

## Foul and Surface Water Drainage Report

**16 Swanbourne Road, Littlehampton**

**For**

**Leonard Woodcock**

Rev – P1

Reference **C3489**

Date **16<sup>th</sup> January 2025**

Revision	Date of Issue	Comments	Prepared By	Checked By
P	16/01/2025	Initial Issue	KCK	CS
<b>P1</b>	01/04/2025	Updated to Soakaway	TZ	CS



## Contents

<b>1</b>	<b>INTRODUCTION .....</b>	<b>3</b>
<b>2</b>	<b>EXECUTIVE SUMMARY:.....</b>	<b>4</b>
<b>3</b>	<b>SITE GEOLOGY .....</b>	<b>4</b>
<b>4</b>	<b>EXISTING DRAINAGE .....</b>	<b>8</b>
<b>5</b>	<b>PROPOSED DRAINAGE STRATEGY .....</b>	<b>8</b>
<b>6</b>	<b>SUMMARY AND CONCLUSIONS .....</b>	<b>14</b>
<b>7</b>	<b>APPENDICES .....</b>	<b>15</b>

# 1 Introduction

- 1.1.1 CGS Civils Ltd has been appointed to undertake a drainage strategy report for a proposed development at 16 Swanbourne Road, Littlehampton.
- 1.1.2 The purpose of this drainage strategy is to demonstrate how the development area can be satisfactorily drained without increasing flood risk onsite and elsewhere.
- 1.1.3 The existing site is vacant. The proposed development will consist of the erection of a detached dwelling. The proposed development is located at OS Grid Reference **TQ 02958 03059** and has the post code **BN17 6HS**.
- 1.1.4 The proposed site plan can be found in **Appendix A**.

