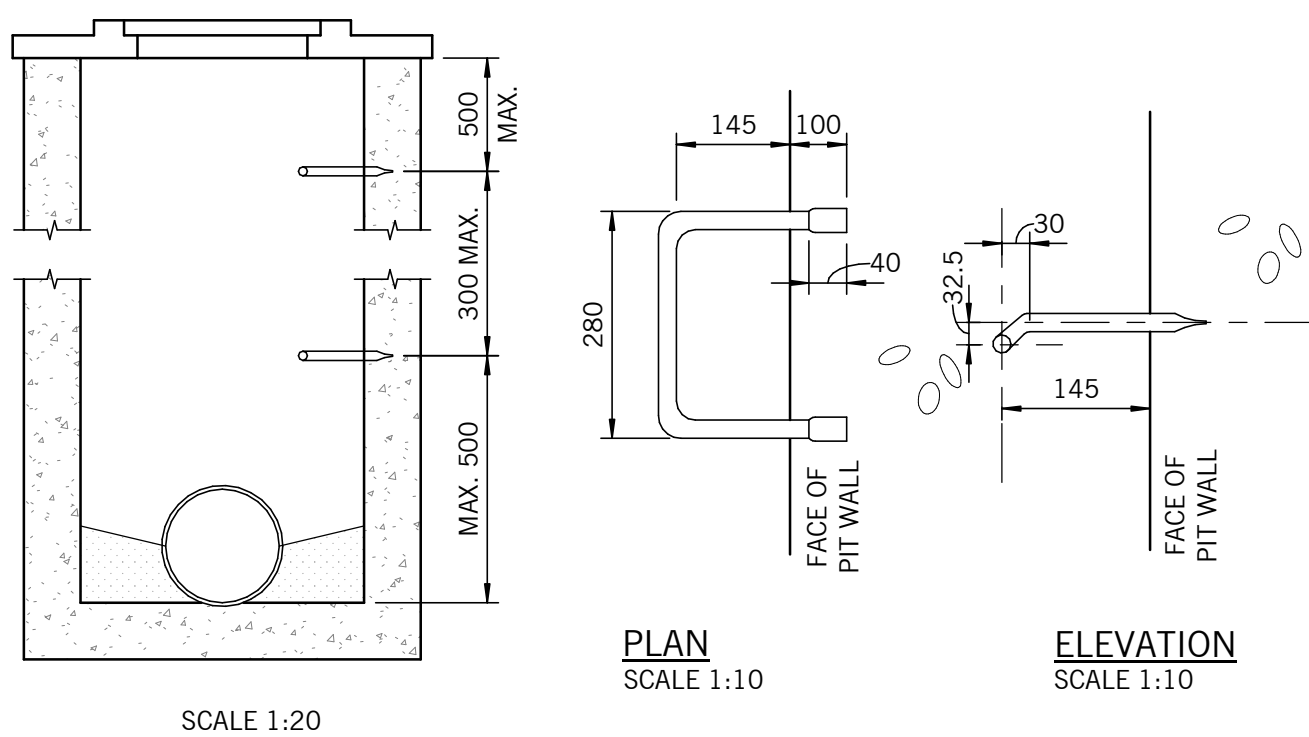
TOP OF PITS TO SUIT REQUIRED SURFACE LEVELS, REFER ARCHITECTURALS FOR FURTHER DETAILS.

AREA ADJACENT TO PIT TO BE COMPACTED IN ACCORDANCE WITH PAVEMENT REQUIREMENTS. ANY OVERT CUT TO BE REPLACED WITH SUITABLE COMPACTED MATERIAL. (TYPICAL FOR ALL EXCAVATIONS.)

NOTE

- IN ROAD RESERVE PITS TO BE IN ACCORDANCE WITH LOCAL AUTHORITY REQUIREMENTS.
- SHAPE BASE OF PITS TO SPRINGING LINE OF OUTLET PIPE TO CHANNEL

## SCALE 1:20



SCREW CAP TO SUIT

PAVING SLAB

30mm

100mm DIA. PVC "F" OR BEND AT RISER

GRATED LINEAR DRAIN  
 PROPRIETARY PRODUCT BY CONTRACTOR. MIN. 200 WIDE x 150 DEEP. FALL TO GRATED PIT AS SHOWN ON PLAN. GRATE TO ARCHITECTS SPECIFICATIONS.

ASPHALT AND SUBGRADE

FALL

FALL

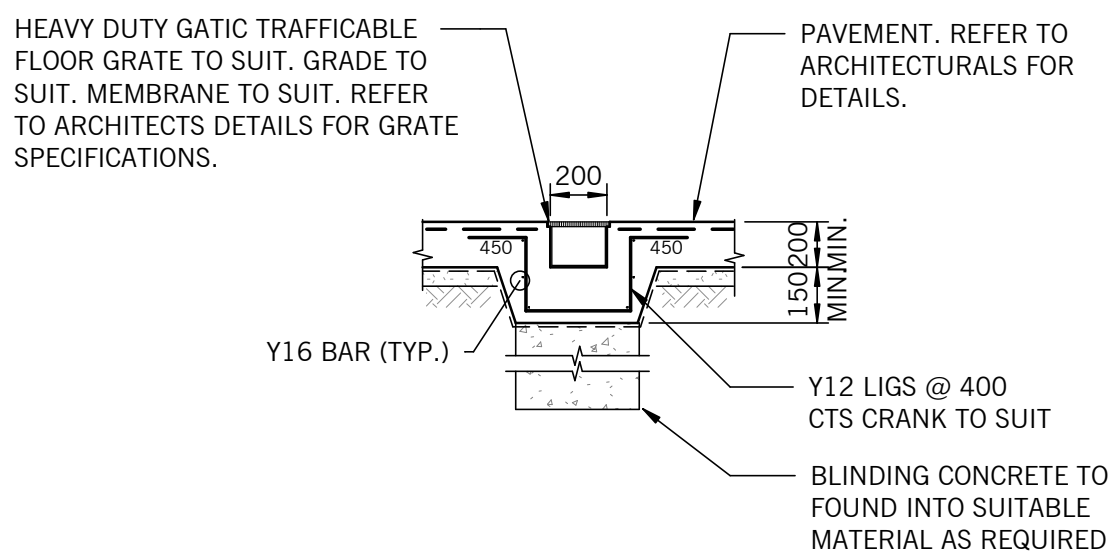
ASPHALT AND SUBGRADE

NOTE:  
REFER TO PROPRIETARY PRODUCT  
SPECIFICATIONS FOR INSTALLATION DETAIL.

NOTES:

1. STEP IRONS TO BE GALVANISED AND USED IN PITS EXCEEDING 900mm IN DEPTH
2. COMMENCE STEP IRONS 500mm FROM BOTTOM OF PIT WITH MAXIMUM 300mm SPACING TO WITHIN 500mm OF THE TOP.
3. STEP IRONS TO BE PLACED CENTRAL TO PIT COVER OPENINGS.
4. STEP IRONS INSTALLED IN COUNCIL PITS MUST COMPLY WITH STANDARDS AS3679 PART 1 AND AS/NZS 4680.
5. FOR PRECAST PITS, STEP IRONS MUST BE LOAD TESTED TO AS4198/1994

(TO BE INSTALLED AT HIGH POINTS, 30m INTERVALS  
AND AS NOMINATED ON DRAWINGS AS A MINIMUM)



## SCALE 1:20

SCALE: N.T.S.

NOTE

DESIGN OF PIT WALLS TO TAKE INTO ACCOUNT HYDROSTATIC PRESSURE FROM GROUND WATER FOR FULL DEPTH OF PIT

**NOTE**

SIZE AND SPECIFICATION OF PUMPWELL AND PUMPS  
T.B.C. PENDING REVIEW OF HYDRAULIC DRAWINGS

## SCALE 1:10

REFER TO RELEVANT AUTHORITY FOR  
FURTHER REQUIREMENTS AND LOCATIONS.

**WEBER DESIGN**

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LEVEL 2, 31 QUEEN STREET  
MELBOURNE VIC, AUSTRALIA 3000  
T. +61 3 9654 7165

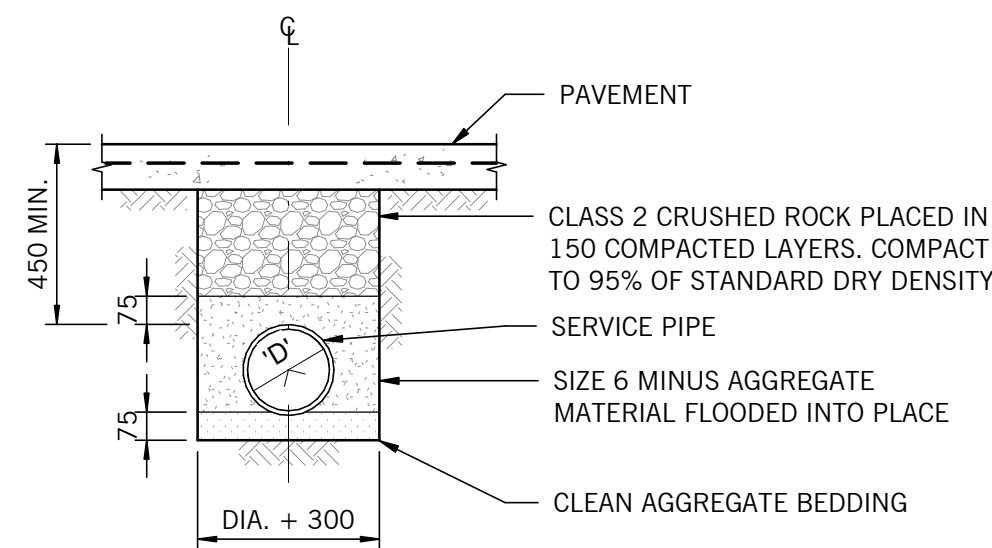
TAYLOR

MANNIX PARADE WARWICK  
FARM  
11-13 MANNIX PARADE,  
WARWICK FARM

# TYPICAL CIVIL DETAILS - SHEET 1

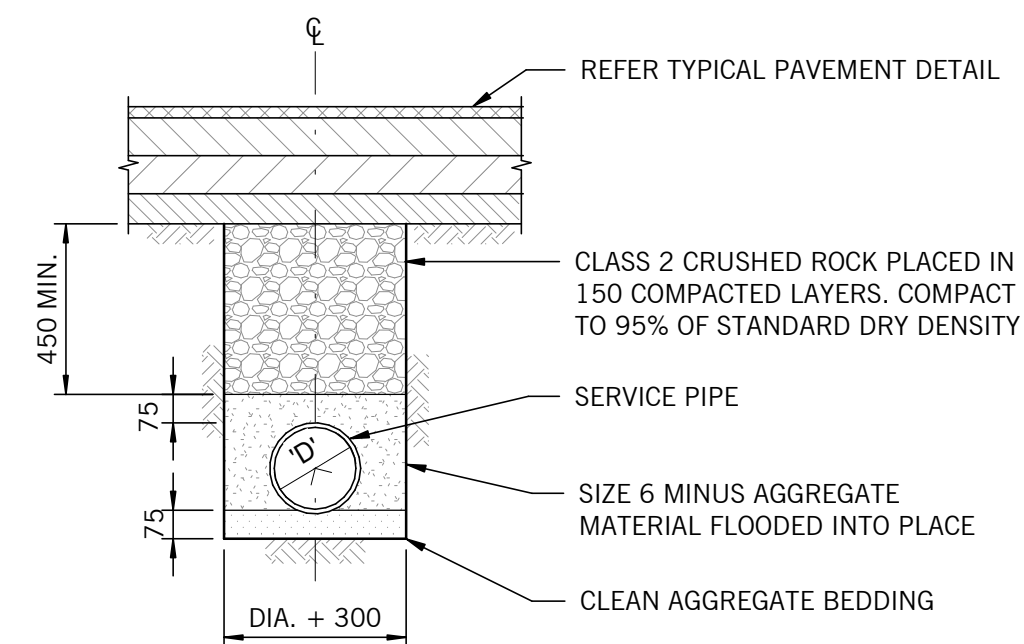
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DATE	DESIGNED BY GP	CHECKED BY GP	
SCALES AT A1 As indicated	DRAWN BY GP	APPROVED BY PW	
JOB No. 20023	DRAWING No. CIV-WEB-200		REV. 3





