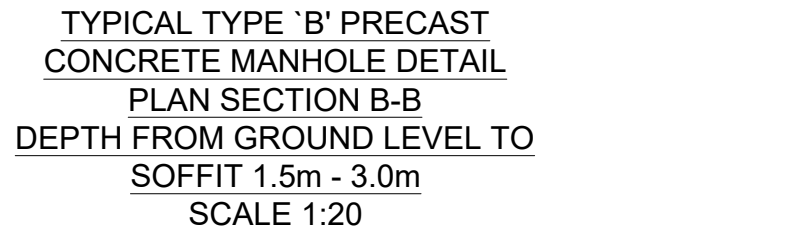


Appendix I. Below Ground Drainage Construction Details



10

○ —



600

600X600 COVER AND FRAME TO BE BEDDED ON MORTAR TO BS EN12420:15 CL 4.2.30 (REFER TO MANHOLE SCHEDULE FOR COVER TYPE)

CL

Ø 1200

300

300

450

1.3 COURSES CLASS B ENGINEERING BRICKS TO B.S.3921 AND BUILT WITH CLASS 1 MORTAR. ALTERNATIVELY CONCRETE BLOCK OR PRECAST CONCRETE COVER SEATING FINISH.

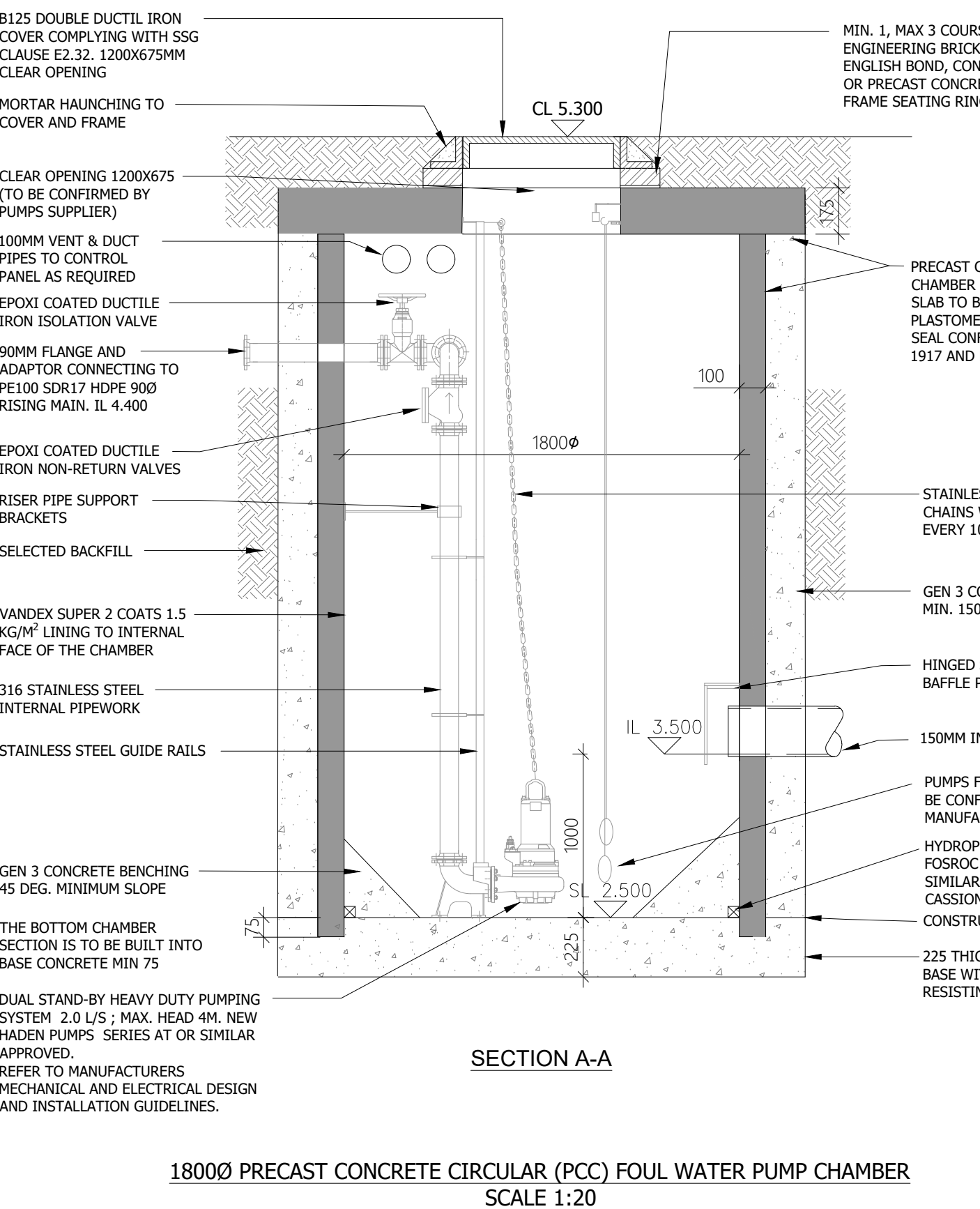
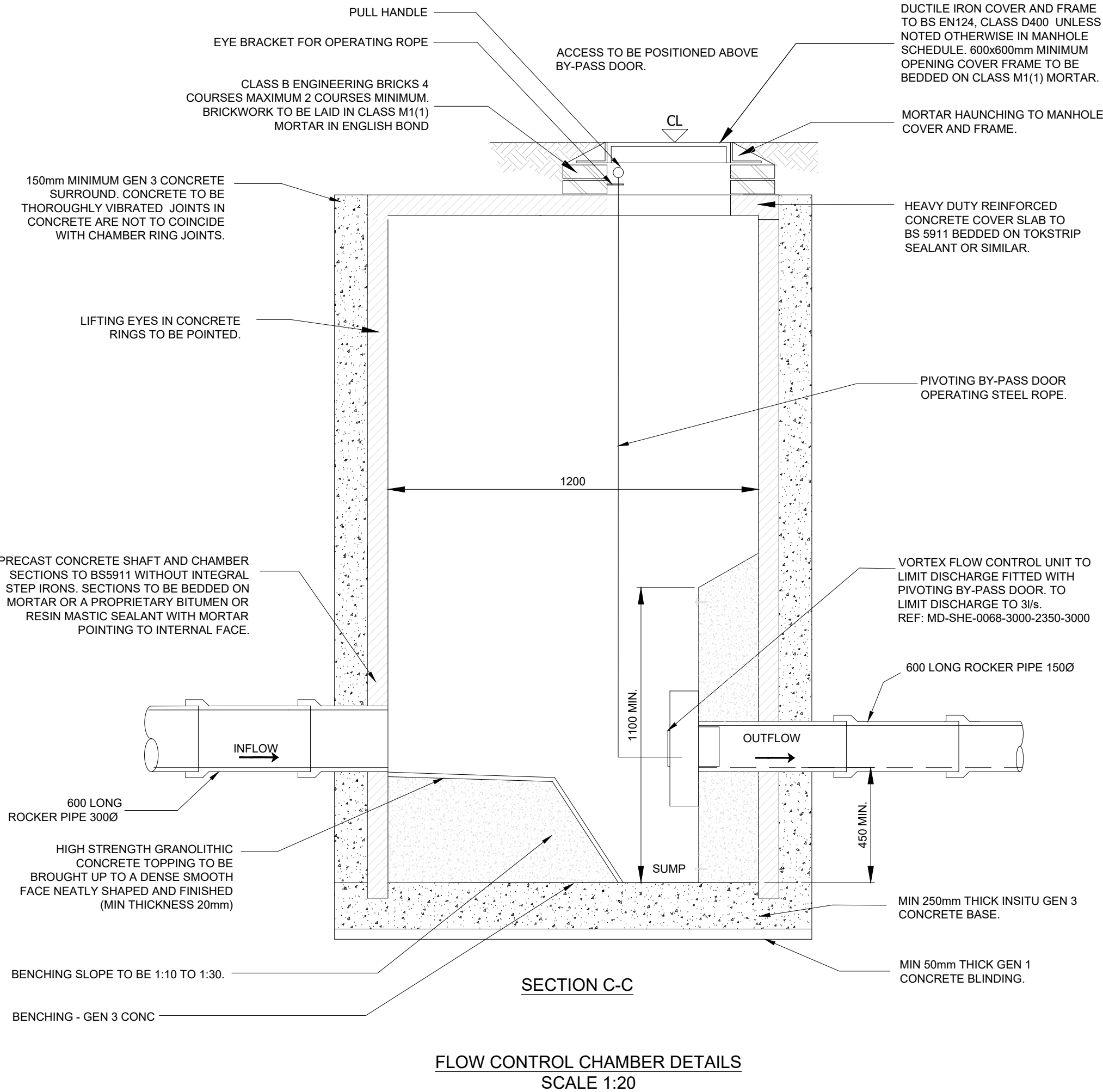
STEP IRONS TO BE PLASTIC ENCAPSULATED DOUBLE STEPS TO BS:1247 (CL 4.3.31).

