

Drainage Statement

for

Former Post Office
High Street
Eastleigh



ARCH ASSOCIATES
CONSULTING CIVIL AND STRUCTURAL ENGINEERS

DRAINAGE STATEMENT

for

Former Post Office
High Street, Eastleigh

Client:
PMC Construction
116 High Street
Cosham

ISSUE				
Issued By	C Hendry			
Date	September 2022			
Purpose	Information			
Approved By	CH			

Project No. PMC285

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1.0 Executive Summary

Following receipt of conditional planning approval for the proposed scheme at Eastleigh Post Office, PMC Construction have commissioned Arch Associates Limited to provide the detailed Stage 4 & 5 drainage design.

Planning condition 6 is noted thus: *'Prior to the commencement of any construction works on the new buildings hereby approved, final details of the proposed means of foul and surface water sewerage disposal shall be submitted to and approved in writing by the local planning authority, in consultation with Southern Water. The development shall then be carried out in accordance with the approved details.'*

This report has been produced to supplement the drawings, details and calculations and is intended for submission to the local planning authority with the intent of discharging condition 6.

The detailed drainage design follows the strategy put forward by Eastwood and Partners at planning stage, which is a gravity fed system to discharge both foul and surface water run-off into the existing Southern Water public network. An attenuation tank is provided to cater for the restricted outflow of 11.8 litres per second and this is designed to cater for all storms up to and including the 1 in 100 year 6 hour event plus an increase of 40% for climate change.

2.0 The Site

- 2.1 The site is located at Former Post Office, High Street, Eastleigh, Hampshire SO50 5FY and has an approximate O.S. Land Ranger Grid Reference of SU 455 189.
- 2.2 The site comprises a disused postal sorting office and is relatively flat and level.
- 2.3 Immediately to the south of the building runs a disused alleyway linking Wells Road in the east to the High Street in the west. To the north of the building a loading / turning / car parking area faces onto Wells Road which curved around the site boundary. The car park area is covered in tarmacadam and alleyway is mostly block paved with some concrete areas.



Total Site Area = 1220m²
Existing Site Impermeable area = 1220m²
Proposed Site Impermeable area = 1170m²



Figure 1 – Aerial View of Site

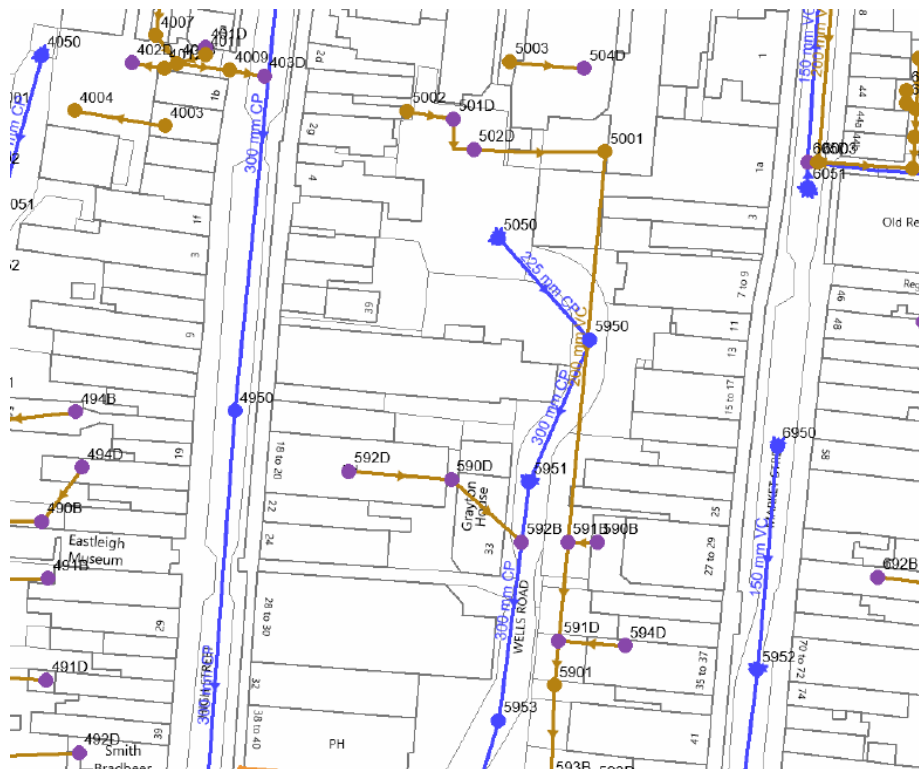


Figure 2 – Southern Water Asset Location Plan



3.0 Proposed Foul and Surface Water Drainage

3.1 Foul Water

The proposed foul water drainage for the development is to be directed into the existing Southern Water public foul sewer that runs down Wells Road. Connection is to be made via a gravity fed system into the existing manhole on the southern boundary of the site.

The existing arrangement has been CCTV surveyed to confirm the route from the site into the public network. Refer to Appendix 3. The findings of the CCTV survey have been transposed onto our proposed drainage drawing 501, refer to Appendix 1.

Connection into the network is to be made via a S106 agreement with Southern Water. On-site drainage will remain private and will not be offered for adoption by Thames water.

3.2 Surface Water

In line with the strategy submitted at planning stage, the surface water run-off is to be directed into the existing Southern Water surface water network at a restricted rate of 11.8 litres per second. Run-off falling on hardstanding and roofs is directed into ACO channels, gullies or RWPs and then piped through a gravity fed network towards a Hydrobrake flow control chamber before connecting into the surface water sewer within Wells Road. The connection is to be made via a S106 agreement with Southern Water.

Attenuation tanks formed using crates are installed along the network to contain the restricted volumes of water for all storms up to and including the 1 in 100 year 6 hour storm event.

Exceedance flow routes would flow to the south-east corner of the site and onto Wells Road.



4.0 SuDS Maintenance Schedule

The property owner / management company would be responsible for the operation and maintenance of the site drainage network. The following schedule should be included within the Operation and Maintenance Manual for the development.

General Maintenance

In addition to the maintenance of specific SuDS features, such as attenuation tanks, the following table outlines general maintenance requirements of the surface water system.

Maintenance Schedule	Required Action	Frequency
Regular Maintenance	Remove sediment & debris from pre-treatment devices & floor of inspection chambers	Annually
	Cleaning of any gutters & any filters on downpipes	Annually
	Trimming and roots that may be causing blockages	Annually (or as required)
Monitoring	Inspect silt traps and note rate of sediment accumulation	Monthly in the first year and then annually

Attenuation Tanks

Attenuation tanks store water while a pumping chamber device slows the outflow of the network. As such, maintenance is required to ensure it is working effectively.

Maintenance Schedule	Required Action	Frequency
Regular Maintenance	Inspect and identify any areas that are not operating correctly. If required, take remedial action.	Monthly for 3 months, then annually
	Remove debris from the catchment surface (where it may cause risks to performance)	Monthly



	For systems where rainfall infiltrates into the tank, check surface of filter for blockage by sediment, algae, or other matter; remove and replace surface infiltration medium as necessary.	Annually
Remedial Actions	Repair/rehabilitate inlets, outlet, overflows and vents	As required
Monitoring	Inspect/check and inlets, outlets, vents and overflows to ensure that they are in good condition and operating as designed	Annually
	Survey inside of tank for sediment build-up and remove if necessary	Every 5 years or as required

SuDS Maintenance Responsibility

The maintenance of the SuDS features, and drainage generally, will be funded by the management company, from the proceeds of an annual (or bi-annual) services charge paid by each homeowner. The management company will formally appoint a drainage company (under a service agreement) to inspect and maintain the pumping station apparatus at the required frequency.

Foul Drainage Maintenance

The foul drainage system has been designed in accordance with the relevant codes of practice and should achieve self-cleansing velocity with the anticipated foul water flows. Maintenance of the system should therefore be minimal, but blockages may occur with improper use, such as inappropriate objects being flushed down toilets, in which case rodding or jetting may be required. This work should be carried out on an ad hoc basis by a specialist contractor.



Appendix 1.

Drawings

NOTES

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- MAIN CONTRACTOR TO PROVIDE AND FIX SUITABLE BRACING AND PROPPING FOR ALL ELEMENTS IN THE TEMPORARY CONDITION DURING CONSTRUCTION STAGE, SUCH AS TO ENSURE STRUCTURE STABILITY AT ALL TIMES.
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DRAINAGE

- ALL MATERIALS AND WORKMANSHIP TO SEWERAGE SECTOR DESIGN AND CONSTRUCTION GUIDANCE DOCUMENT APPENDIX C APPROVED VERSION 2.1.
- ALL MATERIALS AND WORKMANSHIP TO COMPLY WITH BS EN 752-1: 2008
- WHEN USING VITRIFIED CLAY PIPEWORK WITH FLEXIBLE JOINTS, SUPERSTRENGTH SHALL BE USED. ALL ADOPTABLE WORKS SHALL USE V.C PIPEWORK. FOR NON-ADOPTED SYSTEM PVCU-SN4 CLASS PIPEWORK AND FITTINGS MAY BE SUBSTITUTED.
- CONCRETE ENCASEMENT, MINIMUM 150 BED AND HAUNCH, TO BE USED ON PIPEWORK UNDER ROADS WITH LESS THAN 1200 COVER TO CROWN UNLESS NOTED OR INDICATED OTHERWISE.
- UNLESS OTHERWISE STATED, ALL PIPEWORK TO BE BEDDED AND SURROUNDED IN 10mm SINGLE SIZE AGGREGATE UP TO 450mm DIAMETER. FOR LARGER PIPEWORK, 20mm SHALL BE USED.
- REFER TO MANHOLE SCHEDULE FOR SIZES, COVERS ETC.
- ALL MATERIALS TO COMPLY WITH THE RELEVANT BS-EN, LATEST EDITION, FOR PIPEWORK AND FITTINGS.
- UPON COMPLETION, ALL WORKS TO BE THOROUGHLY CLEANED BY FLUSHING.

CDM REGULATIONS 2015

ARCH ASSOCIATES HAVE CONSIDERED AND, WHERE REASONABLY PRACTICABLE, AVOIDED FORESEEABLE RISKS IN THE PREPARATION OF THE DESIGN SHOWN ON THIS AND RELATED DRAWINGS. SIGNIFICANT RISKS WHICH REMAIN AND ASSOCIATED CONTROL MEASURES ARE IDENTIFIED BELOW AND SHOULD BE GIVEN PARTICULAR ATTENTION BY THE MAIN CONTRACTOR ON SITE.