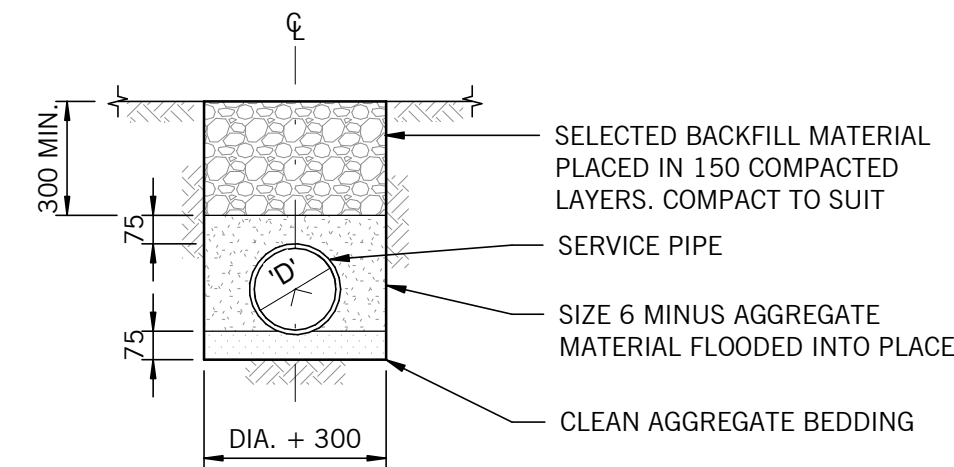
### PIPE LAYING DETAIL UNDER CONCRETE PAVEMENT

SCALE: 1:20



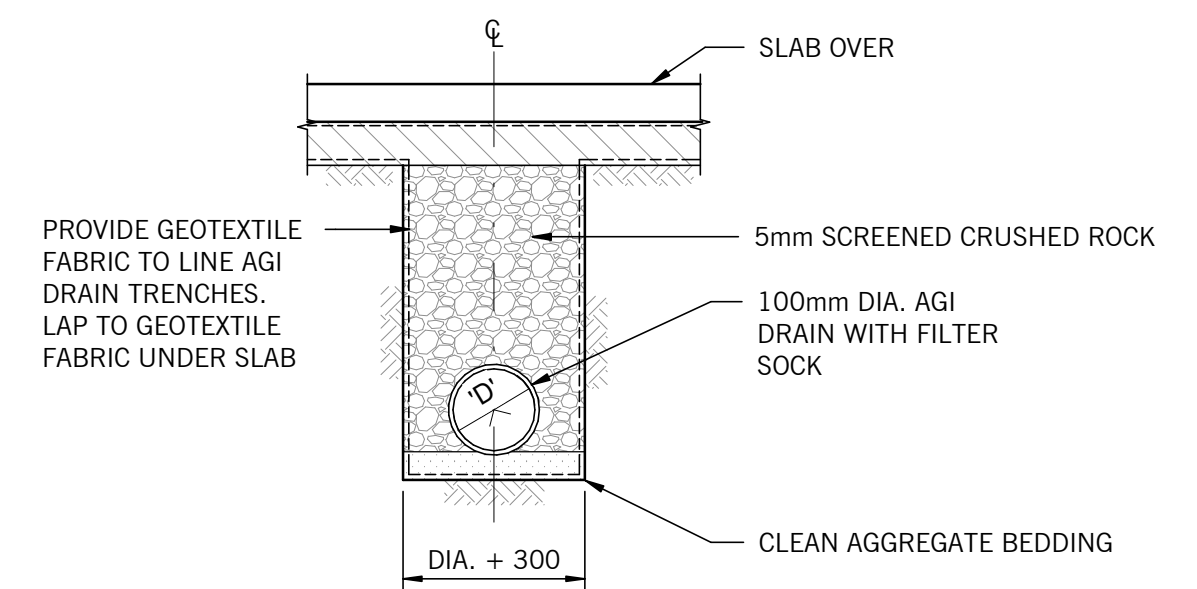
### PIPE LAYING DETAIL UNDER ASPHALT PAVEMENT

SCALE: 1:20



### PIPE LAYING DETAIL - OPEN SPACE

SCALE: 1:20



### AGI DRAIN LAYING DETAIL

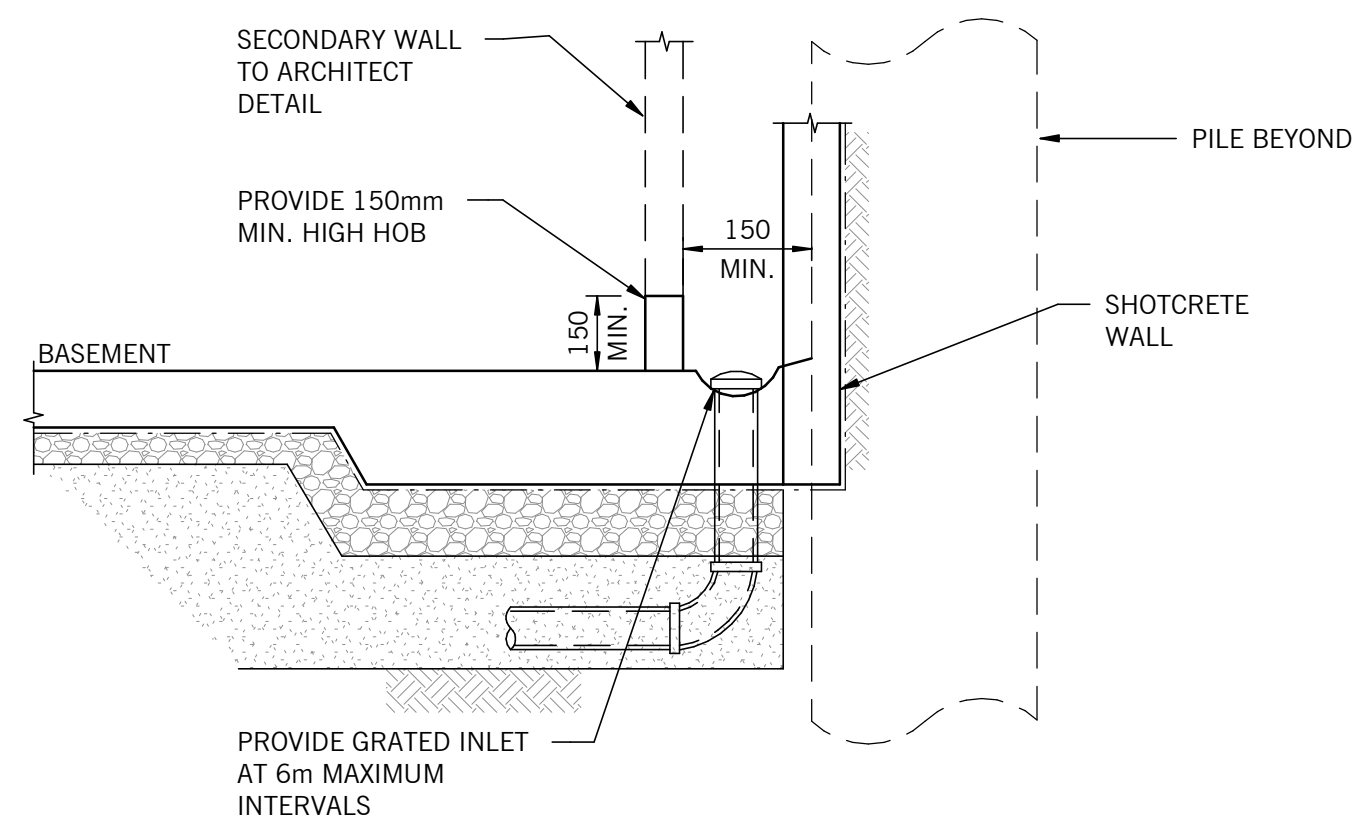
SCALE: 1:20  
NOTE

**NOTE:**

INVERT LEVEL OF AGI DRAIN SHALL BE AS REQUIRED BY ADJOINING CONSTRUCTION, BUT NOT LESS THAN THE 500mm BELOW FINISHED SURFACE LEVEL AND/OR 300mm BELOW THE FORMATION LEVEL OF ADJACENT CHANNELLING PAVEMENT SYSTEMS

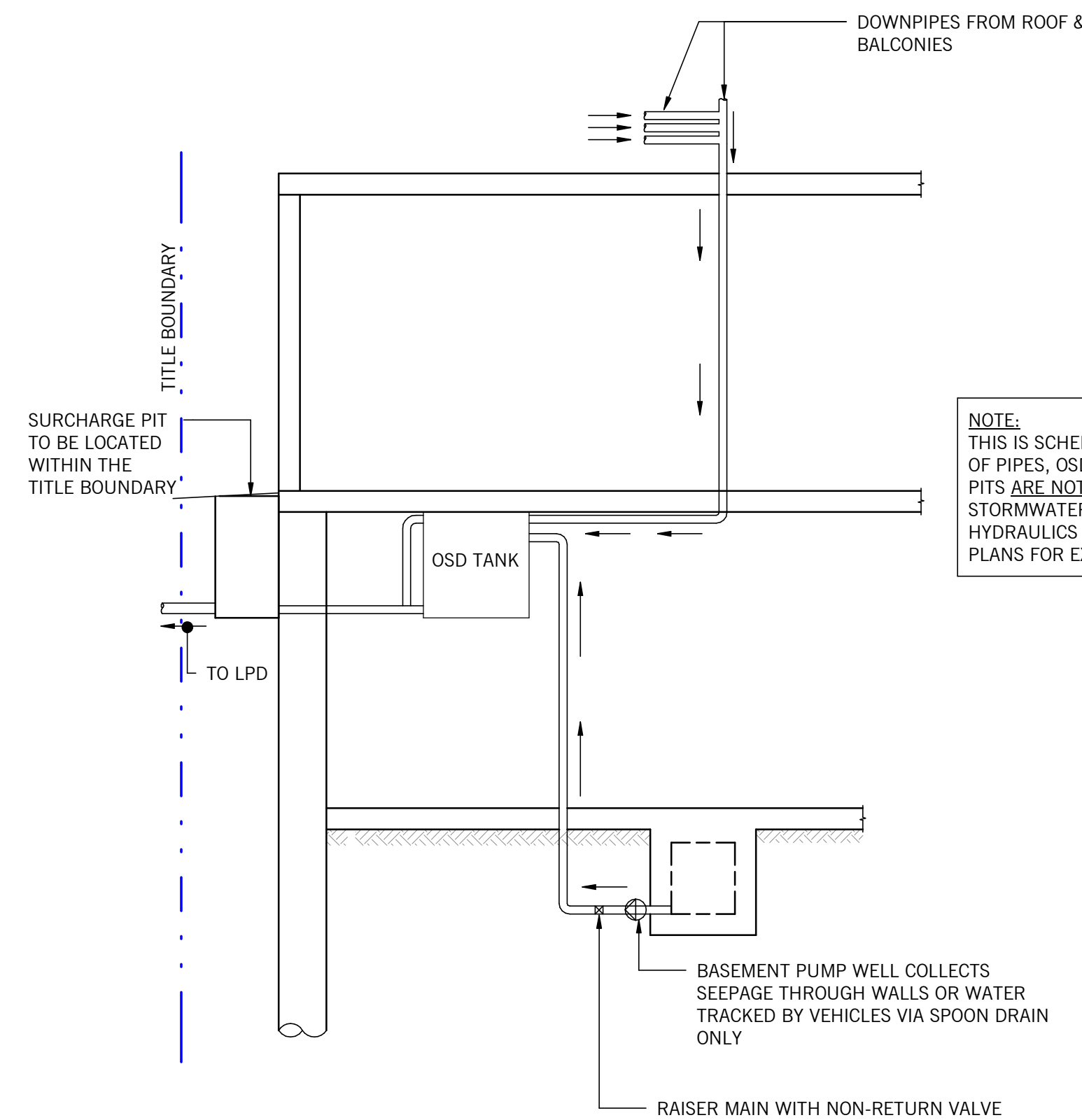
NOTE:

NOTE:  
ALL KERBS, RETAINING WALLS, PAVEMENT EDGES, ETC ARE  
TO BE AGI DRAINS TO BE CONNECTED TO MAIN IN GROUND  
DRAINAGE SYSTEM TO SUIT. AGI DRAINS NOT SHOWN ON  
DRAWINGS FOR CLARITY. REFER DETAILS.



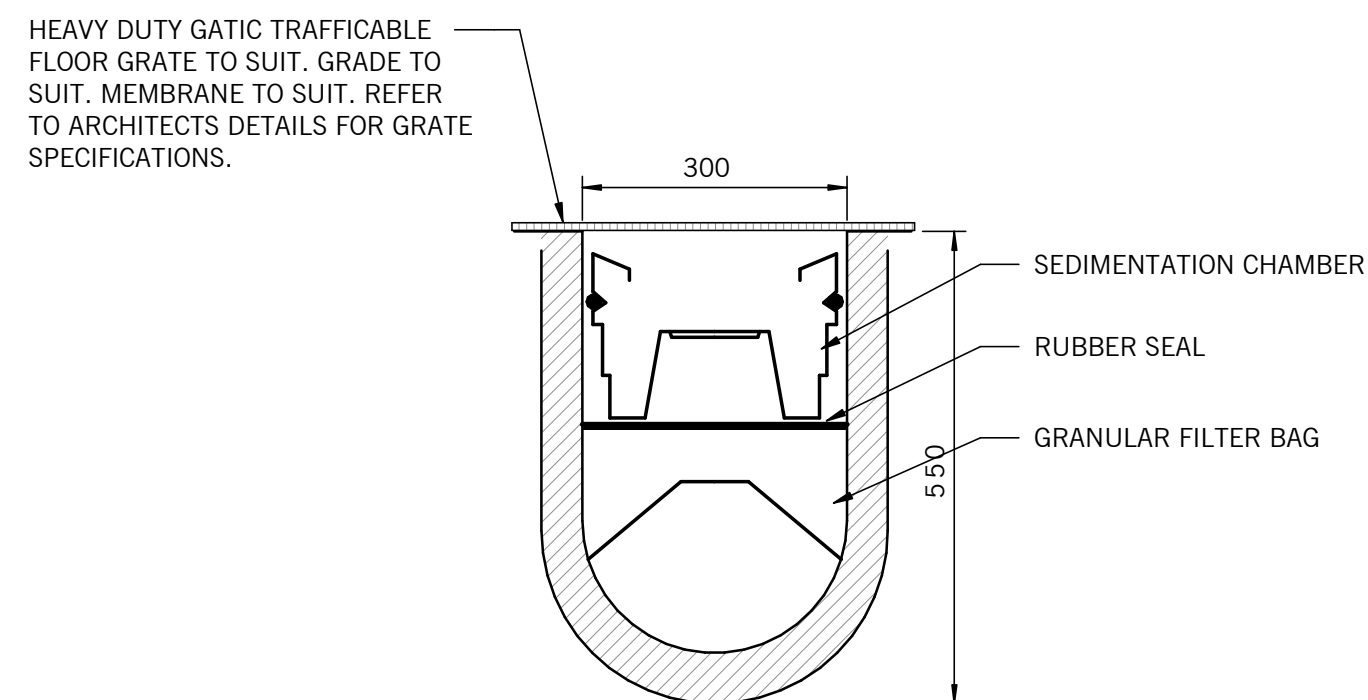
TYPICAL RETENTION DETAIL  
ADJACENT HABITABLE SPACE

NTS



## STORMWATER DISCHARGE SCHEMATIC

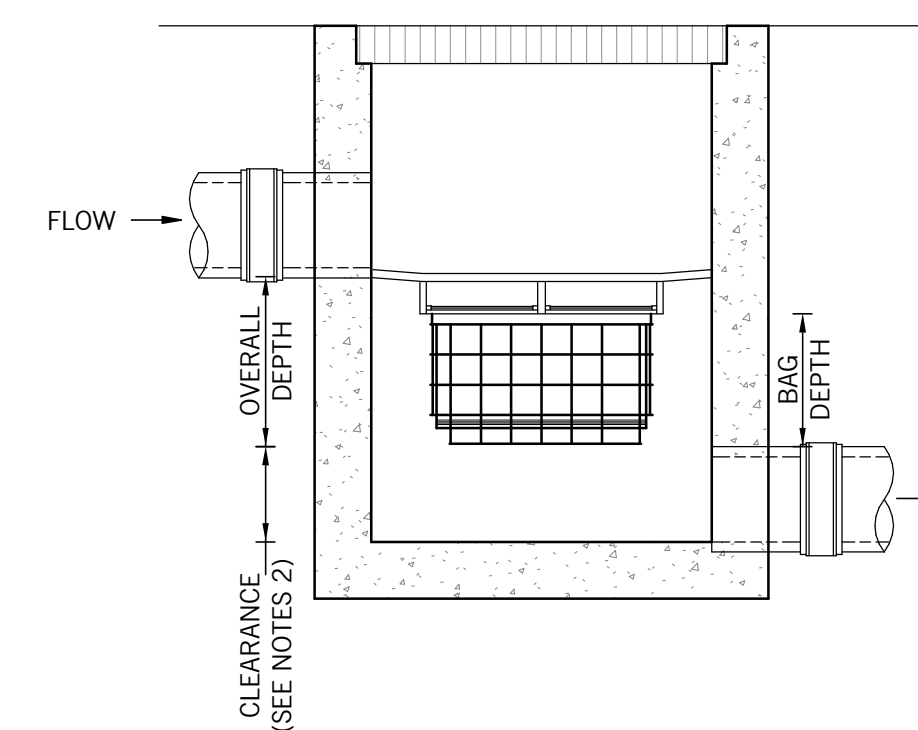
NTS



### HYDROCHANNEL DETAIL

SCALE 1:20

\*THIS A PROPRIETARY PRODUCT REFER TO MANUFACTURER'S SPECIFICATION DETAILS



### TYPICAL FILTRATION BAG DETAIL

N.T.S

### GENERAL NOTES

1. THE MINIMUM CLEARANCE DEPENDS ON THE CONFIGURATION (SEE NOTES 2) AND THE LOCAL COUNCIL REQUIREMENTS
2. CLEARANCE FOR ANY PIT WITHOUT AN INLET PIPE (ONLY USED FOR SURFACE FLOW) CAN BE AS LOW AS 50mm. FOR OTHER PITS, THE RECOMMENDED CLEARANCE SHOULD BE GREATER OR EQUAL TO THE PIPE OBVERT SO AS NOT TO INHIBIT HYDRAULIC CAPACITY
3. 100 MICRON BAGS FOR HIGHER WATER QUALITY FILTERING AND A COARSE BAG FOR TARGETING GROSS POLLUTANTS.
4. DRAWING NOT TO SCALE.

PRINT TIME:	9/04/2021 1:02:33 PM	<p>ALL RIGHT RESERVED, THIS WORK IS COPYRIGHT AND REMAINS THE PROPERTY OF WEBBER DESIGN PVT LTD. NO PART OF THIS WORK SHALL BE REPRODUCED OR COPIED IN ANY FORM OR BY MEANS GRAPHIC, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING OR INFORMATION RETRIEVAL SYSTEMS) WITHOUT THE PERMISSION OF WEBBER DESIGN PVT LTD.</p> <p>DO NOT SCALE DRAWINGS, USE FIGURED DIMENSIONS</p>
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[illegible]

**W  
E  
B  
R  
DESIGN**  
STRUCTURAL ENGINEERING

**SYDNEY OFFICE:**  
SUITE 301, LEVEL 3, 15A AUNDALEY STREET  
TUSCHUTTERS BAY, NSW, AUSTRALIA 2011  
TEL: 02 9560 1646

**MELBOURNE OFFICE:**  
LEVEL 2, 31 QUEEN STREET  
MELBOURNE, VIC. AUSTRALIA 3000  
TEL: 03 9434 2155

60% DD ISSUE

TAYLOR

PROJECT

MANNIX PARADE WARWICK  
FARM  
11-13 MANNIX PARADE,  
WARWICK FARM

TITLE

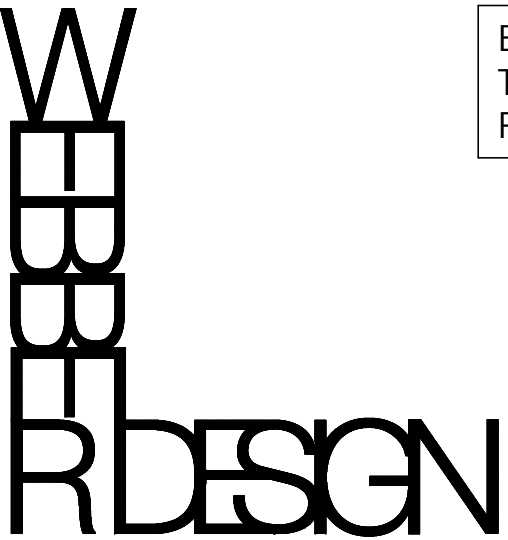
TYPICAL CIVIL DETAILS -  
SHEET 2

CIVIL DRAWING			
DATE	DESIGNED BY	CHECKED BY	
	GP		GP
SCALES AT A1	DRAWN BY	APPROVED BY	
As indicated	GP		PW
JOB No.	DRAWING No.	REV.	
20023	CIV-WEB-210	3	



# CROSSOVER PLAN

SCALE 1:20



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SYDNEY OFFICE:  
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RUSHCUTTERS BAY, NSW, AUSTRALIA 2013