OUTFLOW

225

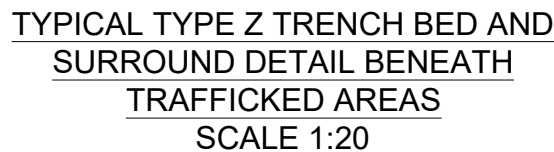
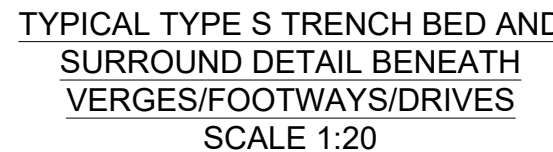
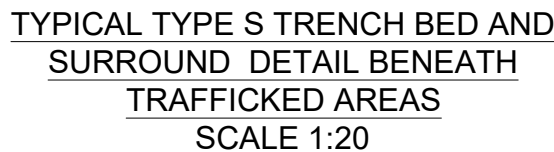
75mm BUNDING

TYPICAL CATCH PIT PRECAST CONCRETE MANHOLE DETAIL
DEPTH FROM GROUND LEVEL TO SOFFIT 1.5m - 3.0m
SCALE 1:20



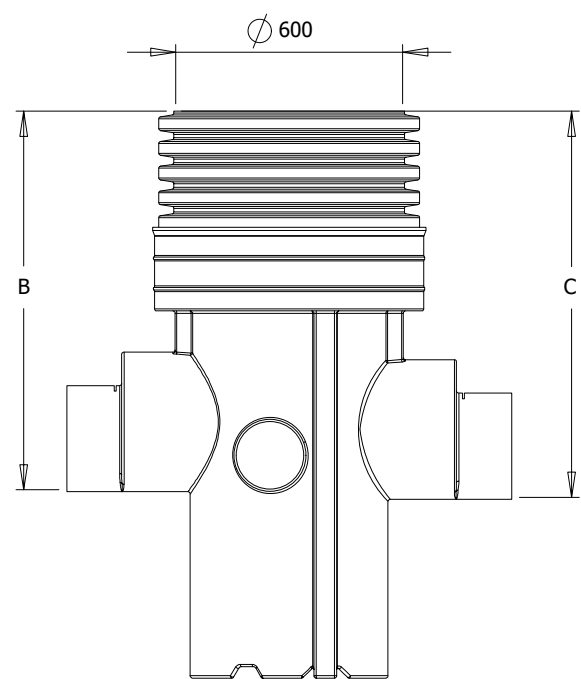
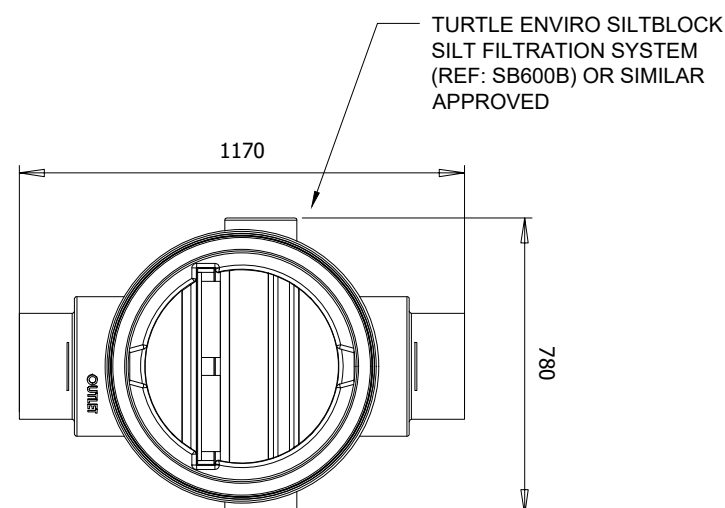
CLASSIFICATION - CONTAINS BASELINE INFORMATION