ACTIVITY	HAZARD	CONTROL

NOTE: THE ABOVE ASSESSMENT RECORDS ONLY THOSE ELEMENTS CONSIDERED UNUSUAL, DIFFICULT TO MANAGE OR OUTSIDE OF THE ANTICIPATED EXPERTISE OF A COMPETENT CONTRACTOR

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SURFACE WATER MANHOLE SCHEDULE							
REF.	COVER LEVEL	INVERT LEVEL	DEPTH TO INVERT	TYPE	MANHOLE SIZE	COVER CLASS AND SIZE	COMMENTS
S1	16.050	14.750	1.300	B	1500 DIA.	B125 / 600x600	HYDROBRAKE MANHOLE MAX. DISCHARGE RATE OF 11.8 LITRES PER SECOND.
S2	16.050	14.850	1.200	D	450 DIA.	B125 / 450x450	300mm SUMP
S3	16.170	15.050	1.120	D	450 DIA.	B125 / 450x450	300mm SUMP
S4	16.200	15.400	0.800	D	450 DIA.	B125 / 450x450	—
S5	16.100	15.000	1.100	D	450 DIA.	D400 / 450x450	300mm SUMP
S6	16.120	15.200	0.920	D	450 DIA.	D400 / 450x450	—
S7	16.100	15.330	0.770	D	450 DIA.	B125 / 450x450	—
S8	16.250	15.450	0.800	D	450 DIA.	B125 / 450x450	300mm SUMP
S9	16.250	15.550	0.700	D	450 DIA.	B125 / 450x450	300mm SUMP

FOUL WATER MANHOLE SCHEDULE							
REF.	COVER LEVEL	INVERT LEVEL	DEPTH TO INVERT	TYPE	MANHOLE SIZE	COVER CLASS AND SIZE	COMMENTS
F1	16.170	15.400	0.770	D	450 DIA.	B125 / 450x450	—
F2	16.270	15.520	0.750	D	450 DIA.	B125 / 450x450	—
F3	16.100	15.288	0.812	D	450 DIA.	B125 / 450x450	—
F4	16.120	15.310	0.810	D	450 DIA.	B125 / 450x450	—
F5	16.120	15.402	0.718	D	450 DIA.	D400 / 450x450	—
F6	16.120	15.425	0.695	D	450 DIA.	D400 / 450x450	—
F7	16.100	15.428	0.672	D	450 DIA.	B125 / 450x450	—
F8	16.130	15.450	0.680	D	450 DIA.	B125 / 450x450	—
F9	16.130	15.477	0.653	D	450 DIA.	B125 / 450x450	—
F10	16.130	15.499	0.633	D	450 DIA.	B125 / 450x450	—
F11	16.280	15.380	0.900	D	450 DIA.	B125 / 450x450	—
F12	16.280	15.340	0.940	D	450 DIA.	B125 / 450x450	—
F13	16.280	15.300	0.980	D	450 DIA.	B125 / 450x450	—
F14	16.280	15.520	0.760	D	450 DIA.	B125 / 450x450	—
F15	16.130	15.520	0.610	D	450 DIA.	B125 / 450x450	—

NOTE ALL COVER LEVELS SHOWN ARE APPROXIMATE ONLY. COVERS TO BE SET TO SUIT CAMBER / GRADIENT OF EXISTING AND PROPOSED SURFACES.

DRAINAGE LEGEND

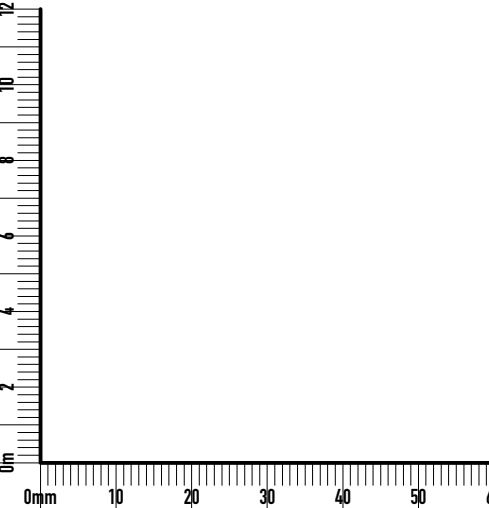
-  EXISTING SURFACE / STORM WATER SEWER / MANHOLE
-  EXISTING FOUL WATER SEWER / MANHOLE
-  EXISTING FOUL WATER DRAIN AND MANHOLE TO BE ABANDONED. CONTRACTOR TO CONFIRM THAT NO LIVE CONNECTIONS REMAIN.
-  SURFACE WATER MANHOLE / INSPECTION CHAMBER / ACCESS CHAMBER (SEE SCHEDULE FOR DETAILS).
-  CATCHPIT MANHOLE (SEE SCHEDULE FOR DETAILS).
-  100mm Dia. PVCu. SN4 STORM WATER DRAIN UNLESS NOTED OTHERWISE.
-  RAIN WATER DOWNPIPE (LOCATION AS ARCHITECTS DRGS).
-  ROAD GULLY (DEEP SEAL TRAP).
-  RODDING EYE.
-  YARD GULLY WITH 100 DIA. RODDABLE OUTLET.
-  ATTENUATION TANK OUT OF PROPRIETARY MODULAR CRATE SYSTEM WRAPPED IN IMPERMEABLE GEOMEMBRANE AND PROTECTIVE GEOTEXTILE AND VENTED AS NECESSARY.
-  ACO M100D DRAINAGE CHANNEL WITH 100 DIA. SUMP OUTLETS AND LOAD CLASS B125 COVERS.
-  FOUL WATER MANHOLE / INSPECTION CHAMBER / ACCESS CHAMBER (SEE SCHEDULE FOR DETAILS).
-  100mm Dia. PVCu. SN4 FOUL WATER DRAIN (U.N.O.).
-  SOIL VENT PIPE / STUB STACK (LOCATION AS ARCHITECTS DRGS).

SITE PLAN SHOWING PROPOSED DRAINAGE LAYOUT
(SCALE 1:200@A1)

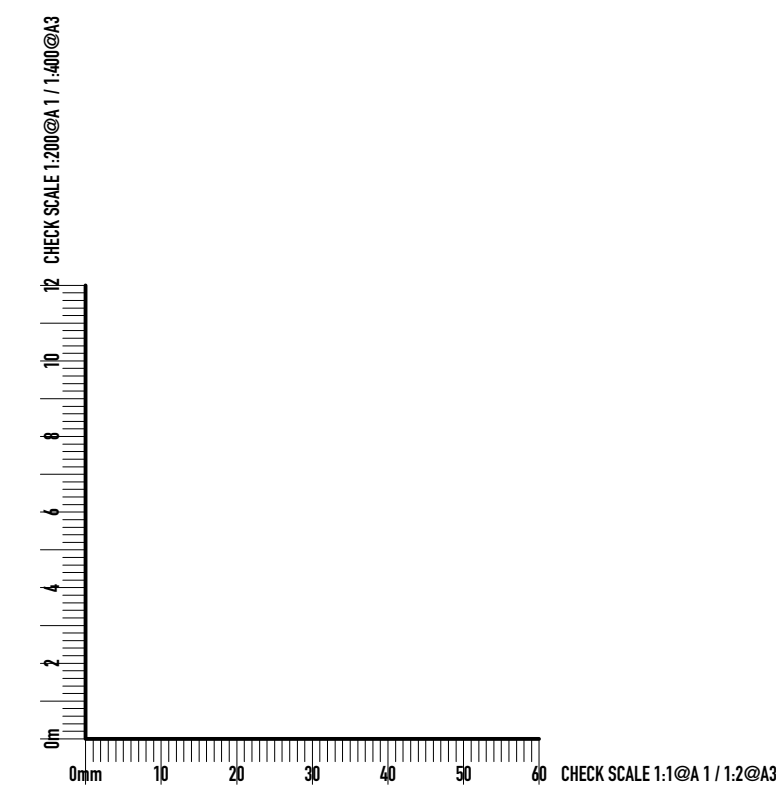
ATTENUATION TANK OPERATION AND MAINTENANCE REQUIREMENTS		
MAINTENANCE SCHEDULE	REQUIRED ACTION	RECOMMENDED FREQUENCY
REGULAR MAINTENANCE	INSPECT AND IDENTIFY ANY AREAS THAT ARE NOT OPERATING CORRECTLY. IF REQUIRED TAKE REMEDIAL ACTION	MONTHLY FOR 3 MONTHS, THEN 6 MONTHLY.
	DEBRIS REMOVAL FROM CATCHMENT SURFACE (WHERE MAY CAUSE RISKS TO PERFORMANCE).	MONTHLY.
REMEDIAL ACTIONS	REMOVE SEDIMENT FROM PRE-TREATMENT STRUCTURES I.E. SILT TRAPS AND GULLIES.	ANNUALLY, OR AS REQUIRED.
	REPAIR / REHABILITATION OF INLETS, OUTLET, OVERFLOWS AND VENTS.	AS REQUIRED
MONITORING	INSPECT / CHECK ALL INLETS, OUTLETS, VENTS AND OVERFLOWS TO ENSURE THAT THEY ARE IN GOOD CONDITION AND OPERATING AS DESIGNED.	ANNUALLY AND AFTER LARGE STORMS

GENERAL SUDS OPERATION AND MAINTENANCE		
MAINTENANCE SCHEDULE	REQUIRED ACTION	FREQUENCY
REGULAR MAINTENANCE	REMOVE SEDIMENT AND DEBRIS FROM PRE-TREATMENT DEVICES AND FLOOR OF INSPECTION TUBE OR CHAMBER	ANNUALLY
	CLEANING OF ANY GUTTERS & ANY FILTERS ON DOWNPIPES	ANNUALLY
MONITORING	TRIMMING ANY ROOTS THAT MAY BE CAUSING BLOCKAGES	ANNUALLY (OR AS REQUIRED).
	INSPECT SILT TRAPS AND NOTE RATE OF SEDIMENT ACCUMULATION	MONTHLY IN THE FIRST YEAR AND THEN ANNUALLY

CHECK SCALE 1:200@A1 1/2@A3



CHECK SCALE 1:100@A1 1/2@A3



SITE PLAN SHOWING PROPOSED FINISHED EXTERNAL LEVELS
(SCALE 1:200 @ A1)

KEY:

	MARSHALLS KEYBLOCK 'NATURAL' COLOUR BLOCK PAVING
	MARSHALLS KEYBLOCK 'BUFF' COLOUR BLOCK PAVING
	PLANTERS
	MARSHALLS KEYKERB KL BN KERB
	FLUSH 'EF' CONCRETE EDGING
	GRAVEL FINISH
	VEHICULAR ACCESS CONSTRUCTION. REFER TO DETAILS.
	LOCKABLE BOLLARDS, Ø76mm x 500mm HIGH, RHINO RT RD4

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P2	23.05.22	PAVING STRATEGY UPDATED	JMB
P1	28.04.22	PRELIMINARY ISSUE	JMB
Revision	Date	Description	By

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Client
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Architect
HGP ARCHITECTS LTD.