**STRUCTURAL ENGINEERING**

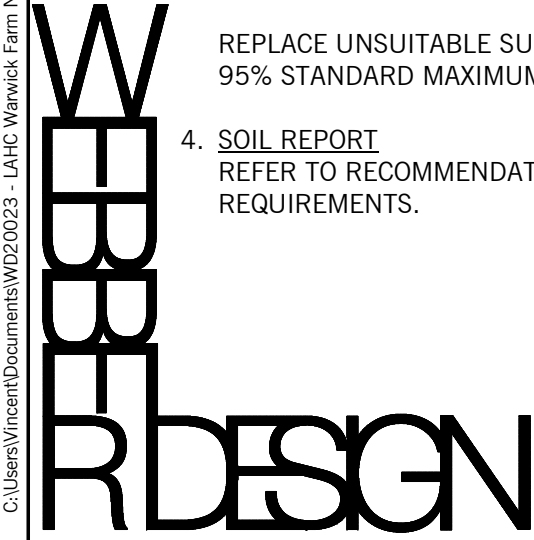
<b>SYDNEY OFFICE:</b> SUITE 301, LEVEL 3, 19A BOUNDARY STREET RUSHCUTTERS BAY, NSW, AUSTRALIA 2011 T: +61 2 9590 3498	<b>MELBOURNE OFFICE:</b> LEVEL 2, 31 QUEEN STREET MELBOURNE, VIC, AUSTRALIA 3000 T: +61 3 0614 7155
--	--

REFER TO LAYOUT DRAWINGS FOR LOCATIONS IN ASSOCIATION  
WITH ARCHITECTURALS AND LANDSCAPING DOCUMENTS

60% DD ISSUE		PROJECT  MANNIX PARADE WARWICK FARM  11-13 MANNIX PARADE, WARWICK FARM	TITLE  TYPICAL PAVEMENT DETAILS	CIVIL DRAWING			
CLIENT	TAYLOR			DATE	DESIGNED BY GP	CHECKED BY GP	
				SCALES AT A1 As indicated	DRAWN BY GP	APPROVED BY PW	
				JOB No. 20023	DRAWING No. CIV-WEB-300		REV. 3



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GENERAL NOTES:

1. THESE DRAWINGS, SHALL BE READ IN CONJUNCTION WITH THE SPECIFICATION, & ALL OTHER ASSOCIATED DISCIPLINE DRAWINGS SHOULD THERE BE ANY 'DISCREPANCY', POTENTIAL CONFLICT/CLASH ETC., NOTIFY THE SUPERINTENDENT IMMEDIATELY FOR RESOLUTION.
2. THE CONTRACTOR SHALL ARRANGE & PAY FOR ALL INSPECTIONS REQUIRED BY THE COUNCIL & ALL OTHER RELEVANT STATUTORY AUTHORITIES. ANY DRAINAGE OR OTHER LEVY FEES TO BE PAID BY OTHERS.
3. ALL SUB-GRADES/SUB-BASES/BASE COURSES & DRAINS, PRIOR TO CONCEALMENT, ARE TO BE INSPECTED BY THE SUPERINTENDENT & ALSO TESTS WITNESSED AND/OR VERIFIED BY AN AGREED PROCEDURE. AT LEAST TWO (2) DAYS' NOTICE (IN WRITING) TO BE GIVEN. IT SHOULD BE NOTED THAT THESE INSPECTIONS/FINDINGS ARE NOT TO BE TAKEN AS HAVING RECEIVED APPROVAL FOR THE COMPLIANCE OF THE INSTALLATION/CONSTRUCTION ETC. COMPLIANCE WILL BE ISSUED SUBJECT TO 'SATISFACTORY' EVIDENCE THAT THE WORKS COMPLY WITH THE CONTRACT DOCUMENTS & AUTHORITIES/SERVICE COMPANIES' REQUIREMENTS.
4. EXISTING SURFACE LEVELS/FEATURES SHOWN HAVE BEEN USED IN THE DESIGN PROCESS. THESE ARE SHOWN AS A GUIDE ONLY & MAY BE USED BY THE CONTRACTOR ON THE BASIS THAT THERE WILL BE NO CONTRACTUAL VARIATION APPROVED FOR ANY DISCREPANCIES IN THE EXISTING LEVELS/FEATURES CAUSING VARIATIONS IN THE QUANTITIES.
5. ALL CONNECTING (TYING INTO); SURFACE LEVELS, INVERT LEVELS, FEATURES SHALL BE CHECKED BY CONTRACTOR PRIOR TO CONSTRUCTION OF ANY WORKS. REPORT ALL FINDINGS TO THE SUPERINTENDENT PRIOR TO PROCEEDING WITH THE WORK.
6. ANY SERVICE THAT IS DISUSED/REDUNDANT/TO BE ABOLISHED SHALL BE ABOLISHED & REMOVED, CUT/PLUG/SEAL & REMOVE ABOLISHED PORTIONS ENSURING RETAINED PORTIONS ARE SECURELY SEALED/PLUGGED. ALL TERMINATIONS SHALL BE IN ACCORDANCE WITH THE AUTHORITIES/SERVICE COMPANIES' REQUIREMENTS. ANY SERVICES TO BE RELOCATED SHALL BE CARRIED OUT IN ACCORDANCE WITH THE DRAWINGS & THE REQUIREMENTS OF THE AUTHORITIES/ SERVICE COMPANIES BACKFILL RESULTANT EXCAVATIONS. ALLOW TO SAW-CUT PAVEMENTS PRIOR TO EXCAVATION & REINSTATE TO NEAREST JOINT.
7. ALL TRENCHES/EXCAVATIONS UNDERNEATH PAVED/NON-SPANNING SLABS/KREBS/CHANNELS AND WITHIN 500mm OF THESE SHALL BE BACKFILLED WITH CLASS 2 20mm CRUSHED ROCK PLACED & COMPACTED IN LAYERS TO A DENSITY OF 98% OF THE STANDARD MAXIMUM DRY DENSITY (S.M.D.D.) A.S.1289. TRENCHES/EXCAVATIONS ELSEWHERE SHALL BE BACKFILLED WITH APPROVED SELECT MATERIAL, FREE OF DEBRIS, RUBBLE, CLAY LUMPS & CAPABLE OF BEING COMPACTED IN LAYERS TO AT LEAST 95% OF THE S.M.D.D. OR OTHER METHOD OF COMPACTION AS INSTRUCTED BY THE SUPERINTENDENT. (ALLOW TO IMPORT IF INSUFFICIENT SELECT MATERIAL ON SITE)
8. ANY TRENCH/LOCAL EXCAVATION EXCEEDING 1.5m DEPTH, AND LESSER DEPTHS WHERE THE SIDES ARE NOT SELF-SUPPORTING, SHALL BE STABLES/SHORED TO COMPLY WITH THE RELEVANT CONSTRUCTION SAFETY ACTS.
9. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ADEQUATELY DRAIN THE SITE AT ALL TIMES.
10. ANY PAVEMENT, FEATURE OR SURFACE THAT IS DISUSED/REDUNDANT/TO BE ABOLISHED SHALL BE ABOLISHED & REMOVED, ALLOW TO SAW-CUT OUT PAVEMENTS, FENCES & OTHER STRUCTURE FEATURES & SURFACES PRIOR TO THE REMOVAL. TO ENSURE NEAT EDGE FOR ABUTTAL, ALLOW TO SAW-CUT PAVEMENTS PRIOR TO EXCAVATION & REINSTATE TO NEAREST JOINT
11. NOT ALL EXISTING SERVICES/MAINS ARE NECESSARILY SHOWN. POSITIONS SHOWN ARE ASSUMED LOCATIONS ONLY. SPACE SITE VERIFICATION, INVOLVING PROBING, INVESTIGATIVE EXCAVATIONS & CHECKING RECORDS AT AUTHORITIES/ COMPANIES IS TO BE CARRIED OUT PRIOR TO COMMENCEMENT OF WORK & BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
12. DIMENSIONS REFER TO OUTER WALL OF BUILDING CENTERLINE OF SERVICE BACK OF KERB THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS WITH SITE CONDITIONS & REFER ANY DISCREPANCIES TO THE SUPERINTENDENT PRIOR TO COMMENCING WORK.
13. DRAWINGS SHALL NOT BE SCALED.
14. ON COMPLETION OF THESE WORKS THE CONTRACTOR SHALL CLEAN UP THE SITE TO THE SATISFACTION OF THE SUPERINTENDENT AND REMOVE ALL DEBRIS, RUBBLE & SURPLUS MATERIAL OFF SITE.
15. ALL ANOMALIES SHALL BE REFERRED TO THE SUPERINTENDENT FOR CLARIFICATION BEFORE PUTTING WORK IN HAND.
16. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THE NECESSARY VEHICLE CROSSING PERMIT IS OBTAINED FROM COUNCIL THE VEHICLE CROSSING SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE COUNCIL REQUIREMENTS.
17. ALL HEIGHTS ARE TO AHD (REFER LAND SURVEYOR).
18. EXCAVATED MATERIAL & TOPSOIL TO BE STOCKPILED AS DIRECTED BY THE SUPERINTENDENT AND REUSED ON SITE AS MUCH AS POSSIBLE. NO MATERIAL TO BE MOVED OFF SITE UNLESS APPROVED BY THE SUPERINTENDENT
19. FOR LINE MARKING STANDARDS AND REQUIREMENTS REFER TO THE ARCHITECTS SPECIFICATIONS.
20. PRIOR TO COMMENCING ANY WORKS OR TRANSPORTATION OF SOIL OFF SITE REFER TO THE RECOMMENDATIONS CONTAINED WITHIN THE SOIL CONTAMINATION ASSESSMENT REPORT.
21. FOR PREPARATION OF AVAILABLE SUB BASE TO PAVEMENTS, FOOTINGS FOR RETAINING WALLS, SCREENS, FENCES AND CONCRETE SEATING, REFER TO THE RECOMMENDATIONS CONTAINED WITHIN THE AVAILABLE GEOTECHNICAL REPORT.

EXCAVATION, FILLING, COMPACTION TOPSOIL:

1. USEABLE TOPSOIL OBTAINED FROM EXCAVATIONS SHALL BE STOCKPILED SEPARATELY ON SITE FOR USE IN LANDSCAPING AREAS
2. FILLING.  
FILL MATERIAL SHALL BE FREE OF TOPSOIL, DELETERIOUS AND/OR PERISHABLE MATTER & WHICH AFTER COMPACTION HAS A MAXIMUM PARTICLE DIMENSION OF NOT MORE THAN 150mm WITHIN 400mm OF THE SUBGRADE, OR 400mm AT DEPTHS GREATER THAN 400mm BELOW SUBGRADE. MATERIAL CLASSIFIED AS SILT, EITHER BEFORE OR AFTER COMPACTION, IS NOT ACCEPTABLE AS FILL UNLESS OTHERWISE APPROVED BY THE SUPERINTENDENT.  
  
THE MATERIAL IMMEDIATELY BELOW THE FILL AREA SHALL BE SCARIFIED TO A DEPTH OF 150mm, & COMPACTED TO MEET THE SPECIFIED REQUIREMENTS.  
  
FILL SHALL BE PLACED & SPREAD IN UNIFORM LAYERS & SHALL BE COMPACTED TO MEET THE SPECIFIED REQUIREMENTS. DURING THE PLACEMENT OF FILL THE SURFACE OF EACH LAYER SHALL BE KEPT GENERALLY PARALLEL TO THE SURFACE OF THE SUBGRADE. ANY ROCKY MATERIAL PRESENT IN THE FILL FOR ANY LAYER SHALL BE UNIFORMLY DISTRIBUTED WITHIN THE LAYER & THE WHOLE SHALL BE COMPACTED AS SPECIFIED.  
  