ATKINS RÉALIS PROJECT NUMBER :-

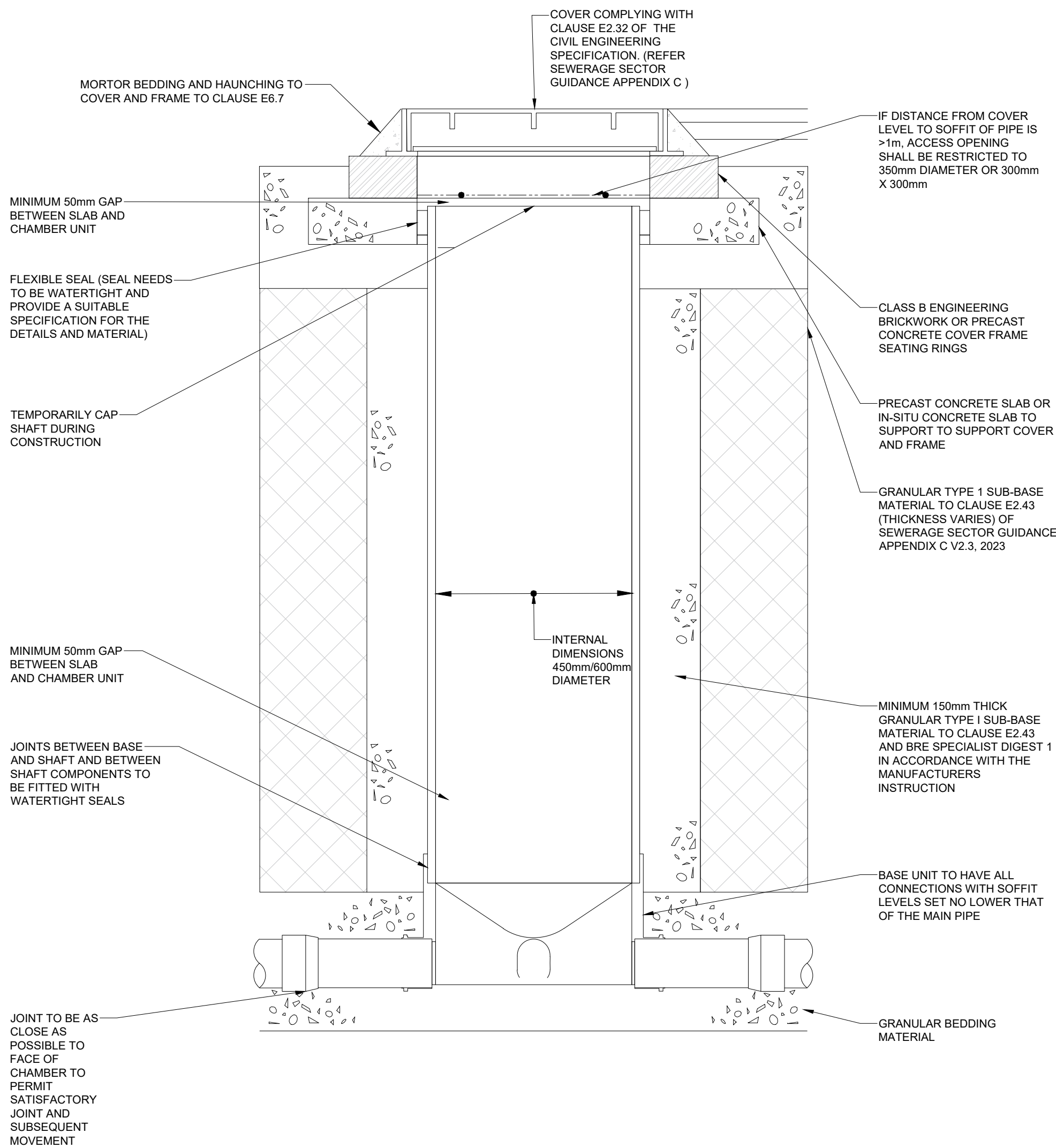


NOTES:-

- A. GRANULAR BEDDING MATERIAL TO BE SINGLE SIZE OR GRADED MATERIAL AS TABLE BELOW AND TO CONFORM WITH BS EN 1610 ANNEX B TABLE B15.
- B. SELECTED BACKFILL MATERIAL - TO BE FREE FROM STONES LARGER THAN 40mm, LUMPS OF CLAY OVER 100mm, FROZEN MATERIAL, VEGETABLE MATTER.
- C. IF TRENCH WIDTH, OVER CONSTRUCTION DEPTH, EXCEEDS INDICATED DIMENSIONS THE CONTRACTOR MAY BE REQUIRED TO PROVIDE HIGHER STRENGTH PIPES, OR HIGHER BEDDING FACTOR, AT OWN COST.
- D. PIPE IS TO BE LAID CENTRAL TO EXCAVATION FACES.



Ø600mm SILT MANAGEMENT FILTER CHAMBER
SCALE : NTS



TYPICAL INSPECTION CHAMBER DETAIL- SSG TYPE D (DEPTH FROM COVER LEVEL TO SOFFIT OF PIPE UP TO 3m)
SCALE : NTS

IN ADDITION TO THE HAZARDS/RISKS NORMALLY ASSOCIATED WITH THE TYPES OF WORK DETAILED ON THIS DRAWING, NOTE THE FOLLOWING:

IN ADDITION TO THE HAZARDS/RISKS NORMALLY ASSOCIATED WITH THE TYPES OF WORK DETAILED ON THIS DRAWING, NOTE THE FOLLOWING:

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IT IS ASSUMED THAT ALL WORKS WILL BE CARRIED OUT BY A COMPETENT CONTRACTOR WORKING, WHERE APPROPRIATE, TO AN APPROVED METHOD STATEMENT.

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECT'S ENGINEER'S AND SPECIALISTS DRAWINGS AND SPECIFICATIONS. ANY DISCREPANCIES FROM THE INFORMATION INDICATED ON THESE DRAWINGS SHALL IMMEDIATELY BE BROUGHT TO THE ATTENTION OF THE ENGINEER.