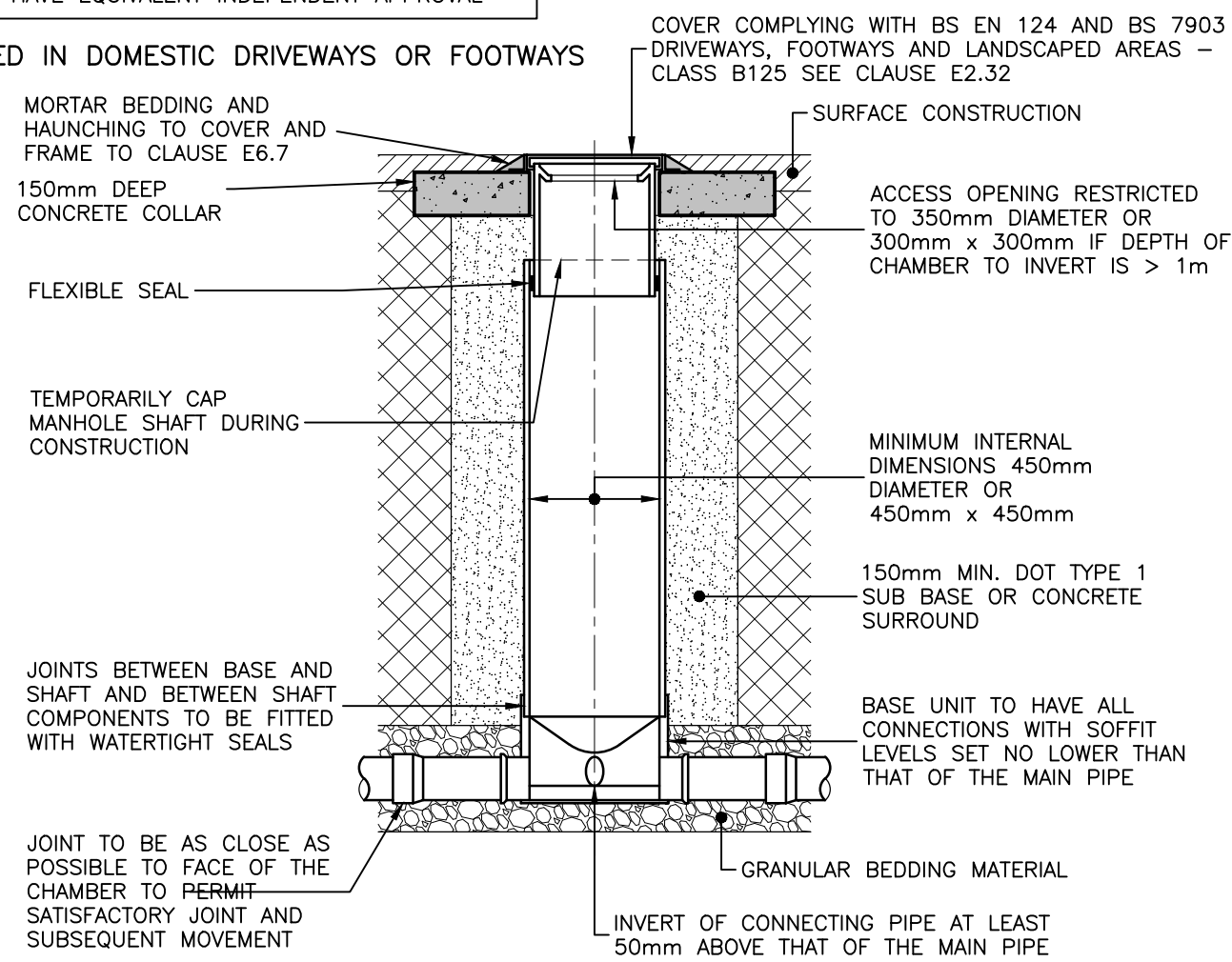
Project Title
OLD POST OFFICE,
EASTLEIGH.

Drawing Title
EXTERNAL WORKS LAYOUT.

Scale 1:200	Paper Size A1	Date APRIL 2022	Drawn By JMB	Checked By CH
Project No. PMC285	Drawing No. 502	Revision P2		

PLASTIC CHAMBERS AND RINGS SHALL COMPLY WITH BS EN 13598-1 AND BS EN 13598-2 OR HAVE EQUIVALENT INDEPENDENT APPROVAL

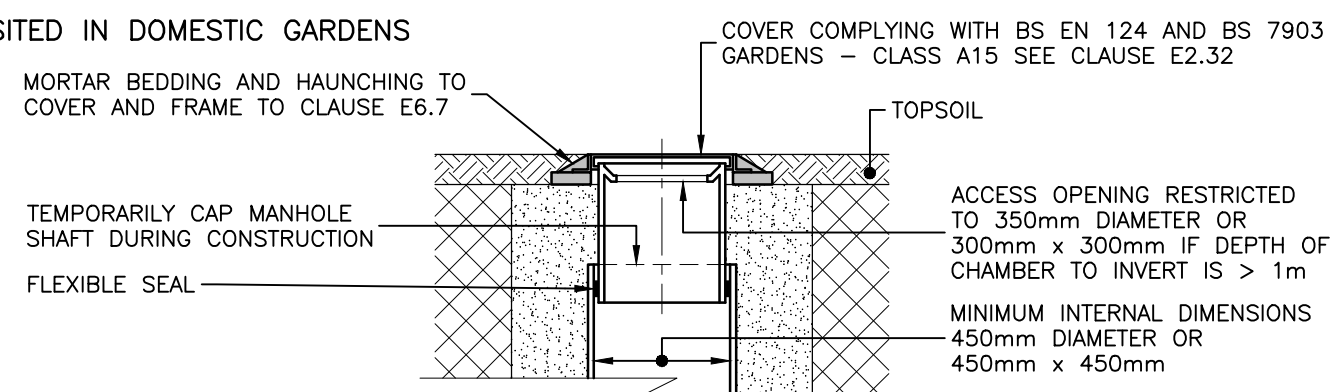
SITED IN DOMESTIC DRIVEWAYS OR FOOTWAYS



TYPICAL ACCESS CHAMBER DETAIL – TYPE 3 (FLEXIBLE MATERIAL DETAIL)

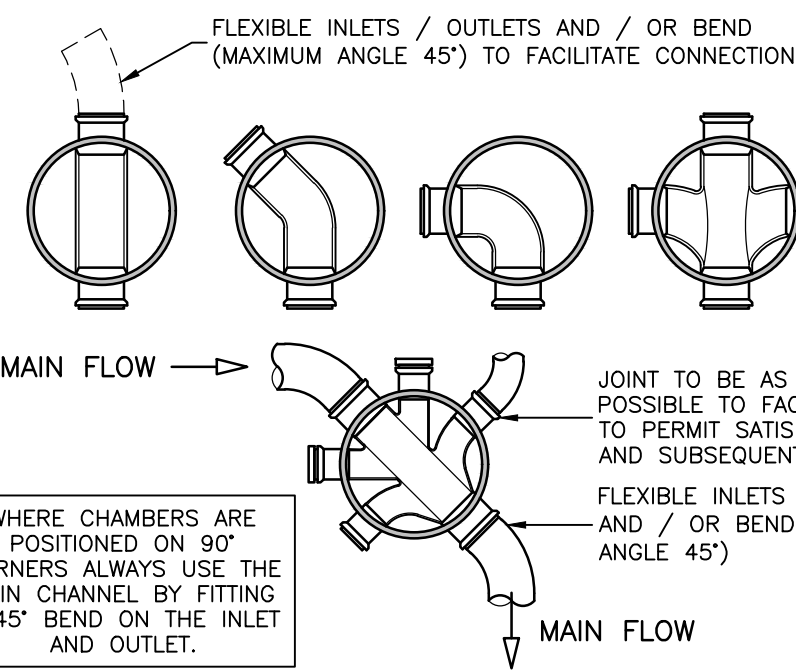
MAXIMUM DEPTH FROM COVER LEVEL TO SOFFIT OF PIPE IN AREAS SUBJECT TO VEHICLE LOADING 3m, NON-ENTRY
(1:25@A1)

SITED IN DOMESTIC GARDENS



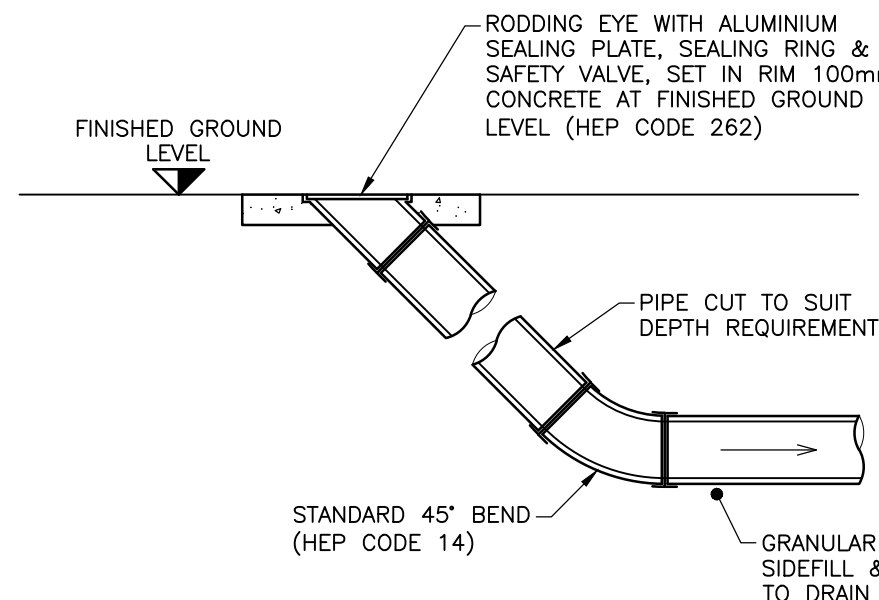
ALTERNATIVE COVER DETAIL FOR LANDSCAPED AREAS – TYPE 3

(1:25@A1)