THE CONTRACTOR SHALL ENSURE THAT AN ADEQUATE BOND WILL DEVELOP BETWEEN EACH LAYER OF FILL. FILLING SHALL BE CARRIED UP IN HORIZONTAL LAYERS, EXTENDING THE FULL WIDTH OF THE WORKS, NOT EXCEEDING 200mm. EACH LAYER SHALL BE COMPACTED IN ACCORDANCE WITH A.S. 1289 BY APPROVED COMPACTION EQUIPMENT, CAREFULLY ROUTED & DIVERTED TO ENSURE AN EVEN COMPACTION OVER THE FULL AREA OF EACH LAYER.

3. COMPACTION:  
COMPACTION REQUIREMENTS FOR EXCAVATION  
  
REPLACE UNSUITABLE MATERIAL IN CUTTINGS OTHER THAN SUB-GRADE - DENSITY OF SURROUNDING UNDISTURBED SOIL SUBGRADE PREPARATION, CUT OR FILL - COMPACTED TO NOT LESS THAW 98% STANDARD MAXIMUM DRY DENSITY FOR PAVEMENTS, 95% STANDARD MAXIMUM DRY DENSITY ELSEWHERE, AS 1289.  
  
REPLACE UNSUITABLE SUBGRADE MATERIAL -COMPACTED TO NOT LESS THAN 98% STANDARD MAXIMUM DRY DENSITY FOR PAVEMENTS, 95% STANDARD MAXIMUM DRY DENSITY ELSEWHERE, AS 1289.
4. SOIL REPORT  
REFER TO RECOMMENDATION CONTAINED WITHIN THE GEOTECHNICAL REPORT FOR ALL SITE EXCAVATION FILLING AND COMPACTION REQUIREMENTS.

STORMWATER DRAINAGE:

1. UNLESS NOTED OTHERWISE (U.N.O), ALL STORMWATER DRAINS GREATER THAN 150 DIAMETER SHALL BE CLASS 2 RCP RRJ PIPES.
2. ALLOW FOR ALL NECESSARY FITTINGS, SHORT PIPES ETC, WHETHER OR NOT DETAILED ON DRAWING. ALL CONNECTIONS ON GRADE TO DRAINS (WHERE NOT AT PIT) TO BE 45°. ALL FITTINGS TO BE MANUFACTURED.
3. AG DRAINS TO BE 100mm DIAMETER CORRUGATED PERFORATED PLASTIC PIPE (1000 Kn/m STRENGTH), UNLESS OTHERWISE APPROVED BY THE SUPERINTENDENT TRENCH TO BE A MINIMUM OF 300mm WIDTH PIPES TO BE WRAPPED IN GEOTEXTILE FABRIC, & BACKFILLED WITH 7 N S SCREENINGS MINIMUM GRADE 1 IN 100 WHERE REQUIRED, FOR MAINTENANCE TERMINATE HEAD OF AG DRAIN AT SURFACE LEVEL WITH PVC SCREWED CAP.
4. COVER LEVELS OF PITS IN GRASSED OR GARDEN AREAS ARE GIVEN AS A GUIDE ONLY. COVER LEVELS SHALL BE ADJUSTED IF REQUIRED UPON COMPLETION OF THESE AREAS.
5. PITS TO BE CONSTRUCTED IN ACCORDANCE WITH DRAWINGS & ALSO AUTHORITY STANDARD DRAWINGS, WITH ALL INTERNAL SURFACES & EXPOSED SURFACES FINISHED SMOOTH & TRUE THE FORMWORK SHALL BE STRAIGHT, SMOOTH & COATED. ALL BREAK-INS FOR PIPE ENTRIES ARE TO BE MADE NEAT & FINISHED SMOOTH WITHOUT GAPS/CAVITIES. GRATES/SURROUNDS ARE TO BE HOT DIPPED GALVANISED

PAVEMENTS:

1. CONCRETE FOOTPATH.  
  
I) CONCRETE TO BE 25 MPa AT 28 DAYS.  
  
II) EXPANSION JOINTS SHALL BE ZIPPED POLYETHYLENE FOAM WITH AN APPROVED JOINT SEALER (SUCH AS SIKA-FLEX). THESE JOINTS ARE TO BE LOCATED WHERE PAVEMENT ABUTS STRUCTURAL COMPONENT, I.E. BUILDINGS, PITS ETC., & AT INTERVALS OF NOT MORE THAN 12 METRES.  
  
III) CONTRACTION JOINTS SHALL BE PROVIDED AT EVEN SPACINGS, BUT NOT MORE THAN 2m C-C IN PATHS. FOR BROAD AREAS, SPACING TO BE EVEN, BUT NOT MORE THAN 3M C-C. CONSTRUCTION JOINTS SHALL COINCIDE WITH EXPANSION/CONTRACTION JOINTS  
  
IV) NO CONCRETE POUR TO EXCEED 15 METRES.  
  
V) CONCRETE PAVING TO HAVE NON-SKID FLOAT FINISH.
2. ASPHALT & BITUMINOUS SURFACE TREATMENT BITUMEN, BITUMINOUS MIX & AGGREGATE MATERIAL FOR ASPHALT AND SURFACE TREATMENT SHALL BE CONSTRUCTED IN ACCORDANCE WITH SEC. 407 OF THE VICROADS SPEC., EXCEPT THE MAXIMUM VERTICAL IRREGULARITY AS MEASURED WITH A 3m STRAIGHT EDGE BETWEEN TWO POINTS SHALL NOT EXCEED 3mm THE FINISHED SURFACE SHALL BE FREE FROM DEPRESSIONS, RIDGES, JOINT OR OTHER IRREGULARITIES AND BE OF UNIFORM DENSITY & TEXTURE CONSISTENCY WITH NO FATTY OR BONEY AREAS (SEGREGATION)
3. CRUSHED ROCK. THE GRADING & PROPERTIES OF CRUSHED ROCK SHALL BE THE SAME CLASSIFICATION AS USED BY RMS.
4. PAVEMENT COMPACTION. SUB-BASE & BASECOURSE TO BE COMPACTED TO NOT LESS THAN 98% OF THE MAXIMUM STANDARD DRY DENSITY, AS1289.
5. SOFT AREAS. ANY CLAYEY SILT AND SOFT SOILS SHALL BE REMOVED AND REPLACED UNDER THE DIRECTION OF THE CONTRACTORS GEOTECHNICAL ENGINEER WITH APPROVED FILL MATERIAL (NON-SILTY, NON-ORGANIC) WITH A CBR GREATER THAN 5

SERVICES:

1. THE CONTRACTOR SHALL COORDINATE LAYING OF SERVICES TO AVOID CLASHES. REFER CLASHES/CONFLICTS TO SUPERINTENDENT FOR RESOLUTION PRIOR TO PROCEEDING. (WHERE APPLICABLE)

LANDSCAPE DEVELOPMENT:

1. RESPREAD USEABLE TOPSOIL OBTAINED FROM SITE STRIP IMPORT AS REQUIRED IF SHORTFALL.
2. ALL SURFACES ARE TO BE FLUSH WITH ABUTTING PAVING, KERBS, CHANNELS & TO FINISHED SURFACE LEVEL INDICATED & BE GRADED UNIFORMLY.

ROOF AND SUSPENDE FLOOR DRAINAGE:

1. ROOF AND SURFACE DRAINAGE (INCLUSIVE OF BALCONIES, TERRACES AND GROUND FLOOR) IS TO BE INDEPENDENTLY DRAINED AND DOCUMENTED BY THE HYDRAULIC ENGINEER.
2. THE CONTRACTOR SHALL COORDINATE THE NECESSARY INTERFACE BETWEEN HYDROLICS AND CIVIL WORKS.

PRESERVATION OF EXISTING TREES MAINTENANCE REQUIREMENTS DURING CONSTRUCTION:

1. OPEN TRENCHING: IN THE PROXIMITY OF THE COUNCIL TREES OPEN TRENCHES ARE TO BE IN ACCORDANCE WITH LOCAL COUNCIL REQUIREMENTS.
2. FINES: CARE MUST BE TAKEN TO AVOID DAMAGE TO TREES DURING WORKS. UNDER COUNCIL BY LAWS FINES ARE APPLICABLE FOR ANY DAMAGE, INCLUDING BARK LOSS AND BROKEN BRANCHES
3. REINSTATEMENT: NATURE STRIP REINSTATEMENT MUST OCCUR IMMEDIATELY AFTER WORKS ARE COMPLETED. SPOILS ARE TO BE CLEAN, FERTILE AND WEED FREE. THE CONTRACTOR IS RESPONSIBLE FOR ANY SUBSIDENCE WHICH MAY OCCUR WITHIN THE FOLLOWING TWELVE (12) MONTHS. A DRY CLIMATE LAWN SEED IS TOO BE LIBERALLY APPLIED AND RAKED IN TO ALLOW GOOD GERMINATION AFTER RAIN OR WATERING
4. NATIVE VEGETATION REMOVAL: FOR WORKS REQUIRING THE REMOVAL OF NATIVE VEGETATION, APPROPRIATE INDIGENOUS SPECIES ARE TO NE REPLACED
5. COMPENSATION: IF ANY SIGNIFICANT TREES ARE DAMAGED OR SUFFER ILL EFFECTS DUE TO NON COMPLIANCE WITH THE COUNCILS REQUIREMENTS, COUNCIL MAY SEEK COMPENSATION

ABOLISHMENT:

1. ABOLISH AND REMOVE ALL DISUSED ITEMS, EXISTING ASPHALT PAVEMENT, DISUSED PITS, DRAINS, DISUSED ELECTRICAL, LIGHTING AND OTHER ITEMS TO BE ABOLISHED.
2. ALL TREES THAT ARE TO BE ABOLISHED ARE TO HAVE THEIR ROOTS GRUBBED OUT TO 300mm BELOW FORMATION LEVEL.
3. ANY ITEMS THAT CAN BE SALVAGED/RE-USED SHALL BE DISMANTLED/ABOLISHED CAREFULLY AND OFFERED TO THE PRINCIPAL FIRSTLY FOR RE-USE. SHOULD THE PRINCIPAL NOT REQUIRE THESE ITEMS, THEY SHALL BE CONNECT THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM SITE.
4. ALL TERMINATIONS ARE TO BE MADE IN ACCORDANCE WITH AUTHORITIES, SERVICES, REQUIREMENTS. RESULTANT EXCAVATIONS TO BE BACKFILLED WITH CRUSHED ROCK WHERE LOCATED BENEATH PAVEMENTS, KERB AND CHANNEL AND WITH IN 500mm OF THESE, ELSEWHERE BACKFILLED WITH SELECTED MATERIAL.

SITE PREPERATION:

1. STRIP WHOLE SITE OF VEGETATION, TOPSOIL AND OTHER DELETERIOUS MATTER. EXCAVATE TO APPROVED SUBGRADE. THE DEPTH OF EXCAVATION SHALL BE AT LEAST 300mm BELOW EXISTING VEGETATED SURFACE LEVELS OR FORMATION LEVEL WHICHEVER IS GREATER. PROOF ROLL AND COMPACT THE SUBGRADE IN THE PRESENCE OF THE SUPERINTENDENT. ANY SOFT OR UNSTABLE AREAS DETECTED SHALL BE EXCAVATED OUT AND REPLACED WITH BACKFILL MATERIAL SPECIFIED IN PAVEMENT NOTE FOR FILLING AND COMPACTION REFER TO EXCAVATION, FILLING, COMPACTION TOPSOIL NOTE.