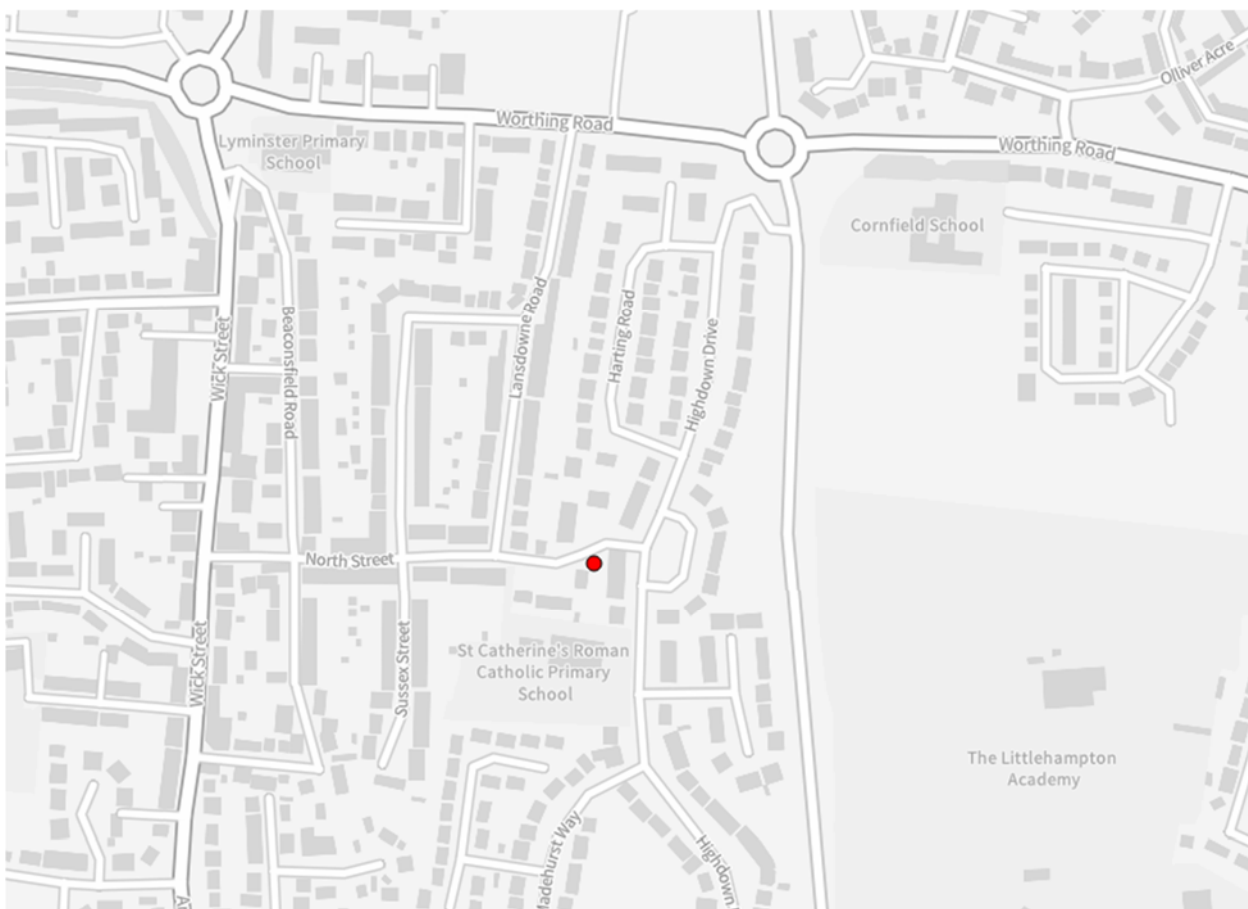


Fig 1. Site Location

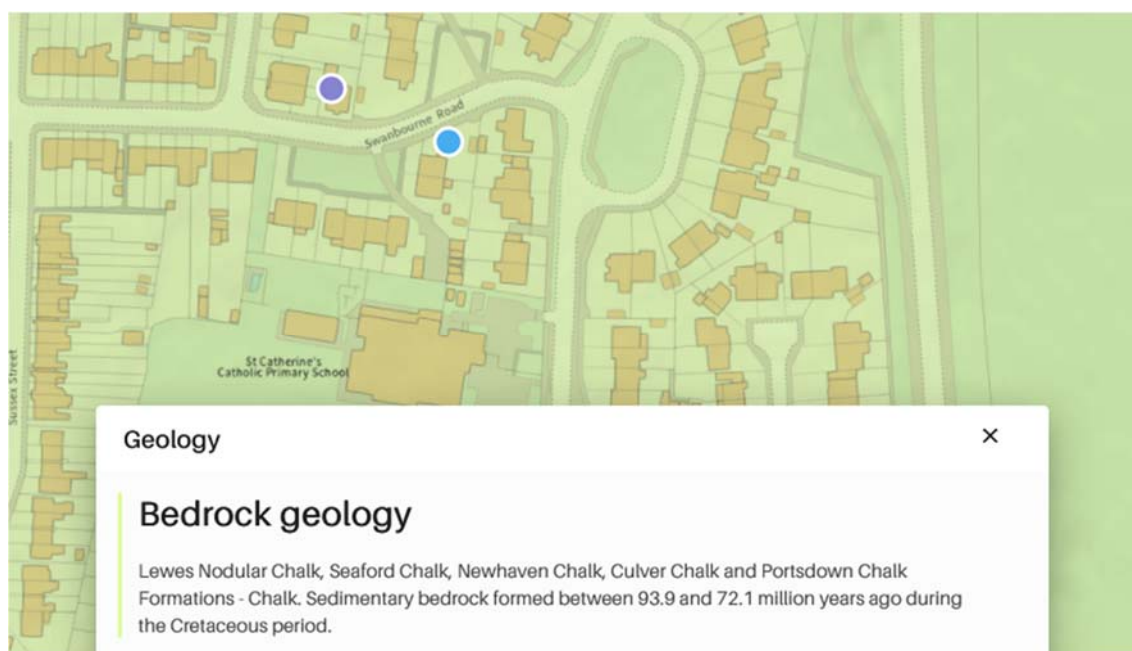
## 2 Executive Summary:

- 2.1.1 Surface water runoff is to be discharged into an onsite soakaway. The proposed soakaway has been designed to accommodate both the existing 'diverted' and proposed roof areas. It has been designed based on recorded infiltration rates. An infiltration test was carried out following the BRE 365 method at a depth of 1m BGL, with no groundwater encountered up to a total depth of 2.2m BGL.
- 2.1.2 The foul water will discharge to the public foul sewer via the existing onsite private sewer. This connection is subject to Southern Water approval under a Section 106 agreement.