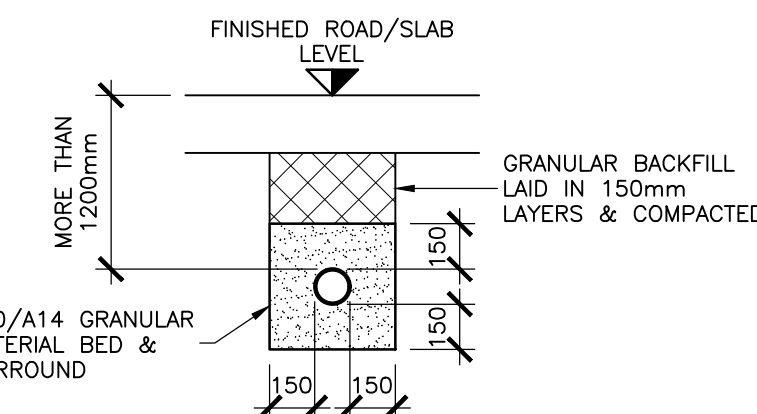
ALTERNATIVE BASE LAYOUTS FOR TYPE 3 CHAMBERS

(1:25@A1)



RODDING EYE DETAIL (VC SHOWN – PVCu ALTERNATIVE TO SUIT)

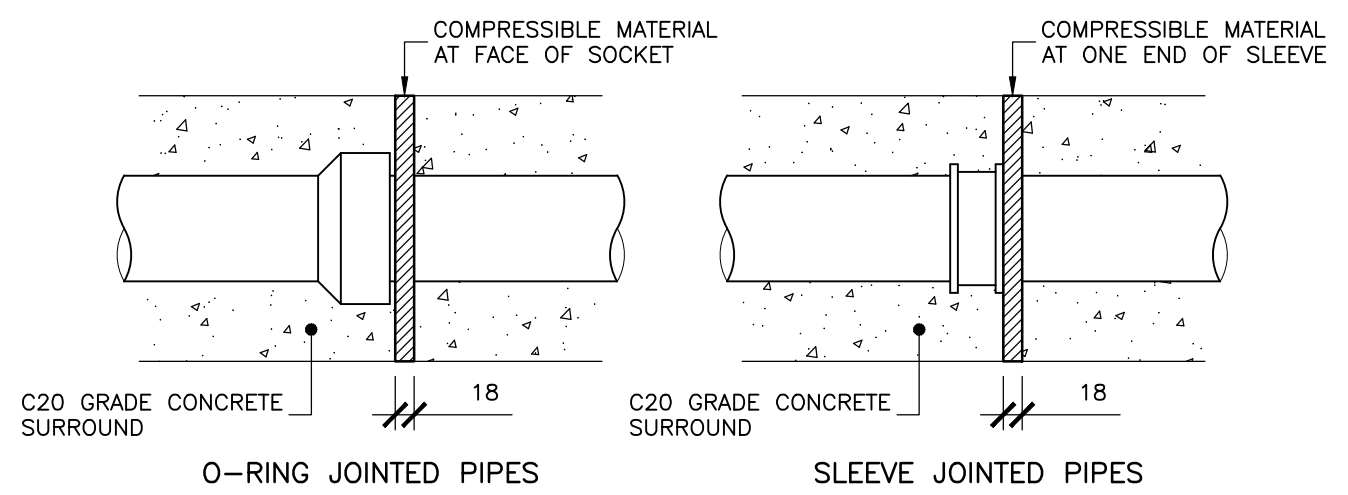
(1:25@A1)



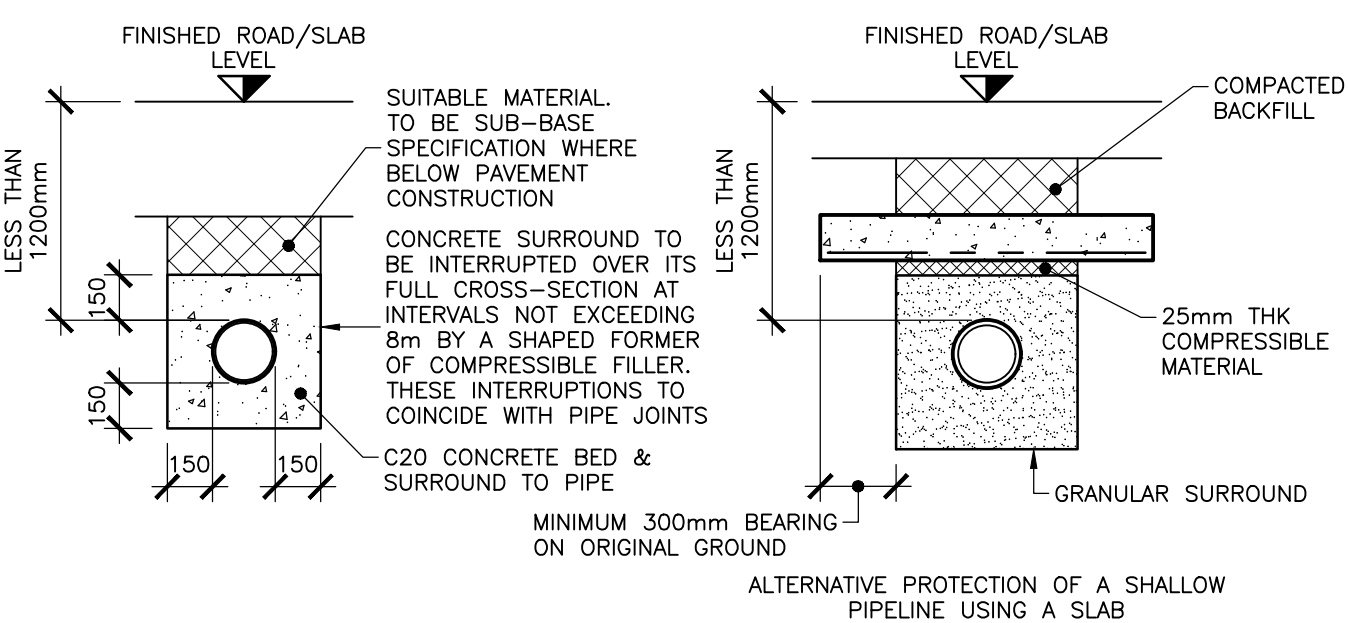
NOMINAL BORE OF PIPE (mm)	SIZE (mm)	
	SINGLE-SIZED	GRADED
100 & 150	10	–
225 & 300	10 OR 20	20 TO 5
375 – 500	20	20 TO 5

PIPE BED & SURROUND DETAIL (CLASS S)

(1:25@A1)

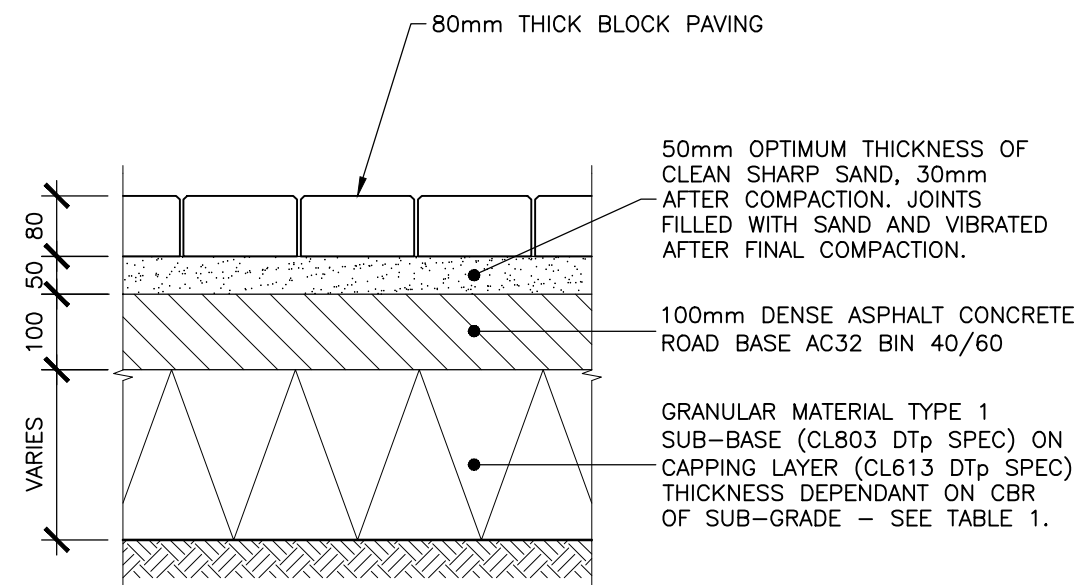


THE FLEXIBILITY OF A PIPELINE BEDDED ON, OR SURROUNDED WITH, CONCRETE SHOULD NORMALLY BE MAINTAINED BY THE PROVISION OF FLEXIBLE CONSTRUCTION JOINTS THROUGH THE CONCRETE AT PIPE JOINTS. THESE SHOULD BE MADE FROM BITUMEN IMPREGNATED INSULATING BOARD COMPLYING WITH B.S. 1142 PART 3, OR OTHER EQUALLY COMPRESSIBLE FILLER MATERIAL SUCH AS EXP&D POLYSTYRENE. THE BOARD SHOULD BE CUT TO FIT THE PIPES & PLACED AT THE FACE OF THE PIPE SOCKETS OR AT ONE END OF SLEEVE JOINTS. THE JOINT MATERIAL SHOULD BE AT LEAST 18mm THICK PLACED AT 5.0m CENTRES MAX.