2. DO NOT SCALE FROM THIS DRAWING IN EITHER PAPER OR DIGITAL FORM. USE WRITTEN DIMENSIONS ONLY.
3. HEALTH & SAFETY: ALL SPECIFIC DRAWING NOTES ARE TO BE READ IN CONJUNCTION WITH THE PROJECT "INFORMATION PACK" AND "SITE RULES".
4. ALL DRAINAGE DESIGN AND INSTALLATION TO BE CARRIED OUT IN ACCORDANCE WITH THE FOLLOWING:
BSEN 725: DRAIN AND SEWER SYSTEMS OUTSIDE BUILDINGS.
BSEN 12056: GRAVITY DRAINAGE SYSTEMS INSIDE BUILDINGS.
BUILDING REGULATIONS - PART H.
CODE FOR ADAPTIONS & SEWERAGE SERVICE GUIDANCE 2023
BS 5250: 14 - WORKMANSHIP ON BUILDING SITES
5. ALL DRAINAGE DESIGN AND INSTALLATION TO COMPLY WITH ANY SOUTHERN WATER AMENDMENTS TO THAT DOCUMENT.
6. ALL ADAPTABLE PIPEWORK TO BE VITRIFIED CLAY AND PRECAST CONCRETE BBA AND B5 SKITMARK APPROVED.
7. PRIVATE PIPEWORK TO BE VITRIFIED CLAY OR UPVC AND PRECAST CONCRETE BBA AND B5 SKITMARK APPROVED.
8. ALL PIPES TO BE LAID IN CLASS 'S' BED, IF UNDER BUILDING COVER IS LESS THAN 600MM LAID CLASS '2' BEDDING.
9. ALL SVP AND RWPS SHOWN ARE INDICATIVE ONLY, TO BE SET OUT BY OTHERS.
10. ALL GULLIES TO BE TRAPPED AND RODDABLE.
11. ALL BELOW GROUND BRANCH PIPES TO MAIN RUNS SHALL BE 100MM DIAMETER UNLESS STATED OTHERWISE.
12. ALL DRAINAGE PIPES TO BE CAST IN CONCRETE WHEN PASSING UNDER FOUNDATIONS.
13. ALL BENDS IN PIPEWORK SHALL BE LONG RADIUS.
14. PIPE CONNECTIONS NOT TO INSPECTION CHAMBERS SHALL BE VIA PREFORMED OBSLIQUE JUNCTION SWEPT IN THE DIRECTION OF FLOW.
15. THE CONTRACTOR SHALL ALLOW FOR THE TEMPORARY AND PERMANENT CLOSURE OF THE ROADWORKS AS NECESSARY TO ALL EXISTING SERVICES TO THE SATISFACTION OF THE PUBLIC UTILITIES.
16. ALL LEVELS AND DIMENSIONS SHALL BE VERIFIED ON SITE PRIOR TO THE COMMENCEMENT OF ANY WORKS. ANY DISCREPANCY SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE ENGINEER.

001	STAGE 3 ISSUE	DS	TP	CC	24/06/2010
Rev	Description	Bv	Chk'd	App'd	Date

Drawing Status

FOR INFORMATION

S2



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Client



Project Title

HOMFIELD PRIMARY SCHOOL

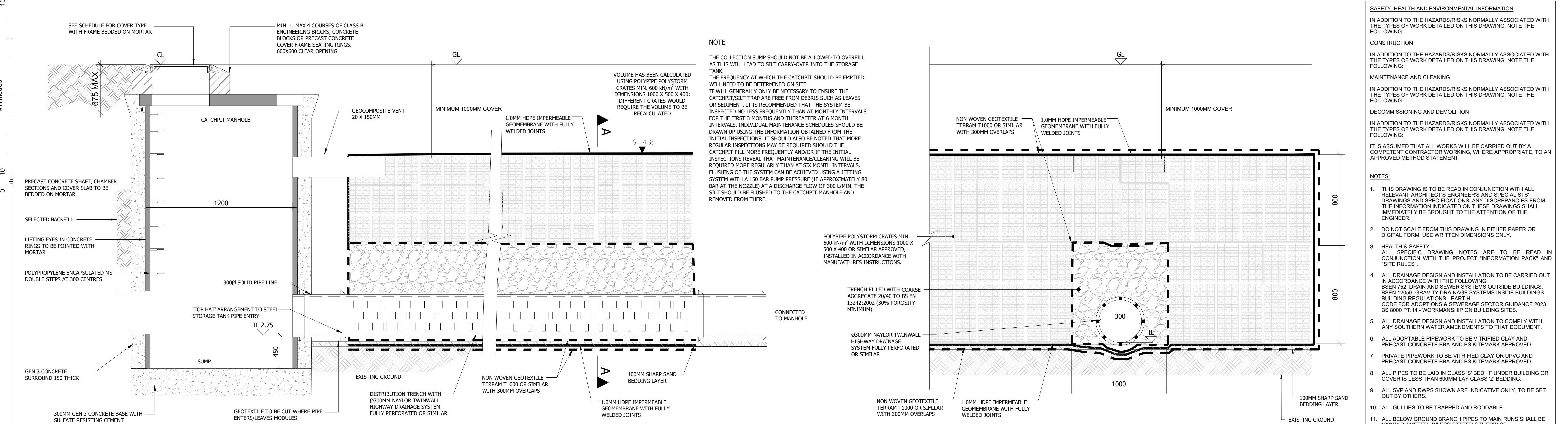
Drawing Title

BELOW GROUND DRAINAGE DETAILS
SHEET 02 OF 03

Scale	Designed	Drawn	Checked	Authorised
AS NOTED	MS	DS	TP	CC
Original Size	Date	Date	Date	Date
A1	24/06/26	24/06/26	24/06/26	24/06/26

100124937-ATR-XX-XX-M-C-907001

P01



ATTENUATION TANK DETAIL SHOWING CATCHPIT MANHOLE

DISTRIBUTOR FILTER TRENCH WITH
Ø300mm FULLY PERFORATED PIPE -SECTION A-A

TYPICAL RODDING EYE DETAIL
SCALE 1:20

FILTER DRAIN DETAIL
SCALE 1:20

INTERNAL FLOOR GULLY
SCALE 1:20

OBLIQUE JUNCTION ARRANGEMENT

YARD GULLY

'150 ACO DRAIN' SECTION
SCALE: NTS

SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION

IN ADDITION TO THE HAZARDS/RISKS NORMALLY ASSOCIATED WITH THE TYPES OF WORK DETAILED ON THIS DRAWING, NOTE THE FOLLOWING:

CONSTRUCTION

IN ADDITION TO THE HAZARDS/RISKS NORMALLY ASSOCIATED WITH THE TYPES OF WORK DETAILED ON THIS DRAWING, NOTE THE FOLLOWING:

MAINTENANCE AND CLEANING

IN ADDITION TO THE HAZARDS/RISKS NORMALLY ASSOCIATED WITH THE TYPES OF WORK DETAILED ON THIS DRAWING, NOTE THE FOLLOWING:

DECOMMISSIONING AND DEMOLITION

IN ADDITION TO THE HAZARDS/RISKS NORMALLY ASSOCIATED WITH THE TYPES OF WORK DETAILED ON THIS DRAWING, NOTE THE FOLLOWING:

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NOTES:

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CODE FOR ADOPTIONS & SEWERAGE SECTOR GUIDANCE 2023
BS 8000 PT.14 - WORKMANSHIP ON BUILDING SITES.
5. ALL DRAINAGE DESIGN AND INSTALLATION TO COMPLY WITH ANY SOUTHERN WATER AMENDMENTS TO THAT DOCUMENT.
6. ALL ADAPTABLE PIPEWORK TO BE VITRIFIED CLAY AND PRECAST CONCRETE BBA AND BS KITEMARK APPROVED.
7. PRIVATE PIPEWORK TO BE VITRIFIED CLAY OR UPVC AND PRECAST CONCRETE BBA AND BS KITEMARK APPROVED.
8. ALL PIPES TO BE LAID IN CLASS 'S' BED, IF UNDER BUILDING OR COVER IS LESS THAN 600MM LAY CLASS 'Z' BEDDING.
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13. ALL BENDS IN PIPEWORK SHALL BE LONG RADII.
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P01	STAGE 3 ISSUE	DS	TP	CC	24/06/2026
Rev	Description	By	Chk'd	App'd	Date

Drawing Status	Suitability
FOR INFORMATION	S2

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Project Title

HOMFIELD PRIMARY SCHOOL

Drawing Title

BELOW GROUND DRAINAGE DETAILS
SHEET 03 OF 03

Scale	Designed	Drawn	Checked	Authorised
AS NOTED	MS	DS	TP	CC
Original Size	Date	Date	Date	Date
A1	24/06/26	24/06/26	24/06/26	24/06/26

Drawing Number	Revision
100124937-ATR-XX-XX-M-C-907002	P01

Appendix J. Hydraulic Calculations for the Surface Water Drainage Network



SNC Lavalin		Page 1
455, Boul. RenT-LTvesque Ouest Montreal H2Z 1Z3 Canada	Homefield Primary School SW Drainage Network	
Date 24/06/2026 10:09	Designed by MS	
File HOMEFIELD PRIMARY SCHOOL ...	Checked by TP	
Innovyze	Network 2020.1.3	

STORM SEWER DESIGN by the Modified Rational Method

Network Design Table for Homefield School - SW Drainage Network vD

- Indicates pipe length does not match coordinates
« - Indicates pipe capacity < flow

PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Section Type	Auto Design
S1.000	20.417	0.100	204.2	0.006	5.00	0.0	0.030	o	150	Pipe/Conduit	
S1.001	7.719	0.425	18.2	0.002	0.00	0.0	0.030	o	150	Pipe/Conduit	
S1.002	28.701	0.300	95.7	0.028	0.00	0.0	0.030	o	225	Pipe/Conduit	
S1.003	22.690	0.825	27.5	0.022	0.00	0.0	0.030	o	225	Pipe/Conduit	
S1.004	7.200#	0.100	72.0	0.005	0.00	0.0	0.030	o	300	Pipe/Conduit	
S1.005	5.481	0.050	109.6	0.007	0.00	0.0	0.030	o	300	Pipe/Conduit	
S2.000	49.867	0.400	124.7	0.094	5.00	0.0	0.030	o	225	Pipe/Conduit	
S1.006	4.565	0.050	91.3	0.021	0.00	0.0	0.030	o	150	Pipe/Conduit	
S1.007	4.701	0.600	7.8	0.000	0.00	0.0	0.030	o	150	Pipe/Conduit	

Network Results Table

PN	Rain (mm/hr)	T.C. (mins)	US/IL (m)	Σ I.Area (ha)	Σ Base Flow (l/s)	Foul (l/s)	Add Flow (l/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
S1.000	128.30	5.38	4.600	0.006	0.0	0.0	0.0	0.89	15.8	2.2
S1.001	127.93	5.42	4.500	0.009	0.0	0.0	0.0	3.24	57.2	3.0
S1.002	125.39	5.70	4.000	0.036	0.0	0.0	0.0	1.74	69.3	12.3
S1.003	124.39	5.81	3.700	0.058	0.0	0.0	0.0	3.36	133.6	19.6
S1.004	123.96	5.86	2.800	0.063	0.0	0.0	0.0	2.43	171.8	21.1
S1.005	123.55	5.90	2.700	0.070	0.0	0.0	0.0	1.95	137.6	23.5
S2.000	126.73	5.55	4.200	0.094	0.0	0.0	0.0	1.51	60.2	32.3
S1.006	123.08	5.96	2.650	0.186	0.0	0.0	0.0	1.38	24.3«	61.9
S1.007	122.94	5.98	2.600	0.186	0.0	0.0	0.0	5.01	88.6	61.9

Homefield Primary School SW Drainage Network

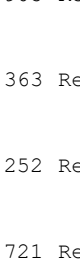
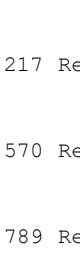


Designed by MS

Checked by TP

Network 2020.1.3

MH Name	MH CL (m)	MH Depth (m)	MH Connection	MH Diam.,L*W (mm)	Pipe Out PN Invert Level (m) Diameter (mm)			Pipes In PN Invert Level (m) Diameter (mm)			Backdrop (mm)
S1	5.200	0.600	Open Manhole	450	S1.000	4.600	150				
S2	5.200	0.700	Open Manhole	450	S1.001	4.500	150	S1.000	4.500	150	
S3	5.250	1.250	Open Manhole	600	S1.002	4.000	225	S1.001	4.075	150	
S4	5.250	1.550	Open Manhole	600	S1.003	3.700	225	S1.002	3.700	225	
S5 CP	5.380	2.580	Open Manhole	1200	S1.004	2.800	300	S1.003	2.875	225	
S6 CP	5.530	2.830	Open Manhole	1200	S1.005	2.700	300	S1.004	2.700	300	
S7	5.550	1.350	Open Manhole	600	S2.000	4.200	225				
S8 HB	5.500	2.850	Open Manhole	1200	S1.006	2.650	150	S1.005	2.650	300	
								S2.000	3.800	225	1225
S9 FI	5.300	2.700	Open Manhole	600	S1.007	2.600	150	S1.006	2.600	150	
S	5.000	3.000	Open Manhole	0	OUTFALL			S1.007	2.000	150	