## 3 Site Geology

### 3.1 British Geological Survey information

- 3.1.1 The British Geological Survey confirms the bedrock geology to be made up Lewes Nodular Chalk, Seaford Chalk, Newhaven Chalk, Culver Chalk and Portsdown Chalk Formations- Chalk. The BGS website confirms the superficial deposits on site to be made up of River Terrace Deposits- Sand, silt and clay.
- 3.1.2 The British Geological survey also holds records of historical boreholes near the site which give some insight into the ground geology.
- Borehole TQ00SW222 (Located approx. 227m East of the site) – Ground geology (Chalk, Clay)
  - Borehole TQ00SW193 (Located approx. 390m North-East of the site) – Ground geology (Silty Clay, Clay)
- 3.1.3 The Borehole Logs can be found in **Appendix B**.



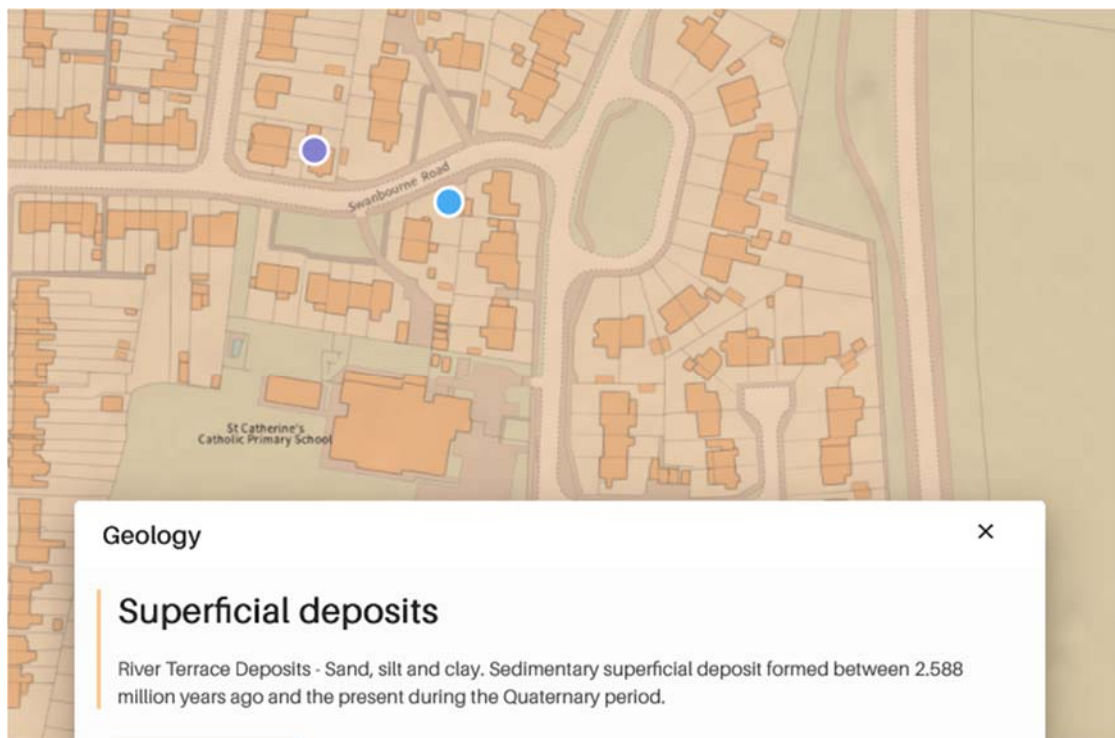


Fig 2. British Geological Survey

Snippet from BGS Website showing Bedrock geology/superficial deposits <http://mapapps.bgs.ac.uk/geologyofbritain/home.html?>