KERBS:

1. REFER TO ARCHITECT AND LANDSCAPE ARCHITECT FOR FINISH TO ALL CONCRETE KERBING.
2. THE FINAL COLOUR IS TO BE APPROVED BY THE CLIENT VIA SAMPLE PROCESS THROUGH THE PROJECT MANAGER.

SUBGRADE PREPARATION NOTES AND PAVEMENT CONSTRUCTION SEQUENCE:

1. EXCAVATE IN AREA NEEDED TO A LEVEL REQUIRED TO CONSTRUCT NEW PAVEMENT AND FOR MINIMUM REMOVAL OF ALL TOP SOIL AND/OR REMOVAL OF ALL SILTY SAND. SILTY CLAY OR MATERIAL NOT DEEMED SUITABLE FOR REUSE.
2. COMPACT SUB-GRADE TO 95% MODIFIED MAXIMUM DRY DENSITY WITH MIN. 4 PASSES EACH WAY OF A VIBRATING SMOOTH WHEELED ROLLER OF NOT LESS 10 TONNE/M.
3. REMOVE ANY SOFT SPOTS DETECTED AND REPLACE WITH CLASS 4, 40mm FCR COMPACTED TO 95% MODIFIED RELATIVE COMPACTION.
4. PLACE SOUTHERN GEOSYNTHETICS DUX W155 GEOTEXTILE ON SUBGRADE IN ACCORDANCE WITH THE DISTRIBUTORS RECOMMENDATIONS AND DETAILS.
5. SPREAD NOMINAL 150mm THICKNESS OF CRUSHED ROCK AS DETAILED AS CAPPING LAYER AND PAVEMENT SUBBASE WITH SPREADING EQUIPMENT NOT ACCESSING THE GEOTEXTILE.
6. COMPACTED SUBBASE MATERIAL AS DETAILED AND PRECEED WITH NEXT PAVEMENT LAYER.
7. OBTAIN COMPACTION TESTS OF SUBGRADE AND EACH BASE LAYER PLACED FROM NATA REGISTERED LABORATORY. MINIMUM NUMBER OF TESTS No. 1 PER 50m² OR No. 3 PER LAYER (WHICHEVER IS GREATER). PROVIDE RESULTS FOR EACH TEST LAYER TO SUPERINTENDENT AND ENGINEER FOR REVIEW PRIOR TO PLACEMENT OF THE NEXT PAVEMENT LAYER.

DRAINAGE NOTES:

1. REFER EXISTING CONDITIONS, ARCHITECTS AND OTHER CONSULTANTS DRAWINGS, GEOTECHNICAL REPORT AND SPECIFICATION FOR ADDITIONAL NOTES AND DETAILS.& REINSTATE TO NEAREST JOINT
2. REFER TO SITE PLAN AND ARCHITECTS DRAWINGS FOR SURVEY LEVELS. CONTRACTOR TO VERIFY LEVELS PRIOR TO COMMENCEMENT OF WORKS.
3. ALL STORMWATER PIPES TO BE UPVC CLASS 'SEH' SOLVENT WELDED U.N.O.
4. MINIMUM PIPE GRADE ARE AS FOLLOWS U.N.O.

	UPVC	RC
100 DIA.	1:100 MIN.	1:60 MIN.
150 DIA.	1:150 MIN.	1:80 MIN.
225 DIA.	1:250 MIN.	1:150 MIN.
300 DIA.	1:325 MIN.	1:200 MIN.
5. MINIMUM COVER (CONTRACTOR TO VERIFY ON SITE)

	UPVC	UPVC (CLASS 12)	RC
GENERAL	300mm	150mm	150mm
UNDER PAVEMENT (LIGHT VEHICLE TRAFFIC)	450mm	300mm	300mm
UNDER PAVEMENT (MEDIUM VEHICLE TRAFFIC)	N/A	N/A	800mm
UNDER BUILDING SLAB	50mm	50mm	50mm
6. THE LOCATION, LEVELS AND GRADES OF ALL PROPOSED AND EXISTING SERVICES SHALL BE CHECKED BY CONTRACTOR PRIOR OR COMMENCING ANY WORKS.
7. THE DISCHARGE FROM THE SITE IS TO BE VERIFIED BY THE BUILDING PERMIT AUTHORITY PRIOR TO COMMENCEMENT OF WORKS.
8. CONNECT PIPES TO STREET SERVICES TO LOCAL AUTHORITY REQUIREMENTS. PIPES TO BE UPVC CLASS 12 IN ROAD RESERVE.
9. WHERE DOWNPIPES ARE EXPOSED TO EXTERNAL DAMAGE, SUITABLE PROTECTION IS TO BE PROVIDED AS PER ARCHITECTURAL REQUIREMENTS.
10. CARE MUST BE TAKEN WHEN BREAKING INTO EXISTING SERVICES. MAKE GOOD ALL DAMAGED WORKS INCLUDING PAVEMENTS AND SURFACE WORKS TO AUTHORITIES REQUIREMENTS.
11. IF PAVEMENT IS TO BE CONSTRUCTED PRIOR TO THE INSTALLATION OF SERVICES THEN CONDUITS ARE TO BE INSTALLED WHERE NECESSARY AND SYSTEM TO BE FULLY TESTED PRIOR TO PAVEMENT INSTALLATION.
12. TRENCHES TO BE FILLED WITH CLASS 2 F.C.R. OR OTHER APPROVED MATERIAL COMPACTED IN 150mm MAXIMUM THICK LAYERS TO A MINIMUM 96% DENSITY.
13. STORMWATER SYSTEM TO BE FULLY SEALED AND TESTED PRIOR TO FINAL COMPLETION. (CONTRACTOR TO ISSUE VERIFICATION TO ARCHITECT)
14. ANY AMENDMENTS TO PROPOSED SYSTEM ARE TO BE APPROVED BY THE ENGINEERS PRIOR TO COMMENCEMENT OF WORKS.
15. PITS AND SERVICES TO BE SUITABLY LOCATED SO THAT ADJACENT FOOTING STRUCTURE DOES NOT INDUCE LOADS ON SERVICES OR FOOTING.
16. PROVIDE INSPECTION OUTLETS AT BASE OF ALL DOWN PIPES AND AT CHANGE IN DIRECTIONS TO PIPEWORK.
17. STEP IRONS TO BE INSTALLED IN PITS GREATER THEN 900mm IN DEPTH TO RMS REQUIREMENTS AS A MINIMUM.
18. CONTRACTOR TO CO-ORDINATE WITH EXISTING AND NEW SERVICES AND ENSURE NO CLASHES OCCUR.
19. CONTRACTOR TO INSTALL ADDITIONAL CLEAN FILL TO SUIT COVER AND FALL REQUIREMENTS.
20. ALL PITS AND I.O.'S ARE TO BE FITTED WITH SECURITY MEASURES TO ARCHITECTURAL DETAILS.
21. ALL PIPEWORK CONNECTION DOWNPIPES ARE BY OTHERS AND CONNECTED TO MAIN DRAINAGE SYSTEM AT MINIMUM GRADE AS NOTED. REFER TO ARCHITECT FOR LOCATIONS OF DOWNPIPES.
22. ALL WORKS ARE TO BE IN ACCORDANCE WITH AUTHORITY REQUIREMENTS. CONTRACTOR TO CO-ORDINATE WITH AUTHORITY AND INCLUDE ALL REQUIREMENTS INTO WORKS.
23. CONTRACTOR TO PROVIDE SUITABLE TEMPORARY DRAINAGE SYSTEM DURING WORKS. SUBMISSION OF PROPOSAL TO BE ISSUED TO ARCHITECT PRIOR TO COMMENCEMENT OF WORKS.
24. PIT MINIMUM SIZE AS PER FOLLOWS;

< 600mm	= 450 x 450
> 600mm < 900mm	= 600 x 600
< 900mm > 1200mm	= 600 x 900
> 1200mm	= 900 x 900
25. ALL EXCAVATIONS FOR DRAINAGE SYSTEM ARE TO BE INSTALLED IN ACCORDANCE WITH REGULATORY AUTHORITIES REQUIREMENTS, INCLUSIVE OF 'THE CODE OF PRACTICE FOR SAFETY REGULATIONS IN TRENCHING OPERATIONS'.

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DO NOT SCALE DRAWINGS, USE FIGURED DIMENSIONS

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60% DD ISSUE

TAYLOR

MANNIX PARADE WARWICK FARM  
11-13 MANNIX PARADE,  
WARWICK FARM

CIVIL NOTES

CIVIL DRAWING

DATE

DESIGNED BY

CHECKED BY

GP

GP

APPROVED BY

PW

REV.

3

CIV-WEB-001

20023

1 : 100

GP

GP





**LEGEND**

- SITE BOUNDARY
- SEDIMENT FENCE
- FENCE / HOARDING
- [Hatched Box] STABILISED SITE ENTRY / EXIT TRUCK WASH / RUMBLE STRIPS (REFER TO DRG. C051 FOR DETAILS.)
- [Grid Box] STOCKPILE AREA
- [Dashed Arc] MESH & GRAVEL INLET FILTER (REFER TO DRG. C051 FOR DETAILS)
- [Zigzag Line] CATCH DRAIN
- [Box with X] TEMPORARY SUMP & SEDIMENT PUMP

- GENERAL NOTES:**
- EROSION AND SEDIMENT CONTROLS TO BE MONITORED ON A DAILY BASIS AND MAINTAINED
  - ROAD AND FOOTPATH TO BE SWEEP DAILY AND PUT SOIL SPILL BEHIND THE SEDIMENT CONTROLS.
  - ESCP DEVICES ARE TO REMAIN IN PLACE UNTIL 70% OF THE SITE HAS BEEN REVEGETATED.
- EXISTING SERVICES NOTES:**
- BUILDER TO CONFIRM EXACT LOCATION, DEPTH AND SIZE OF EXISTING SERVICES PRIOR COMMENCEMENT OF ANY WORKS.
  - IF ANY PROPOSED DRAINAGE SYSTEM INTERSECT WITH EXISTING SERVICES, CONTACT WEBBER DESIGN OFFICE FOR FURTHER ASSESSMENT.