MH Name	Manhole Easting (m)	Manhole Northing (m)	Intersection Easting (m)	Intersection Northing (m)	Manhole Access	Layout (North)
S1	515338.291	103535.905	515338.291	103535.905	Required	
S2	515344.204	103516.363	515344.204	103516.363	Required	
S3	515349.989	103511.252	515349.989	103511.252	Required	
S4	515377.702	103518.721	515377.702	103518.721	Required	
S5 CP	515399.442	103525.217	515399.442	103525.217	Required	
S6 CP	515392.949	103546.570	515392.949	103546.570	Required	
S7	515342.024	103536.789	515342.024	103536.789	Required	
S8 HB	515389.806	103551.060	515389.806	103551.060	Required	
S9 FI	515393.627	103553.556	515393.627	103553.556	Required	
S	515397.495	103556.227			No Entry	

SNC Lavalin		Page 3
455, Boul. RenT-LTvesque Ouest Montreal H2Z 1Z3 Canada	Homefield Primary School SW Drainage Network	
Date 24/06/2026 10:09 File HOMEFIELD PRIMARY SCHOOL ...	Designed by MS Checked by TP	
Innovyze	Network 2020.1.3	

PIPELINE SCHEDULES for Homefield School - SW Drainage Network vD

Upstream Manhole

- Indicates pipe length does not match coordinates

PN	Hyd Sect	Diam (mm)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
S1.000	o	150	S1	5.200	4.600	0.450	Open Manhole	450
S1.001	o	150	S2	5.200	4.500	0.550	Open Manhole	450
S1.002	o	225	S3	5.250	4.000	1.025	Open Manhole	600
S1.003	o	225	S4	5.250	3.700	1.325	Open Manhole	600
S1.004	o	300	S5 CP	5.380	2.800	2.280	Open Manhole	1200
S1.005	o	300	S6 CP	5.530	2.700	2.530	Open Manhole	1200
S2.000	o	225	S7	5.550	4.200	1.125	Open Manhole	600
S1.006	o	150	S8 HB	5.500	2.650	2.700	Open Manhole	1200
S1.007	o	150	S9 FI	5.300	2.600	2.550	Open Manhole	600

Downstream Manhole

PN	Length (m)	Slope (1:X)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
S1.000	20.417	204.2	S2	5.200	4.500	0.550	Open Manhole	450
S1.001	7.719	18.2	S3	5.250	4.075	1.025	Open Manhole	600
S1.002	28.701	95.7	S4	5.250	3.700	1.325	Open Manhole	600
S1.003	22.690	27.5	S5 CP	5.380	2.875	2.280	Open Manhole	1200
S1.004	7.200#	72.0	S6 CP	5.530	2.700	2.530	Open Manhole	1200
S1.005	5.481	109.6	S8 HB	5.500	2.650	2.550	Open Manhole	1200
S2.000	49.867	124.7	S8 HB	5.500	3.800	1.475	Open Manhole	1200
S1.006	4.565	91.3	S9 FI	5.300	2.600	2.550	Open Manhole	600
S1.007	4.701	7.8	S	5.000	2.000	2.850	Open Manhole	0

SNC Lavalin		Page 4
455, Boul. Rent-LTvesque Ouest Montreal H2Z 1Z3 Canada	Homefield Primary School SW Drainage Network	
Date 24/06/2026 10:09	Designed by MS	
File HOMEFIELD PRIMARY SCHOOL ...	Checked by TP	
Innovyze	Network 2020.1.3	

Area Summary for Homefield School - SW Drainage Network vD

Pipe Number	PIMP Type	PIMP Name	PIMP (%)	Gross Area (ha)	Imp. Area (ha)	Pipe Total (ha)
1.000	Classification	Default	100	0.005	0.005	0.005
	User	-	30	0.004	0.001	0.006
1.001	Classification	Default	100	0.001	0.001	0.001
	User	-	30	0.004	0.001	0.002
1.002	Classification	Default	100	0.011	0.011	0.011
	Classification	Default	100	0.001	0.001	0.012
	Classification	Default	100	0.001	0.001	0.013
	Classification	Default	100	0.001	0.001	0.014
	Classification	Default	100	0.009	0.009	0.022
	User	-	30	0.005	0.001	0.024
	User	-	30	0.012	0.004	0.028
1.003	Classification	Default	100	0.002	0.002	0.002
	User	-	100	0.007	0.007	0.009
	User	-	30	0.009	0.003	0.011
	User	-	100	0.011	0.011	0.022
1.004	User	-	100	0.003	0.003	0.003
	User	-	30	0.006	0.002	0.005
1.005	User	-	100	0.007	0.007	0.007
2.000	Classification	Default	100	0.013	0.013	0.013
	Classification	Default	100	0.002	0.002	0.015
	Classification	Default	100	0.036	0.036	0.051
	User	-	30	0.019	0.006	0.056
	User	-	100	0.038	0.038	0.094
1.006	User	-	100	0.008	0.008	0.008
	User	-	100	0.013	0.013	0.021
1.007	-	-	100	0.000	0.000	0.000
				Total	Total	Total
				0.227	0.186	0.186

SNC Lavalin		Page 5
455, Boul. RenT-LTvesque Ouest Montreal H2Z 1Z3 Canada	Homefield Primary School SW Drainage Network	
Date 24/06/2026 10:09	Designed by MS	
File HOMEFIELD PRIMARY SCHOOL ...	Checked by TP	
Innovyze	Network 2020.1.3	

Online Controls for Homefield School - SW Drainage Network vD

Hydro-Brake® Optimum Manhole: S8 HB, DS/PN: S1.006, Volume (m³): 5.5

Unit Reference	MD-SHE-0068-3000-2350-3000
Design Head (m)	2.350
Design Flow (l/s)	3.0
Flush-Flo™	Calculated
Objective	Minimise upstream storage
Application	Surface
Sump Available	Yes
Diameter (mm)	68
Invert Level (m)	2.650
Minimum Outlet Pipe Diameter (mm)	100
Suggested Manhole Diameter (mm)	1200

Control Points	Head (m)	Flow (l/s)	Control Points	Head (m)	Flow (l/s)
Design Point (Calculated)	2.350	3.0	Kick-Flo®	0.605	1.6
Flush-Flo™	0.300	2.0	Mean Flow over Head Range	-	2.2

The hydrological calculations have been based on the Head/Discharge relationship for the Hydro-Brake® Optimum as specified. Should another type of control device other than a Hydro-Brake Optimum® be utilised then these storage routing calculations will be invalidated

Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)
0.100	1.7	1.200	2.2	3.000	3.4	7.000	5.0
0.200	1.9	1.400	2.4	3.500	3.6	7.500	5.1
0.300	2.0	1.600	2.5	4.000	3.8	8.000	5.3
0.400	2.0	1.800	2.6	4.500	4.0	8.500	5.5
0.500	1.9	2.000	2.8	5.000	4.3	9.000	5.6
0.600	1.6	2.200	2.9	5.500	4.4	9.500	5.8
0.800	1.8	2.400	3.0	6.000	4.6		
1.000	2.0	2.600	3.1	6.500	4.8		