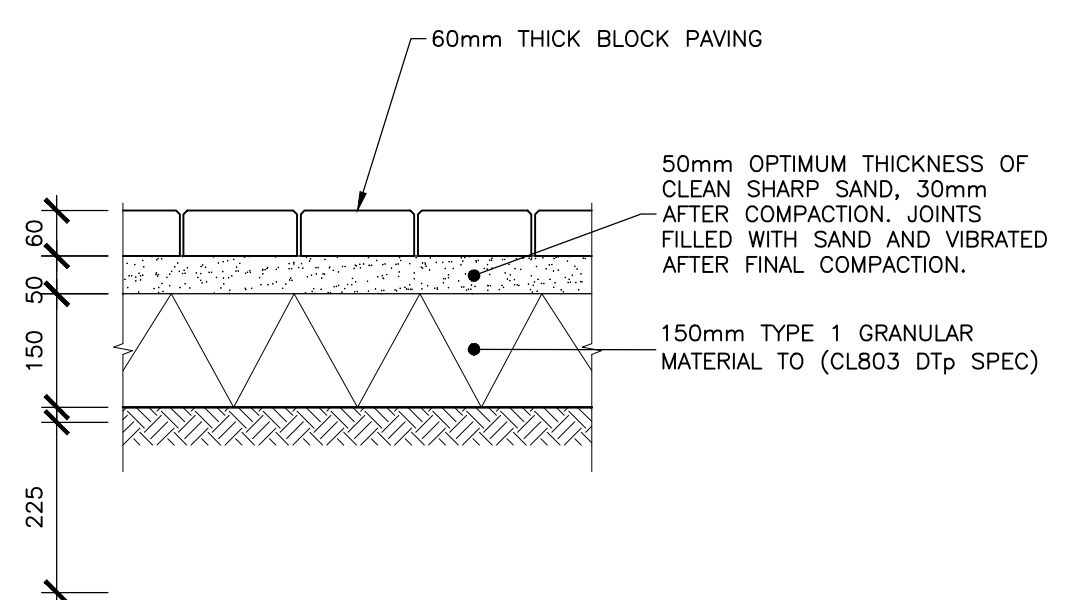
PROTECTION TO PIPELINES WITH LESS THAN 1200mm COVER

(1:25@A1)



BLOCK PAVING CONSTRUCTION DETAIL – VEHICULAR ACCESS

(1:10)



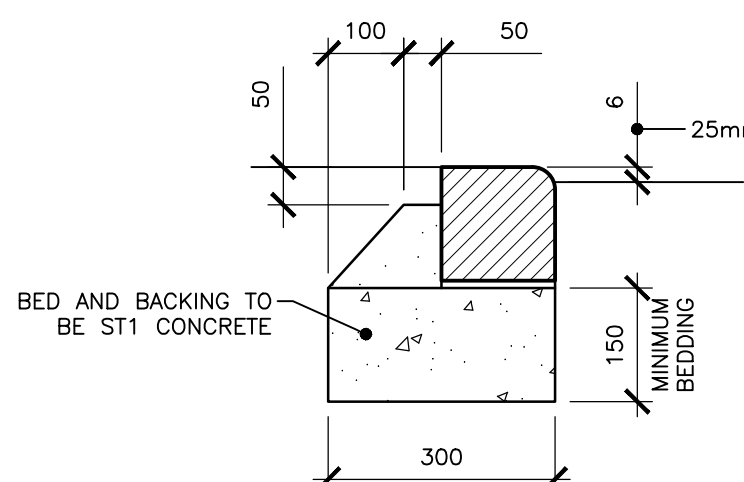
BLOCK PAVING CONSTRUCTION DETAIL – NO VEHICULAR ACCESS

(NO HEAVY VEHICLE ACCESS)

(1:10)

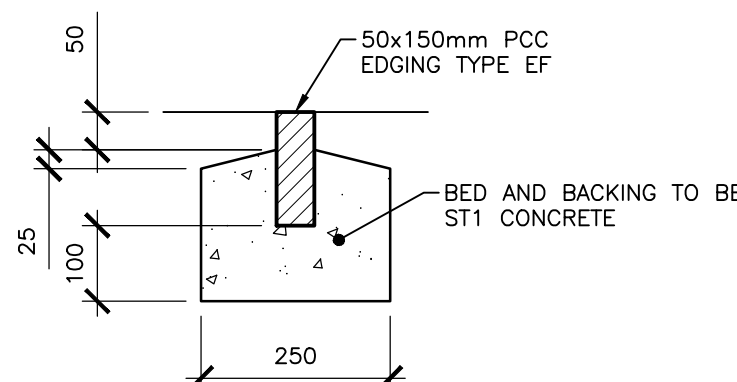
TABLE 1		
CBR OF SUB-GRADE*	THICKNESS(mm) TYPE 1 SUB-BASE	THICKNESS(mm) CAPPING LAYER
LESS THAN 2%	150	600
2% – 5%	150	350
5% OR GREATER	225	–

NOTES
*1. INSITU TESTS TO BE CARRIED OUT PRIOR TO CONSTRUCTION TO ASCERTAIN CBR VALUES.
2. IN ANY EVENT, THE OVERALL CONSTRUCTION THICKNESS SHOULD NOT BE LESS THAN 450mm IRRESPECTIVE OF THE SUB-GRADE CBR VALUE.



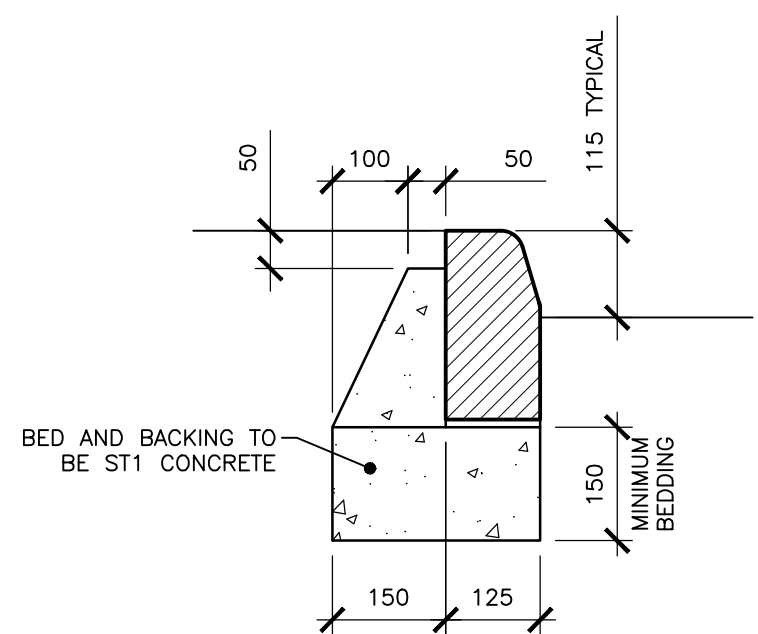
KERB TYPE BN DETAIL (DROPPED KERB)

(1:10@A1)



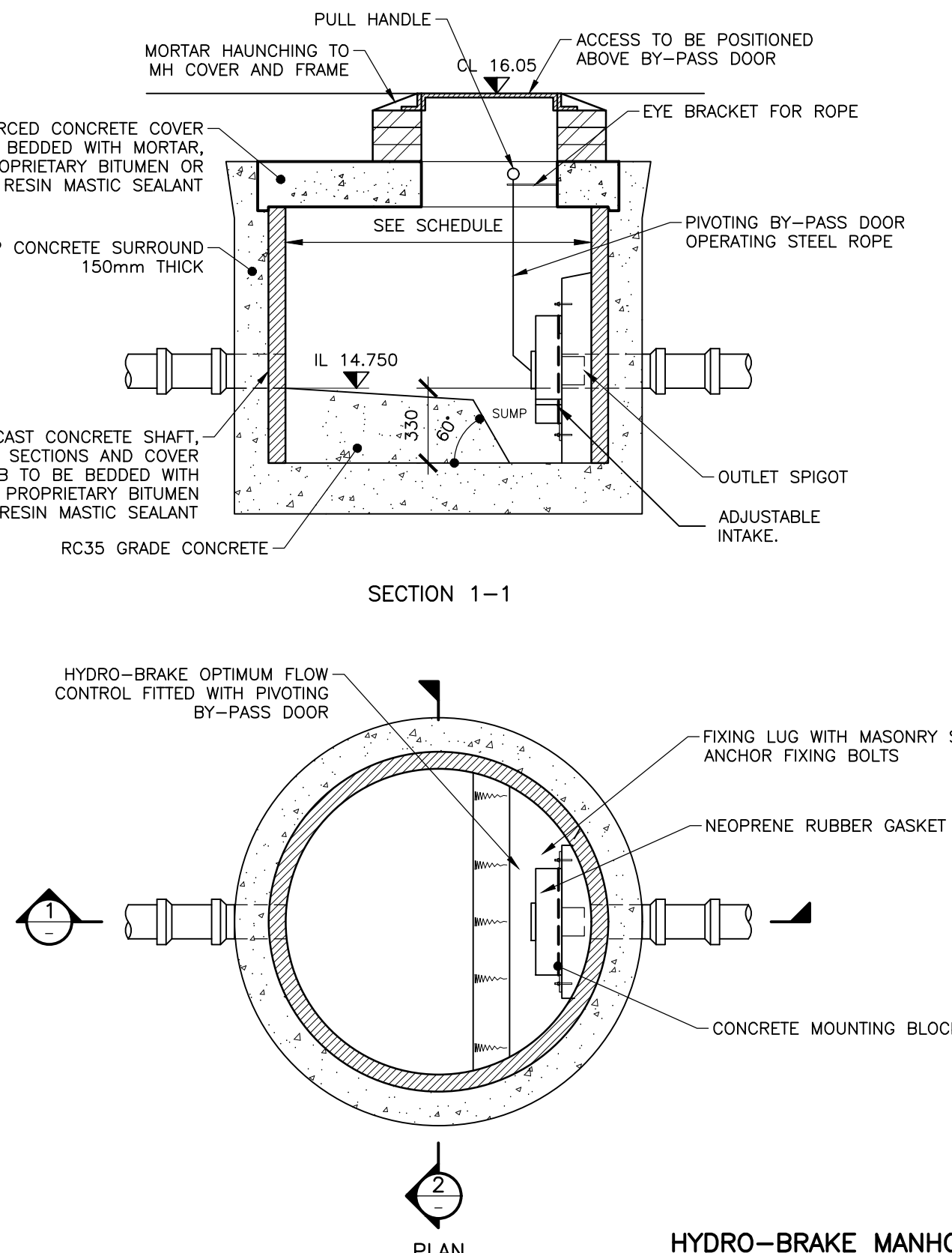
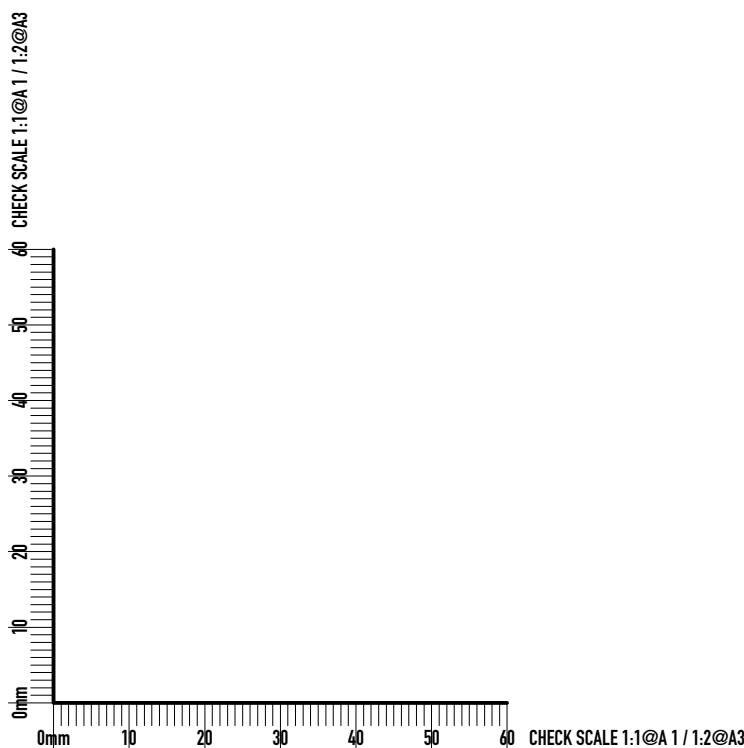
KERB TYPE HB 2 DETAIL

