

Technical Note: Planning Condition Discharge

HASSOCKS HASSOCKS

Curtins Ref: 076038-CUR-XX-XX-T-C-92000

Revision: P02

Issue Date: 18 August 2026

Client Name: Dermot O' Reilly

Site Address: Byanda, Brighton Road, Hassocks, BN6 9LX

Rev	Description	Issued by	Checked	Date
P01	First Issue	JC	ATL	23 July 2026
P02	Updated In Line with Comments	ATL	ATL	18 August 2026

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Author	Signature	Date
Jacob Collin BEng (Hons) Civil Engineer		18 August 2026

Reviewed	Signature	Date
Andy Losty MEng (Hons) Project Engineer		18 August 2026

Authorised	Signature	Date
Andy Losty MEng (Hons) Project Engineer		18 August 2026

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Proposed Drainage Layout
Drainage Details
Drainage Notes
Manhole Schedules

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Proposed Surface Water Drainage Model Details and Results
Infiltration Testing Results

Appendix C

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1 INTRODUCTION

1.1 Project Background

Curtins has been appointed by Dermot O'Reilly to provide a Flood Risk Technical Note to enable the discharge of Planning Conditions, for the proposed development at Brighton Road, Hassocks.

The approximate postcode of the application site is BN6 9LY and the approximate eastings and northings 529965, 115319.

1.2 Scope of Assessment

The Technical note will provide details in relation to the discharge of Planning Condition 5, included in the Planning Approval Reference DM/23/0002.

The drainage design for the scheme follows the principles set out in the Flood Risk Assessment and Drainage Strategy ref 076038, which was submitted as part of the Planning Approval process.

1.3 Proposed Development

The proposed development consists of:

'Demolition of Byanda (a single residential property and ancillary buildings) and the erection of a 60-bedroom residential care facility, with associated access, ground works, car parking, servicing, private amenity space, landscaping, construction of substation unit and boundary treatment.'

The Proposed Site Plan is enclosed in Appendix A.

1.4 Drainage Planning Condition

Condition 5 of the Planning Approval is worded as below:

'The development hereby permitted shall not commence unless and until details of the proposed foul and surface water drainage and means of disposal have been submitted to and approved in writing by the local planning authority. No building shall be occupied until all the approved drainage works have been carried out in accordance with the approved details. The details shall include a timetable for its implementation and a management and maintenance plan for the lifetime of the development which shall include arrangements for adoption by any public authority or statutory undertaker and any other arrangements to secure the operation of the scheme throughout its lifetime. Maintenance and management during the lifetime of the development should be in accordance with the approved details.'

2 EXISTING SITE DETAILS

2.1 History and Current Use

The Site is currently accessed via an access road off Brighton Road.

The development is bound by an access road to the north, private land to the east, an access road to the south and North & South Dean House to the west.

The existing site currently comprises a single residential property and ancillary buildings.

Figure 1 - Site Location



3 DRAINAGE STRATEGY

3.1 Overview

The drainage network on site is a private drainage network.

Separate foul and surface water systems are proposed within the development.

It is proposed to discharge Foul water discharges to the existing foul water sewer within Brighton Road.

Surface water discharges via an on-site infiltration tank.

3.2 Foul Water Drainage

The foul water network is a gravity network which discharges to an on-site pumping station. Foul water is then pumped off site to the existing public foul sewer, via a new connection to an existing manhole (MH REF: 8400), within Brighton Road

Further details of the foul water drainage system can be found in the Drainage Drawing enclosed in *Appendix B*.

3.3 Surface Water Drainage

Any new development site drainage should be designed in accordance with current best practice to provide adequate capacity not to flood for the critical 1 in 30-year storm event and flood water generated for up to the critical 1 in 100-year plus climate change storm event shall be constrained within the areas on site so not to cause damage to buildings, essential services or adjoining developments and services.

The proposed network on site requires attenuation to provide capacity to accommodate the volumes generated during the 1 in 100 year +40% design event whilst maintaining the maximum flow restriction.

Attenuation volume is provided by the infiltration tank and within the sub-base of the permeable paving.

Assessment was completed at preliminary design stage to confirm the most viable method of discharge was via infiltration.

The surface water network discharges via an infiltration tank located in the west of the site within the carpark.

The proposed surface water drainage drawings are enclosed in *Appendix A1*. Infiltration testing results and proposed drainage calculations are enclosed in *Appendix B*

3.4 Flood Storage Compensation

In line with the Addendum to the FRA, Ref 076038-CUR-XX-XX-RP-C-72000, flood storage compensation is required within the east of the site, where there is a source of flooding from the brook to the north.

The UK government flood maps for planning showed surface water flooding within an area of the site that is required to be raised to create an outside space. This would reduce the risk of flooding to this area but would increase flood risk in the surrounding area.

The proposed solution is to create an entirely separate attenuation feature under the raised garden area. This is provided by a cellular attenuation tank, which will be wrapped in an impermeable membrane to stop direct rainfall from entering thereby reserving all the storage available for the surface water flood volume. Pipes will be installed from the point where the water enters the site to the attenuation to allow water in during storm events and out when the water recedes.

All direct rainfall on site has been accommodated in the onsite infiltration tank and will not interact with the attenuation set aside for the surface water flooding under the garden landscaping.

3.5 Maintenance

The Planning Condition requires a maintenance strategy be provided prior to occupation of the site. A Maintenance Strategy is enclosed in *Appendix C*.

The Maintenance Strategy should be developed further during the construction phase of the development as specific products are confirmed.

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APPENDICES

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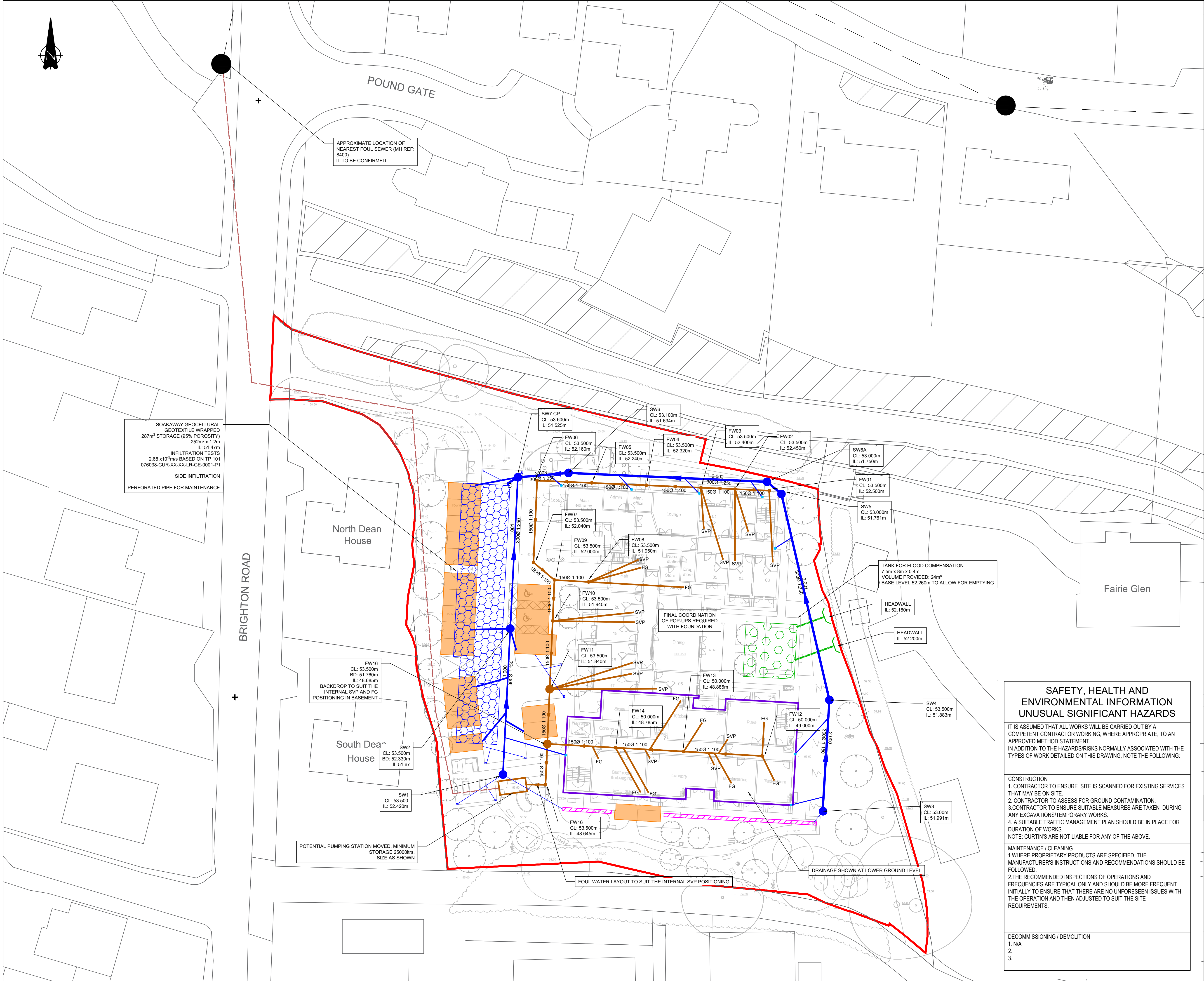
Appendix A

Proposed Drainage Layout

Drainage Details

Drainage Notes

Manhole Schedules



GENERAL NOTES:

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS AND ENGINEERS DRAWINGS AND SPECIFICATIONS.
2. DO NOT SCALE THIS DRAWING. ANY AMBIGUITIES, OMISSIONS AND ERRORS ON DRAWINGS SHALL BE BROUGHT TO THE ENGINEERS ATTENTION IMMEDIATELY. ALL DIMENSIONS MUST BE CHECKED / VERIFIED ON SITE.
3. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.
4. FOR GENERAL NOTES REFER TO DRAWING.
5. BASED ON DRAWING CUR-XX-XX-D_DRAINAGE DESIGN_V7

KEY

- SITE BOUNDARY
- EXISTING PUBLIC COMBINED SEWER
- BASEMENT EXTENTS
- SURFACE WATER
- FOUL WATER
- PERMEABLE PAVING
- SURFACE WATER TANK
- FILTER TRENCH
- FLOOD STORAGE COMPENSATION

SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION
UNUSUAL SIGNIFICANT HAZARDS

IT IS ASSUMED THAT ALL WORKS WILL BE CARRIED OUT BY A COMPETENT CONTRACTOR WORKING, WHERE APPROPRIATE, TO AN APPROVED METHOD STATEMENT.
IN ADDITION TO THE HAZARDS/RISKS NORMALLY ASSOCIATED WITH THE TYPES OF WORK DETAILED ON THIS DRAWING, NOTE THE FOLLOWING:

- CONSTRUCTION
1. CONTRACTOR TO ENSURE SITE IS SCANNED FOR EXISTING SERVICES THAT MAY BE ON SITE.
 2. CONTRACTOR TO ASSESS FOR GROUND CONTAMINATION.
 3. CONTRACTOR TO ENSURE SUITABLE MEASURES ARE TAKEN DURING ANY EXCAVATIONS/TEMPORARY WORKS.
 4. A SUITABLE TRAFFIC MANAGEMENT PLAN SHOULD BE IN PLACE FOR DURATION OF WORKS.
- NOTE: CURTINS ARE NOT LIABLE FOR ANY OF THE ABOVE.

- MAINTENANCE / CLEANING
1. WHERE PROPRIETARY PRODUCTS ARE SPECIFIED, THE MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS SHOULD BE FOLLOWED.
 2. THE RECOMMENDED INSPECTIONS OF OPERATIONS AND FREQUENCIES ARE TYPICAL ONLY AND SHOULD BE MORE FREQUENT INITIALLY TO ENSURE THAT THERE ARE NO UNFORESEEN ISSUES WITH THE OPERATION AND THEN ADJUSTED TO SUIT THE SITE REQUIREMENTS.

- DECOMMISSIONING / DEMOLITION
1. N/A
 - 2.
 - 3.

P11	STAGE 4 ISSUE	23/07/26	ATL	PB
P10	UPDATED DRAINAGE IN LINE WITH LLFA COMMENTS	04/04/23	ATL	MW
P09	UPDATED DRAINAGE STRATEGY FOLLOWING SOAKAWAY TEST	27/03/23	MW	AR
P08	UPDATED TO SUIT REVISED SCHEME LAYOUT	21/02/23	AR	ARR
P07	ADJUST TO NEW SITE LAYOUT	16/06/22	AR	ARR
P06	WITHDRAWN	16/6/22	AR	ARR
P05	INFILTRATION DESIGN	04/10/21	DE	AR
P04	UPDATED FOR PLANNING	15/03/21	DE	AR
P03	UPDATED FOR PLANNING	04/02/21	DE	AR
P02	UPDATED DESIGN ISSUE OF PLANNING	19/01/21	DE	AR
P01	ISSUED FOR PLANNING	12/05/20	DE	RM
Rev:	Description:	Date:	By:	Chkd:



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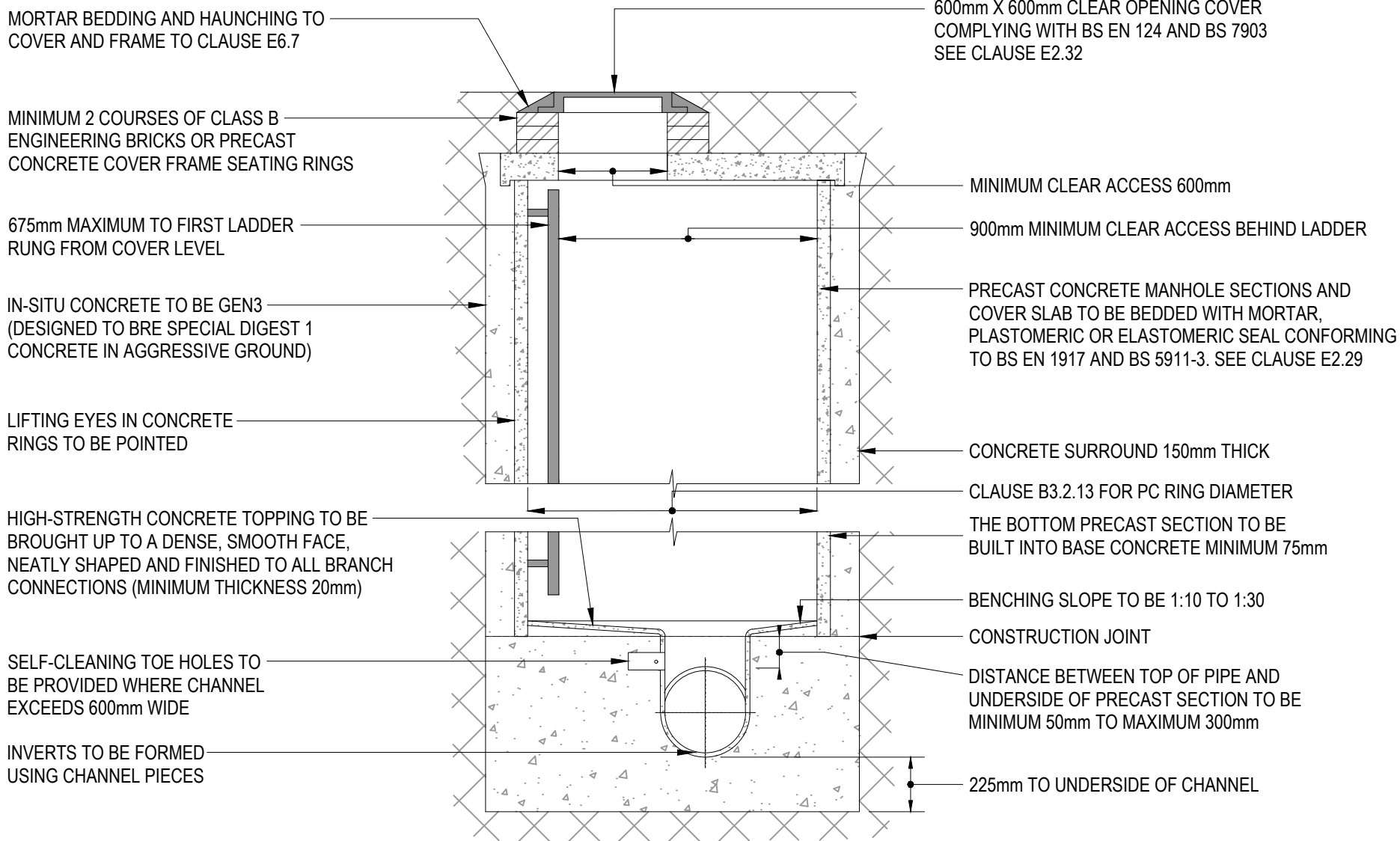
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Project: **HASSOCKS - RESIDENTIAL HOME**