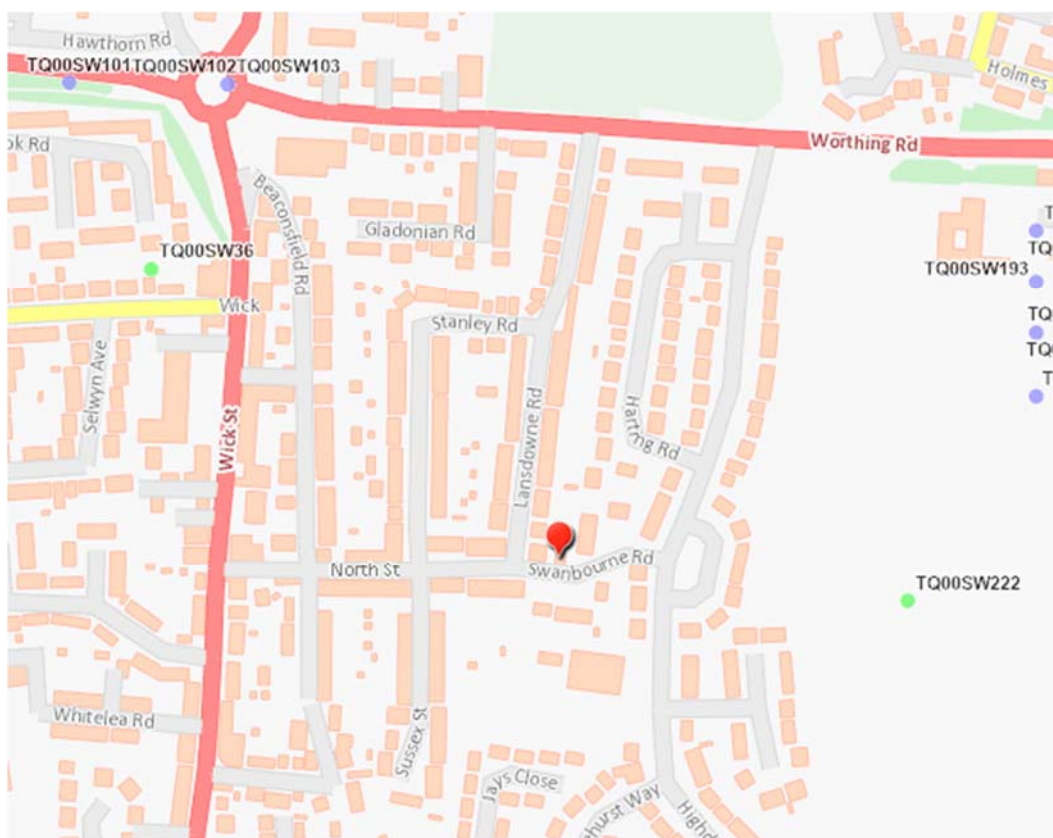


Fig 3. British Geological Survey

Snippet from BGS Website showing the Historical Borehole Log location

### 3.2 Soilscape Map Review

- 3.2.1 The online Soilscape Viewer indicates that the proposed site is located within an area classified as Soilscape 6 – freely draining, slightly acidic loamy soils. This classification suggests favourable conditions for onsite infiltration, consistent with information from British Geological Survey (BGS) maps, which indicate that the site is suitable for surface water drainage via infiltration.



Fig 4. Soilscape Viewer extract

### 3.3 Geological Assessment

- 3.3.1 An onsite ground investigation was undertaken by the site contractor and confirmed site being underlain by clayey sand soils with good potential for infiltration.
- 3.3.2 The onsite infiltration testing was undertaken to a total depth of 1mBGL indicating infiltration results varying between  $9.26 \times 10^{-5}$  m/s –  $8.42 \times 10^{-5}$  m/s which is classified as a good infiltration.
- 3.3.3 Infiltration test was carried in accordance with the BRE 365 method.



**Fig 5. BRE365 Infiltration Test Photographs**

- 3.3.4 Based on the information provided from the site, no groundwater was encountered during infiltration testing or site excavation works, which extended to a total depth of 2.2m BGL. This is consistent with the BGS historical borehole logs located in close proximity to the site, which indicate no groundwater present up to a depth of 3.7m BGL.
- 3.3.5 Additionally, it should be noted that the front part of the existing building's roof currently discharges into an underground soakaway, which has been indicated to be approximately 1.5m deep. Given that no issues or groundwater presence have been observed within the existing soakaway, it is reasonable to expect that groundwater lies below 2.2m BGL.
- 3.3.6 The Borehole Logs, onsite infiltration testing results can be found in **Appendix B**.

## 4 Existing Drainage

- 4.1.1 The existing site is classified as Greenfield land; therefore, it is presumed that all surface water runoff is discharged into the ground via infiltration.
- 4.1.2 An onsite CCTV survey indicated that part of the existing building currently discharges into the onsite soakaway.
- 4.1.3 The existing soakaway is located at the front of the property and will need to be relocated to accommodate the new development. It is therefore proposed that two downpipes be redirected into the new onsite drainage system.

## 5 Proposed Drainage Strategy

### 5.1 SuDS Hierarchy

- 5.1.1 All options for the destination of run-off generated on site have been assessed in line with the SuDS hierarchy as set out in Building Regulations Part H document and DEFRA's Draft National Standards for SuDS.