(1:10@A1)



STORM WATER ATTENUATION TANK WAVIN / OSMA 'AQUACELL' ATTENUATION INSTALLATION WITH VENT PIPE DETAIL

(SCALE 1:25)



HYDRO-BRAKE MANHOLE S2 DETAIL (HYDRO-BRAKE INSTALLATION TO BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS)

(SCALE 1:25@A1)

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- ALL FIGURED DIMENSIONS TO BE TAKEN IN PREFERENCE TO SCALED DIMENSIONS.
- ANY DISCREPANCIES BETWEEN THIS DRAWING AND OTHER INFORMATION IS TO BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO THE COMMENCEMENT OF THE WORKS ON SITE.
- THE MAIN CONTRACTOR SHALL BE RESPONSIBLE FOR THE SETTING OUT AND ACCURACY OF ALL DIMENSIONS. THE CONTRACTOR IS TO ENSURE THE STABILITY AND STRUCTURAL INTEGRITY OF THE EXISTING PROPERTY AT ALL TIMES DURING WORKS AND IS TO BE RESPONSIBLE FOR ALL PROPPING AND SHORING AS REQUIRED.
- MAIN CONTRACTOR TO PROVIDE AND FIX SUITABLE BRACING AND PROPPING FOR ALL ELEMENTS IN THE TEMPORARY CONDITION DURING CONSTRUCTION STAGE, SUCH AS TO ENSURE STRUCTURE STABILITY AT ALL TIMES.
- IT IS THE CONTRACTORS SOLE RESPONSIBILITY FOR ASCERTAINING SAFE DISPOSAL OF ANY OFF-SITE EXCAVATED SPOIL. NO CLAIM RESULTING FROM ABNORMAL TIP REQUIREMENTS WILL BE ENTERTAINED.

DRAINAGE

- ALL MATERIALS AND WORKMANSHIP TO SEWERAGE SECTOR DESIGN AND CONSTRUCTION GUIDANCE DOCUMENT APPENDIX C APPROVED VERSION 2.1.
- ALL MATERIALS AND WORKMANSHIP TO COMPLY WITH BS EN 752-1: 2008
- WHEN USING VITRIFIED CLAY PIPEWORK WITH FLEXIBLE JOINTS, SUPERSTRENGTH SHALL BE USED. ALL ADOPTABLE WORKS SHALL USE V.C PIPEWORK. FOR NON-ADOPTED SYSTEM PVCU-SN4 CLASS PIPEWORK AND FITTINGS MAY BE SUBSTITUTED.
- CONCRETE ENCASEMENT MINIMUM 150 BED AND HAUNCH, TO BE USED ON PIPEWORK UNDER ROADS WITH LESS THAN 1200 COVER TO CROWN UNLESS NOTED OR INDICATED OTHERWISE. VARIES 100
- UNLESS OTHERWISE STATED, ALL PIPEWORK TO BE BEDDED AND SURROUNDED IN 10mm SINGLE SIZE AGGREGATE UP TO 450mm DIAMETER. FOR LARGER PIPEWORK, 20mm SHALL BE USED.
- REFER TO MANHOLE SCHEDULE FOR SIZES, COVERS ETC.
- ALL MATERIALS TO COMPLY WITH THE RELEVANT BS-EN, LATEST EDITION, FOR PIPEWORK AND FITTINGS.
- UPON COMPLETION, ALL WORKS TO BE THOROUGHLY CLEANED BY FLUSHING.

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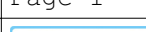
UPON COMPLETION, ALL WORKS TO BE THOROUGHLY CLEANED BY FLUSHING.

UPON COMPLETION, ALL WORKS TO BE THOROUGHLY CLEANED BY FLUSHING.



Appendix 2.

Microdrainage Calculations

Arch Associates Limited		Page 1
Town House St Geroge's Square Bishops Waltham Southampton SO32 1AF	Eastleigh PO	
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STORM SEWER DESIGN by the Modified Rational Method

Pipe Sizes STANDARD Manhole Sizes STANDARD

Designed with Level Soffits

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
1.000	17.734	0.177	100.2	0.021	1.00	0.0	0.600	o	100	Pipe/Conduit		
1.001	8.124	0.120	67.7	0.000	0.00	0.0	0.600	o	100	Pipe/Conduit		
1.002	12.769	0.130	98.2	0.000	0.00	0.0	0.600	o	100	Pipe/Conduit		
1.003	8.172	0.200	40.9	0.016	0.00	0.0	0.600	o	100	Pipe/Conduit		
1.004	17.883	0.150	119.2	0.021	0.00	0.0	0.600	o	150	Pipe/Conduit		
2.000	22.656	0.350	64.7	0.025	1.00	0.0	0.600	o	150	Pipe/Conduit		
2.001	10.150	0.200	50.8	0.025	0.00	0.0	0.600	o	150	Pipe/Conduit		
1.005	11.682	0.100	116.8	0.006	0.00	0.0	0.600	o	150	Pipe/Conduit		
1.006	8.900	0.090	98.9	0.000	0.00	0.0	0.600	o	150	Pipe/Conduit		

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)
1.000	50.00	1.38	15.627	0.021	0.0	0.0	0.0	0.77	6.0	2.8
1.001	50.00	1.53	15.450	0.021	0.0	0.0	0.0	0.94	7.4	2.8
1.002	50.00	1.80	15.330	0.021	0.0	0.0	0.0	0.78	6.1	2.8
1.003	50.00	1.92	15.200	0.037	0.0	0.0	0.0	1.21	9.5	5.0
1.004	50.00	2.24	15.000	0.058	0.0	0.0	0.0	0.92	16.2	7.9
2.000	50.00	1.30	15.400	0.025	0.0	0.0	0.0	1.25	22.1	3.4
2.001	50.00	1.42	15.050	0.050	0.0	0.0	0.0	1.42	25.0	6.8
1.005	50.00	2.45	14.850	0.114	0.0	0.0	0.0	0.93	16.4	15.4
1.006	50.00	2.60	14.750	0.114	0.0	0.0	0.0	1.01	17.9	15.4

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Town House St Geroge's Square Bishops Waltham Southampton SO32 1AF	Eastleigh PO	
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Manhole Schedules for Storm

MH Name	MH CL (m)	MH Depth (m)	MH Connection	MH Diam., L*W (mm)	PN	Pipe Out Invert Level (m)	Pipe Out Diameter (mm)	PN	Pipes In Invert Level (m)	Pipes In Diameter (mm)	Backdrop (mm)
ACO	16.150	0.523	Open Manhole	450	1.000	15.627	100				
S8	16.150	0.700	Open Manhole	450	1.001	15.450	100	1.000	15.450	100	
S7	16.150	0.820	Open Manhole	450	1.002	15.330	100	1.001	15.330	100	
S6	16.150	0.950	Open Manhole	450	1.003	15.200	100	1.002	15.200	100	
S5	16.150	1.150	Open Manhole	450	1.004	15.000	150	1.003	15.000	100	
S4	16.150	0.750	Open Manhole	450	2.000	15.400	150				
S3	16.150	1.100	Open Manhole	450	2.001	15.050	150	2.000	15.050	150	
S2	16.150	1.300	Open Manhole	450	1.005	14.850	150	1.004	14.850	150	
								2.001	14.850	150	
S1	16.150	1.400	Open Manhole	1500	1.006	14.750	150	1.005	14.750	150	
Road	16.150	1.490	Open Manhole	0		OUTFALL		1.006	14.660	150	

No coordinates have been specified, layout information cannot be produced.

Free Flowing Outfall Details for Storm

Outfall Pipe Number	Outfall Name	C. Level (m)	I. Level (m)	Min I. Level (m)	D, L (mm)	W (mm)
1.006	Road	16.150	14.660	0.000	0	0

Simulation Criteria for Storm

Volumetric Runoff Coeff	0.750	Additional Flow - % of Total Flow	0.000
Areal Reduction Factor	1.000	MADD Factor * 10m³/ha Storage	2.000
Hot Start (mins)	0	Inlet Coefficient	0.800
Hot Start Level (mm)	0	Flow per Person per Day (l/per/day)	0.000
Manhole Headloss Coeff (Global)	0.500	Run Time (mins)	60
Foul Sewage per hectare (l/s)	0.000	Output Interval (mins)	1
Number of Input Hydrographs	0	Number of Storage Structures	4
Number of Online Controls	1	Number of Time/Area Diagrams	0
Number of Offline Controls	0	Number of Real Time Controls	0

Synthetic Rainfall Details

Rainfall Model	FSR	Profile Type	Summer
Return Period (years)	100	Cv (Summer)	0.750
Region	England and Wales	Cv (Winter)	0.840
M5-60 (mm)	19.600	Storm Duration (mins)	30
Ratio R	0.350		

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Online Controls for Storm

Hydro-Brake® Optimum Manhole: S1, DS/PN: 1.006, Volume (m³): 2.7

Unit Reference	MD-SCU-0135-1180-0400-1180
Design Head (m)	0.400
Design Flow (l/s)	11.8
Flush-Flo™	Calculated
Objective	Linear discharge profile
Application	Surface
Sump Available	Yes
Diameter (mm)	135
Invert Level (m)	14.750
Minimum Outlet Pipe Diameter (mm)	150
Suggested Manhole Diameter (mm)	1200

Control Points	Head (m)	Flow (l/s)
Design Point (Calculated)	0.400	11.8
Flush-Flo™	0.165	8.7
Kick-Flo®	0.201	8.5
Mean Flow over Head Range	-	7.6