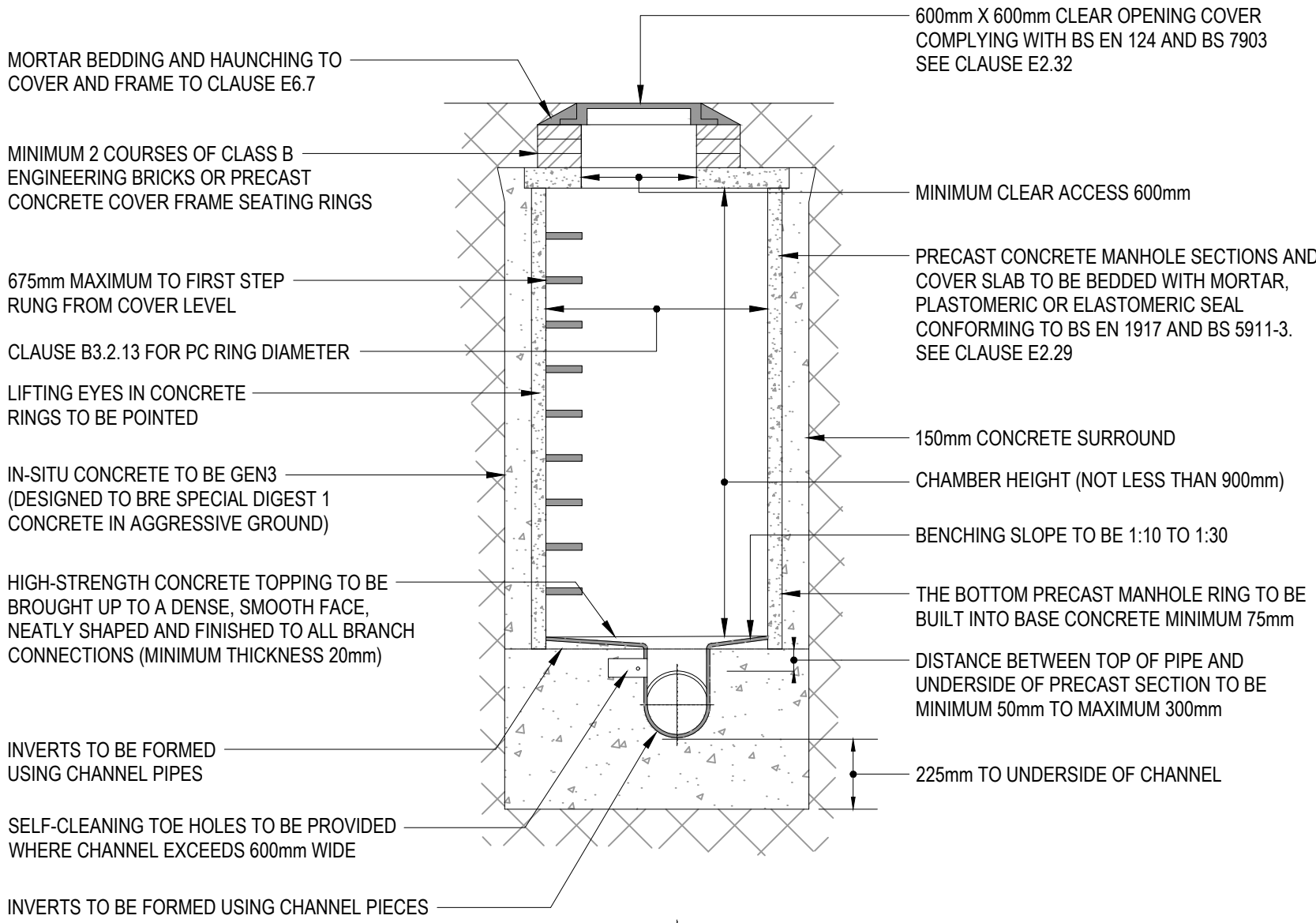
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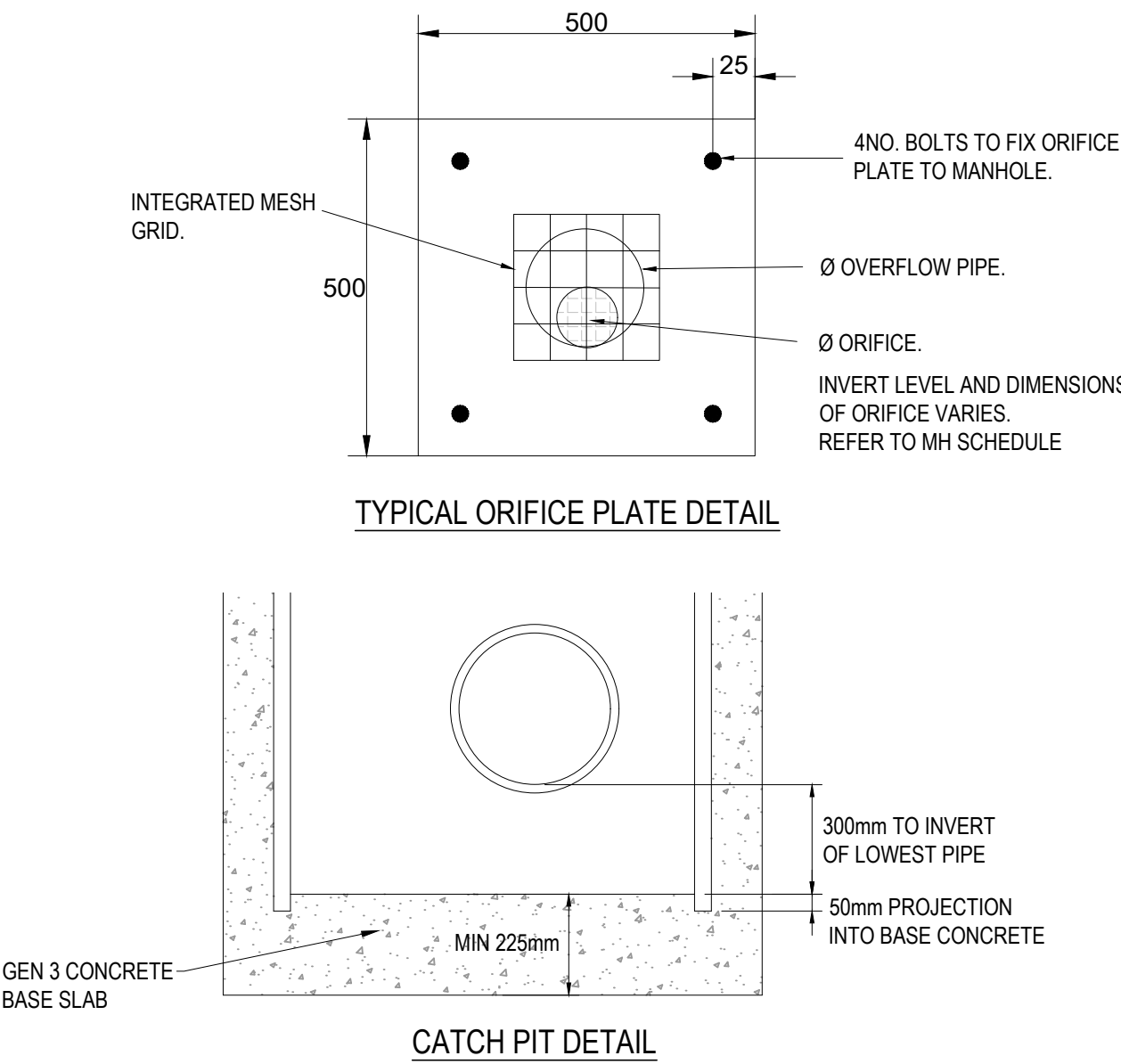
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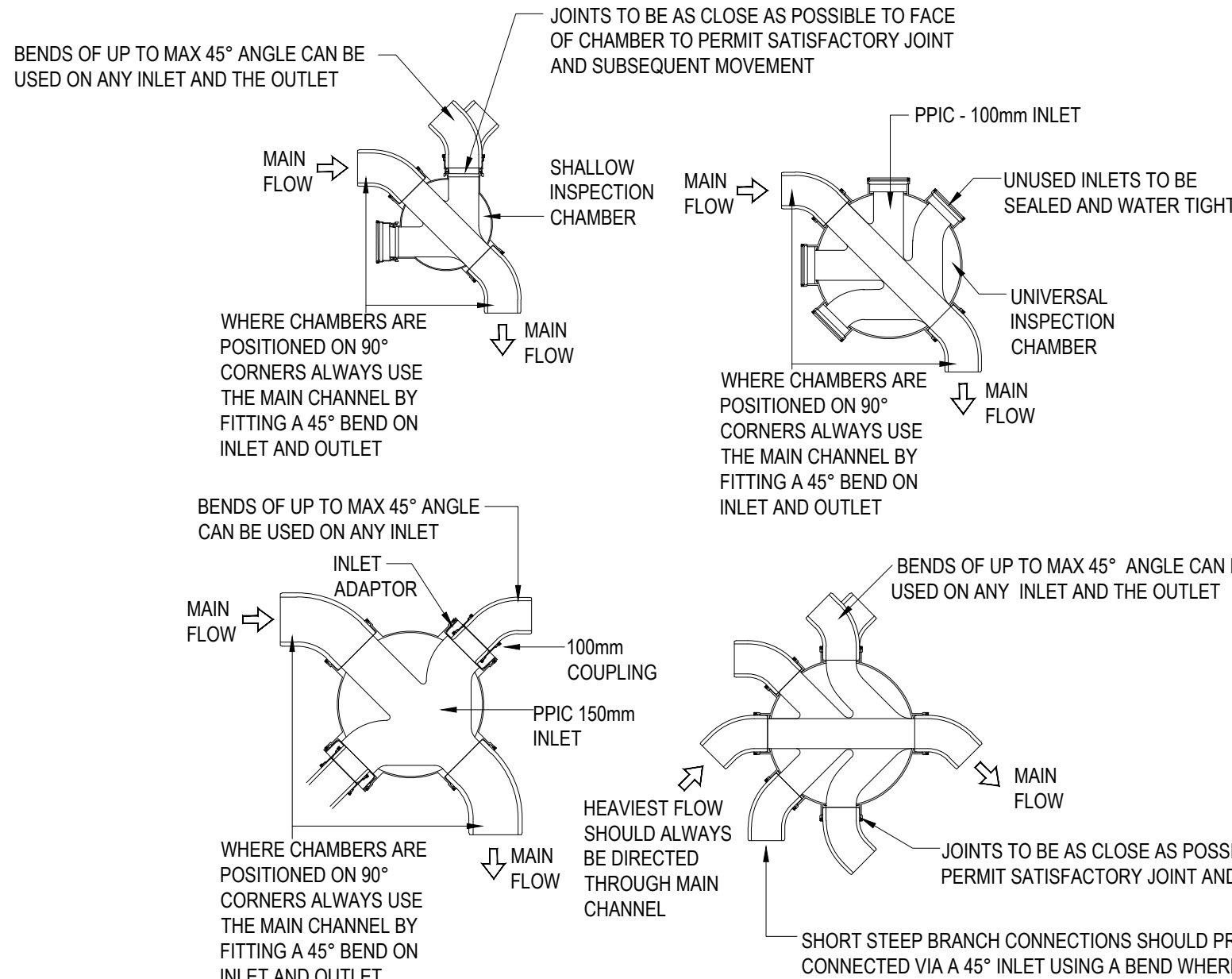
TYPICAL MANHOLE DETAIL - TYPE 1B
(DEPTH FROM COVER TO SOFFIT OF PIPE 3m TO 6m)



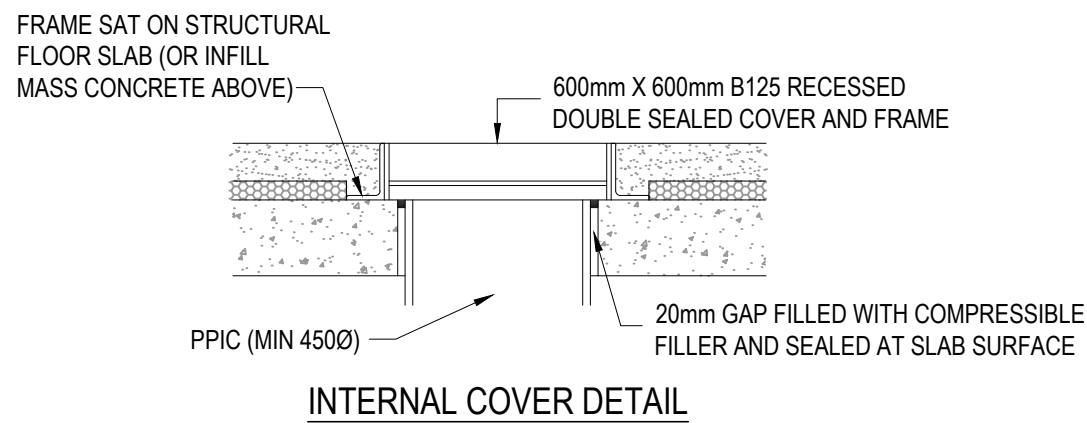
TYPICAL MANHOLE DETAIL - TYPE 2
(MAXIMUM DEPTH FROM COVER TO SOFFIT OF PIPE 3.0 m)



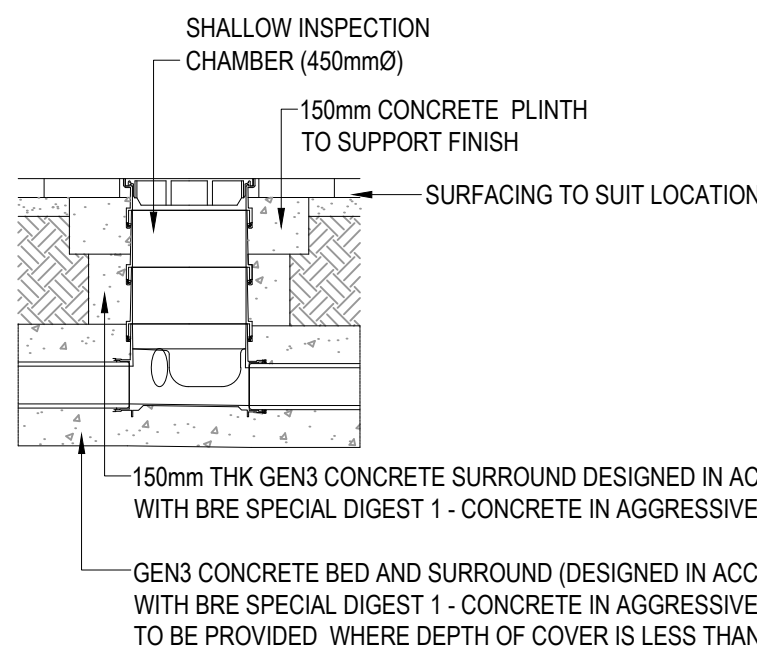
CATCH PIT DETAIL



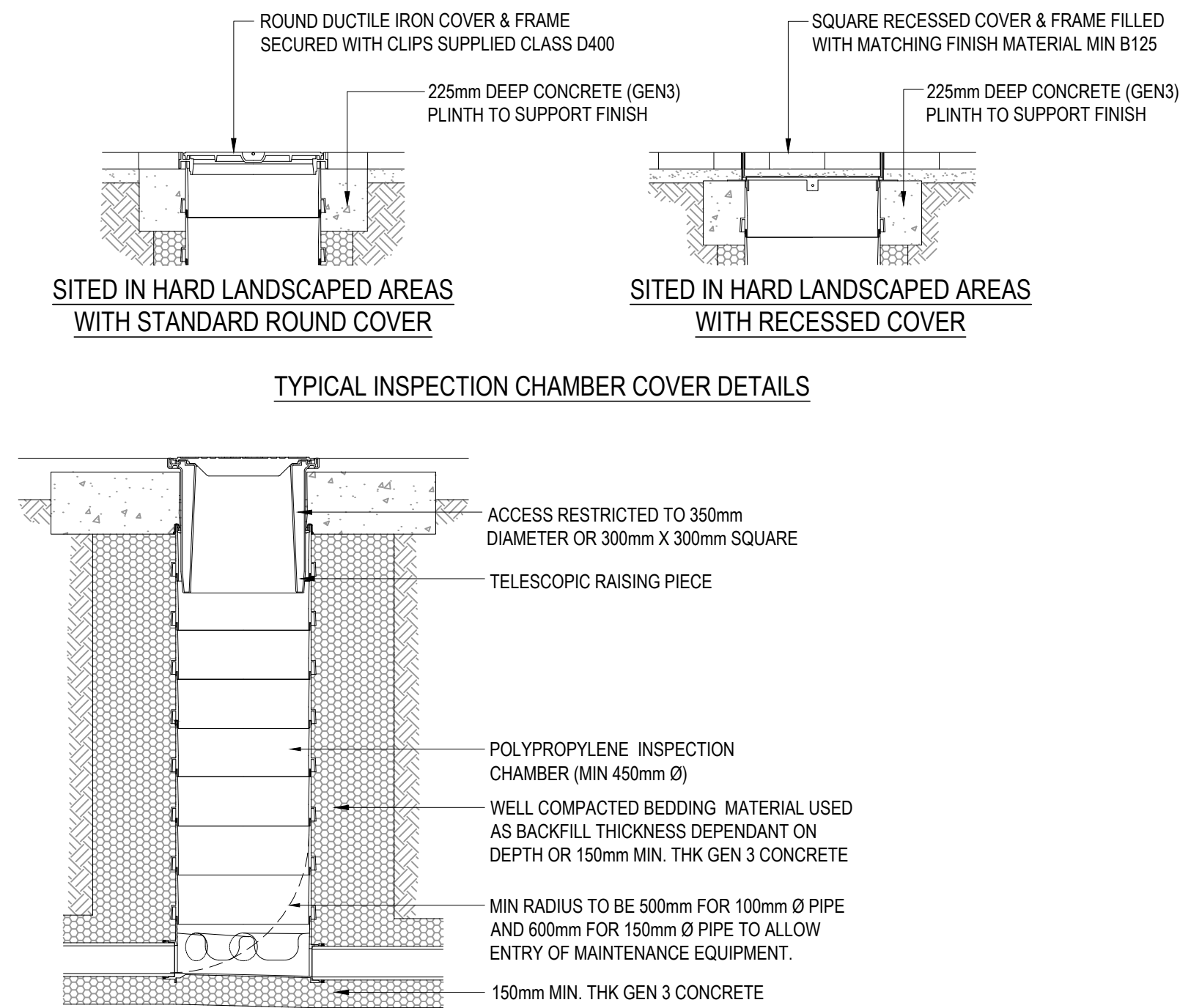
INSPECTION CHAMBER BASE DETAILS



INTERNAL COVER DETAIL

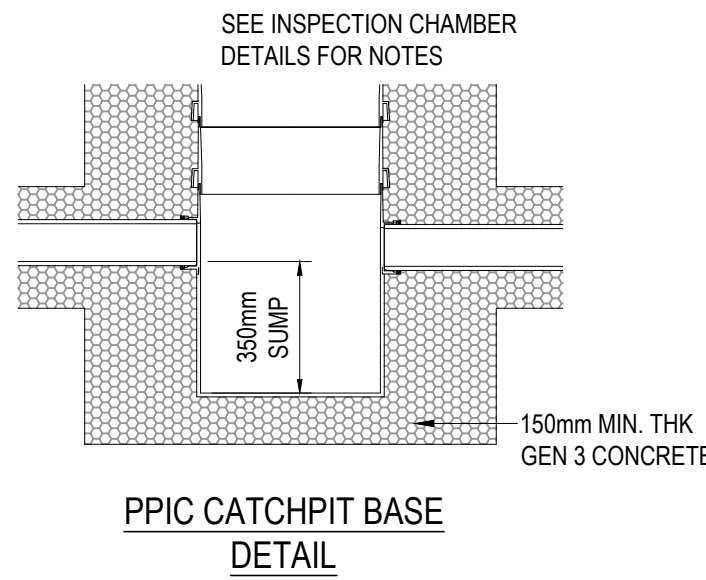


SHALLOW INSPECTION CHAMBER
MIN DEPTH 0.6m

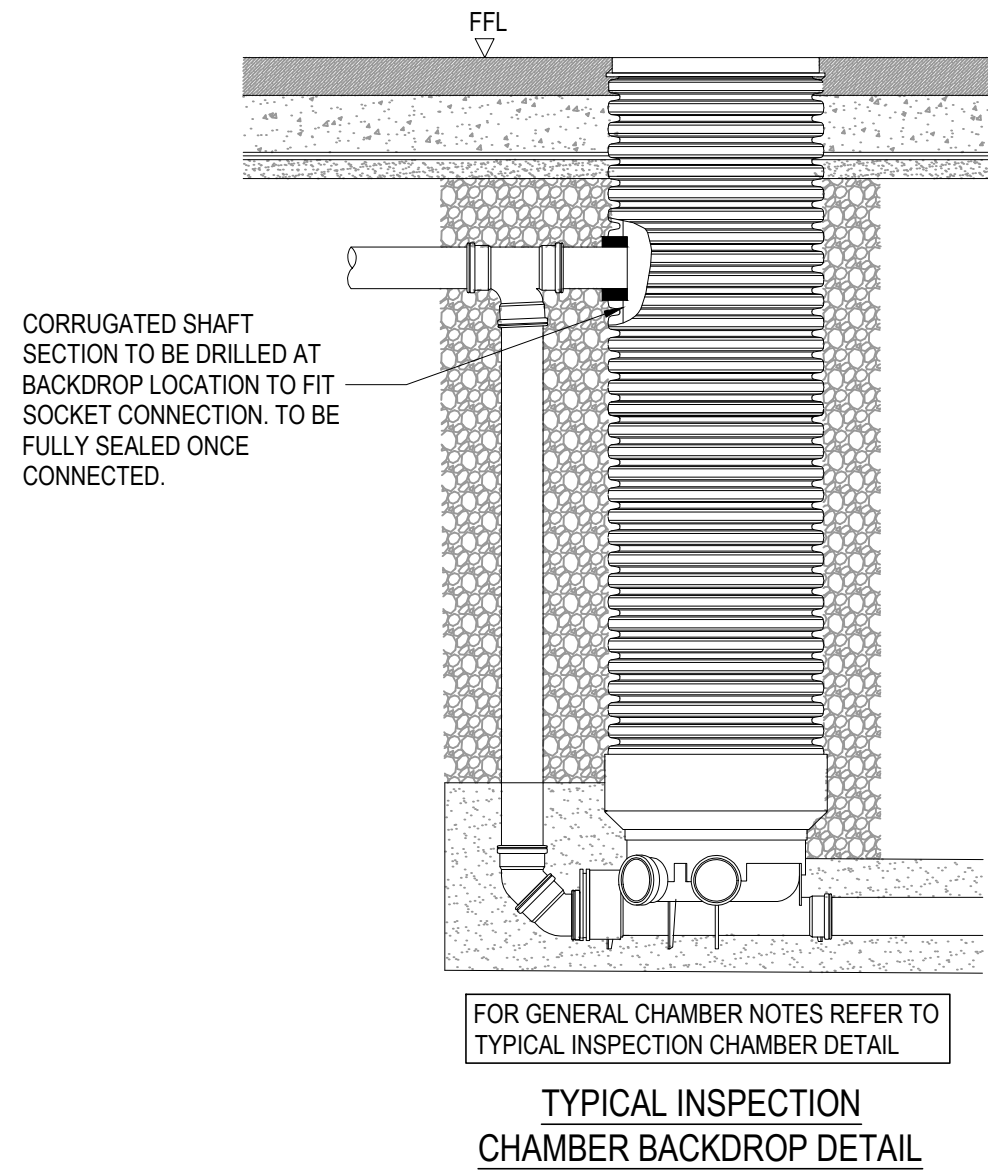


DEEP INSPECTION CHAMBER
DEPTHS BETWEEN 1.2m AND 3.0m

TYPICAL INSPECTION CHAMBER DETAILS - PPIC



PPIC CATCHPIT BASE
DETAIL



TYPICAL INSPECTION
CHAMBER BACKDROP DETAIL

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 - ALL DIMENSIONS ARE IN METRES UNLESS NOTED OTHERWISE.
 - FOR FULL DRAINAGE NOTES REFER TO 076038-CUR-XX-00-DR-D-92020

P02	REFERENCES UPDATED	18/08/26	ATL	ATL
P01	STAGE 4 ISSUE	23/07/26	ATL	PB
Rev:	Description:	Date:	By:	Chkd:

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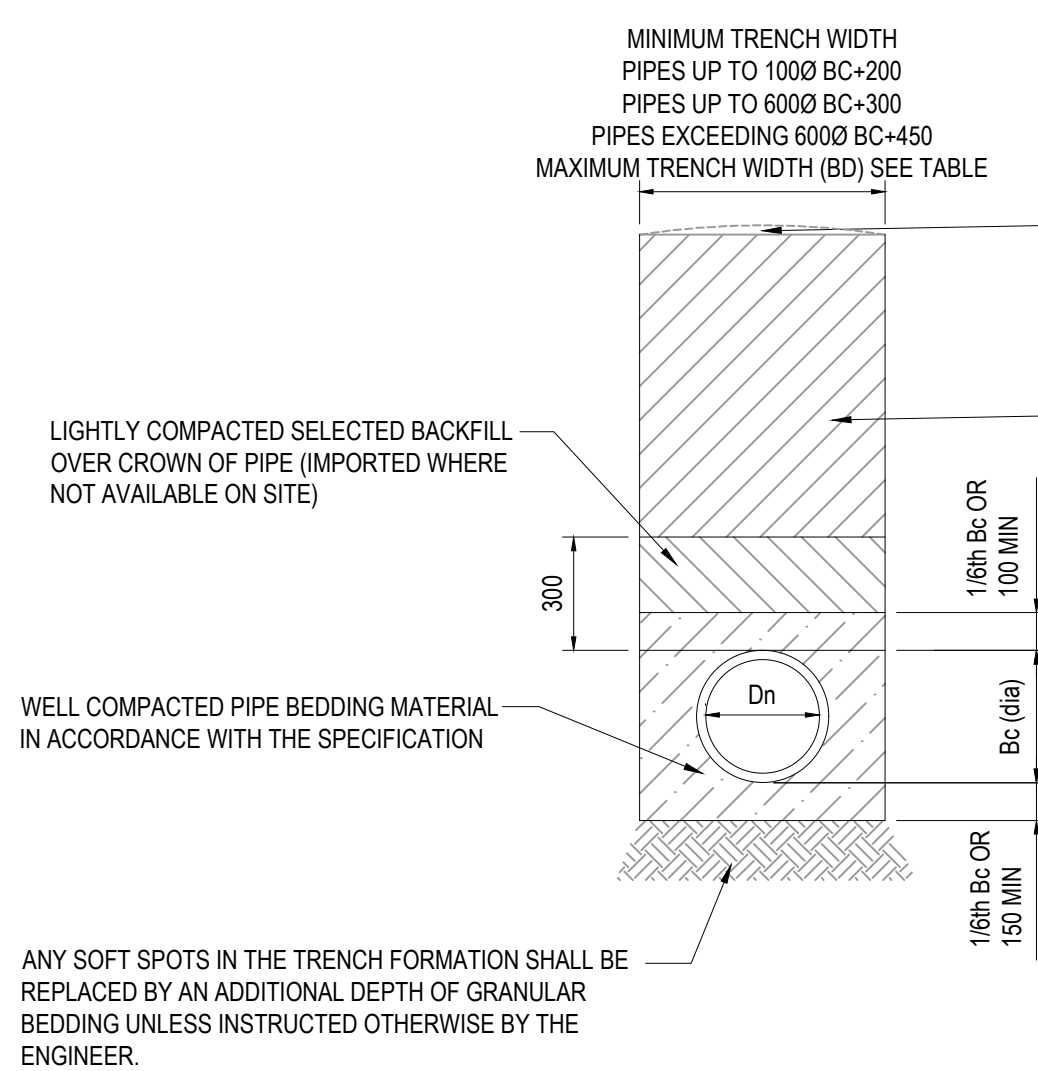
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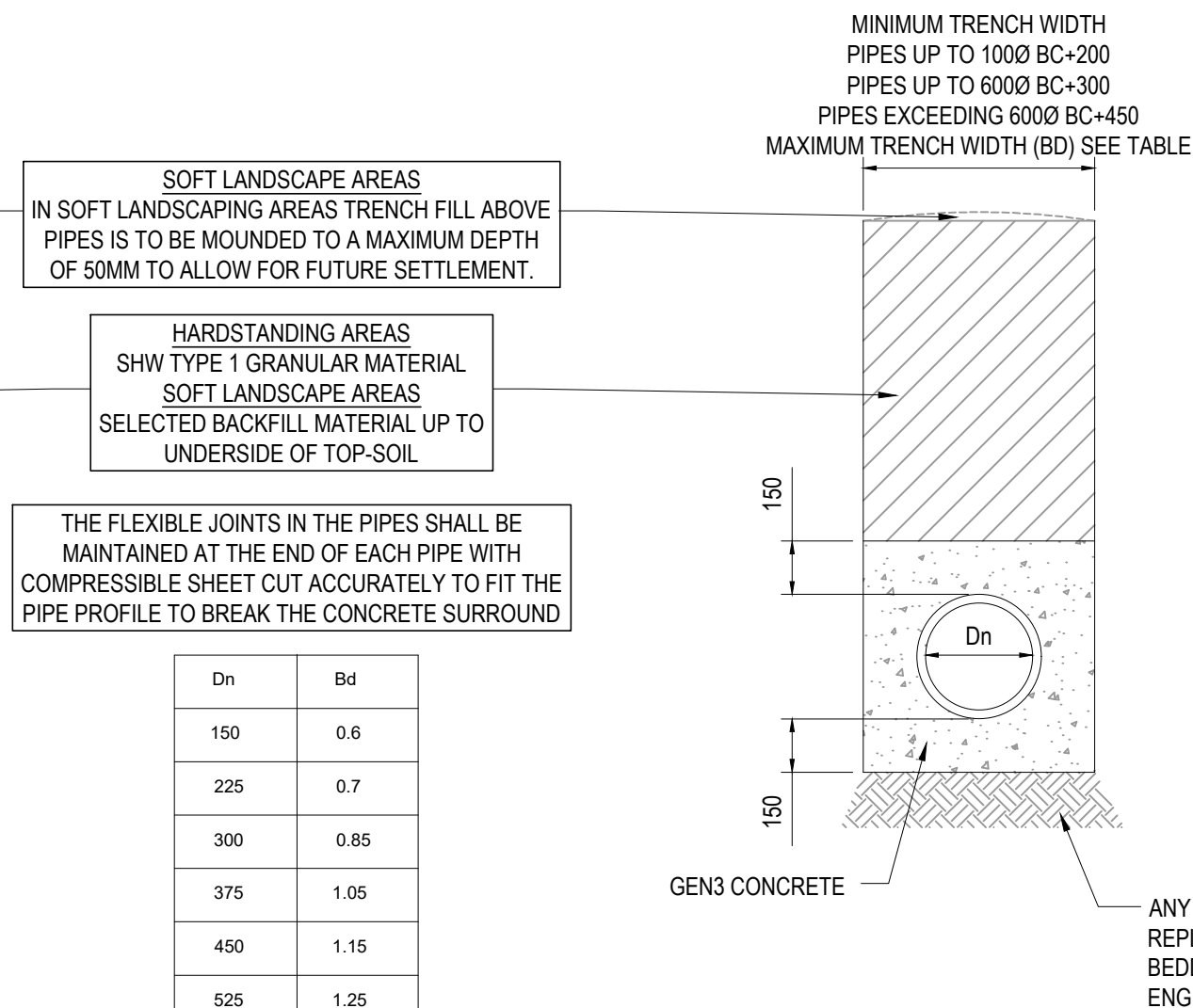
Orig Title:

**DRAINAGE DETAILS
SHEET 1**

Drawn By ATL	Designed By ATL	Checked By PB
Date 23/07/26	Scales @ A1	NTS
Project No 076038	Originator CUR	Function XX
Spatial 00	Form DR	Discipline D
Number 92010	Revision P02	



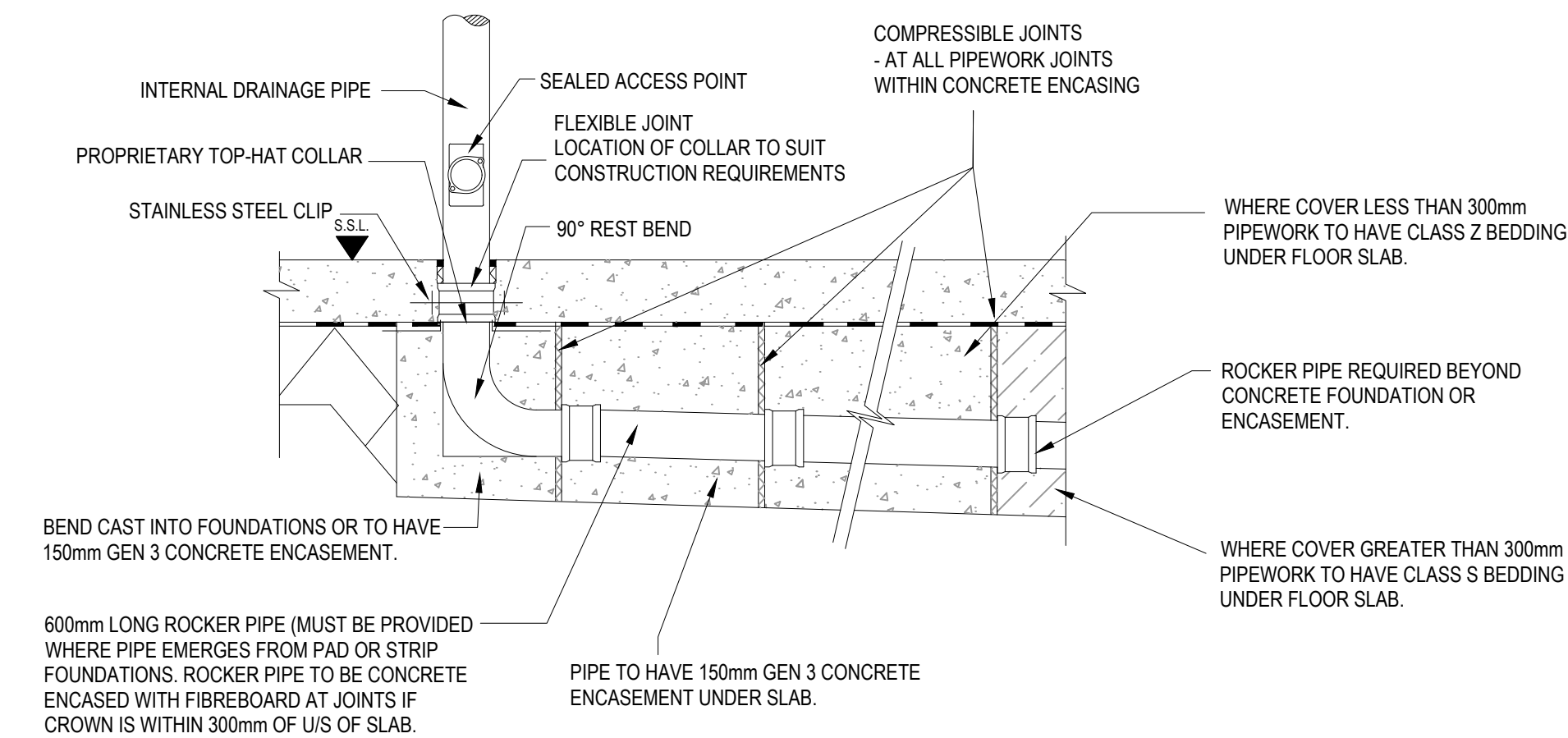
CLASS S - 360° GRANULAR SURROUND PIPE BEDDING DETAIL



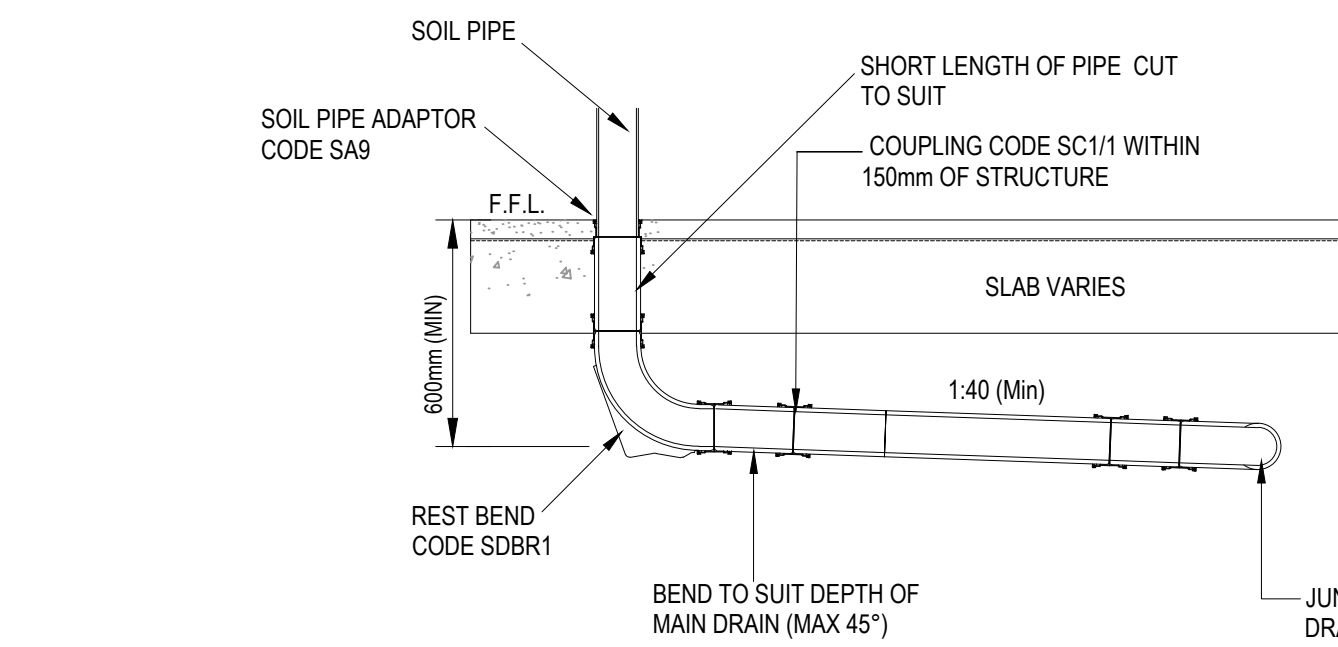
CLASS Z - CONCRETE BED AND SURROUND PIPE BEDDING DETAIL

MAXIMUM TRENCH WIDTH

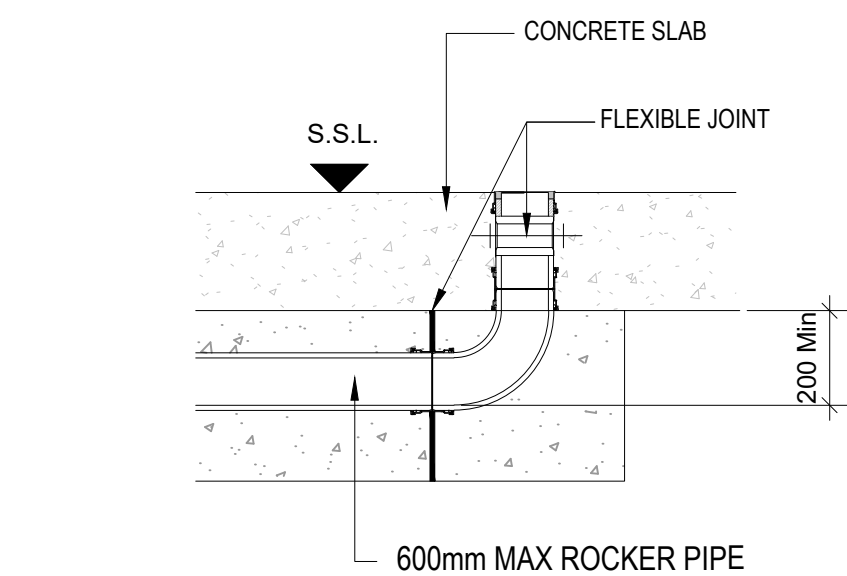
Dn	Bd
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225	0.7
300	0.85
375	1.05
450	1.15
525	1.25
600	1.35
675	1.45
750	1.50



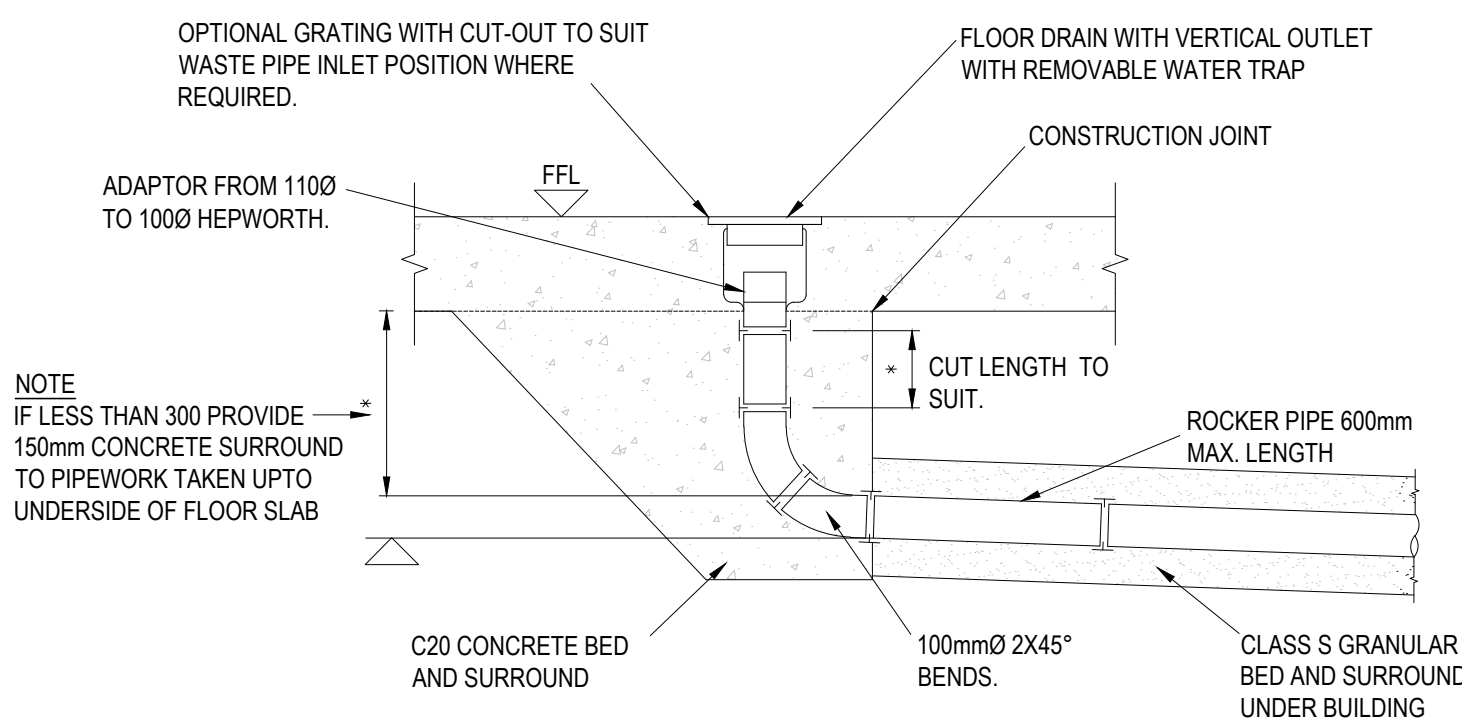
DRAINAGE UNDER BUILDINGS



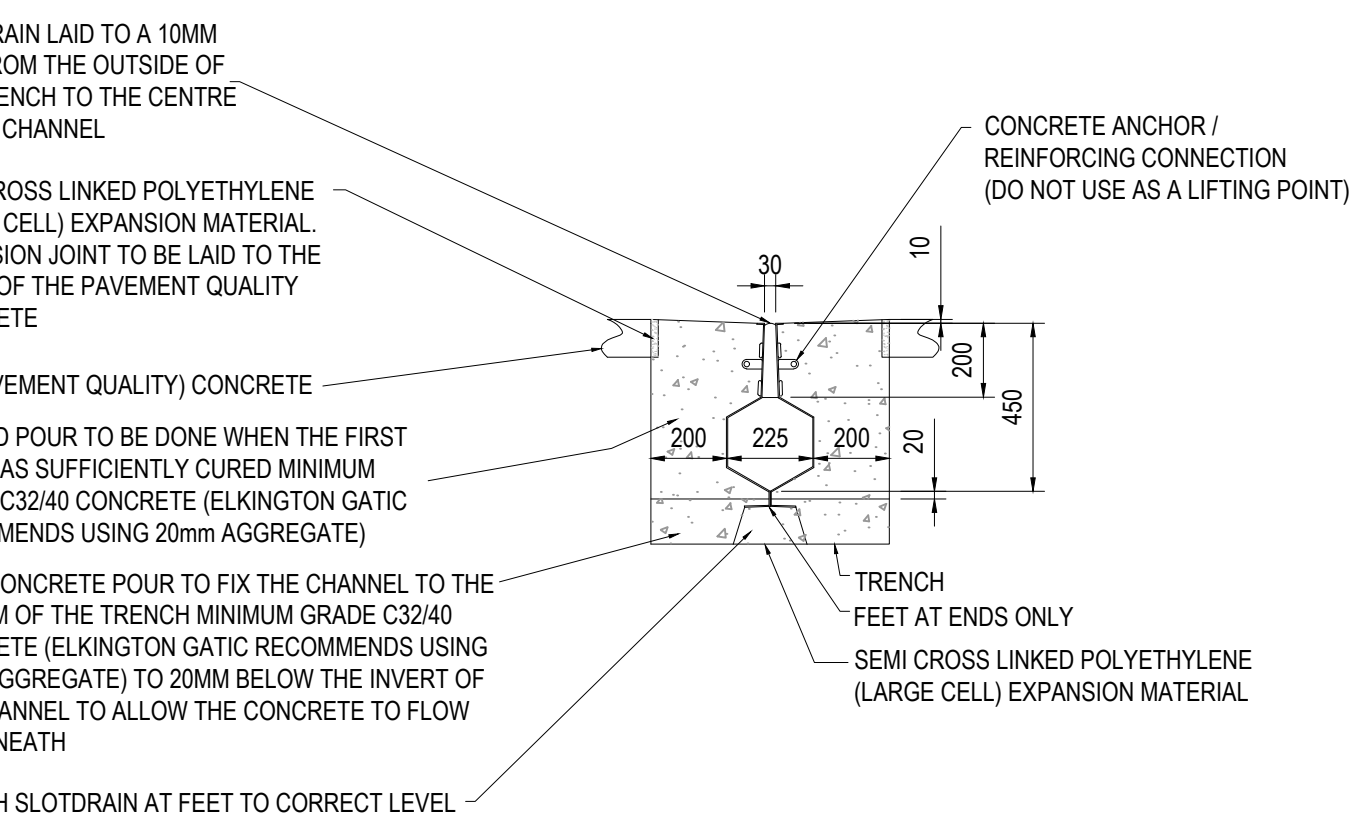
TYPICAL SVP CONNECTION TO MAIN RUN



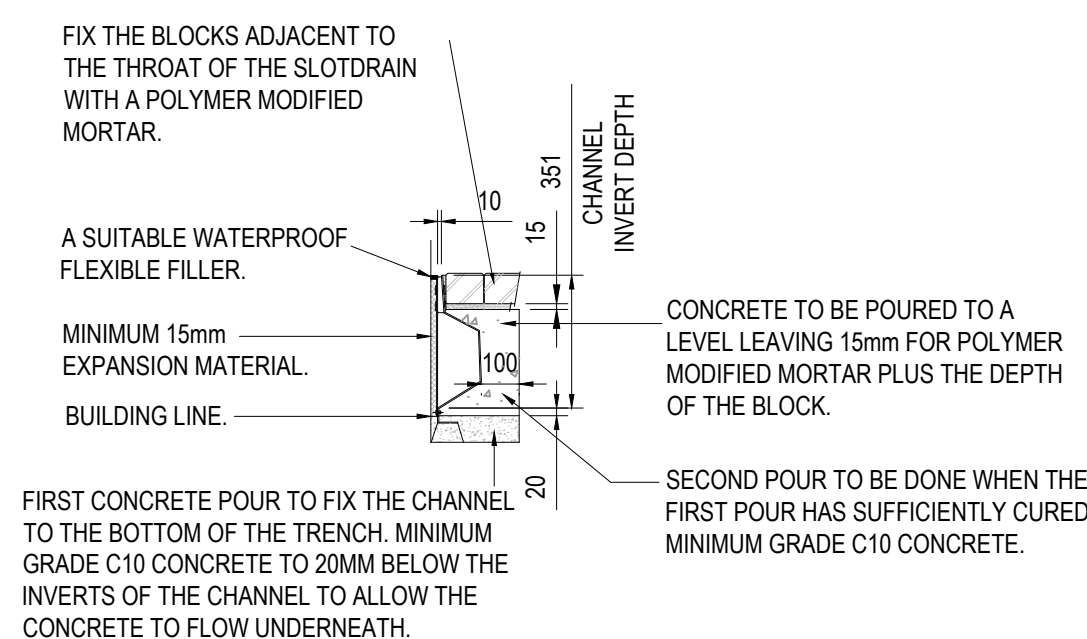
TYPICAL SECTION THROUGH SLAB (100mmØ downpipe)