SEDIMENT AND EROSION CONTROL PLAN  
SCALE: 1 : 100



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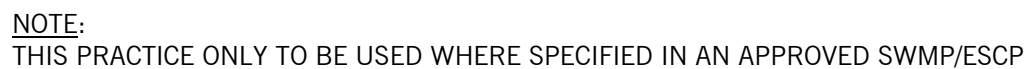
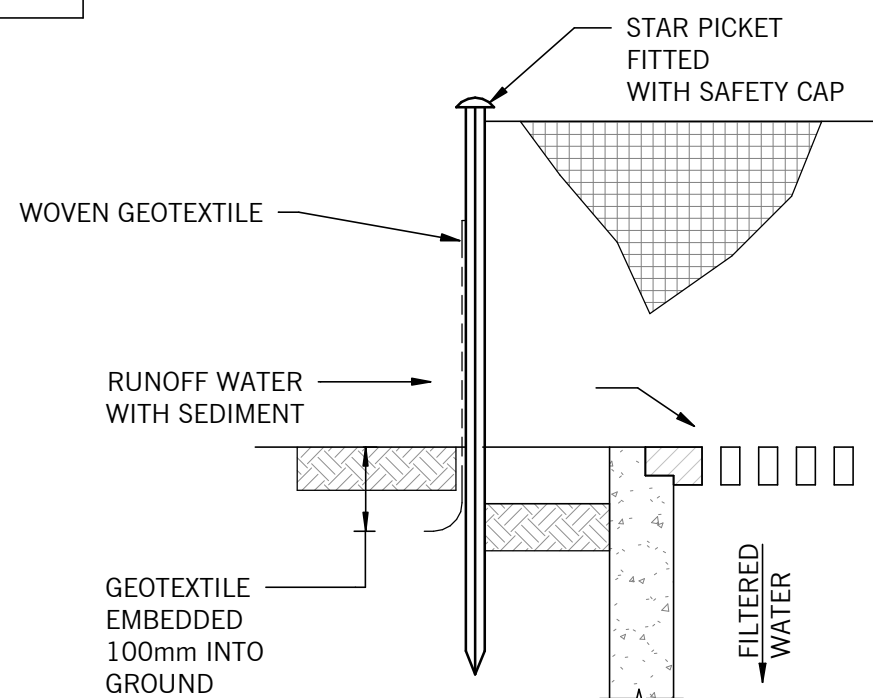
Rev	Description	Eng	Draft	Date	Rev	Description	Eng	Draft	Date
P1	FOR DA SUBMISSION	GP	GP	27.05.20					
P2	REVISED FOR DA	GP	GP	14.08.20					
1	ISSUED FOR 60% DD	GP	GP	27.11.20					
2	60% DD FINAL ISSUE	GP	ALN	18.12.20					
3	REVISED AS PER NEW ARCHITECT	GP	VH	09.04.21					

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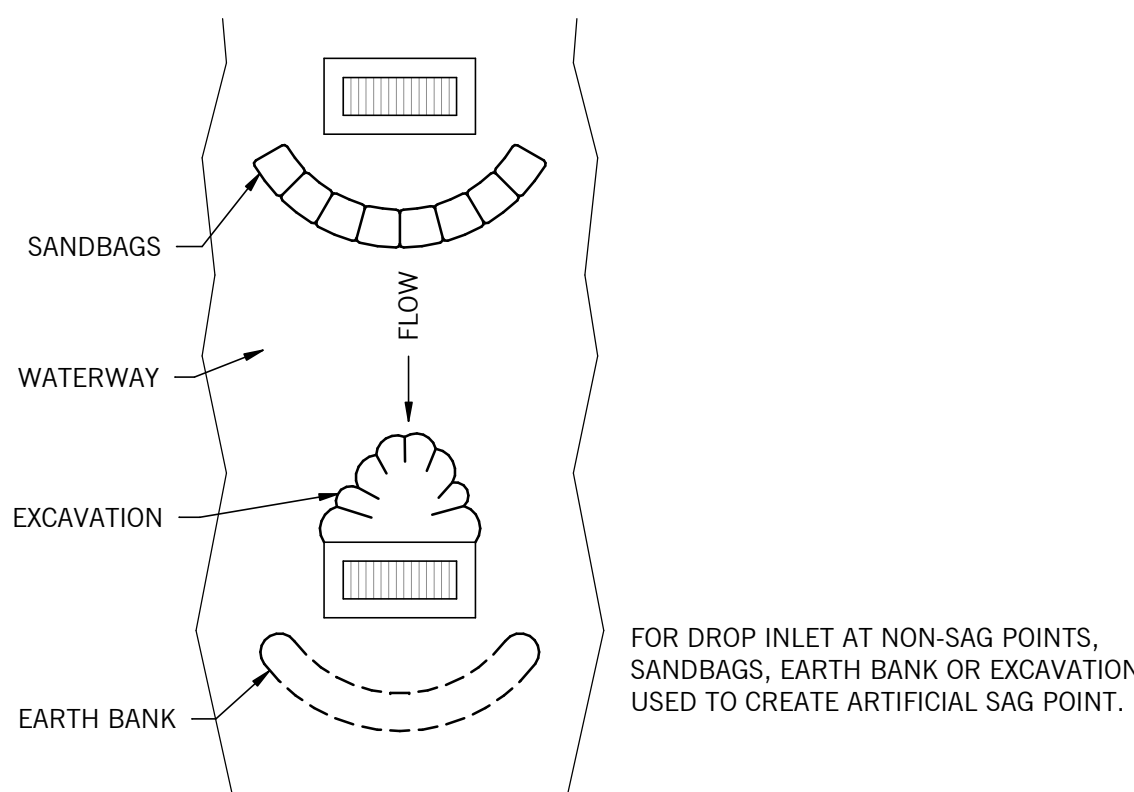
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60% DD ISSUE		PROJECT  MANNIX PARADE WARWICK FARM  11-13 MANNIX PARADE, WARWICK FARM	TITLE  SEDIMENT AND EROSION CONTROL PLAN	CIVIL DRAWING		
CLIENT  TAYLOR	DATE			DESIGNED BY  GP	CHECKED BY  GP	
	SCALES AT A1  As indicated			DRAWN BY  GP	APPROVED BY  PW	
	JOB No.  20023			DRAWING No.  CIV-WEB-050		REV.  3

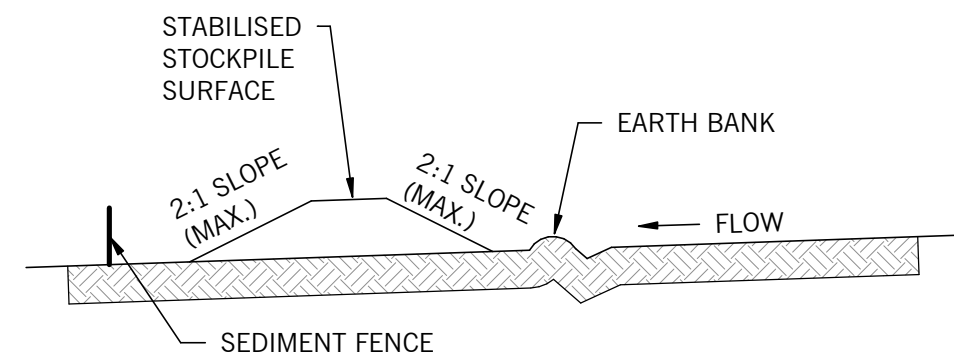




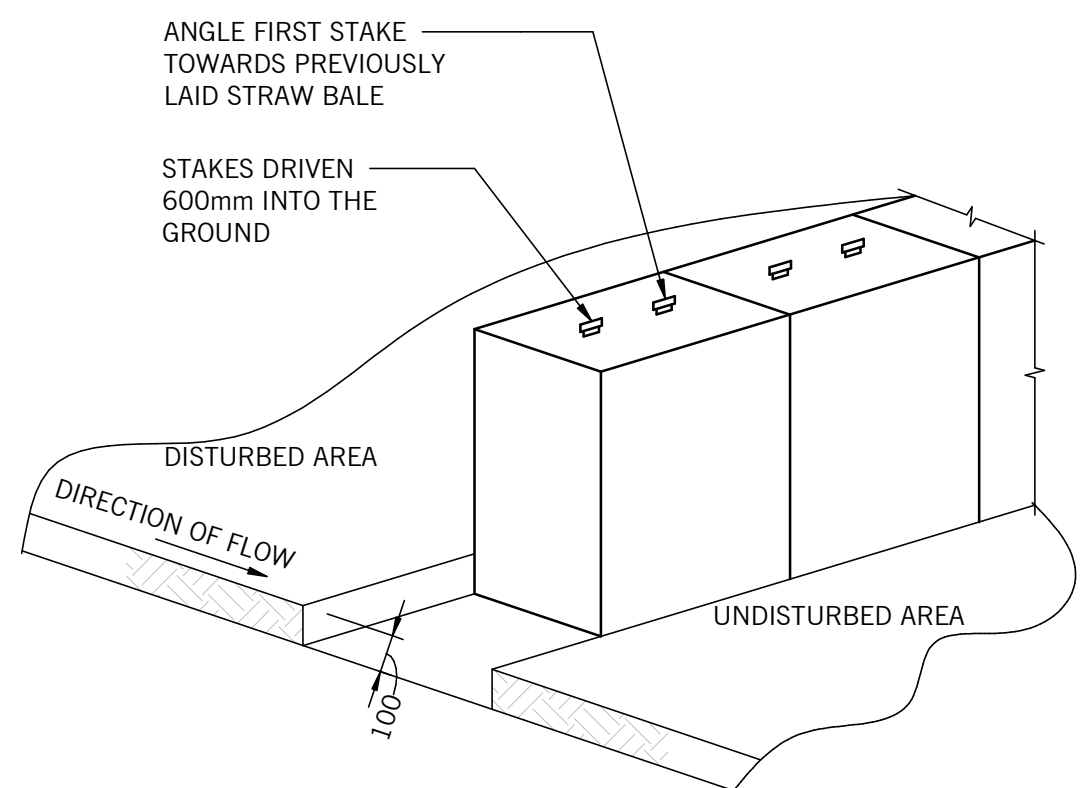
1. INSTALL FILTERS TO KERB INLETS ONLY AT SAG POINTS.
2. FABRICATE A SLEEVE MADE FROM GEOTEXTILE OR WIRE MESH LONGER THAN THE LENGTH OF THE INLET PIT AND HALF FILL IT WITH 25mm to 50mm GRAVEL OR CLEAN SAND.
3. FORM A 100mm CROSS-SECTION ABOUT THE INLET PIT AND 400mm WIDE.
4. PLACE THE FILTER AT THE OPENING LEAVING AT LEAST A 100mm SPACE BETWEEN IT AND THE KERB INLET. MAINTAIN THE OPENING WITH SPACER BLOCKS.
5. FORM A SEAL WITH THE KERB TO PREVENT SEDIMENT BYPASSING THE FILTER.
6. SANDBAGS FILLED WITH GRAVEL CAN SUBSTITUTE FOR THE MESH OR GEOTEXTILE PROVIDING THEY ARE PLACED FIRMLY ABUTTING EACH OTHER AND SEDIMENT-LADEN WATERS CANNOT PASS BETWEEN.