**Table 1. SuDS Hierarchy**

Discharge Destination	
Rainwater Harvesting	Water butt is proposed for SW runoff re-use
Discharge to Ground	Surface water runoff from the existing roof and proposed roof area to be discharged into the shared onsite soakaway.
Discharge to Watercourse	N/A
Discharge to Surface Water Sewer	N/A
Discharge to Other Sewer	N/A

### 5.2 Proposed Hydraulic Calculation Specifications:

**Table 2. SuDS Hierarchy**

Hydraulic Calculations Settings:	
Rainfall Methodology	<b>FEH-22</b>
Volumetric Run-off Coefficient Cv	<b>1</b>
CV Winter and Summer	<b>1</b>
Additional Storage (m <sup>3</sup> / ha)	<b>0.0</b>
Maximum Rainfall (mm/hr)	<b>75</b>
Flow Control	<b>N/A</b>
Attenuation Tank Design	Base Coefficient (m/hr): <b>0.30300 **</b>
	Side Coefficient (m/hr): <b>0.30300</b>
	Factor of Safety: <b>2</b>
	Porosity: <b>95%</b>
	Time to Half Empty (mins): <b>58</b>

\*\* It should be noted that all downpipes will discharge via a Raintaina filter chamber with a permeable cover, preventing sediment from entering the downstream system and reducing the risk of blockages. The proposed filter allows for infiltration through both the base and sides of the soakaway, ensuring effective water management.

Hydraulic Calculations Settings:		
Hydraulic Calculations Settings (Permeable Paving):		
Rainfall Methodology	FEH-22	
Volumetric Run-off Coefficient Cv	1.0	
CV Winter and Summer	1.0	
Additional Storage (m <sup>3</sup> / ha)	0.0	
Infiltration	Recorded Infiltration	
Permeable Paving	Base Coefficient (m/hr):	0.30300
	Side Coefficient (m/hr):	0.30300
	Factor of Safety:	2.0
	Porosity:	30%
	Time to Half Empty (mins):	280

### 5.3 Surface Water Drainage

- 5.3.1 Based on information gathered from the British Geological Survey website and the planning portal, it is deemed that discharge to the ground via infiltration is achievable.
- 5.3.2 A BRE 365 infiltration test was conducted by the site contractor in March 2025. The test was carried out to a total depth of 1m BGL and indicated good infiltration potential, with rates varying between  $9.26 \times 10^{-5}$  m/s and  $8.42 \times 10^{-5}$  m/s.
- 5.3.3 No groundwater was encountered during the infiltration testing. Additionally, it was confirmed that during site excavation works, no groundwater was observed to a total depth of **2.2m BGL**. This is consistent with the BGS Historical Borehole Log data, which indicated no groundwater presence to a total depth of **3.7m BGL**.
- 5.3.4 A CCTV survey of the existing drainage system has been conducted, which identified that surface water runoff from the existing residential dwelling currently discharges into an onsite soakaway. The existing soakaway is located within the footprint of the proposed new building and will need to be relocated.
- 5.3.5 It was confirmed that a total area of **50m<sup>2</sup>** from the existing dwelling roof currently discharges into the front soakaway. This soakaway is to be decommissioned and runoff is to be re-routed into a new onsite soakaway, which will also serve the proposed new dwelling. The combined roof area of both the existing and proposed dwellings has been calculated as **100m<sup>2</sup>**.
- 5.3.6 All hard paved areas are to be freely drained to ground via porous construction. All infiltration features on site have been designed to a recorded infiltration and to cater for the 1 in 100-year +45% storm.
- 5.3.7 It is proposed that surface water runoff from the existing and proposed roof areas is to be discharged via Raintaina filter chambers to remove any sediment discharge. The Raintaina filter chamber provides pre-treatment for downpipe runoff. Rainwater is directed onto the top of the chamber, which retains silts, leaves, and other debris on its permeable filter cover. The cover is designed to be easily removable for maintenance purposes.



Fig 6. Raintaina Filter Chamber

5.3.8 The existing drainage CCTV Survey, Proposed Drainage, Contributing Area, Typical Construction Details plans and Hydraulic calculations have been carried out which can be found at **Appendix C**.

5.3.9 EA Magic Map can be found at **Appendix D**.

## 5.4 Water Quality

5.4.1 A key requirement of any SuDS system is that it protects the receiving water body from the risk of pollution.

5.4.2 Frequent and short duration rainfall events are those that are most loaded with potential contaminants (silts, fines, heavy metals, and various organic and inorganic contaminants) Therefore the first 5-10mm of rainfall should be adequately treated with SuDS.