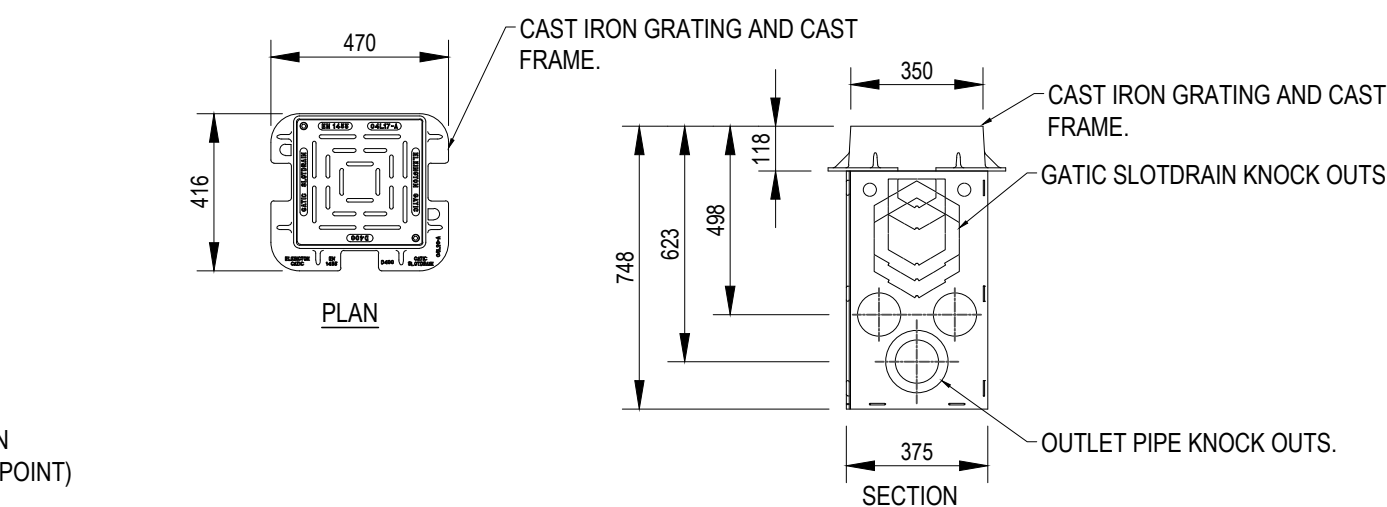
INTERNAL FLOOR DRAIN



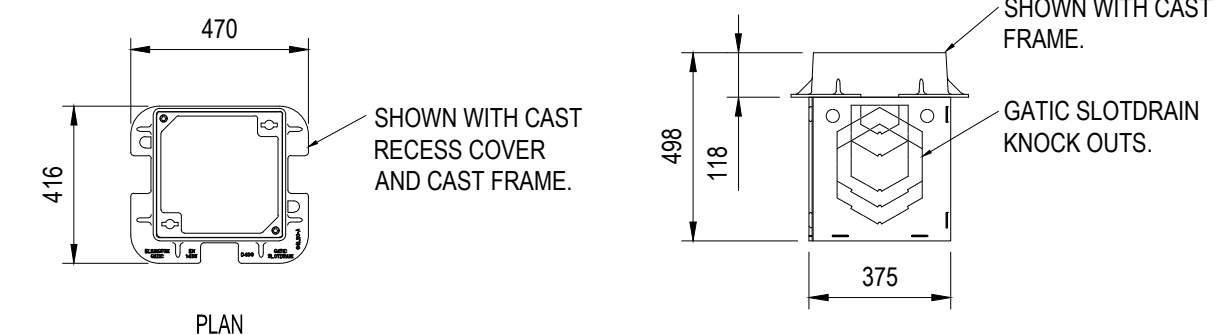
GATIC SLOT DRAIN 225mm CASTSLOT CONCRETE INSTALLATION



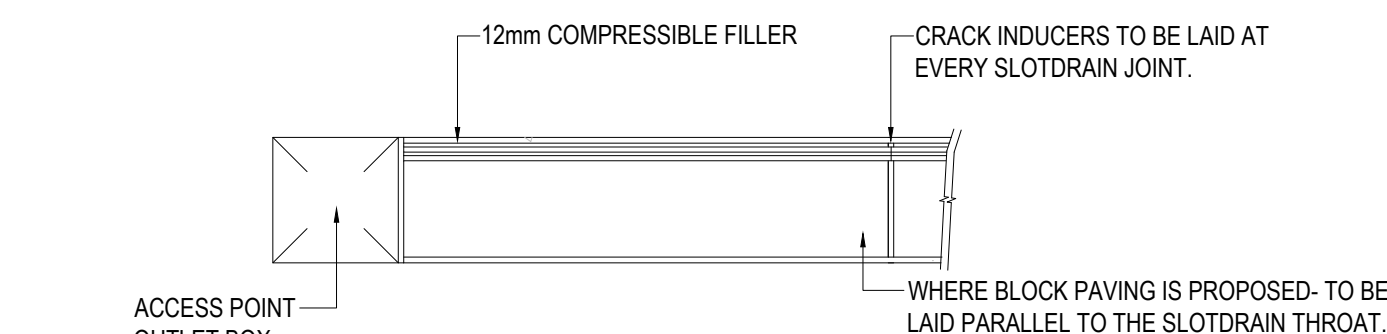
GATIC FACADESLOT 115mm



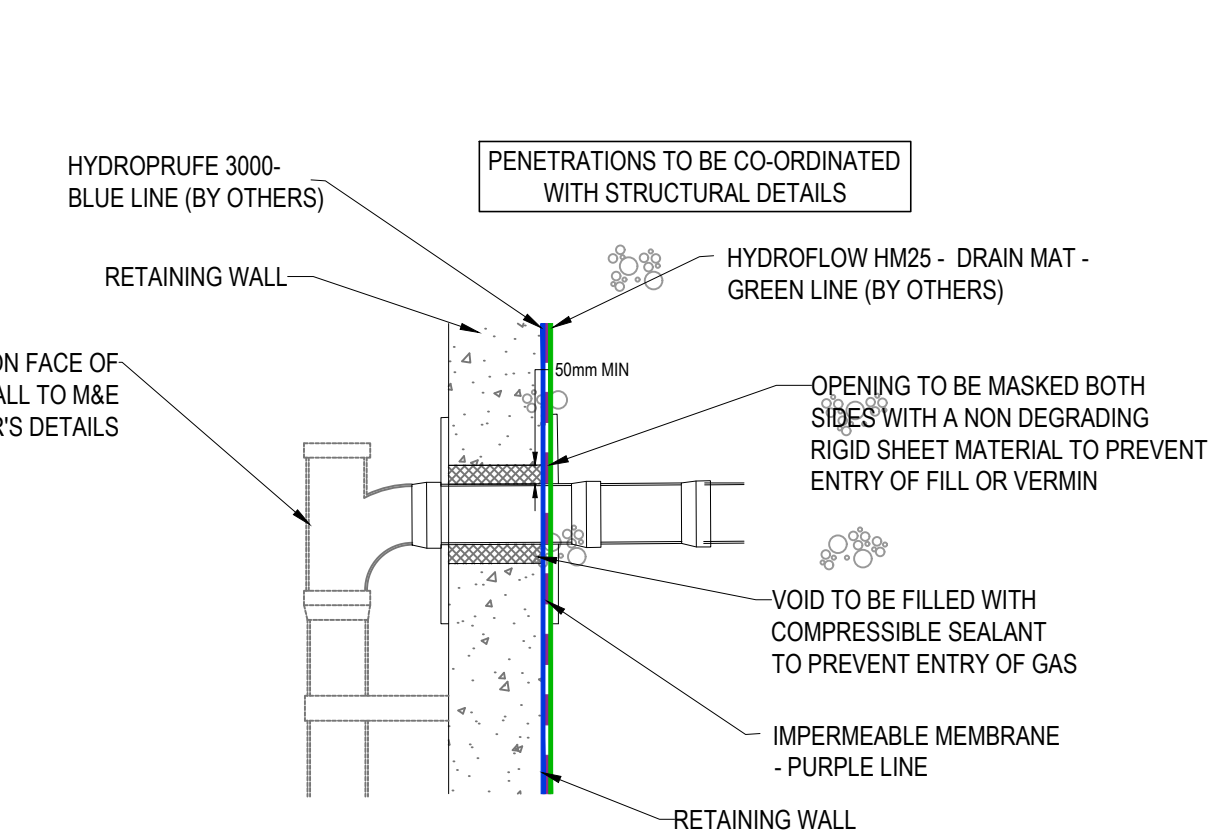
GATIC SLOT DRAIN 350mm OUTLET UNIT SECTION AND PLAN DETAILS NTS



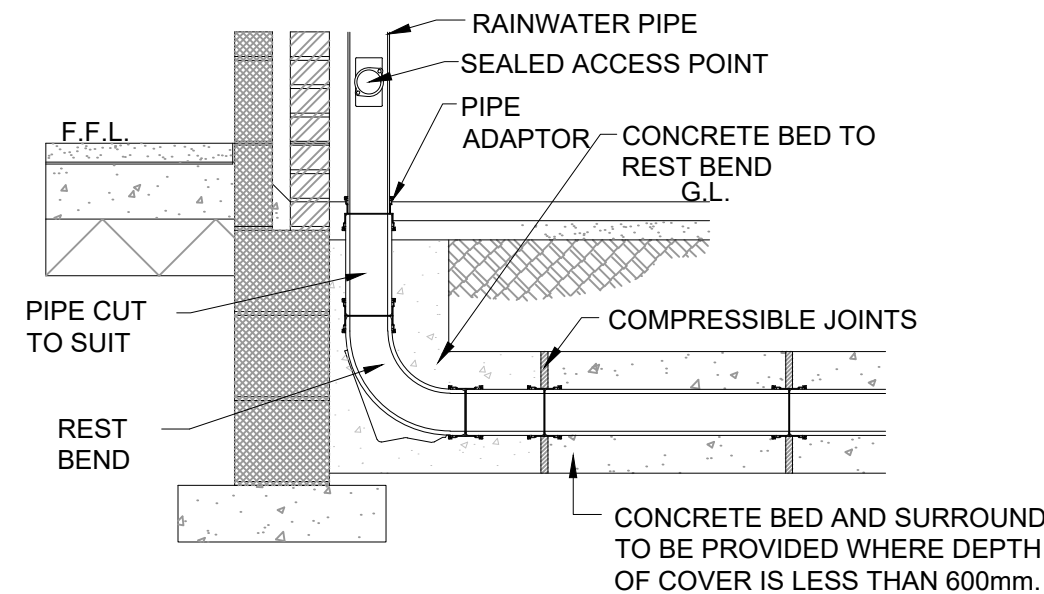
350 ACCESS BOX SECTION AND PLAN DETAILS NTS



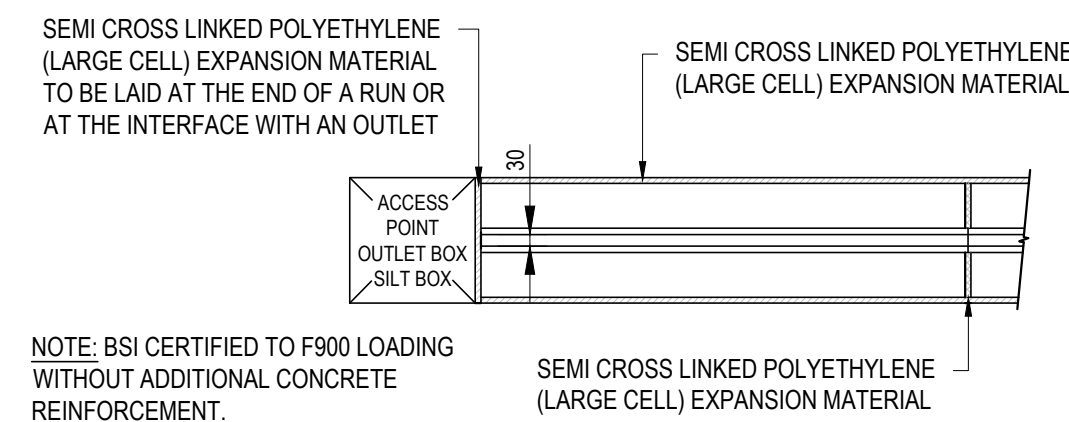
GATIC FACADESLOT PLAN



PENETRATION DETAIL THROUGH RETAINING WALL



RWP CONNECTION DETAIL



GATIC PLAN DETAIL

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P02	REFERENCES UPDATED	18/08/26	ATL	ATL
P01	STAGE 4 ISSUE	23/07/26	ATL	PB

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Status: SUITABLE FOR INFORMATION S2

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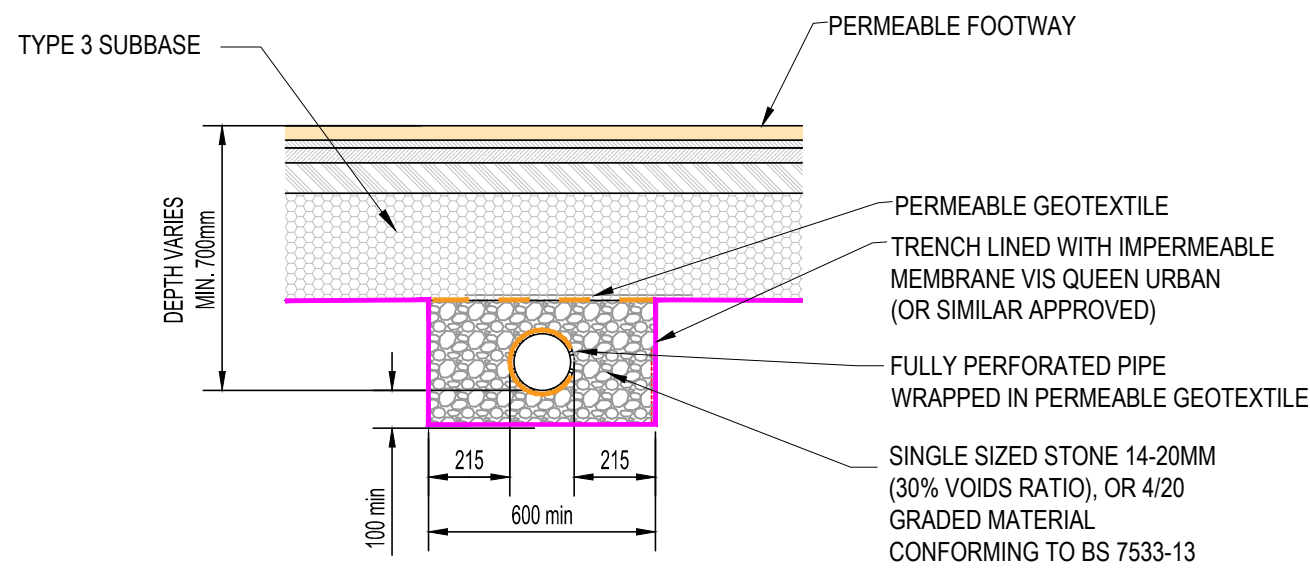
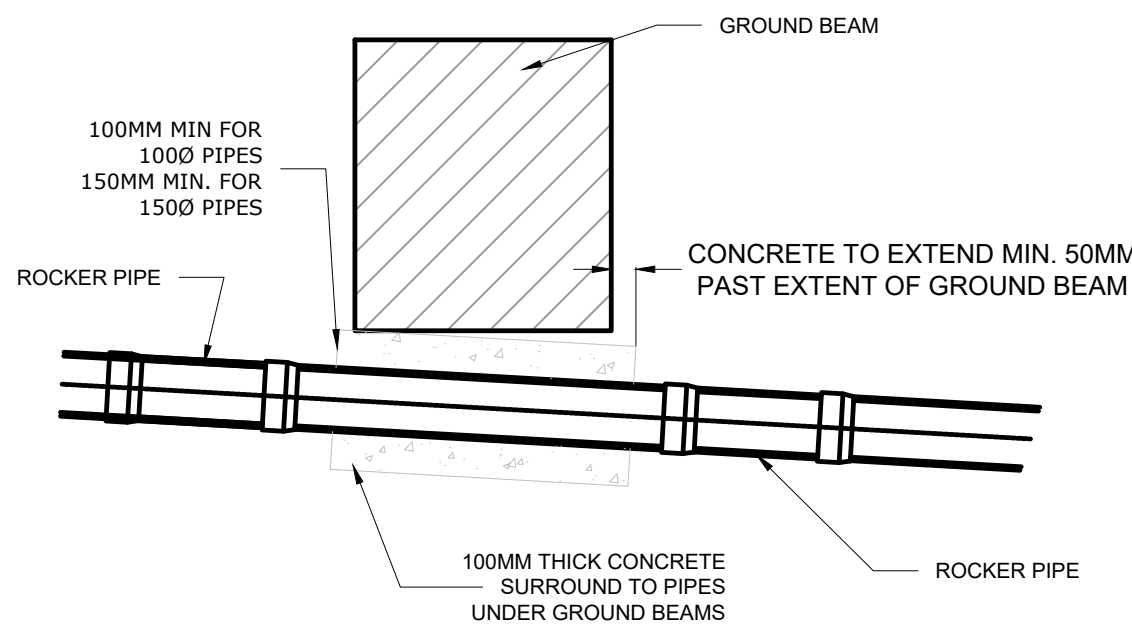
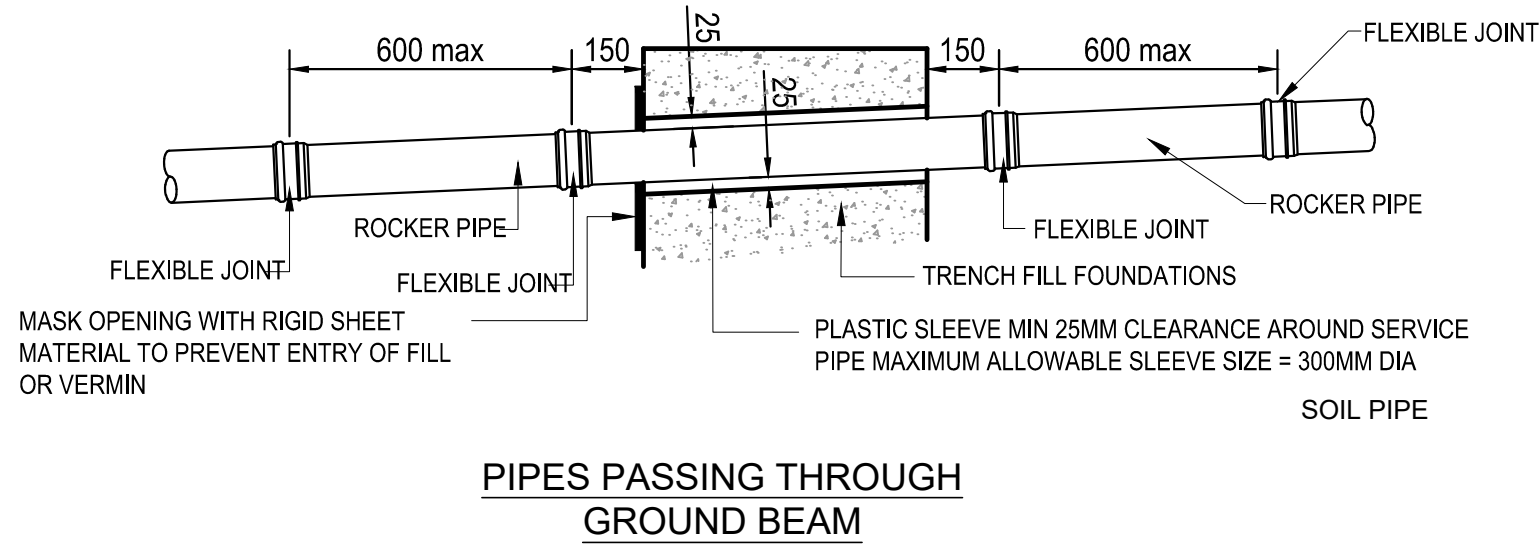
Orig Title: DRAINAGE DETAILS SHEET 2

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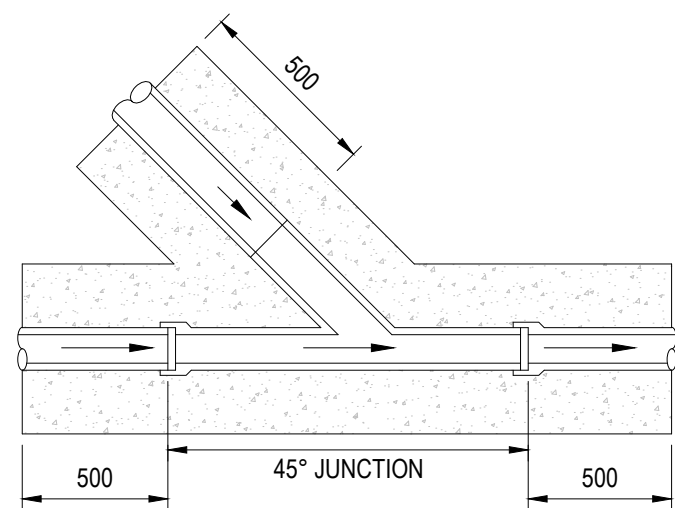
Date: 23/07/26 Scales @ A1 NTS

Project No - Originator - Function - Spatial - Form - Discipline - Number Revision

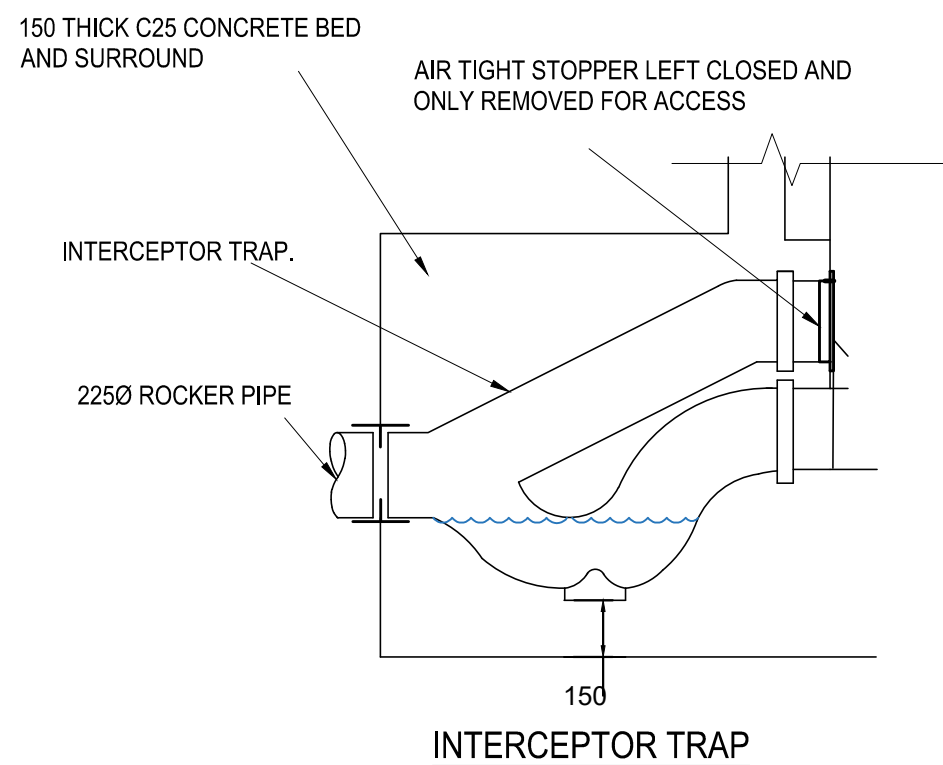
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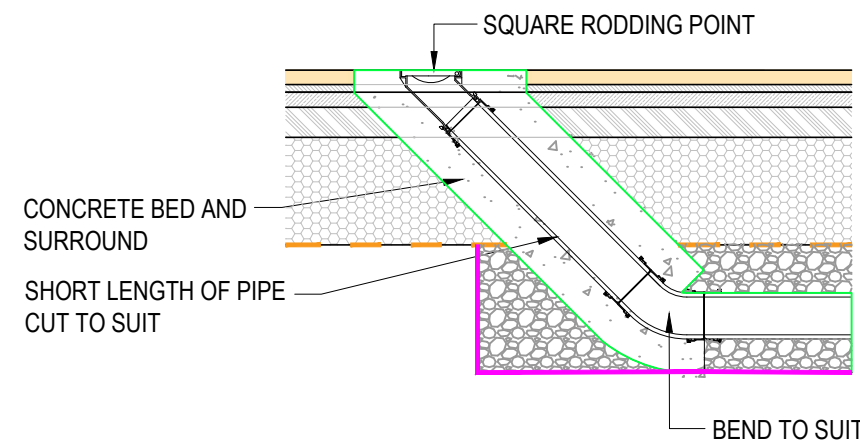
PERFORATED PIPE/ FILTER DRAIN UNDER PERMEABLE FOOTWAY