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Storage Structures for Homefield School - SW Drainage Network vD

Filter Drain Manhole: S2, DS/PN: S1.001

Infiltration Coefficient Base (m/hr)	0.00000	Pipe Diameter (m)	0.150
Infiltration Coefficient Side (m/hr)	0.00000	Pipe Depth above Invert (m)	0.000
Safety Factor	2.0	Number of Pipes	1
Porosity	0.30	Slope (1:X)	184.0
Invert Level (m)	4.500	Cap Volume Depth (m)	0.600
Trench Width (m)	0.6	Cap Infiltration Depth (m)	0.000
Trench Length (m)	18.6		

Filter Drain Manhole: S5 CP, DS/PN: S1.004

Infiltration Coefficient Base (m/hr)	0.00000	Pipe Diameter (m)	0.300
Infiltration Coefficient Side (m/hr)	0.00000	Pipe Depth above Invert (m)	0.000
Safety Factor	2.0	Number of Pipes	1
Porosity	0.30	Slope (1:X)	0.0
Invert Level (m)	2.750	Cap Volume Depth (m)	0.800
Trench Width (m)	1.0	Cap Infiltration Depth (m)	0.000
Trench Length (m)	14.0		

Cellular Storage Manhole: S6 CP, DS/PN: S1.005

Invert Level (m)	2.750	Safety Factor	2.0
Infiltration Coefficient Base (m/hr)	0.00000	Porosity	0.95
Infiltration Coefficient Side (m/hr)	0.00000		

Depth (m)	Area (m ²)	Inf. Area (m ²)	Depth (m)	Area (m ²)	Inf. Area (m ²)
0.000	63.0	0.0	1.601	0.0	0.0
1.600	63.0	0.0			

Volume Summary (Static)

Length Calculations based on Centre-Centre

Pipe Number	USMH Name	Manhole Volume (m ³)	Pipe Volume (m ³)	Storage Structure Volume (m ³)	Total Volume (m ³)
S1.000	S1	0.095	0.361	0.000	0.456
S1.001	S2	0.111	0.136	2.239	2.487
S1.002	S3	0.353	1.141	0.000	1.495
S1.003	S4	0.438	0.902	0.000	1.340
S1.004	S5 CP	2.918	0.509	4.053	7.480
S1.005	S6 CP	3.201	0.387	95.780	99.368
S2.000	S7	0.382	1.983	0.000	2.364
S1.006	S8 HB	3.223	0.081	0.000	3.304
S1.007	S9 FI	0.763	0.083	0.000	0.846
Total		11.485	5.583	102.072	119.140

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2 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for
Homefield School - SW Drainage Network vD

Simulation Criteria

Areal Reduction Factor 1.000

Hot Start (mins) 0

Hot Start Level (mm) 0

Manhole Headloss Coeff (Global) 0.500

Foul Sewage per hectare (l/s) 0.000

Additional Flow - % of Total Flow 0.000

MADD Factor * 10m³/ha Storage 2.000

Inlet Coeffiecient 0.800

Flow per Person per Day (l/per/day) 0.000

Number of Input Hydrographs 0

Number of Offline Controls 0

Number of Time/Area Diagrams 0

Number of Online Controls 1

Number of Storage Structures 3

Number of Real Time Controls 0

Synthetic Rainfall Details

Rainfall Model FEH

FEH Rainfall Version 2013

Site Location GB 515369 103534 TQ 15369 03534

Data Type Point

Cv (Summer) 0.750

Cv (Winter) 0.840

Margin for Flood Risk Warning (mm) 300.0

Analysis Timestep 2.5 Second Increment (Extended)

DTS Status OFF

DVD Status ON

Inertia Status ON

Profile(s) Summer and Winter

Duration(s) (mins) 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960

Return Period(s) (years) 2, 30, 100

Climate Change (%) 0, 40, 45

				Water		Surcharged	Flooded		
				US/CL	Level	Depth	Volume	Flow /	Overflow
PN	US/MH Name	Event		(m)	(m)	(m)	(m³)	Cap.	(l/s)
S1.000	S1	15 minute	2 year Winter I+0%	5.200	4.627	-0.123	0.000	0.07	
S1.001	S2	15 minute	2 year Winter I+0%	5.200	4.518	-0.132	0.000	0.03	
S1.002	S3	15 minute	2 year Winter I+0%	5.250	4.045	-0.180	0.000	0.09	
S1.003	S4	15 minute	2 year Winter I+0%	5.250	3.740	-0.185	0.000	0.07	
S1.004	S5 CP	180 minute	2 year Winter I+0%	5.380	3.050	-0.050	0.000	0.03	
S1.005	S6 CP	180 minute	2 year Winter I+0%	5.530	3.050	0.050	0.000	0.03	
S2.000	S7	15 minute	2 year Winter I+0%	5.550	4.282	-0.143	0.000	0.28	
S1.006	S8 HB	180 minute	2 year Winter I+0%	5.500	3.050	0.250	0.000	0.14	
S1.007	S9 FI	360 minute	2 year Summer I+0%	5.300	2.619	-0.131	0.000	0.04	

Maximum Pipe

US/MH Overflow Discharge Velocity Flow

PN Name Vol (m³) Vol (m³) (m/s) (l/s) Status

S1.000 S1 0.502 0.5 1.1 OK

S1.001 S2 0.680 1.2 1.4 OK

S1.002 S3 2.852 1.0 5.3 OK

S1.003 S4 4.604 1.8 8.4 OK

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2 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for
Homefield School - SW Drainage Network vD

		US/MH Overflow		Discharge	Maximum Velocity	Pipe Flow	Status
PN	Name	Vol (m ³)	Vol (m ³)		(m/s)	(l/s)	
S1.004	S5 CP		12.930		0.6	2.3	OK
S1.005	S6 CP		14.491		0.2	2.1	SURCHARGED
S2.000	S7		7.441		1.2	15.8	OK
S1.006	S8 HB		38.796		0.8	2.0	SURCHARGED
S1.007	S9 FI		43.057		1.5	2.0	OK

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Micro Drainage

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30 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for
Homefield School - SW Drainage Network vD

Simulation Criteria

Areal Reduction Factor 1.000Additional Flow - % of Total Flow 0.000

Hot Start (mins) 0MADD Factor * 10m³/ha Storage 2.000

Hot Start Level (mm) 0Inlet Coeffiecient 0.800

Manhole Headloss Coeff (Global) 0.500Flow per Person per Day (l/per/day) 0.000

Foul Sewage per hectare (l/s) 0.000

Number of Input Hydrographs 0Number of Offline Controls 0Number of Time/Area Diagrams 0