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	5.3	1.200	19.9	3.000	30.8	7.000	46.7
0.200	8.5	1.400	21.4	3.500	33.2	7.500	48.3
0.300	10.3	1.600	22.8	4.000	35.4	8.000	49.9
0.400	11.8	1.800	24.1	4.500	37.3	8.500	51.5
0.500	13.1	2.000	25.4	5.000	39.4	9.000	53.0
0.600	14.3	2.200	26.6	5.500	41.3	9.500	54.4
0.800	16.4	2.400	27.7	6.000	43.2		
1.000	18.2	2.600	28.8	6.500	44.9		

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Storage Structures for Storm

Cellular Storage Manhole: S5, DS/PN: 1.004

Invert Level (m) 15.000 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	18.0	18.0	0.401	0.0	25.2
0.400	18.0	25.2			

Cellular Storage Manhole: S3, DS/PN: 2.001

Invert Level (m) 15.050 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	18.0	18.0	0.401	0.0	26.8
0.400	18.0	26.8			

Cellular Storage Manhole: S2, DS/PN: 1.005

Invert Level (m) 14.850 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	12.0	12.0	0.401	0.0	18.4
0.400	12.0	18.4			

Cellular Storage Manhole: S1, DS/PN: 1.006

Invert Level (m) 14.750 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	18.0	18.0	0.401	0.0	25.2
0.400	18.0	25.2			

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Bishops Waltham
Southampton SO32 1AF

Eastleigh PO

Date 27/09/2022
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Micro Drainage

Summary of Critical Results by Maximum Level (Rank 1) for Storm

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 Coefficient 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 Storage Structures 4

Number of Online Controls 1

Number of Time/Area Diagrams 0

Number of Offline Controls 0

Number of Real Time Controls 0

Synthetic Rainfall Details

Rainfall Model FSR

Ratio R 0.350

Region England and Wales Cv (Summer) 0.750

M5-60 (mm) 19.600 Cv (Winter) 0.840

Margin for Flood Risk Warning (mm) 300.0

DVD Status OFF

Analysis Timestep Fine

Inertia Status OFF

DTS Status ON

Profile(s) Summer and Winter

Duration(s) (mins) 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440, 2160, 2880, 4320, 5760, 7200, 8640, 10080

Return Period(s) (years) 1, 30, 100

Climate Change (%) 0, 0, 40

PN	US/MH Name	Storm	Return Period	Climate Change	First (X) Surge	First (Y) Flood	First (Z) Overflow	Overflow Act.	Water Level (m)
1.000	ACO	15 Winter	100	+40%	30/15	Summer			16.149
1.001	S8	15 Winter	100	+40%	30/15	Summer			16.010
1.002	S7	15 Winter	100	+40%	30/15	Summer			15.940
1.003	S6	15 Winter	100	+40%	30/15	Summer			15.836
1.004	S5	30 Winter	100	+40%	30/15	Summer			15.505
2.000	S4	15 Summer	100	+40%	100/15	Summer			15.616
2.001	S3	60 Winter	100	+40%	100/15	Summer			15.434
1.005	S2	60 Winter	100	+40%	30/15	Summer			15.415
1.006	S1	60 Winter	100	+40%	30/15	Summer			15.326

Surcharged Flooded					Half Drain	Pipe			
PN	US/MH Name	Depth (m)	Volume (m³)	Flow / Cap.	Overflow (l/s)	Time (mins)	Flow (l/s)	Status	Level Exceeded
1.000	ACO	0.422	0.000	1.42			8.2	FLOOD RISK	
1.001	S8	0.460	0.000	1.05			7.1	FLOOD RISK	
1.002	S7	0.510	0.000	1.22			7.0	FLOOD RISK	
1.003	S6	0.536	0.000	1.72			15.0	SURCHARGED	
1.004	S5	0.355	0.000	0.88		21	13.4	SURCHARGED	

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Summary of Critical Results by Maximum Level (Rank 1) for Storm

PN	US/MH Name	Surcharged		Flooded		Half Drain Time (mins)	Pipe Flow (l/s)	Status	Level Exceeded
		Depth (m)	Volume (m³)	Flow / Cap.	Overflow (l/s)				
2.000	S4	0.066	0.000	0.92			19.4	SURCHARGED	
2.001	S3	0.234	0.000	0.48		20	10.7	SURCHARGED	
1.005	S2	0.415	0.000	1.16		38	17.2	SURCHARGED	
1.006	S1	0.426	0.000	0.89		44	14.0	SURCHARGED	



Appendix 3. CCTV Survey

Contract no:		District:	.	Page No:	Index
Customer:	PMC	Division:		Site ID:	AB5403
Catchment:	Not known	Operator:	RAY	Date:	07:02:2022
Road:	High Street			Time:	09:07
Place:	Eastleigh				

INDEX

<i>Survey</i>	<i>Start MH</i>	<i>End MH</i>	<i>Pipe size</i>	<i>Length</i>
1	590B	591B	150	6.2M
2	5951	5953	300	53.4M
3	5951	5950	300	36.7M
4	5950	5050	225	0.1M
5	502D	5901	225	11.8M
6	502D	F1	150	3.7M
7	F1	F2	150	13.7M
8	F3	5801	225	15.0M
9	5801	5901	225	34.8M
10	590D	D/S	150	27.5M
11	590D	F4	150	2.2M

Contract no:		District:	.	Page No:	1-1
Customer:	PMC	Division:		Site ID:	AB5403
Catchment:	Not known	Operator:	RAY	Date:	07:02:2022
Road:	High Street			Time:	09:07
Place:	Eastleigh				
Start MH:	590B	Finish MH:	591B	PLR:	590B
Start Depth:	1.30M	Finish Depth:	0.00M	Year Laid:	Not known
Pipe Size 1:	150mm	Material:	Vitrified clay	Direction:	Downstream
Pipe Size 2:	0mm	Lining:	Not specified	Weather:	Dry
Pipe Shape:	Circular	Use:	Foul	Location:	-
Pipe Length:	0.00M	Purpose:	Assessment	Total Length:	6.2M
Comments:				VT No:	00
Location				Video:	mpeg
Details:				Criticality:	
				Precleansed:	No

Video Digit	Photo No	Distance (Metres)	Cont Def	Description	Severity
		0.0	ST	Start Survey.	0
		0.0	MH	Manhole. 590B	0
		0.0	WL	Water Level. 5% loss of diam.	0
		5.9	LD	Line Deviates Down.	0
		6.2	GO	General Observation. Main	0
		6.2	FH	Finish Survey. .	0

Contract no:		District:	.	Page No:	2-1
Customer:	PMC	Division:		Site ID:	AB5403
Catchment:	Not known	Operator:	RAY	Date:	07:02:2022
Road:	High Street			Time:	09:08
Place:	Eastleigh				
Start MH:	5951	Finish MH:	5953	PLR:	5951
Start Depth:	1.20M	Finish Depth:	0.00M	Year Laid:	Not known
Pipe Size 1:	300mm	Material:	Concrete	Direction:	Downstream
Pipe Size 2:	0mm	Lining:	Not specified	Weather:	Dry
Pipe Shape:	Circular	Use:	Surface water	Location:	-
Pipe Length:	0.00M	Purpose:	Assessment	Total Length:	53.4M
Comments:				VT No:	00
Location				Video:	mpeg
Details:				Criticality:	-
				Precleansed:	No

Video Digit	Photo No	Distance (Metres)	Cont Def	Description	Severity
		0.0	ST	Start Survey.	0
		0.0	MH	Manhole. 5951	0
		0.0	WL	Water Level. 5% loss of diam.	0
		0.0	S1	DES Debris And Silt. 20% loss of diam.	1
		19.0	C1	DES Debris And Silt. 10% loss of diam.	1
		21.2	CN	Connection at 10 o'clock. Diameter 100mm.	0
		24.2	F1	DES Debris And Silt. 10% loss of diam.	1
		30.0	S2	DES Debris And Silt. 10% loss of diam.	1
		31.8	CN	Connection at 2 o'clock. Diameter 100mm.	0
		34.0	F2	DES Debris And Silt. 10% loss of diam.	1
		44.0	S3	DES Debris And Silt. 30% loss of diam.	1
		53.0	F3	DES Debris And Silt. 30% loss of diam.	1
		53.4	MH	Manhole. 5953	0
		53.4	FH	Finish Survey.	0

Contract no:		District:	.	Page No:	3-1
Customer:	PMC	Division:		Site ID:	AB5403
Catchment:	Not known	Operator:	RAY	Date:	07:02:2022
Road:	High Street			Time:	09:49
Place:	Eastleigh				
Start MH:	5951	Finish MH:	5950	PLR:	
Start Depth:	1.20M	Finish Depth:	0.00M	Year Laid:	Not known
Pipe Size 1:	300mm	Material:	Concrete	Direction:	Upstream
Pipe Size 2:	0mm	Lining:	Not specified	Weather:	Dry
Pipe Shape:	Circular	Use:	Surface water	Location:	-
Pipe Length:	0.00M	Purpose:	Assessment	Total Length:	36.7M
Comments:				VT No:	00
Location				Video:	mpeg
Details:				Criticality:	-
				Precleansed:	No

Video Digit	Photo No	Distance (Metres)	Cont Def	Description	Severity
		0.0	ST	Start Survey.	0
		0.0	MH	Manhole. 5951	0
		0.0	WL	Water Level. 5% loss of diam.	0
		0.0	DES	Debris And Silt. 10% loss of diam.	1
		7.7	DES	Debris And Silt. 5% loss of diam.	1
		17.0	S1 DES	Debris And Silt. 10% loss of diam.	1
		18.8	JN	Junction at 10 o'clock. Diameter 100mm.	0
		27.5	CNI	Connection Intruding at 3 o'clock. Diameter 100mm. 20mm intrusion.	4
		36.7	F1 DES	Debris And Silt. 10% loss of diam.	1
		36.7	MH	Manhole. 5950	0
		36.7	FH	Finish Survey.	0

Contract no:		District:	.	Page No:	4-1
Customer:	PMC	Division:		Site ID:	AB5403
Catchment:	Not known	Operator:	RAY	Date:	07:02:2022
Road:	High Street			Time:	10:01
Place:	Eastleigh				
Start MH:	5950	Finish MH:	5050	PLR:	
Start Depth:	1.30M	Finish Depth:	0.00M	Year Laid:	Not known
Pipe Size 1:	225mm	Material:	Concrete	Direction:	Upstream
Pipe Size 2:	0mm	Lining:	Not specified	Weather:	Dry
Pipe Shape:	Circular	Use:	Surface water	Location:	-
Pipe Length:	0.00M	Purpose:	Assessment	Total Length:	0.1M
Comments:				VT No:	00
Location				Video:	mpeg
Details:				Criticality:	-
				Precleansed:	No