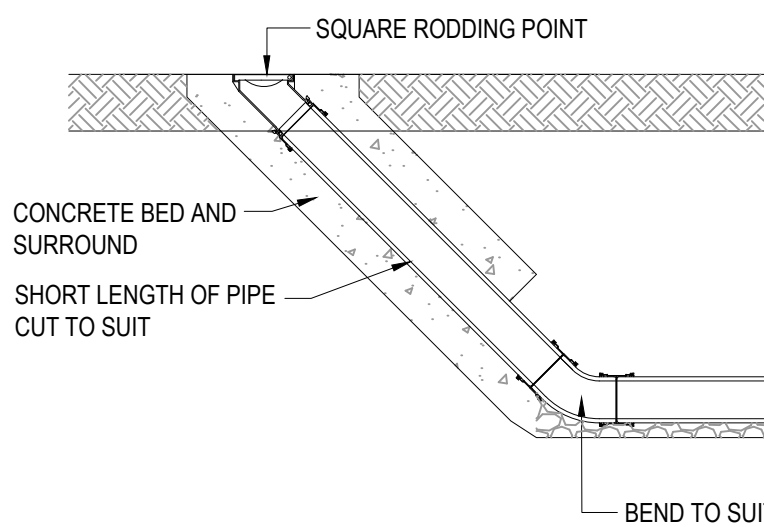
TYPICAL SADDLE CONNECTION



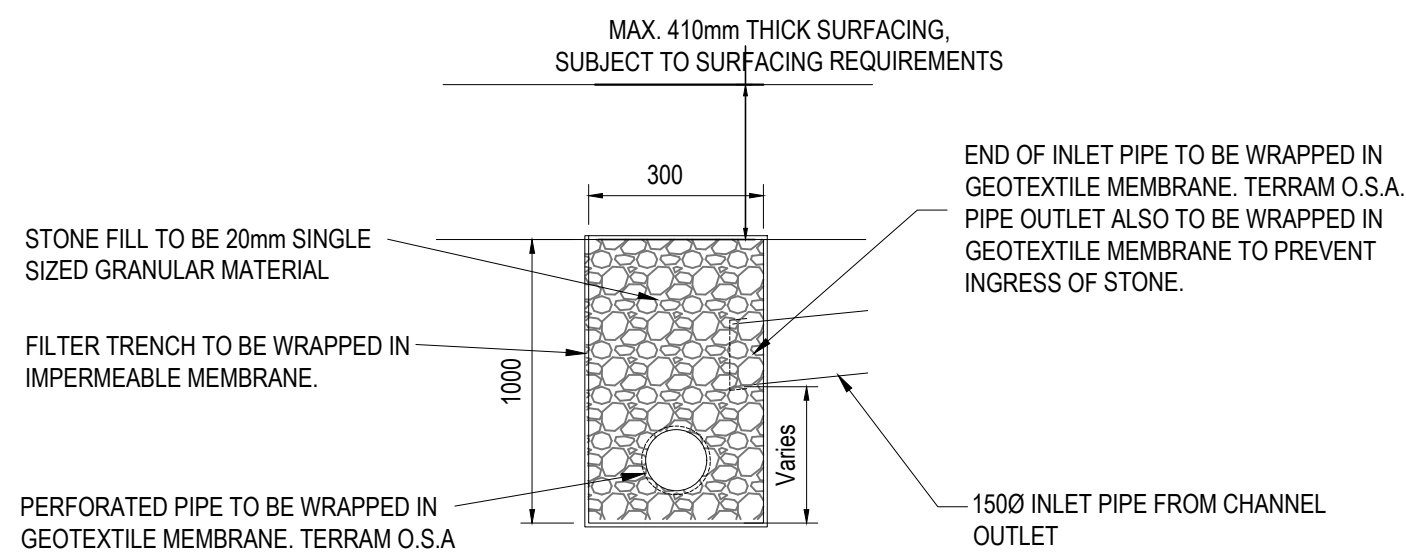
INTERCEPTOR TRAP



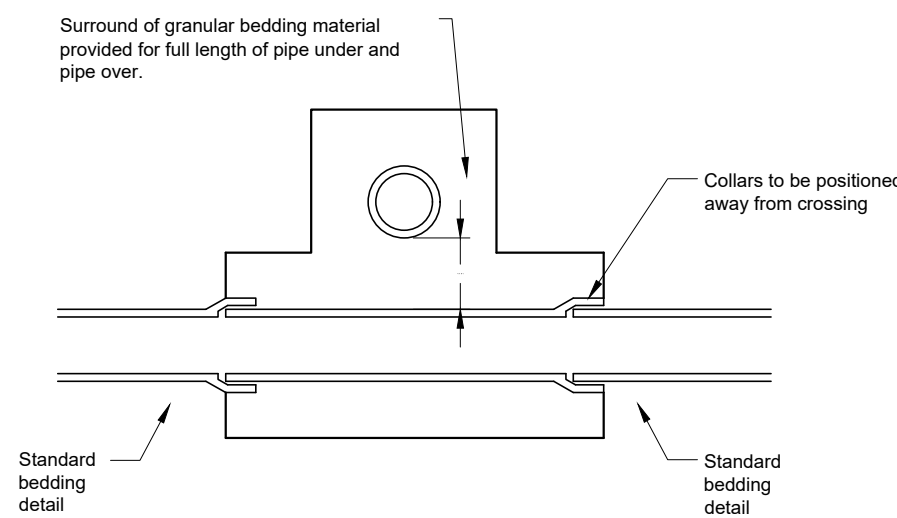
RODDING POINT DETAIL (RE)



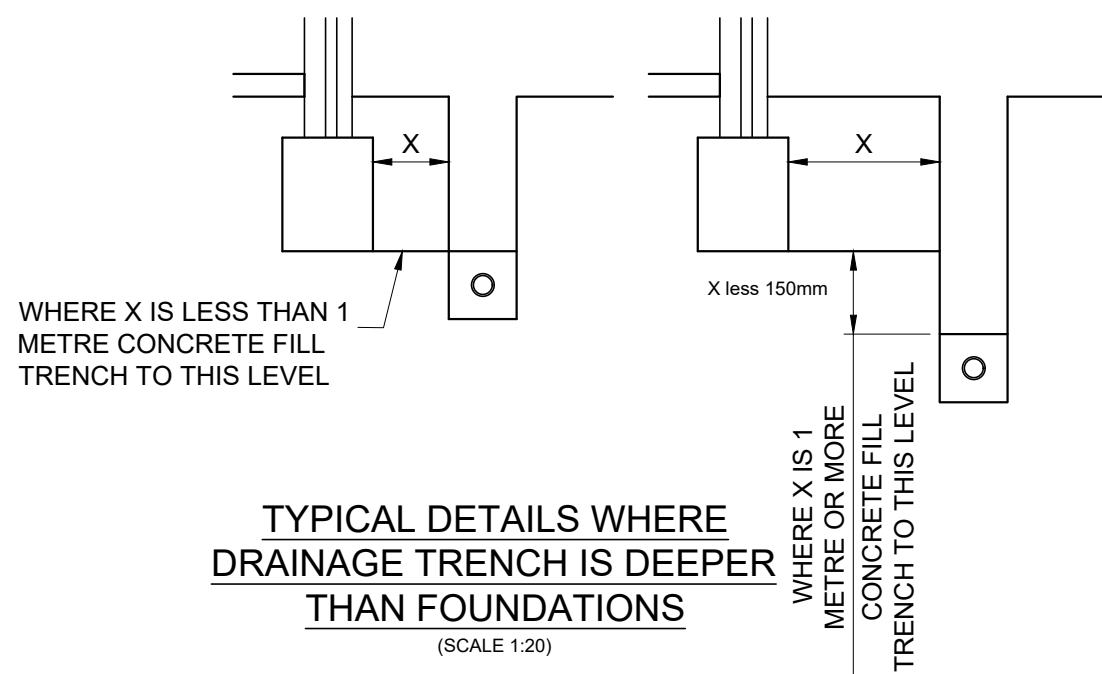
RODDING POINT DETAIL (RE)



TYPICAL FILTER STRIP DETAIL inc. INLET CONNECTION



PIPE CROSSINGS DETAIL



TYPICAL DETAILS WHERE DRAINAGE TRENCH IS DEEPER THAN FOUNDATIONS (SCALE 1:20)

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3. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.
4. REFER TO DRAINAGE LAYOUT 084783-CUR-MD-XX-D-C-92500 FOR THE LOCATION OF THE ATTENUATION TANK.
5. FLOW CONTROL TO BE INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURERS REQUIREMENTS, INSTRUCTIONS AND RECOMMENDATIONS.
6. WHERE ALTERNATIVE FLOW CONTROL DEVICE IS PREFERRED, IT WILL BE SUBJECT TO REDESIGN TO CONFIRM WHETHER THE SYSTEM HAS CAPACITY.
7. SURFACE WATER DRAINAGE CONNECTION SUBJECT TO S106 AGREEMENT WITH UNITED UTILITIES
8. FOR FULL DRAINAGE NOTES REFER TO 076038-CUR-XX-00-DR-D-92020

P02	REFERENCES UPDATED	18/08/26	ATL	ATL
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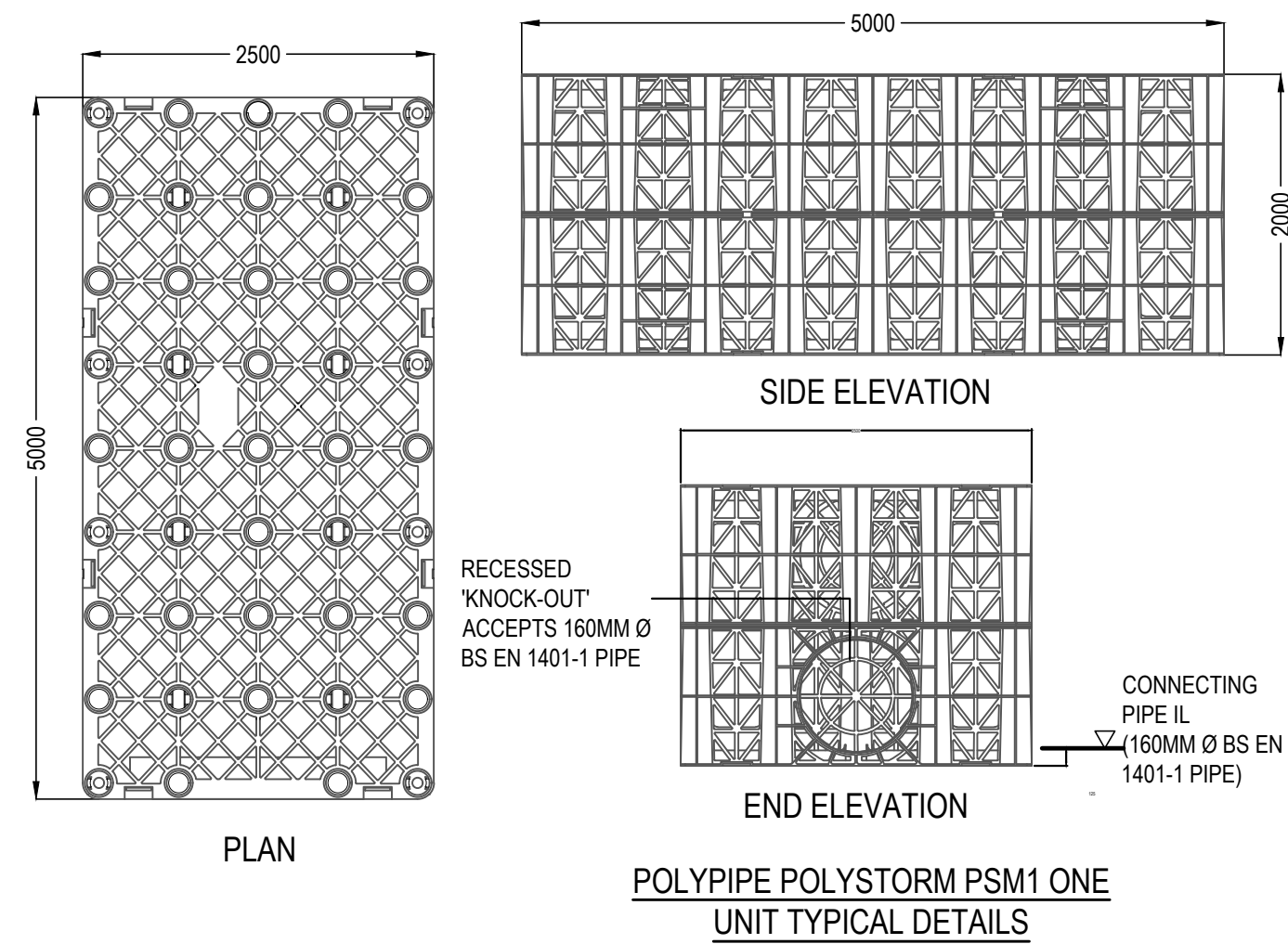
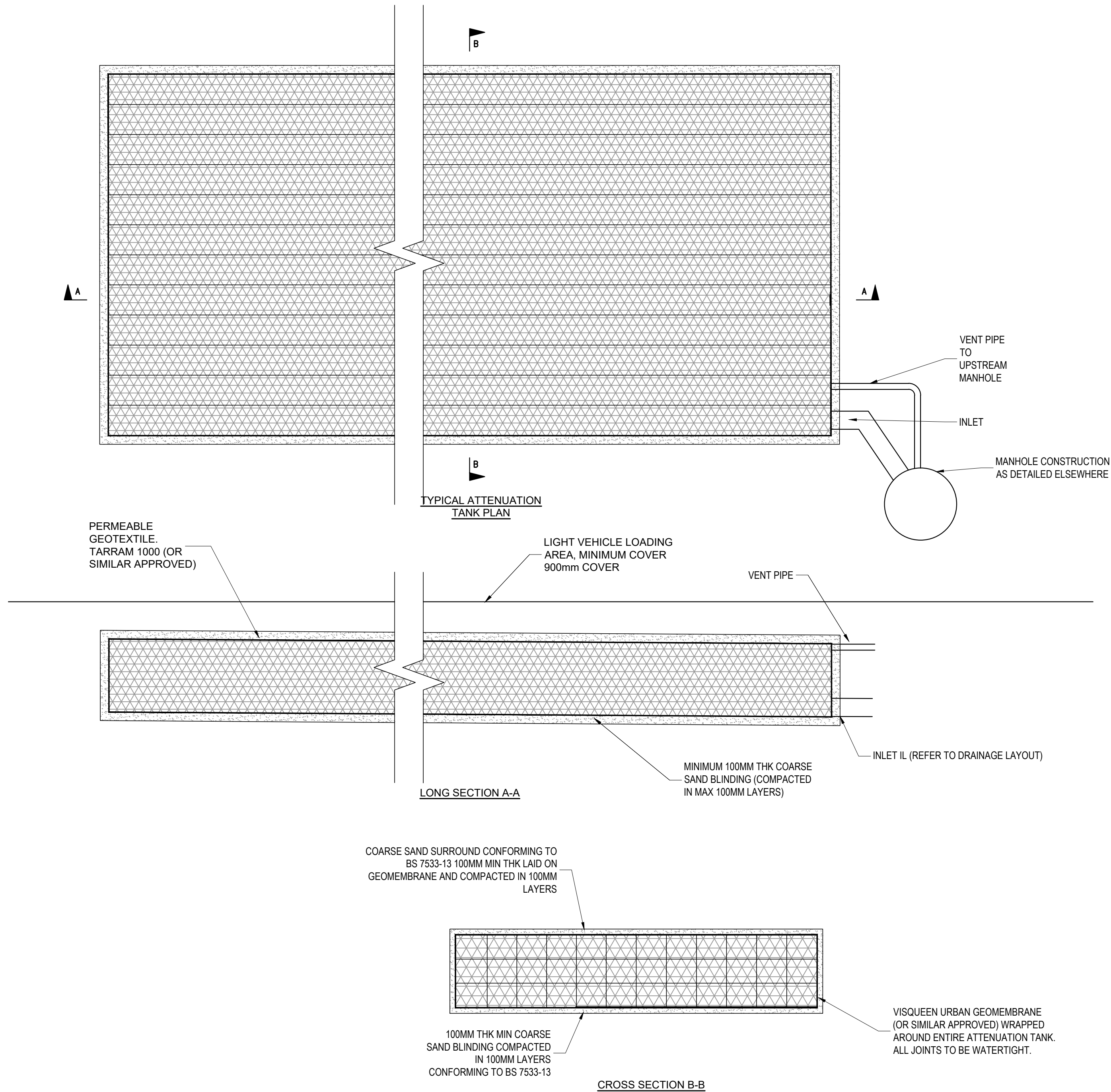
Status: **SUITABLE FOR INFORMATION** **S2**

Project: **HASSOCKS - RESIDENTIAL HOME**

Orig Title: **DRAINAGE DETAILS SHEET 3**

Drawn By	Designed By	Checked By
ATL	ATL	PB
Date	23/07/26	Scales @ A1
		NTS

Project No - Originator - Function - Spatial - Form - Discipline - Number	Revision
076038 - CUR - XX - 00 - DR - D - 92012	P02



U/S MANHOLE	BASE LEVEL	TOP OF TANK LEVEL	MIN GROUND LEVEL	MAX GROUND LEVEL	MIN COVER TO TOP OF TANK	MAX COVER TO TOP OF TANK	LOADING	LENGTH 'X'	WIDTH 'Y'	DEPTH 'Z'	VOLUME
SW7	51.47	52.67	53.50	53.50	0.83	0.83	HEAVY VEHICLE	42m	6m	1.2m	287m³

CURRENT DESIGN ASSUMPTIONS

DESIGN BASED ON POLYSTORM UNITS. 1000x500x400(D), MANUFACTURER TO CONFIRM EXACT TYPES REQUIRED.

DETAILED STRUCTURAL CALCULATIONS REQUIRED TO PROVE TANK HAS SUFFICIENT STRENGTH. REFER TO TABLE FOR TANK LOADINGS.

THE MANUFACTURER WILL NEED TO CONFIRM THAT THE TANK HAS SUFFICIENT STRENGTH FOR THIS LOCATION IN ACCORDANCE WITH CIRIA C680.

SEE TABLE FOR INVERT LEVELS, COVER LEVELS & COVER DEPTHS

SEE TABLE FOR DIMENSIONS OF TANKS AND VOLUMES
ATTENUATION VOLUME, BASED ON 95%

IMPERMEABLE MEMBRANE, BED AND SURROUND TO BE CONFIRMED WITH THE MANUFACTURER.

REFER TO DRAINAGE LAYOUT 084783-CUR-YP-XX-D-C-92500 FOR INLET/ OUTLET LOCATIONS

GROUNDWATER LEVEL NOT KNOWN. FINAL DESIGN TBC BY MANUFACTURER.