Number of Online Controls 1Number of Storage Structures 3Number of Real Time Controls 0

Synthetic Rainfall Details

Rainfall ModelFEH

FEH Rainfall Version2013

Site Location GB 515369 103534 TQ 15369 03534

Data TypePoint

Cv (Summer)0.750

Cv (Winter)0.840

Margin for Flood Risk Warning (mm)300.0

Analysis Timestep 2.5 Second Increment (Extended)

DTS StatusOFF

DVD StatusON

Inertia StatusON

Profile(s)Summer and Winter

Duration(s) (mins)15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960

Return Period(s) (years)2, 30, 100

Climate Change (%)0, 40, 45

PN

US/MH Name

Event

US/CL (m)

Water Level (m)

Surcharged Depth (m)

Flooded Volume (m³)

Flow / Overflow Cap. (l/s)

S1.000

S1

15 minute 30 year Winter I+40%

5.200

4.650

-0.100

0.000

0.24

S1.001

S2

15 minute 30 year Winter I+40%

5.200

4.534

-0.116

0.000

0.11

S1.002

S3

15 minute 30 year Winter I+40%

5.250

4.090

-0.135

0.000

0.33

S1.003

S4

240 minute 30 year Winter I+40%

5.250

4.035

0.110

0.000

0.06

S1.004

S5 CP

240 minute 30 year Winter I+40%

5.380

4.034

0.934

0.000

0.07

S1.005

S6 CP

240 minute 30 year Winter I+40%

5.530

4.033

1.033

0.000

0.04

S2.000

S7

15 minute 30 year Winter I+40%

5.550

4.369

-0.056

0.000

0.90

S1.006

S8 HB

240 minute 30 year Winter I+40%

5.500

4.033

1.233

0.000

0.17

S1.007

S9 FI

240 minute 30 year Winter I+40%

5.300

2.621

-0.129

0.000

0.05

PN

US/MH Name

Overflow Vol (m³)

Discharge Vol (m³)

Maximum Velocity (m/s)

Pipe Flow (l/s)

Status

S1.000

S1

1.605

0.7

3.4

OK

S1.001

S2

2.176

1.6

4.6

OK

S1.002

S3

9.129

1.4

20.4

OK

S1.003

S4

36.684

1.7

6.4

SURCHARGED

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30 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for
Homefield School - SW Drainage Network vD

		US/MH Overflow Discharge		Maximum Velocity	Pipe Flow	Status
PN	Name	Vol (m ³)	Vol (m ³)	(m/s)	(l/s)	
S1.004	S5 CP		37.131	0.6	5.9	SURCHARGED
S1.005	S6 CP		21.854	0.0	2.2	SURCHARGED
S2.000	S7		23.815	1.6	50.5	OK
S1.006	S8 HB		93.556	0.9	2.3	SURCHARGED
S1.007	S9 FI		93.529	1.6	2.3	OK

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100 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for
Homefield School - SW Drainage Network vD

Simulation Criteria

Areal Reduction Factor 1.000

Additional Flow - % of Total Flow 0.000

Hot Start (mins) 0

MADD Factor * 10m³/ha Storage 2.000

Hot Start Level (mm) 0

Inlet Coeffiecient 0.800

Manhole Headloss Coeff (Global) 0.500

Flow per Person per Day (l/per/day) 0.000

Foul Sewage per hectare (l/s) 0.000

Number of Input Hydrographs 0

Number of Offline Controls 0

Number of Time/Area Diagrams 0

Number of Online Controls 1

Number of Storage Structures 3

Number of Real Time Controls 0

Synthetic Rainfall Details

Rainfall Model FEH

FEH Rainfall Version 2013

Site Location GB 515369 103534 TQ 15369 03534

Data Type Point

Cv (Summer) 0.750

Cv (Winter) 0.840

Margin for Flood Risk Warning (mm) 300.0

Analysis Timestep 2.5 Second Increment (Extended)

DTS Status OFF

DVD Status ON

Inertia Status ON

Profile(s) Summer and Winter

Duration(s) (mins) 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960

Return Period(s) (years) 2, 30, 100

Climate Change (%) 0, 40, 45

				Water		Surcharged	Flooded		
PN	US/MH Name	Event		US/CL (m)	Level (m)	Depth (m)	Volume (m³)	Flow / Cap.	Overflow (l/s)
S1.000	S1	240 minute	100 year Winter I+45%	5.200	5.085	0.335	0.000	0.06	
S1.001	S2	240 minute	100 year Winter I+45%	5.200	5.085	0.435	0.000	0.04	
S1.002	S3	240 minute	100 year Winter I+45%	5.250	5.084	0.859	0.000	0.08	
S1.003	S4	240 minute	100 year Winter I+45%	5.250	5.083	1.158	0.000	0.07	
S1.004	S5 CP	240 minute	100 year Winter I+45%	5.380	5.081	1.981	0.000	0.10	
S1.005	S6 CP	240 minute	100 year Winter I+45%	5.530	5.080	2.080	0.000	0.04	
S2.000	S7	240 minute	100 year Winter I+45%	5.550	5.085	0.660	0.000	0.24	
S1.006	S8 HB	240 minute	100 year Winter I+45%	5.500	5.080	2.280	0.000	0.22	
S1.007	S9 FI	240 minute	100 year Winter I+45%	5.300	2.624	-0.126	0.000	0.06	

Maximum Pipe

US/MH Overflow Discharge Velocity Flow

PN

Name

Vol (m³)

Vol (m³)

(m/s)

(l/s)

Status

S1.000

S1

5.164

0.5

0.9

FLOOD RISK

S1.001

S2

7.001

1.2

1.5

FLOOD RISK

S1.002

S3

29.367

1.0

5.2

FLOOD RISK

S1.003

S4

47.405

1.8

8.3

FLOOD RISK

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100 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for
Homefield School - SW Drainage Network vD

		US/MH Overflow		Discharge	Maximum Velocity	Pipe Flow	Status
PN	Name	Vol (m ³)	Vol (m ³)		(m/s)	(l/s)	
S1.004	S5 CP		46.731		0.6	8.1	FLOOD RISK
S1.005	S6 CP		13.965		0.0	2.4	SURCHARGED
S2.000	S7		76.612		1.2	13.4	SURCHARGED
S1.006	S8 HB		106.469		0.9	3.0	SURCHARGED
S1.007	S9 FI		106.445		1.6	3.0	OK

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