Video Digit	Photo No	Distance (Metres)	Cont Def	Description	Severity
		0.0	ST	Start Survey.	0
		0.0	MH	Manhole. 5950	0
		0.0	WL	Water Level. 5% loss of diam.	0
		0.0	DES	Debris And Silt. 60% loss of diam.	1
		0.0	WL	Water Level. 60% loss of diam.	0
		0.1	SA	Survey Abandoned. Due to DES	0

Contract no:		District:	.	Page No:	5-1
Customer:	PMC	Division:		Site ID:	AB5403
Catchment:	Not known	Operator:	RAY	Date:	07:02:2022
Road:	High Street			Time:	10:12
Place:	Eastleigh				
Start MH:	502D	Finish MH:	5901	PLR:	
Start Depth:	1.40M	Finish Depth:	0.00M	Year Laid:	Not known
Pipe Size 1:	225mm	Material:	Vitrified clay	Direction:	Downstream
Pipe Size 2:	0mm	Lining:	Not specified	Weather:	Dry
Pipe Shape:	Circular	Use:	Foul	Location:	-
Pipe Length:	0.00M	Purpose:	Assessment	Total Length:	11.8M
Comments:				VT No:	00
Location				Video:	mpeg
Details:				Criticality:	-
				Precleansed:	No

Video Digit	Photo No	Distance (Metres)	Cont Def	Description	Severity
		0.0	ST	Start Survey.	0
		0.0	MH	Manhole. 502D	0
		0.0	WL	Water Level. 5% loss of diam.	0
		10.2	WL	Water Level. 30% loss of diam.	0
		10.8	WL	Water Level. 50% loss of diam.	0
		10.8	DES	Debris And Silt. 40% loss of diam.	1
		11.8	SA	Survey Abandoned. Due to DES	0

Contract no:		District:	.	Page No:	6-1
Customer:	PMC	Division:		Site ID:	AB5403
Catchment:	Not known	Operator:	RAY	Date:	07:02:2022
Road:	High Street			Time:	10:51
Place:	Eastleigh				
Start MH:	502D	Finish MH:	F1	PLR:	
Start Depth:	0.00M	Finish Depth:	0.00M	Year Laid:	Not known
Pipe Size 1:	150mm	Material:	Vitrified clay	Direction:	Upstream
Pipe Size 2:	0mm	Lining:	Not specified	Weather:	Dry
Pipe Shape:	Circular	Use:	Foul	Location:	-
Pipe Length:	0.00M	Purpose:	Assessment	Total Length:	3.7M
Comments:				VT No:	00
Location				Video:	mpeg
Details:				Criticality:	-
				Precleansed:	No

Video Digit	Photo No	Distance (Metres)	Cont Def	Description	Severity
		0.0	ST	Start Survey.	0
		0.0	MH	Manhole. 502D	0
		0.0	WL	Water Level. 5% loss of diam.	0
		0.2	LL	Line Deviates Left.	0
		3.7	GO	General Observation. Trap	0
		3.7	MH	Manhole. F1	0
		3.7	FH	Finish Survey.	0

Contract no:		District:	.	Page No:	7-1
Customer:	PMC	Division:		Site ID:	AB5403
Catchment:	Not known	Operator:	RAY	Date:	07:02:2022
Road:	High Street			Time:	10:53
Place:	Eastleigh				
Start MH:	F1	Finish MH:	F2	PLR:	
Start Depth:	0.00M	Finish Depth:	0.00M	Year Laid:	Not known
Pipe Size 1:	150mm	Material:	Vitrified clay	Direction:	Upstream
Pipe Size 2:	0mm	Lining:	Not specified	Weather:	Dry
Pipe Shape:	Circular	Use:	Foul	Location:	-
Pipe Length:	0.00M	Purpose:	Assessment	Total Length:	13.7M
Comments:				VT No:	00
				Video:	mpeg
Location				Criticality:	-
Details:				Precleansed:	No

Video Digit	Photo No	Distance (Metres)	Cont Def	Description	Severity
		0.0	ST	Start Survey.	0
		0.0	MH	Manhole. F1	0
		0.0	WL	Water Level. 5% loss of diam.	0
		1.1	JN	Junction at 3 o'clock. Diameter 100mm.	0
		3.6	EM	Encrustation Medium from 5 to 7 o'clock. 10% loss of diam.	4
		5.1	JN	Junction at 10 o'clock. Diameter 150mm.	0
		11.2	RMJ	Roots Mass At Joint. 30% loss of diam.	5
		12.1	RMJ	Roots Mass At Joint. 50% loss of diam.	5
		13.0	JN	Junction at 3 o'clock. Diameter 150mm.	0
		13.7	MH	Manhole. F2	0
		13.7	FH	Finish Survey.	0

Contract no:		District:	.	Page No:	8-1
Customer:	PMC	Division:		Site ID:	AB5403
Catchment:	Not known	Operator:	RAY	Date:	07:02:2022
Road:	High Street			Time:	10:55
Place:	Eastleigh				
Start MH:	F3	Finish MH:	5801	PLR:	
Start Depth:	0.00M	Finish Depth:	0.00M	Year Laid:	Not known
Pipe Size 1:	225mm	Material:	Vitrified clay	Direction:	Upstream
Pipe Size 2:	0mm	Lining:	Not specified	Weather:	Dry
Pipe Shape:	Circular	Use:	Foul	Location:	-
Pipe Length:	0.00M	Purpose:	Assessment	Total Length:	15.0M
Comments:				VT No:	00
Location				Video:	mpeg
Details:				Criticality:	-
				Precleansed:	No

Video Digit	Photo No	Distance (Metres)	Cont Def	Description	Severity
		0.0	ST	Start Survey.	0
		0.0	MH	Manhole. F3	0
		0.0	WL	Water Level. 5% loss of diam.	0
		8.0	CN	Connection at 3 o'clock. Diameter 150mm.	0
		13.6	JN	Junction at 2 o'clock. Diameter 150mm.	0
		15.0	MH	Manhole. 5801	0
		15.0	FH	Finish Survey.	0

Contract no:		District:	.	Page No:	9-1
Customer:	PMC	Division:		Site ID:	AB5403
Catchment:	Not known	Operator:	RAY	Date:	07:02:2022
Road:	High Street			Time:	11:15
Place:	Eastleigh				
Start MH:	5801	Finish MH:	5901	PLR:	
Start Depth:	0.00M	Finish Depth:	0.00M	Year Laid:	Not known
Pipe Size 1:	225mm	Material:	Vitrified clay	Direction:	Upstream
Pipe Size 2:	0mm	Lining:	Not specified	Weather:	Dry
Pipe Shape:	Circular	Use:	Foul	Location:	-
Pipe Length:	0.00M	Purpose:	Assessment	Total Length:	34.8M
Comments:				VT No:	00
Location				Video:	mpeg
Details:				Criticality:	-
				Precleansed:	No

Video Digit	Photo No	Distance (Metres)	Cont Def	Description	Severity
		0.0	ST	Start Survey.	0
		0.0	MH	Manhole. 5801	0
		0.0	WL	Water Level. 5% loss of diam.	0
		0.4	CN	Connection at 3 o'clock. Diameter 100mm.	0
		8.3	MH	Manhole. 591D	0
		13.6	CN	Connection at 2 o'clock. Diameter 100mm.	0
		18.6	JN	Junction at 3 o'clock. Diameter 150mm.	0
		19.5	JN	Junction at 10 o'clock. Diameter 100mm.	0
		25.5	CN	Connection at 2 o'clock. Diameter 100mm.	0
		33.3	CN	Connection at 3 o'clock. Diameter 150mm.	0
		34.8	DES	Debris And Silt. 40% loss of diam.	1
		34.8	SA	Survey Abandoned. Due to DES	0

Contract no:		District:	.	Page No:	10-1
Customer:	PMC	Division:		Site ID:	AB5403
Catchment:	Not known	Operator:	RAY	Date:	07:02:2022
Road:	High Street			Time:	11:30
Place:	Eastleigh				
Start MH:	590D	Finish MH:	D/S	PLR:	
Start Depth:	1.40M	Finish Depth:	0.00M	Year Laid:	Not known
Pipe Size 1:	150mm	Material:	Vitrified clay	Direction:	Downstream
Pipe Size 2:	0mm	Lining:	Not specified	Weather:	Dry
Pipe Shape:	Circular	Use:	Foul	Location:	-
Pipe Length:	0.00M	Purpose:	Assessment	Total Length:	27.5M
Comments:				VT No:	00
Location				Video:	mpeg
Details:				Criticality:	-
				Precleansed:	No

Video Digit	Photo No	Distance (Metres)	Cont Def	Description	Severity
		0.0	ST	Start Survey.	0
		0.0	MH	Manhole. 590D	0
		0.0	WL	Water Level. 5% loss of diam.	0
		0.8	JN	Junction at 2 o'clock. Diameter 100mm.	0
		0.8	WL	Water Level. 50% loss of diam.	0
		1.8	JDL	Joint Displaced Large.	2
		2.0	WL	Water Level. 5% loss of diam.	0
		8.5	JN	Junction at 10 o'clock. Diameter 150mm.	0
		15.0	JDL	Joint Displaced Large.	2
		26.0	LR	Line Deviates Right.	0
		27.5	GO	General Observation. Main	0
		27.5	FH	Finish Survey. .	0

Contract no:		District:	.	Page No:	11-1
Customer:	PMC	Division:		Site ID:	AB5403
Catchment:	Not known	Operator:	RAY	Date:	08:02:2022
Road:	High Street			Time:	08:54
Place:	Eastleigh				
Start MH:	590D	Finish MH:	F4	PLR:	
Start Depth:	0.00M	Finish Depth:	0.00M	Year Laid:	Not known
Pipe Size 1:	150mm	Material:	Vitrified clay	Direction:	Upstream
Pipe Size 2:	0mm	Lining:	Not specified	Weather:	Dry
Pipe Shape:	Circular	Use:	Foul	Location:	-
Pipe Length:	0.00M	Purpose:	Assessment	Total Length:	2.2M
Comments:				VT No:	00
				Video:	mpeg
Location				Criticality:	-
Details:				Precleansed:	No

Video Digit	Photo No	Distance (Metres)	Cont Def	Description	Severity
		0.0	ST	Start Survey.	0
		0.0	MH	Manhole. 590D	0
		0.0	WL	Water Level. 5% loss of diam.	0
		0.6	LL	Line Deviates Left.	0
		2.2	GO	General Observation. Trap	0
		2.2	MH	Manhole. F4	0
		2.2	FH	Finish Survey.	0