GENERAL NOTES:

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- ALL DIMENSIONS ARE IN METRES UNLESS NOTED OTHERWISE.
- REFER TO DRAINAGE LAYOUT Z1-CUR-GS80-PL-GRD-92500 FOR THE LOCATION OF THE ATTENUATION TANK.
- ATTENUATION TANK TO BE INSTALLED STRICTLY IN ACCORDANCE WITH THE MANUFACTURER'S REQUIREMENTS.
- THE CURRENT TANK IS BASED ON POLYSTORM UNITS BY POLYPIPE. WHERE AN ALTERNATIVE ATTENUATION TANK DEVICE IS PREFERRED, IT WILL BE SUBJECT TO REDESIGN TO CONFIRM WHETHER THE SYSTEM HAS CAPACITY.
- THE DESIGN OF THE TANK SHOULD BE PROVIDED BY THE MANUFACTURER OR SUPPLIER TO ENSURE THE TANK IS SUFFICIENT FOR THE SITE SPECIFIC CRITERIA.
- THE TANK DESIGN SHOULD INCORPORATE:
 - CRATES SUBJECT TO REGULAR HEAVY VEHICLE LOADING,
 - SUITABLE MAINTENANCE ACCESS; AND
 - VENTING TO PREVENT TRAPPED AIR POCKETS.
- THE STRENGTH OF THE TANK SHOULD COMPLY WITH CIRIA C680 STRUCTURAL DESIGN OF MODULAR GEOCELLULAR DRAINAGE TANKS.
- ACCESS FOR MAINTENANCE SHOULD BE IN ACCORDANCE WITH CIRIA GUIDANCE.
- VENTING TO THE TANK SHOULD BE CONFIRMED BY THE TANK MANUFACTURER. VENTING SHOULD BE LOCATED WITHIN LANDSCAPED AREAS, OR ROUTED BACK TO THE NEAREST MANHOLE ABOVE THE DESIGN WATER LEVEL.
- CONSTRUCTION AND INSTALLATION OF THE TANK SHOULD BE STRICTLY IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION REQUIREMENTS.
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- THE CONTRACTOR SHALL PROHIBIT THE MOVEMENT OF CONSTRUCTION PLANT ACROSS THE STORAGE TANK AND WHERE NECESSARY PROVIDE ADDITIONAL SUPPORT AND PROTECTION TO THE STRUCTURE. PARTICULARLY POST CONSTRUCTION. TEMPORARY FENCING CAN BE USED TO PROHIBIT TRADE STOCKS, PILLING MATERIALS, HEAVY PLANTS ETC.
- FOR FULL DRAINAGE NOTES REFER TO 076038-CUR-XX-00-DR-D-92020

P02	REFERENCES UPDATED	18/08/26	ATL	ATL
P01	STAGE 4 ISSUE	23/07/26	ATL	PB
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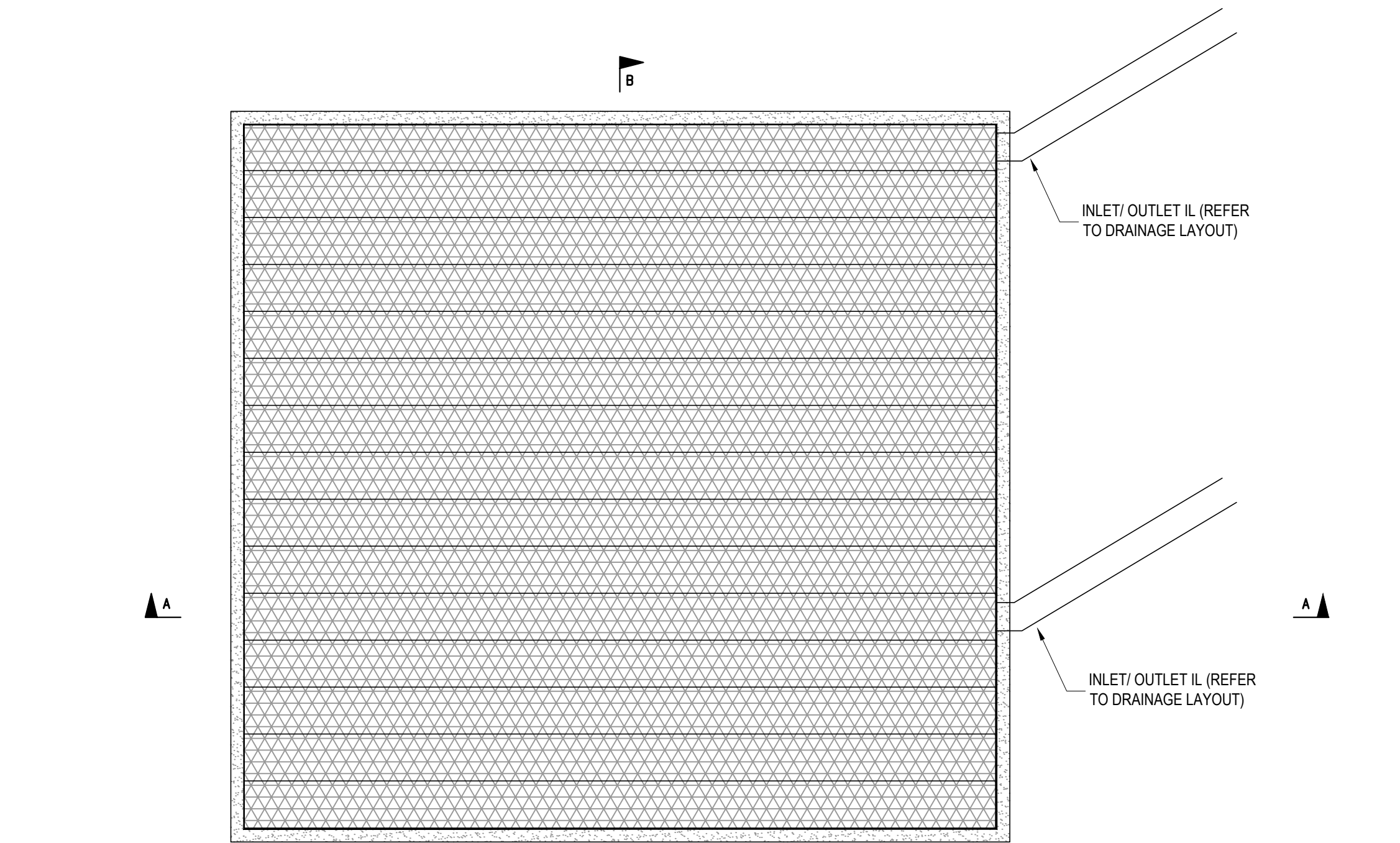
Status: **SUITABLE FOR INFORMATION** **S2**

Project: **HASSOCKS - RESIDENTIAL HOME**

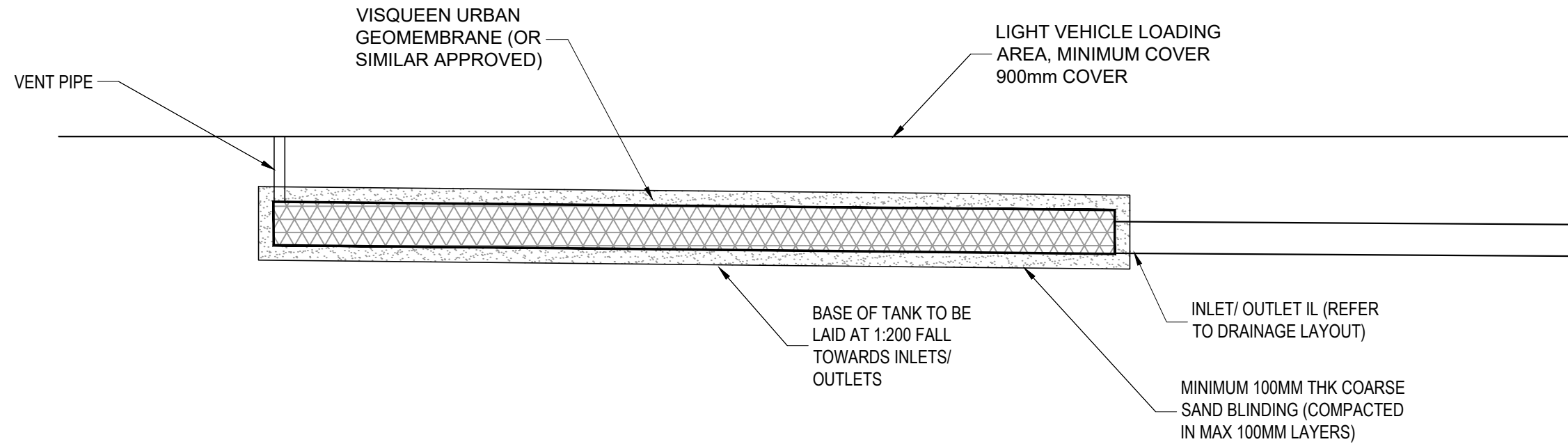
Orig Title: **DRAINAGE DETAILS
SHEET 4**

Drawn By ATL	Designed By ATL	Checked By PB
Date 23/07/26	Scale @ A1	NTS

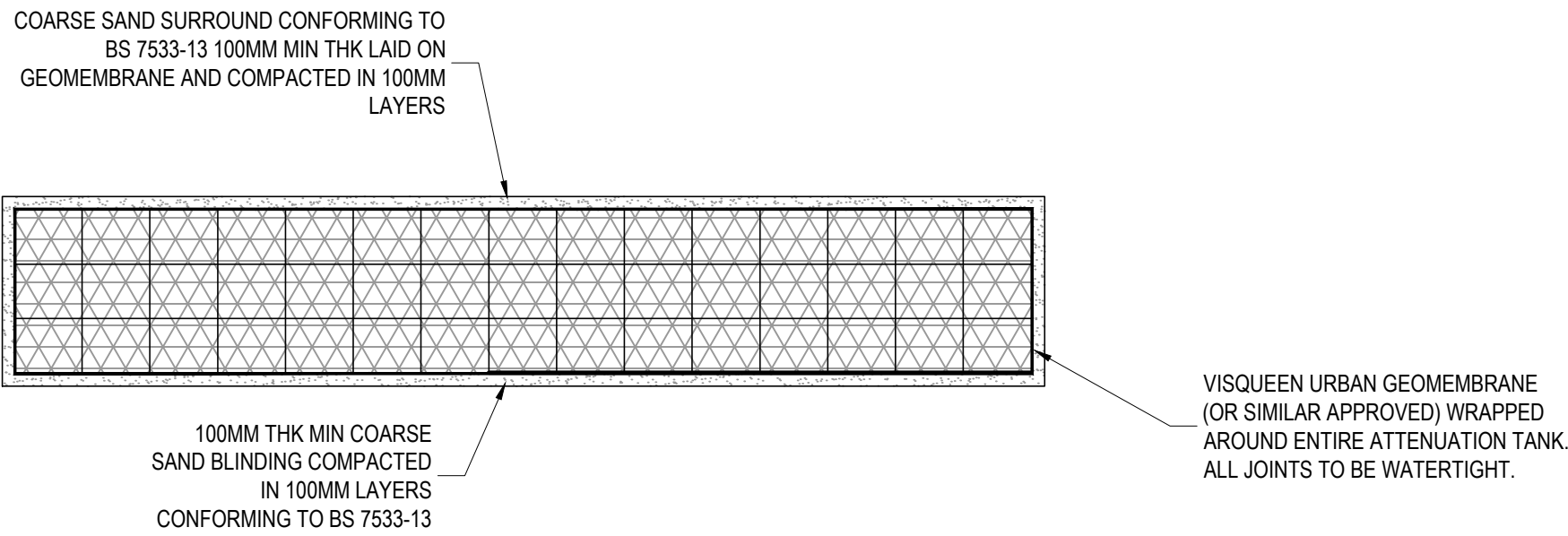
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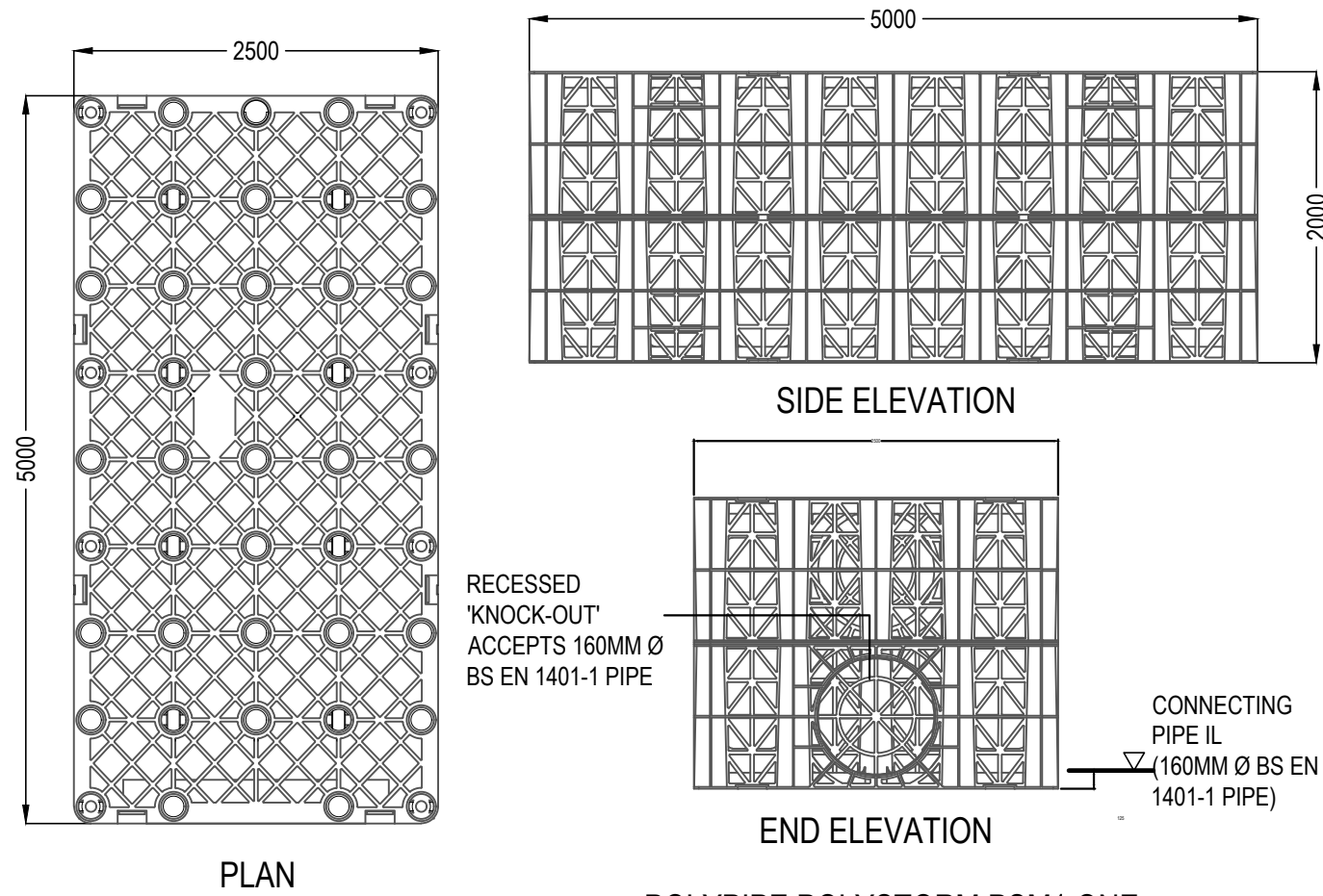
TYPICAL ATTENUATION
TANK PLAN



LONG SECTION A-A



CROSS SECTION B-B



POLYPIPE POLYSTORM PSM1 ONE
UNIT TYPICAL DETAILS

U/S MANHOLE	BASE LEVEL	TOP OF TANK LEVEL	MIN GROUND LEVEL	MAX GROUND LEVEL	MIN COVER TO TOP OF TANK	MAX COVER TO TOP OF TANK	LOADING	LENGTH 'X'	WIDTH 'Y'	DEPTH 'Z'	VOLUME
HEADWALLS	52.26	52.66	53.50	53.50	0.82	0.82	PEDESTRIAN	8m	7.5m	0.4m	24m³

CURRENT DESIGN ASSUMPTIONS

DESIGN BASED ON POLYSTORM UNITS. 1000x500x400(D), MANUFACTURER TO CONFIRM EXACT TYPES REQUIRED.

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P02	REFERENCES UPDATED	18/08/26	ATL	ATL
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Status: **SUITABLE FOR INFORMATION** **S2**

Project: **HASSOCKS - RESIDENTIAL HOME**

Orig Title: **DRAINAGE DETAILS
SHEET 4**

Drawn By ATL	Designed By ATL	Checked By PB
Date 23/07/26	Scales @ A1 NTS	Revision

Project No - Originator - Function - Spatial - Form - Discipline - Number
076038 - CUR - XX - 00 - DR - D - 92014 **P02**

GENERAL NOTES:

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS AND ENGINEERS DRAWINGS AND SPECIFICATIONS.

2. ALL ADOPTABLE DRAINAGE WORKS INCLUDING WORKS TO EXISTING PUBLIC SEWERS TO BE UNDERTAKEN IN ACCORDANCE WITH "DESIGN AND CONSTRUCTION GUIDANCE FOR FOUL AND SURFACE WATER SEWERS OFFERED FOR ADOPTION - LATEST EDITION" AND "CIVIL ENGINEERING SPECIFICATION FOR THE WATER INDUSTRY 7th EDITION" AND CONSTRUCTED TO THE RELEVANT STATUTORY UNDERTAKERS DETAILS.

3. ALL PRIVATE DRAINAGE WORKS TO BE IN ACCORDANCE WITH CURTINS DRAINAGE SPECIFICATION, "CIVIL ENGINEERING SPECIFICATION FOR THE WATER INDUSTRY 7th EDITION", BS EN 752 2017 'DRAIN AND SEWER SYSTEMS OUTSIDE BUILDINGS' AND THE BUILDING REGULATIONS APPROVED 'DOCUMENT H'.

4. DO NOT SCALE THIS DRAWING. ANY AMBIGUITIES, OMISSIONS AND ERRORS ON DRAWINGS SHALL BE BROUGHT TO THE ENGINEERS ATTENTION IMMEDIATELY. ALL DIMENSIONS MUST BE CHECKED / VERIFIED ON SITE.

5. DESIGN BASED ON TOPOGRAPHICAL SURVEY AND CCTV SURVEY INFORMATION AVAILABLE AT THE TIME OF THE DESIGN.

6. WHERE EXISTING DRAINAGE IS BEING USED, ALLOWANCES SHOULD BE MADE TO REMEDIATE THIS DRAINAGE IN LINE WITH AVAILABLE CCTV SURVEY INFORMATION. IF NO SURVEY IS AVAILABLE, IT IS ADVISED TO OBTAIN ONE PRIOR TO COMMENCEMENT OF WORKS.

7. ALL EXISTING SERVICES TO BE LOCATED PRIOR TO COMMENCEMENT OF ANY DRAINAGE WORKS, AND WHERE NECESSARY PROTECTION OR DIVERSIONS TO BE UNDERTAKEN TO AVOID CONFLICT WITH THE PROPOSED WORK.

8. OUTFALL CONNECTION(S) SUBJECT TO AGREEMENT WITH THE APPROVING AUTHORITY.

9. ALL DIMENSIONS ARE IN METRES AND LEVELS IN METRES ABOVE ORDNANCE DATUM UNLESS OTHERWISE NOTED.

10. COVER LEVELS, GULLY POSITIONS, AND BUILDINGS LOCATION ARE APPROXIMATE AND SHALL BE CONFIRMED BY ARCHITECT/ LANDSCAPE ARCHITECT. CONTRACTOR TO ALLOW FOR ADJUSTMENT TO SUIT AGREED POSITIONS AND FINISHED LEVELS, AND CONFIRM ALL COVER LEVELS ON SITE.

11. ALL INTERNAL DRAINAGE CONNECTIONS ARE PROVIDED TO THE PENETRATION POSITIONS SHOWN ON ARCHITECT AND M&E DRAWINGS. REFER TO DIMENSIONED LOCATIONS AND DIAMETERS ON ARCHITECT'S GROUND FLOOR SETTING-OUT PLANS.

12. ALL UNDERGROUND FOUL DRAINAGE SHOULD BE SUITABLY VENTED AT OR NEAR TO THE HEAD OF RUNS.

13. ALL ACCESS FITTINGS, STACKS, RWP'S AND GULLIES TO BE RODDABLE. ALL TO HAVE LOW LEVEL RODDING ACCESS PLATES UNLESS AN ALTERNATIVE MEANS OF ACCESS IS AGREED. ACCESS POINT TO BE ABOVE ANY GROUND FLOOR CONNECTED APPLIANCE SPILL LEVEL.

14. LARGE ACCESS FITTING REQUIRED ABOVE GROUND WHERE GREATER THAN 12M UP TO 22M TO A JUNCTION. SMALL ACCESS FITTING REQUIRED UP TO 12M TO A JUNCTION.

15. ALL GULLY AND CHANNEL DRAIN OUTLETS AND TERMINATION POINTS TO BE TRAPPED AND RODDABLE. INTERNAL GULLIES AND CHANNEL DRAINS TO BE SPECIFIED BY OTHERS.

16. WHERE NO WC'S ARE CONNECTED UPSTREAM, UNDERSLAB FW DRAINAGE TO BE LAID AT 1:40 MIN. AFTER THE CONNECTION OF AT LEAST 1NO WC, A MIN. FALL OF 1:80 APPLIES.

17. ALL CONNECTIONS FROM POP-UPS TO BE LAID AT A CONSTANT GRADIENT TO JUNCTION/ INSPECTION CHAMBER/ MANHOLE UNLESS NOTED OTHERWISE. ANY ISSUES RELATING TO CLASHES WITH FOUNDATIONS ARE TO BE FORWARDED TO THE ENGINEER, ALLOWING SUFFICIENT TIME FOR AN ALTERNATIVE SOLUTION TO BE PROPOSED.

18. INVERT LEVELS AT MANHOLES/ INSPECTION CHAMBERS TO BE USED TO SET OUT PIPEWORK. PIPE GRADIENTS ARE SHOWN INDICATIVELY ONLY.

19. ALL PIPE DIAMETERS GIVEN ARE NOMINAL INTERNAL PIPE DIAMETERS.
20. ALL SEWERS, UNLESS AGREED OTHERWISE STATED, SHALL BE:
 - 100mm to 300mm DIA TO BE VITRIFIED CLAY.
 - 375mm DIA AND GREATER TO BE CLASS 120 CONCRETE PIPES.

21. AS AN ALTERNATIVE THE CONTRACTOR MAY USE AN APPROVED UNPLASTICISED POLYVINYL CHLORIDE (PVCU) WITH APPROVAL FROM THE ENGINEER.

22. SEWER PIPES TO BE LAID IN MAXIMUM 3 METRE LENGTHS UNLESS THERE IS A SPECIFIC OPERATIONAL NEED TO LAY LONGER LENGTHS.

23. THE FIRST PIPE OUT OF MANHOLES TO BE AS SHORT AS PRACTICABLE SO AS TO PROVIDE A FLEXIBLE JOINT AS CLOSE AS POSSIBLE TO THE OUTSIDE FACE OF THE CONCRETE SURROUND AND CONNECTED TO A LENGTH OF ROCKER PIPE.

24. ALL NEW CONNECTIONS INTO EXISTING MANHOLES (OR INTO EXISTING SEWERS) TO BE 'SOFFITS LEVEL' UNLESS OTHERWISE NOTED.

25. ALL ADOPTABLE DRAINAGE PIPES WILL REQUIRE A MINIMUM OF 1200mm COVER, IN ACCORDANCE WITH SEWERAGE UNDERTAKERS REQUIREMENTS. WHERE THIS IS NOT ACHIEVED, IT WILL BE NECESSARY TO AGREE THE BED AND SURROUND DETAIL.

26. ALL PRIVATE DRAINAGE PIPES WITH A COVER OF LESS THAN 600mm IN NON-TRAFFICKED AREAS AND LESS THAN 1200mm IN TRAFFICKED AREAS TO BE BEDDED AND SURROUNDED IN CONCRETE (CLASS Z). COMPRESSIBLE MATERIAL SHALL BE PROVIDED AT EVERY PIPE JOINT. WHERE COVER EXCEEDS THIS DEPTH, PIPES ARE TYPICALLY BEDDED AND SURROUNDED IN CLASS S. REFER TO PIPE EMBEDMENT DETAILS DRAWING FOR SPECIFIC TYPES.