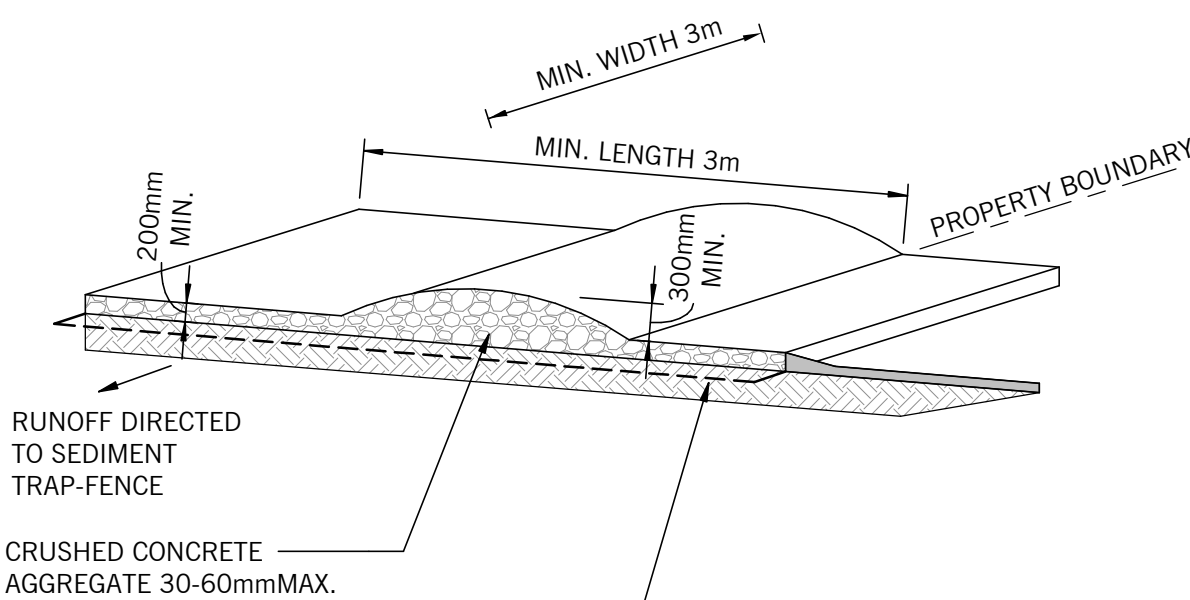
1. FABRICATE A SEDIMENT BARRIER MADE FROM GEOTEXTILE OR STRAW BALES.
2. FOR INSTALLATION PROCEDURES FOR THE STRAW BALES OR GEOFABRIC, REDUCE THE PICKET SPACING TO 1m CENTRES.
3. IN WATERWAYS, ARTIFICIAL SAG POINT CAN BE CREATED WITH SANDBAGS OR EARTH AS SHOWN IN THE DRAWING.
4. DO NOT COVER THE INLET WITH GEOTEXTILE UNLESS THE DESIGN IS ADEQUATE TO ALLOW FOR ALL WATERS TO BYPASS IT.



1. PLACE STOCKPILES MORE THAN 2 (PREFERABLY 5) METRES FROM EXISTING VEGETATION, CONCENTRATED WATER FLOW, ROADS AND HAZARD AREAS.
2. CONSTRUCTION ON THE CONTOURS AS LOW, FLAT, ELONGATED MOUNDS.
3. WHERE THERE IS SUFFICIENT AREA, TOPSOIL STOCKPILES SHALL BE LESS THEN 2m HEIGHT.
4. WHERE THEY ARE TO BE IN PLACE FOR MORE THEN 10 DAYS, STABILISED FOLLOWING THE APPROVED ESCP OR SWMP TO REDUCE THE C-FACTOR TO LESS THAN 0.10.
5. CONSTRUCT EARTH BANKS ON THE UPSLOPE SIDE TO DIVERT WATER AWAY FROM STOCKPILES AND SEDIMENT FENCES (REFER SEDIMENT FENCE NOTE) 1 TO 2 METRES DOWN SLOPE.



1. STAKE TO BE EITHER TAR COATED STAR OR 50 x 50 HARDWOOD.
2. RETURN STRAW BALES EVERY 20 METRES.
3. MINIMUM NUMBER OF BALES TO BE USED AT ALL TIMES IS 4.

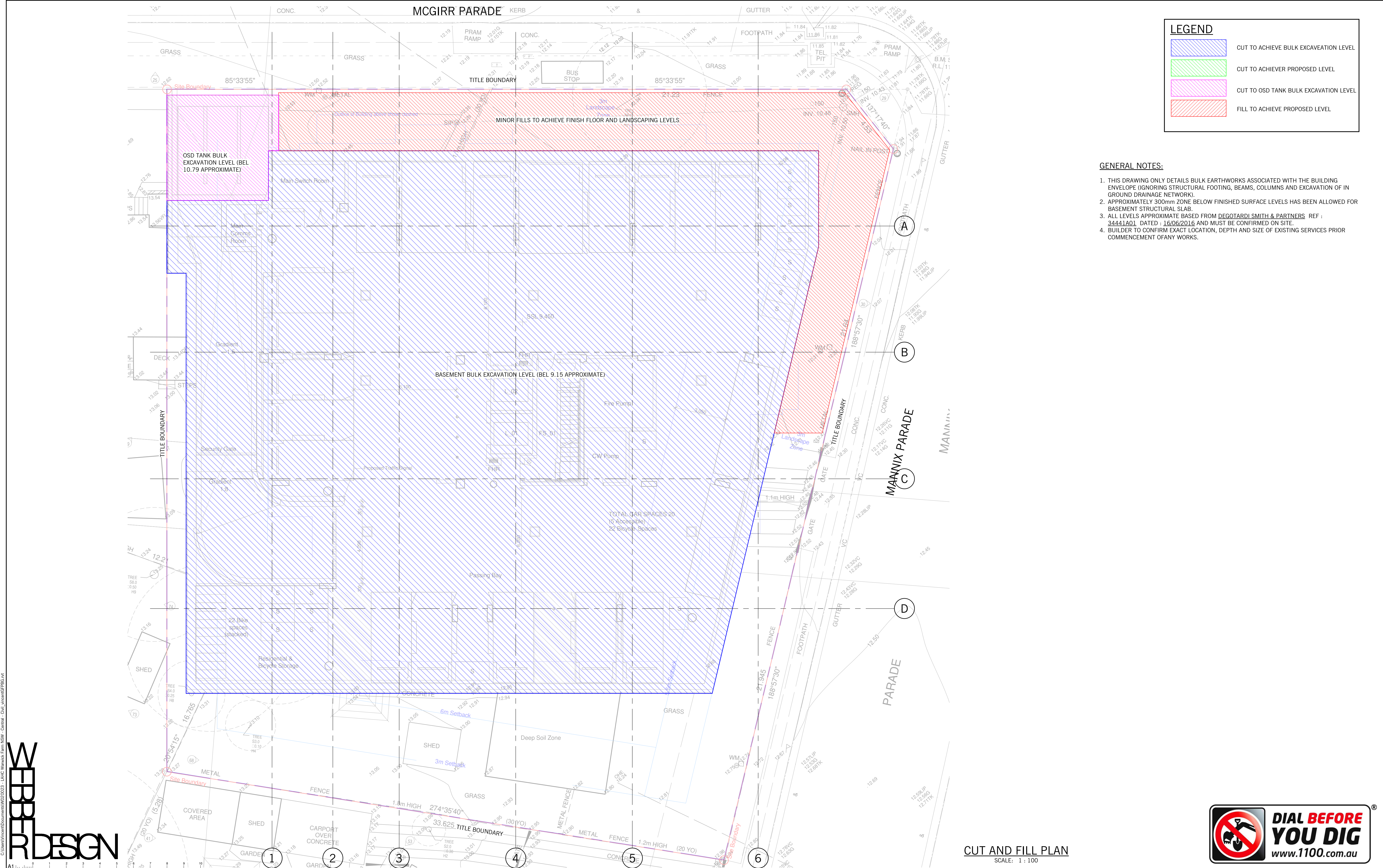


GEOTEXTILE FABRIC DESIGNED TO —  
PREVENT UNDERMINING OF  
SUBGRADE AND BASE MATERIALS AND  
TO MAINTAIN GOOD PROPERTIES OF  
THE SUB-BASE LAYERS. GEOFABRIC  
MAY BE A WOVEN OR  
NEEDLE-PUNCHED PRODUCT WITH A  
MINIMUM CBR BURST STRENGTH (AS  
3704-1990) OF 2500N.

1. STRIP AT LEAST 150mm OF TOPSOIL, LEVEL THE SITE AND COMPACT THE SUBGRADE.
2. COVER THE AREA WITH NEEDLE-PUNCHED GEOTEXTILE.
3. CONSTRUCT A 200mm THICK PAD OVER THE GEOTEXTILE USING CRUSHED CONCRETE AGGREGATE.
4. ENSURE THE STRUCTURE IS AT LEAST 3m LONG OR TO BUILDING ALIGNMENT AND AT LEAST 3m WIDE.
5. WHERE A SEDIMENT FENCE JOINS ONTO THE STABILISED ACCESS, CONSTRUCT A HUMP IN THE STABILISED ACCESS TO DIVERT WATER TO THE SEDIMENT FENCES.

[illegible]





LEGEND

CUT TO ACHIEVE BULK EXCAVEATION LEVEL

CUT TO ACHIEVER PROPOSED LEVEL

CUT TO OSD TANK BULK EXCAVEATION LEVEL

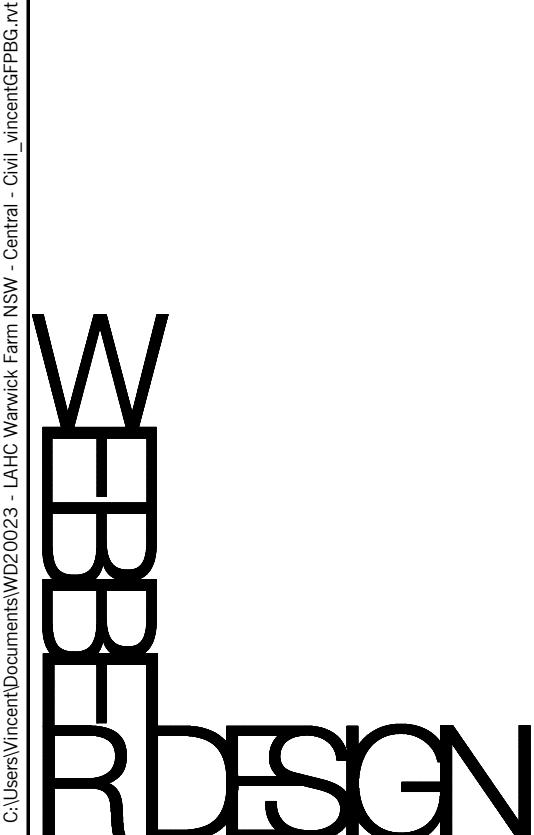
FILL TO ACHIEVE PROPOSED LEVEL

- GENERAL NOTES:
1. THIS DRAWING ONLY DETAILS BULK EARTHWORKS ASSOCIATED WITH THE BUILDING ENVELOPE (IGNORING STRUCTURAL FOOTING, BEAMS, COLUMNS AND EXCAVATION OF IN GROUND DRAINAGE NETWORK).

2. APPROXIMATELY 300mm ZONE BELOW FINISHED SURFACE LEVELS HAS BEEN ALLOWED FOR BASEMENT STRUCTURAL SLAB.

3. ALL LEVELS APPROXIMATE BASED FROM DEGOTARDI SMITH & PARTNERS REF : 34441A01 DATED : 16/06/2016 AND MUST BE CONFIRMED ON SITE.

4. BUILDER TO CONFIRM EXACT LOCATION, DEPTH AND SIZE OF EXISTING SERVICES PRIOR COMMENCEMENT OF ANY WORKS.



↑

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Rev	Description	Eng	Draft	Date	Rev	Description	Eng	Draft	Date
P1	FOR DA SUBMISSION	GP	GP	28.05.20					
P2	REVISED FOR DA	GP	GP	14.08.20					
1	ISSUED FOR 60% DD	GP	GP	27.11.20					
2	60% DD FINAL ISSUE	GP	ALN	18.12.20					
3	REVISED AS PER NEW ARCHITECT	GP	VH	09.04.21					

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60% DD ISSUE

TAYLOR

PROJECT

MANNIX PARADE WARWICK FARM

11-13 MANNIX PARADE,  
WARWICK FARM

TITLE

CUT AND FILL PLAN

CIVIL DRAWING

DATE

DESIGNED BY

GP

CHECKED BY

GP

SCALES AT A1

As indicated

DRAWN BY

GP

APPROVED BY

PW

JOB No.

20023

DRAWING No.

CIV-WEB-070

REV.

3