27. WHERE DRAINAGE PIPES ARE LESS THAN 300mm BELOW THE UNDERSIDE OF THE GROUND FLOOR SLAB, CONCRETE ENCASEMENT IS REQUIRED (CLASS Z). COMPRESSIBLE JOINTS ARE TO BE PROVIDED AT EVERY PIPE JOINT WITHIN THE CONCRETE.

28. WHERE PIPES ARE MORE THAN 300mm BELOW THE UNDERSIDE OF THE SLAB, CLASS S BEDDING IS ACCEPTABLE.

29. SULPHATE RESISTANT CEMENT (C20-DC2) AND PRECAST CONCRETE PRODUCTS MUST BE USED IN LINE WITH SITE INVESTIGATION REPORT 080908-CUR-XX-XX-T-GE-0002.

30. WHERE FOUL SEWERS RUN ABOVE SURFACE SEWERS, CONCRETE PROTECTION MAY BE REQUIRED AT CROSSEOVERS TO PREVENT ANY POTENTIAL CONTAMINATION.

31. ALL CONNECTIONS PASSING THROUGH BASES OR EDGE BEAMS TO BE IN SEALED SLEEVES. ALTERNATIVELY CONNECTIONS MAY BE CAST-IN WITH FLEXIBLE JOINTS NOT GREATER THAN 150MM FROM FACE OF CONCRETE.

32. THE CHAMBER SIZE OF MANHOLES WITH MORE THAN ONE CONNECTION MAY NEED TO BE INCREASED TO ACCOMMODATE THE CONNECTIONS AND BENDS.

33. ALL MANHOLE COVERS IN BLOCK/SLAB AND EXTERNAL PAVING AREAS TO HAVE RECESSED COVERS OF THE APPROPRIATE GRADE TO ACCEPT ARCHITECT'S PAVING PROPOSAL.

34. ALL INTERNAL COVERS TO HAVE MECHANICALLY JOINTED CORNERS AND DOUBLE SEALED WITH RECESSED TRAY TO ALLOW FOR FINISHES.

35. UNLESS NOTED OTHERWISE IN THE MANHOLE SCHEDULE, ALL MANHOLE, GULLY AND CHANNEL COVERS (IRONWORK) SHOULD BE THE FOLLOWING SPECIFICATION:
 - B125 LOAD CLASS IN PEDESTRIAN AREAS
 - D400 LOAD CLASS IN VEHICULAR AREAS.

36. WHERE LAND DRAINAGE PERFORATED PIPES ARE SPECIFIED, TH E PIPES SHOULD BE FULLY PERFORATED AND IN ACCORDANCE WITH BS EN 295.

37. PERFORATED PIPES SHOULD BE WRAPPED IN A GEOTEXTILE MEMBRANE UNLESS NOTED OTHERWISE.

38. ALL PROPRIETARY PRODUCTS TO BE INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURERS REQUIREMENTS, INSTRUCTIONS AND RECOMMENDATIONS.

P01	STAGE 4 ISSUE	23/07/26	ATL	PB
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Status:		S2		
Project: HASSOCKS - RESIDENTIAL HOME				
Drg Title: DRAINAGE NOTES				
Drawn By ATL		Designed By ATL		Checked By PB
		Date 23/07/26		Scales @ A2 NTS
Project Code - Originator - Function - Spatial - Form - Discipline - Number				Revision
076038 - CUR - XX - 00 - DR- D - 92020				P01

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Manhole schedule - Surface Water																
MH REF	CL (mAOD)	IL (mAOD)	DEPTH TO SOFFIT (mAOD)	DS PIPE DIA (mm)	MH DIA (mm)	MH TYPE	CATCHPIT	CATCHPIT DEPTH (mm)	COVER SIZE (mm)	COVER CLASS	COVER TYPE	RECESSED	BACK DROP	Back drop IL (m)	RESTRICTED ACCESS	COMMENTS
SW1	53.500	52.420	0.78	300	1500	TYPE C	N	N/A	1200X675	D400	SINGLE SEALED	N	N	N/A	N	UNRESTRICTED;
SW2	53.500	51.670	1.53	300	1200	TYPE B	N	N/A	600X600	D400	SINGLE SEALED	N	Y	52.33	N	UNRESTRICTED;
SW3	53.000	51.991	0.71	300	1500	TYPE C	N	N/A	1200X675	C250	SINGLE SEALED	N	N	N/A	N	UNRESTRICTED;
SW4	53.500	51.883	1.32	300	1500	TYPE C	N	N/A	1200X675	C250	SINGLE SEALED	N	N	N/A	N	UNRESTRICTED;
SW5	53.000	51.761	0.94	300	1500	TYPE C	N	N/A	1200X675	C250	SINGLE SEALED	N	N	N/A	N	UNRESTRICTED;
SW6A	53.000	51.750	0.95	300	1500	TYPE C	N	N/A	1200X675	C250	SINGLE SEALED	N	N	N/A	N	UNRESTRICTED;
SW6	53.100	51.634	1.17	300	1500	TYPE C	N	N/A	1200X675	D400	SINGLE SEALED	N	N	N/A	N	UNRESTRICTED;
SW7	53.600	51.525	1.78	300	1200	TYPE B	N	N/A	600X600	D400	SINGLE SEALED	N	N	N/A	N	UNRESTRICTED;

Manhole schedule - Foul Water																
MH REF	CL (mAOD)	IL (mAOD)	DEPTH TO SOFFIT (mAOD)	DS PIPE DIA (mm)	MH DIA (mm)	MH TYPE	CATCHPIT	CATCHPIT DEPTH (mm)	COVER SIZE (mm)	COVER CLASS	COVER TYPE	RECESSED	BACK DROP	Back drop IL (m)	RESTRICTED ACCESS	COMMENTS
FW01	53.500	52.450	0.90	150	450	PPIC	N	N/A	450X450	C250	DOUBLE SEALED	N	N	N/A	N	UNRESTRICTED;
FW02	53.500	52.450	0.90	150	450	PPIC	N	N/A	450X450	C250	DOUBLE SEALED	N	N	N/A	N	UNRESTRICTED;
FW03	53.500	52.400	0.95	150	450	PPIC	N	N/A	450X450	C250	DOUBLE SEALED	N	N	N/A	N	UNRESTRICTED;
FW04	53.500	52.320	1.03	150	450	PPIC	N	N/A	450X450	C250	DOUBLE SEALED	N	N	N/A	N	UNRESTRICTED;
FW05	53.500	52.240	1.11	150	450	PPIC	N	N/A	450X450	D400	DOUBLE SEALED	N	N	N/A	Y	RESTRICTED ACCESS 350mm DIA MAX;
FW06	53.500	52.160	1.19	150	450	PPIC	N	N/A	450X450	D400	DOUBLE SEALED	N	N	N/A	Y	RESTRICTED ACCESS 350mm DIA MAX;
FW07	53.500	52.040	1.31	150	450	PPIC	N	N/A	450X450	D400	DOUBLE SEALED	N	N	N/A	Y	RESTRICTED ACCESS 350mm DIA MAX;
FW08	53.500	51.950	1.40	150	450	PPIC	N	N/A	450X450	D400	DOUBLE SEALED	N	N	N/A	Y	RESTRICTED ACCESS 350mm DIA MAX;
FW09	53.500	52.000	1.35	150	450	PPIC	N	N/A	450X450	D400	DOUBLE SEALED	N	N	N/A	Y	RESTRICTED ACCESS 350mm DIA MAX;
FW10	53.500	51.940	1.41	150	450	PPIC	N	N/A	450X450	D400	DOUBLE SEALED	N	N	N/A	Y	RESTRICTED ACCESS 350mm DIA MAX;
FW11	53.500	51.840	1.51	150	1200	TYPE B	N	N/A	600X600	D400	DOUBLE SEALED	N	N	N/A	N	UNRESTRICTED;
FW12	50.000	49.000	0.85	150	450	PPIC	N	N/A	450X450	B125	DOUBLE SEALED	Y	N	N/A	N	UNRESTRICTED;
FW13	50.000	48.885	0.97	150	450	PPIC	N	N/A	450X450	B125	DOUBLE SEALED	Y	N	N/A	N	UNRESTRICTED;
FW14	50.000	48.785	1.07	150	450	PPIC	N	N/A	450X450	B125	DOUBLE SEALED	Y	N	N/A	Y	RESTRICTED ACCESS 350mm DIA MAX;
FW15	53.500	48.685	4.67	150	1200	TYPE A1/2	N	N/A	600X600	D400	DOUBLE SEALED	N	Y	51.76	N	UNRESTRICTED;
FW16	53.500	48.645	4.71	150	1200	TYPE A1/2	N	N/A	600X600	D400	DOUBLE SEALED	N	N	N/A	N	UNRESTRICTED;

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3. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.
4. FOR GENERAL NOTES REFER TO DRAWING.
5. BASED ON DRAWING CUR-XX-XX-D_DRAINAGE DESIGN_V7

P01	STAGE 4 ISSUE	23/07/26	ATL	PB
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S2

Project:

HASSOCKS - RESIDENTIAL HOME

Drg Title:

MANHOLE SCHEDULES

Drawn By

ATL

Designed By

ATL

Checked By

PB

Date

23/07/26

Scales @ A2

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Revision

P01

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Appendix B

Proposed Surface Water Drainage Model Details and Results

Design Settings

Rainfall Methodology	FEH-13	Minimum Velocity (m/s)	1.00
Return Period (years)	100	Connection Type	Level Soffits
Additional Flow (%)	40	Minimum Backdrop Height (m)	0.200
CV	0.750	Preferred Cover Depth (m)	1.200
Time of Entry (mins)	5.00	Include Intermediate Ground	✓
Maximum Time of Concentration (mins)	30.00	Enforce best practice design rules	x
Maximum Rainfall (mm/hr)	50.0		

Nodes

Name	Area (ha)	T of E (mins)	Cover Level (m)	Diameter (mm)	Easting (m)	Northing (m)	Depth (m)	Invert Level (m)
SW3	0.030	5.00	53.000	1200	497.466	8.687	1.009	51.991
SW4	0.022	5.00	53.500	1200	498.477	24.900	1.617	51.883
SW5	0.004	5.00	53.000	1200	491.462	55.051	1.239	51.761
SW6A			53.000	1200	489.348	56.827	1.250	51.750
SW6	0.004	5.00	53.100	1200	460.291	58.131	1.466	51.634
SW1	0.053	5.00	53.500	1200	450.702	13.985	1.080	52.420
SW2	0.114	5.00	53.500	1200	451.775	35.344	2.078	51.672
SW7	0.022	5.00	53.600	1200	452.888	57.496	2.075	51.525
soak			53.500	1200	450.169	55.269	2.028	51.472
DUMMY			53.500	1200	439.511	46.198	0.640	52.860

Links

Name	US Node	DS Node	Length (m)	ks (mm) / n	US IL (m)	DS IL (m)	Fall (m)	Slope (1:X)	Dia (mm)	T of C (mins)	Rain (mm/hr)
2.000	SW3	SW4	16.177	0.600	51.991	51.883	0.108	150.0	300	5.21	50.0
2.001	SW4	SW5	30.561	0.600	51.883	51.761	0.122	250.0	300	5.73	50.0
1.002_1	SW5	SW6A	2.761	0.600	51.761	51.750	0.011	250.0	300	5.77	50.0
1.003	SW6A	SW6	29.086	0.600	51.750	51.634	0.116	250.0	300	6.26	50.0
2.003	SW6	SW7	27.296	0.600	51.634	51.525	0.109	250.0	300	6.72	50.0
1.000	SW1	SW2	13.465	0.600	52.420	52.330	0.090	149.6	300	5.17	50.0
1.001	SW2	SW7	36.863	0.600	51.672	51.525	0.147	250.0	300	5.80	50.0
1.002	SW7	soak	13.198	0.600	51.525	51.472	0.053	250.0	300	6.94	50.0
1.006	soak	DUMMY	13.996	0.600	53.000	52.860	0.140	100.0	100	7.25	50.0

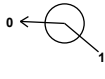
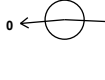
Name	Vel (m/s)	Cap (l/s)	Flow (l/s)	US Depth (m)	DS Depth (m)	Σ Area (ha)	Σ Add Inflow (l/s)
2.000	1.281	90.6	5.7	0.709	1.317	0.030	0.0
2.001	0.990	70.0	9.9	1.317	0.939	0.052	0.0
1.002_1	0.990	70.0	10.6	0.939	0.950	0.056	0.0
1.003	0.990	70.0	10.6	0.950	1.166	0.056	0.0
2.003	0.990	70.0	11.4	1.166	1.775	0.060	0.0
1.000	1.283	90.7	10.1	0.780	1.120	0.053	0.0
1.001	0.990	70.0	31.7	1.778	1.775	0.167	0.0
1.002	0.990	70.0	47.2	1.775	1.728	0.249	0.0
1.006	0.769	6.0	47.2	0.400	0.540	0.249	0.0

Pipeline Schedule

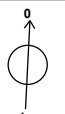
Link	Length (m)	Slope (1:X)	Dia (mm)	Link Type	US CL (m)	US IL (m)	US Depth (m)	DS CL (m)	DS IL (m)	DS Depth (m)
2.000	16.177	150.0	300	1 STANDARD	53.000	51.991	0.709	53.500	51.883	1.317
2.001	30.561	250.0	300	1 STANDARD	53.500	51.883	1.317	53.000	51.761	0.939
1.002_1	2.761	250.0	300	1 STANDARD	53.000	51.761	0.939	53.000	51.750	0.950
1.003	29.086	250.0	300	1 STANDARD	53.000	51.750	0.950	53.100	51.634	1.166
2.003	27.296	250.0	300	1 STANDARD	53.100	51.634	1.166	53.600	51.525	1.775
1.000	13.465	149.6	300	1 STANDARD	53.500	52.420	0.780	53.750	52.330	1.120
1.001	36.863	250.0	300	1 STANDARD	53.750	51.672	1.778	53.600	51.525	1.775
1.002	13.198	250.0	300	1 STANDARD	53.600	51.525	1.775	53.500	51.472	1.728
1.006	13.996	100.0	100	1 STANDARD	53.500	53.000	0.400	53.500	52.860	0.540

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
2.000	SW3	1200	Manhole	1 STANDARD	SW4	1200	Manhole	1 STANDARD
2.001	SW4	1200	Manhole	1 STANDARD	SW5	1200	Manhole	1 STANDARD
1.002_1	SW5	1200	Manhole	1 STANDARD	SW6A	1200	Manhole	1 STANDARD
1.003	SW6A	1200	Manhole	1 STANDARD	SW6	1200	Manhole	1 STANDARD
2.003	SW6	1200	Manhole	1 STANDARD	SW7	1200	Manhole	1 STANDARD
1.000	SW1	1200	Manhole	1 STANDARD	SW2	1200	Manhole	1 STANDARD
1.001	SW2	1200	Manhole	1 STANDARD	SW7	1200	Manhole	1 STANDARD
1.002	SW7	1200	Manhole	1 STANDARD	soak	1200	Manhole	1 STANDARD
1.006	soak	1200	Manhole	1 STANDARD	DUMMY	1200	Manhole	1 STANDARD

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)
SW3	497.466	8.687	53.000	1.009	1200				
						0	2.000	51.991	300
SW4	498.477	24.900	53.500	1.617	1200		1	2.000	51.883
						0	2.001	51.883	300
SW5	491.462	55.051	53.000	1.239	1200		1	2.001	51.761
						0	1.002_1	51.761	300
SW6A	489.348	56.827	53.000	1.250	1200		1	1.002_1	51.750
						0	1.003	51.750	300
SW6	460.291	58.131	53.100	1.466	1200		1	1.003	51.634
						0	2.003	51.634	300
SW1	450.702	13.985	53.500	1.080	1200				
						0	1.000	52.420	300

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)
SW2	451.775	35.344	53.500	2.078	1200		1	1.000	52.330
							0	1.001	51.672
SW7	452.888	57.496	53.600	2.075	1200		1	1.001	51.525
							2	2.003	51.525
							0	1.002	51.525
soak	450.169	55.269	53.500	2.028	1200		1	1.002	51.472
							0	1.006	53.000
DUMMY	439.511	46.198	53.500	0.640	1200		1	1.006	52.860
									100

Simulation Settings

Rainfall Methodology	FEH-13	Analysis Speed	Detailed	Starting Level (m)	
Rainfall Events	Singular	Skip Steady State	x	Check Discharge Rate(s)	x
Summer CV	0.750	Drain Down Time (mins)	10000	Check Discharge Volume	x
Winter CV	0.840	Additional Storage (m³/ha)	20.0		

Storm Durations

15	30	60	120	180	240	360	480	600	720	960	1440
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Return Period (years)	Climate Change (CC %)	Additional Area (A %)	Additional Flow (Q %)
1	0	0	0
30	0	0	0
100	40	0	0

Node soak Depth/Area Storage Structure

BRE-365: Volume (m³)	0.468	Base Inf Coefficient (m/hr)	0.00000	Invert Level (m)	51.470
BRE-365: Area (m²)	3.228	Side Inf Coefficient (m/hr)	0.09665	Time to half empty (mins)	4950
BRE-365: Time (hrs)	1.500	Safety Factor	5.0		
BRE-365: Inf Coef (m/hr)	0.09665	Porosity	0.95		

Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)
0.000	253.0	0.0	1.200	253.0	108.0	1.201	0.0	108.0

Results for 1 year Critical Storm Duration. Lowest mass balance: 99.93%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	SW3	10	52.027	0.036	2.8	0.0613	0.0000	OK
15 minute winter	SW4	11	51.935	0.052	4.7	0.0728	0.0000	OK
15 minute winter	SW5	11	51.820	0.059	4.9	0.0704	0.0000	OK
15 minute winter	SW6A	11	51.804	0.054	4.9	0.0611	0.0000	OK
1440 minute winter	SW6	1410	51.727	0.093	0.5	0.1102	0.0000	OK
15 minute winter	SW1	10	52.468	0.048	4.9	0.1015	0.0000	OK
15 minute winter	SW2	10	51.767	0.095	15.3	0.2113	0.0000	OK
1440 minute winter	SW7	1410	51.727	0.202	2.2	0.2711	0.0000	OK
1440 minute winter	soak	1410	51.727	0.255	2.1	62.0343	0.0000	OK
15 minute summer	DUMMY	1	52.860	0.000	0.0	0.0000	0.0000	OK
Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute winter	SW3	2.000	SW4	2.7	0.433	0.030	0.1028	
15 minute winter	SW4	2.001	SW5	4.6	0.529	0.066	0.2727	
15 minute winter	SW5	1.002_1	SW6A	4.9	0.532	0.070	0.0253	
15 minute winter	SW6A	1.003	SW6	4.9	0.578	0.070	0.2490	
1440 minute winter	SW6	2.003	SW7	0.5	0.133	0.007	0.9413	
15 minute winter	SW1	1.000	SW2	4.8	0.674	0.052	0.0952	
15 minute winter	SW2	1.001	SW7	15.1	0.718	0.216	0.8153	
1440 minute winter	SW7	1.002	soak	2.1	0.289	0.030	0.7538	
1440 minute winter	soak	1.006	DUMMY	0.0	0.000	0.000	0.0000	0.0
1440 minute winter	soak	Infiltration		0.1				

Results for 30 year Critical Storm Duration. Lowest mass balance: 99.91%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	SW3	10	52.061	0.070	11.1	0.1205	0.0000	OK
1440 minute winter	SW4	1410	52.060	0.177	1.0	0.2480	0.0000	OK
1440 minute winter	SW5	1410	52.060	0.299	1.1	0.3573	0.0000	OK
1440 minute winter	SW6A	1410	52.060	0.310	1.1	0.3503	0.0000	SURCHARGED
1440 minute winter	SW6	1410	52.060	0.426	1.2	0.5049	0.0000	SURCHARGED
15 minute winter	SW1	10	52.520	0.100	19.7	0.2113	0.0000	OK
1440 minute winter	SW2	1410	52.060	0.388	3.2	0.8639	0.0000	SURCHARGED
1440 minute winter	SW7	1410	52.060	0.535	4.5	0.7182	0.0000	SURCHARGED
1440 minute winter	soak	1410	52.060	0.588	4.3	142.4111	0.0000	OK

15 minute summer	DUMMY	1	52.860	0.000	0.0	0.0000	0.0000	OK
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Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute winter	SW3	2.000	SW4	11.0	0.627	0.121	0.2857	
1440 minute winter	SW4	2.001	SW5	1.0	0.334	0.014	1.7346	
1440 minute winter	SW5	1.002_1	SW6A	1.1	0.355	0.016	0.1943	
1440 minute winter	SW6A	1.003	SW6	1.1	0.322	0.016	2.0482	
1440 minute winter	SW6	2.003	SW7	1.0	0.133	0.015	1.9222	
15 minute winter	SW1	1.000	SW2	19.4	0.989	0.213	0.2636	
1440 minute winter	SW2	1.001	SW7	3.1	0.320	0.044	2.5959	
1440 minute winter	SW7	1.002	soak	4.3	0.367	0.062	0.9294	
1440 minute winter	soak	1.006	DUMMY	0.0	0.000	0.000	0.0000	0.0
1440 minute winter	soak	Infiltration		0.3				

Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 99.86%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
1440 minute winter	SW3	1440	52.506	0.515	1.0	0.8884	0.0000	SURCHARGED
1440 minute winter	SW4	1440	52.506	0.623	1.8	0.8737	0.0000	SURCHARGED
1440 minute winter	SW5	1440	52.506	0.745	1.7	0.8907	0.0000	SURCHARGED
1440 minute winter	SW6A	1440	52.506	0.756	1.5	0.8547	0.0000	SURCHARGED
1440 minute winter	SW6	1440	52.506	0.872	1.5	1.0339	0.0000	SURCHARGED
15 minute winter	SW1	11	52.560	0.140	35.0	0.2946	0.0000	OK
1440 minute winter	SW2	1440	52.506	0.834	5.7	1.8575	0.0000	SURCHARGED
1440 minute winter	SW7	1440	52.506	0.981	7.8	1.3171	0.0000	SURCHARGED
1440 minute winter	soak	1440	52.506	1.034	7.8	250.1083	0.0000	OK
15 minute summer	DUMMY	1	52.860	0.000	0.0	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
1440 minute winter	SW3	2.000	SW4	1.0	0.312	0.011	1.1392	
1440 minute winter	SW4	2.001	SW5	1.6	0.362	0.023	2.1521	
1440 minute winter	SW5	1.002_1	SW6A	1.5	0.371	0.022	0.1944	
1440 minute winter	SW6A	1.003	SW6	1.4	0.335	0.020	2.0482	
1440 minute winter	SW6	2.003	SW7	1.4	0.133	0.021	1.9222	
15 minute winter	SW1	1.000	SW2	34.5	1.147	0.380	0.4419	
1440 minute winter	SW2	1.001	SW7	5.6	0.320	0.081	2.5959	
1440 minute winter	SW7	1.002	soak	7.8	0.407	0.111	0.9294	
1440 minute winter	soak	1.006	DUMMY	0.0	0.000	0.000	0.0000	0.0
1440 minute winter	soak	Infiltration		0.5				

Hassocks

Drainage Maintenance Strategy

Curtins Ref: 076038-CUR-00-XX-T-C-92100

Revision: P01

Issue Date: 16 July 2026

Client Name: Frontier Estates Ltd

Client Address: 25 Oldbury Place, London, W1U 5PR

Site Address: Byanda, Brighton Road, Hassocks, BN6 9LX

Rev	Description	Issued by	Checked	Date
P01	First Issue	JC	ATL	16 July 2026

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Author	Signature	Date
Jacob Collin BEng (Hons) Civil Engineer		16 July 2026

Reviewed	Signature	Date
Andy Losty MEng (Hons) Project Engineer		16 July 2026

Authorised	Signature	Date
Andy Losty MEng (Hons) Project Engineer		16 July 2026

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Appendix

- Appendix A – Maintenance Inspection Schedule
- Appendix B – Drainage Drawing

1 Introduction

1.1 Project Background

Curtins have been appointed by Nexus planning, on behalf of Frontier Estates, to provide a Drainage Maintenance Strategy for the proposed below ground foul and surface water drainage design for the development of a residential care facility consisting of a main building and associated carpark. The British National Grid co-ordinates for the site is approximately Easting 529965, Northing 115319.

The report is based on currently available information and best practice guidance.

Proposals contained or forming part of this report represent the design intent and may be subject to alteration or adjustment in completing the detailed design for this project. Where such adjustments are undertaken as part of the detailed design and are deemed a material deviation from the intent contained in this document, prior approval shall be obtained from the relevant authority in advance of commencing such works.

1.2 Scope of the Maintenance Strategy

This report demonstrates the below ground drainage which is to be installed for the development site and provides product information to inform future maintenance requirements.

This report is intended to give an overview of the operation and maintenance for the drainage features included with the drainage strategy and in relation to typical details only. Where proprietary products are specified the manufacturer's instructions and recommendations should be followed in priority to this document unless specifically noted otherwise due to project constraints.

The recommended operations and frequencies are typical only and should be more frequent initially to ensure that there are no unforeseen issues with the operation and then adjusted to suit the site requirements.

A management and maintenance plan for the lifetime of the development shall include the arrangements for a maintenance/management contract where required to secure the operation of the drainage and sustainable urban drainage system throughout its lifetime.

The maintenance of the private drainage network within the ownership boundary will be the responsibility of the landowner.

A maintenance inspection schedule is included within **Appendix A** and this should be updated after every inspection and remediation of the drainage system.

The maintenance scheduling should begin from the development completion date.

2 Maintenance Recommendations

2.1 General Maintenance

A copy of the final construction drainage layout should be provided in the final Operations and Maintenance Manual. Reference should be made to the proposed drainage layout: Curtins drawing *076038-CUR-XX-00-DR-D-72001_OutlineDrainageStrategy* enclosed in **Appendix B**.

All works should be undertaken by suitably qualified personnel with the appropriate barriers and signage should be implemented during opening of any chambers or surface drainage covers.

The appropriate health and safety equipment must be used when accessing manholes. Confined space certificates must be held by any personnel entering a manhole and the appropriate permits should be obtained from the Maintenance Manager prior to any access.

Sediment/material removal should be undertaken in consultation with the environmental regulator to confirm appropriate protocols; especially where run-off is taken from potentially contaminated areas. Any waste should be removed by an appropriately registered company.

It is recommended that the drainage system is inspected as a **minimum twice a year**, with the system also being inspected **after any major storm event**.

Significant sediment deposition is likely in areas used for storage, so a post clean-up operation may be required including the removal of litter, vegetation, sewerage debris and larger objects.

Long-term management practices include monthly sweeping of external paved areas. The sweeping program will remove sand and contaminants directly from paved surfaces before they become mobilised during storm events and transported to the drainage system.

During the winter months, surface drainage features such as gullies and channels should be cleared of ice, snow, debris or litter.

The surface water network has been designed to accommodate the 1 in 100-year storm rainfall event plus 40% to allow for climate change increases. As the flows are generally being attenuated on site features, there will be a period of time after storm events where the network is still partially or fully surcharged and is draining down. **Where this surcharging is still present after 48hrs, appropriate action should be taken.**

2.2 Components

The following components have been included within the drainage system for the development:

- **Inspection, Manhole and Catchpit Chambers**
- **Pipes**
- **Flood Compensation Storage/Attenuation Tanks - Geocellular Storage Units**
- **Permeable Paving**
- **Infiltration**

2.3 Inspection, Manhole and Catchpit Chambers

Access points to the below ground drainage system have been provided by Inspection Chambers, Manholes and Catchpit Chambers located at the head of each run, at a change in direction and at a change of pipe size in accordance with Building Regulations Part H.

Chambers can also be used to provide housing for ancillaries (such as flow controls) and to provide additional capacity within the system.

The locations of the chambers are indicated on Curtins drainage drawing 076038-CUR-XX-00-DR-D-72001_OutlineDrainageStrategy.

The appropriate barriers and signage should be implemented during any opening of manholes to warn pedestrians. The appropriate health and safety equipment must be used when accessing manholes. Confined space certificates must be held by any personnel entering a manhole and the appropriate permits should be obtained from the Maintenance Manager prior to any access.

Sediment/material removal should be undertaken in consultation with the environmental regulator to confirm appropriate protocols; especially where run-off is taken from potentially contaminated areas.

Existing manholes not constructed as part of the new drainage system are subject to existing access and maintenance procedures.

Typically, in accordance with Building Regulations Part H:

- Chambers with a minimum working space of 900mm can be accessed by personnel; however, a **winch must be used**.
- Chambers with a minimum working space of 1050mm should be accessed using steps.
- Chambers with a minimum working space of 1200mm should be accessed using ladders.

Maintenance Schedule	Required Action	Frequency
Monitoring (to be undertaken more regularly within the first year of operation and adjusted as required)	Initial inspection should be provided as post construction CCTV survey.	N/A
	Inspect for evidence of poor operation via water level in chambers. If required take remedial action.	3-monthly, 48 hours after large storms.
	Check for wear, rust, or cracks on the cover and inspect the internal chamber for degradation, leaks, or root intrusion. If required take remedial action.	3-monthly, 48 hours after large storms.
Regular maintenance	Check and remove debris on site.	Monthly or as required.
	Check and remove large vegetation growth around chamber/cover.	Monthly or as required.
Remedial actions	Rod through poorly performing runs as initial remediation.	As required.
	If continued poor performance jet and CCTV survey poorly performing runs.	As required.
	Seek advice as to remediation techniques suitable for the type of performance issue and location.	As required If above does not improve performance.
	Seek advice where any damaged covers or chamber cracks are observed.	As required.

2.4 Pipes

Pipes are proprietary products and the materials can vary across the site and as such, the manufacturer's recommendations should be followed. Regardless of the product used the pipes will be fully compliant with the Curtins drainage specification.

Pipes are intended to be the main conveyance across the development and where oversized they form the attenuation volume required by the limitation of the discharge rate. They are intended to be dry except for during rainfall events. These have been designed to be self-cleaning where possible for smaller diameter pipes, and for larger diameters the risk is reduced due to the overall pipe size.

Regular inspection and maintenance is important to identify areas which may have been obstructed/clogged and may not be draining sufficiently, thus exposing the development to a greater level of flood risk.

The approximate locations of the pipes are indicated on Curtins drainage drawing *076038-CUR-XX-00-DR-D-72001_OutlineDrainageStrategy*.

Access for maintenance is provided through access chambers and manholes. Pipes can be cleaned using drain cleaning rods or drain cleaning jets.

Maintenance Schedule	Required Action	Frequency
Monitoring (to be undertaken more regularly within the first year of operation and adjusted as required)	Initial inspection should be provided as post construction CCTV survey.	N/A
	Inspect for evidence of poor operation via water level in chambers. If required take remedial action.	3-monthly, 48 hours after large storms.
Regular maintenance	Check and remove large vegetation growth near pipe runs.	Monthly or as required.
	Cleanse (Jet/rod pipework) to reduce sediment build-up.	12-24 months
Remedial actions	Rod through poorly performing runs as initial remediation.	As required.
	If continued poor performance jet and CCTV survey poorly performing runs.	As required.
	Seek advice as to remediation techniques suitable for the type of performance issue and location.	As required If above does not improve performance.

2.5 Flood Storage Compensation/Attenuation Tank - Geocellular Storage Units

The purpose of the attenuation tank is to provide the necessary capacity to allow for temporary storage of surface water run-off during rainfall events.

Geocellular units are proprietary products and therefore manufacturer's recommendations should be taken into consideration.

The location of the attenuation tank is indicated on Curtin's drainage drawing *076038-CUR-XX-00-DR-D-72001_OutlineDrainageStrategy*.

Regular inspection and maintenance are required to ensure the effective long-term operation of below-ground storage systems. Cellular systems are susceptible to silts building up within the structure.

Upstream and downstream catchpit manholes will require periodic inspection and emptying in line with the chamber maintenance protocols and any connecting pipes to the tank requires routine inspection and jetting in accordance with the pipe maintenance protocols.

Sediment/material removal should be undertaken in consultation with the environmental regulator to confirm appropriate protocols, especially where run-off is taken from potentially contaminated areas such as car parks/service yards.

Maintenance Schedule	Required Action	Frequency
Monitoring (to be undertaken more regularly within the first year of operation and adjusted as required)	Inspect inlets, outlets, vents and overflows for blockages, and clear if required. If faults persist jetting and CCTV survey may be required.	3-monthly, 48 hours after large storms.
	Inspect and identify any areas that are not operating correctly. If required, take remedial action.	Monthly for 3 months, then 6-monthly
Regular maintenance	Empty silt/debris in catchpit sumps upstream/downstream to tank.	6-monthly
	Debris removal from catchment surface (where may cause risks to performance)	Monthly or as required.
	Cleanse (Jet/rod through tank) to reduce sediment build-up.	12-24 months
	For systems where rainfall infiltrates into the tank from above, check surface of filter for blockage by sediment, algae or other matter, remove and replace surface infiltration medium as necessary.	12-24 months
	Survey inside of tank for sediment build-up and remove if necessary.	Every 5 years or as required
Remedial actions	Repair/rehabilitation of inlets, outlet, overflows and vents.	As required.

2.6 Permeable Paving

The purpose of the permeable paving is to allow percolation of surface water run-off through the layers of construction build-up to convey surface water either to ground (infiltration) or to the drainage network.

The permeable pavements are intended to be water quality and attenuation storage features. These features are intended to be dry except during rainfall events.

The surface has been designed to contain voids where rain can flow through the upper construction layers into the voided stone layer (sub-base). Where these features are intended to be used as infiltration devices or soakaways, any capping layers also need to be permeable to permit the flows to the formation layer.

The location of the permeable paving is indicated on Curtin's drainage drawings *076038-CUR-XX-00-DR-D-72001_OutlineDrainageStrategy*.

Permeable paving layers contain proprietary products and as such, where used, the manufacturer's recommendations should be followed.

Access for maintenance is provided as this is a surface feature only.

Regular inspection and maintenance is important for the effective operation of the pervious pavement.

Maintenance Schedule	Required Action	Frequency
Monitoring (to be undertaken more regularly within the first year of operation and adjusted as required).	Inspect feature surface to identify evidence of erosion, compaction, ponding, and contamination. Record areas where water is ponding for >48 hours.	3-monthly, 48 hours after large storms.
	Inspect for evidence of poor operation and/or weed growth. If required, take remedial action.	3-monthly, 48 hours after large storms.
	Inspect silt accumulation rates and establish appropriate brushing frequencies. Silt can also be caused by adjacent landscaping areas which should be reprofiled to provide a flat area or berm adjacent to the paving.	3-monthly, 48 hours after large storms.
Regular maintenance	Brushing and Vacuuming	Three times/year at end of winter, mid-summer, after autumn leaf fall, or as required based on site specific observations of clogging or manufacturers' recommendations.
	Stabilise and mow contributing and adjacent areas.	As required and as per landscape architect's specification.
	Removal of weeds	As required.

Maintenance Schedule	Required Action	Frequency
Remedial Action	Remediate any landscaping which, through vegetation maintenance or soil slip, has been raised to within 50 mm of the level of the paving.	As required.
	Remedial work to any depressions, rutting and cracked or broken blocks considered detrimental to the structural performance or a hazard to users.	As required.
	Rehabilitation of surface and upper sub-structure. This could include replacement of the jointing and bedding material. The upper geotextiles layer may also need replacing if clogged and Terram 1000 has a life span of 25 years.	As required (if infiltration performance is reduced as a result of significant clogging).

2.7 Infiltration Tanks

The infiltration tanks are currently specified as geocellular units, which are wrapped in a geotextile blanket.

The geocellular units and geotextile are proprietary products and therefore manufacturer's recommendations should also be taken into consideration.

Access for maintenance should be provided by an access shaft located on the tank and from the manhole chambers downstream of the tank.

Regular inspection and maintenance are important for the effective operation of attenuation tanks as designed. As the feature is buried, a regular inspection regime is very important to ensure the correction functionality of the surface water drainage network.

Maintenance Schedule	Required Action	Frequency
Monitoring (to be undertaken more regularly within the first year of operation and adjusted as required).	Inspect inlets, outlets and overflows for blockages, and clear if required. If faults persist jetting and CCTV survey may be required.	Monthly and after large storms.
Regular maintenance\ inspection	Inspect and identify any areas that are not operating correctly. If required, take remedial action.	Monthly for 3 months, then six monthly.
	Debris removal from catchment surface (where may cause risks to performance).	Monthly
	Remove sediment from pre-treatment structures.	Annually (or as required after heavy rainfall events)
Remedial Actions	Repair/rehabilitation of inlets, outlets and overflows.	Required.

Appendix A

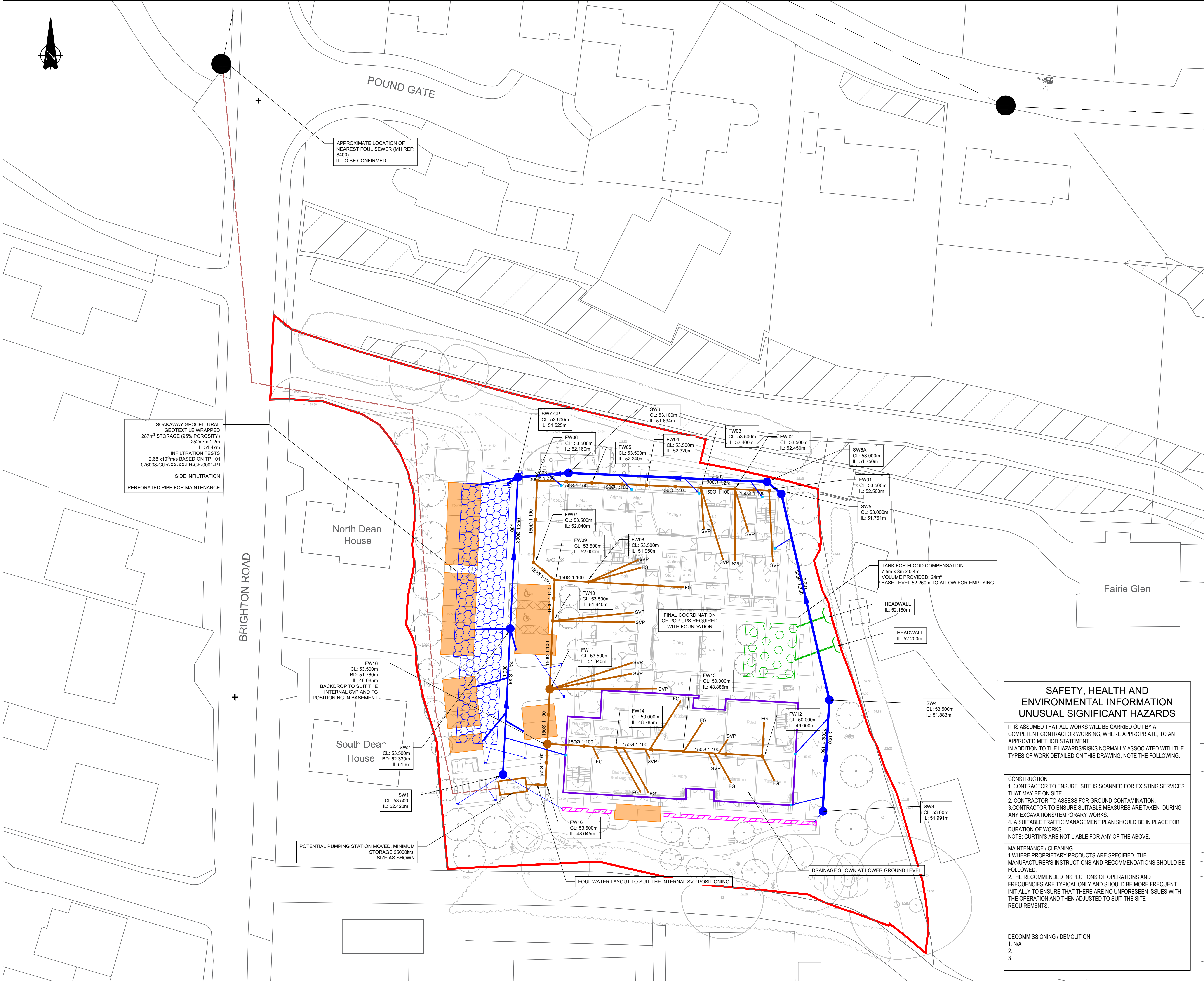
Maintenance Inspection Schedule

Maintenance Inspection Schedule

[illegible]

Appendix B

Drainage Drawing



GENERAL NOTES:

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS AND ENGINEERS DRAWINGS AND SPECIFICATIONS.
2. DO NOT SCALE THIS DRAWING. ANY AMBIGUITIES, OMISSIONS AND ERRORS ON DRAWINGS SHALL BE BROUGHT TO THE ENGINEERS ATTENTION IMMEDIATELY. ALL DIMENSIONS MUST BE CHECKED / VERIFIED ON SITE.
3. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.
4. FOR GENERAL NOTES REFER TO DRAWING.
5. BASED ON DRAWING CUR-XX-XX-D_DRAINAGE DESIGN_V7

KEY

- SITE BOUNDARY
- EXISTING PUBLIC COMBINED SEWER
- BASEMENT EXTENTS
- SURFACE WATER
- FOUL WATER
- PERMEABLE PAVING
- SURFACE WATER TANK
- FILTER TRENCH
- FLOOD STORAGE COMPENSATION

SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION
UNUSUAL SIGNIFICANT HAZARDS

IT IS ASSUMED THAT ALL WORKS WILL BE CARRIED OUT BY A COMPETENT CONTRACTOR WORKING, WHERE APPROPRIATE, TO AN APPROVED METHOD STATEMENT.
IN ADDITION TO THE HAZARDS/RISKS NORMALLY ASSOCIATED WITH THE TYPES OF WORK DETAILED ON THIS DRAWING, NOTE THE FOLLOWING:

- CONSTRUCTION
1. CONTRACTOR TO ENSURE SITE IS SCANNED FOR EXISTING SERVICES THAT MAY BE ON SITE.
 2. CONTRACTOR TO ASSESS FOR GROUND CONTAMINATION.
 3. CONTRACTOR TO ENSURE SUITABLE MEASURES ARE TAKEN DURING ANY EXCAVATIONS/TEMPORARY WORKS.
 4. A SUITABLE TRAFFIC MANAGEMENT PLAN SHOULD BE IN PLACE FOR DURATION OF WORKS.
- NOTE: CURTINS ARE NOT LIABLE FOR ANY OF THE ABOVE.

- MAINTENANCE / CLEANING
1. WHERE PROPRIETARY PRODUCTS ARE SPECIFIED, THE MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS SHOULD BE FOLLOWED.
 2. THE RECOMMENDED INSPECTIONS OF OPERATIONS AND FREQUENCIES ARE TYPICAL ONLY AND SHOULD BE MORE FREQUENT INITIALLY TO ENSURE THAT THERE ARE NO UNFORESEEN ISSUES WITH THE OPERATION AND THEN ADJUSTED TO SUIT THE SITE REQUIREMENTS.

- DECOMMISSIONING / DEMOLITION
1. N/A
 - 2.
 - 3.

P11	STAGE 4 ISSUE	23/07/26	ATL	PB
P10	UPDATED DRAINAGE IN LINE WITH LLFA COMMENTS	04/04/23	ATL	MW
P09	UPDATED DRAINAGE STRATEGY FOLLOWING SOAKAWAY TEST	27/03/23	MW	AR
P08	UPDATED TO SUIT REVISED SCHEME LAYOUT	21/02/23	AR	ARR
P07	ADJUST TO NEW SITE LAYOUT	16/06/22	AR	ARR
P06	WITHDRAWN	16/6/22	AR	ARR
P05	INFILTRATION DESIGN	04/10/21	DE	AR
P04	UPDATED FOR PLANNING	15/03/21	DE	AR
P03	UPDATED FOR PLANNING	04/02/21	DE	AR
P02	UPDATED DESIGN ISSUE OF PLANNING	19/01/21	DE	AR
P01	ISSUED FOR PLANNING	12/05/20	DE	RM
Rev:	Description:	Date:	By:	Chkd:



Merchant Exchange, 17-19 Whitworth Street West, Manchester, M1 5WG
0161 235 2394
manchester@curtins.com
www.curtins.com

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Status: **ISSUED FOR CO-ORDINATION** **S1**

Project: **HASSOCKS - RESIDENTIAL HOME**

Dwg Title: **OUTLINE DRAINAGE STRATEGY**

Size:	Date:	Drawn By:	Designed By:	Checked By:
A1	12/05/2020	DE	DE	RM
Scale:	1:250			
Project No:	Originator:	Zone:	Level:	Type: Discipline: Category / Number: Rev:

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