5.4.3 The new SuDS Manual (Ciria C753, November 2015) introduces slightly different approach compared to the previous version for the water quality management of surface water. The Manual describes risks posed by the surface water runoff to the receiving environment as a function of:

- The pollution hazard at a particular site (i.e., the pollution source)
- The effectiveness of SuDS treatment components in reducing levels of pollutants to environmentally acceptable levels
- The sensitivity of the receiving environment

5.4.4 The EA website indicates that the site does not lie within a Source Protection Zone.

5.4.5 The recommended approaches for water quality risk management are given in the SuDS Manual Table 26.1.

**Table 26.1 from SuDS manual. Approaches to Water Quality Risk Management**

Table 26.1 Approaches to Water Quality Risk Management			
Design method	Hazard Characterisation	Risk Reduction	
		For Surface Water	For Groundwater
Simple Index Approach	Simple pollution hazard indices based on land use (Table 26.2)	Simple SuDS hazard mitigation indices (Table 26.3)	Simple SuDS hazard mitigation indices (Table 26.4)
Risk Screening	Factors characterising traffic density and extent of infiltration likely to occur (Table 26.5)	N/A	Factors characterising unsaturated soil depth and type, and predominant flow type through the soils (Table 26.5)
Detailed Risk Assessment	Site specific information used to define likely pollutants and their significance	More detailed, component specific performance information used to demonstrate that the proposed SuDS components reduce the hazard to acceptable levels	
Process-based treatment modelling	Time series rainfall used with generic pollution characteristics to determine statistical distributions of likely concentrations and loadings in the runoff	Models that represent the treatment processes in the proposed SuDS components give estimates of reductions in even mean discharge concentrations and total annual load reductions delivered by the system	

5.4.6 As per Table 26.1 Simple Index approach will be used as a design method for this site.

5.4.7 Table 26.2 will provide hazard classification of different land uses. The land uses for the surface water drainage for this site are.

- Residential Roofs
- Individual Property driveways and residential car parks

5.4.8 To deliver adequate treatment, the selected SuDS components should have a total pollution mitigation index for each contaminant type that equals or exceeds the pollution hazard index for each contaminant type. Therefore, the following must be achieved for the surface running off the site.

**Total SuDS mitigation index  $\geq$  pollution hazard index**

5.4.9 Pollution Hazard Indices are given for different land uses in Table 26.2 of the SuDS manual;

**Table 26.2 from SuDS manual. Pollution Hazard Indices for Different Land Use Classifications**

Table 26.2 Pollution hazard indices for different land use classifications				
Land Use	Pollution Hazard Level	Total Suspended solids (TSS)	Metals	Hydro-Carbons
Residential roofs	Very Low	0.2	0.2	0.05
Other roofs (Typically commercial/industrial roofs)	Low	0.3	0.2 (up to 0.8 where there is potential for metals to leach from the roof)	0.05
Individual property driveways, residential car parks, low traffic roads (e.g., cul-de-sacs, homezones and general access roads) and non-residential car parking with infrequent change (e.g., schools, offices) i.e., < 300 traffic movements/day	Low	0.5	0.4	0.4
Commercial yard and delivery areas, non-residential car parking with frequent change (e.g., hospitals, retail), all roads except low traffic roads and trunk roads/motorways	Medium	0.7	0.6	0.7
Sites with heavy pollution (e.g., haulage yards, lorry parks, highly frequented lorry approaches to industrial estates, waste sites), sites where chemicals and fuels (other than domestic fuel oil) are to be delivered, handled, stored, used or manufactured; industrial sites; trunk roads and motorways	High	0.8	0.8	0.9

5.4.10 From Table 26.2 the following information is tabulated in Table 1

**Table 3: Pollution hazard index and destination of runoff for the proposed site**

Land Use	Destination of Runoff	Pollution Hazard Level	Total Suspended Solids	Metals	Hydrocarbons
Residential Roof	Ground Water	Very Low	0.2	0.2	0.05

5.4.11 The SuDS mitigation index will be obtained from Table 26.4 (for groundwater) of the SuDS manual.

**Table 26.4 from SuDS manual. Indicative SuDS Mitigation Indices for discharges to ground waters.**

5.4.12 SuDS mitigation index are tabulated in Table 5 as followed.

Characteristics of the material overlying the proposed infiltration surface, through which the runoff percolates	TSS	Metals	Hydrocarbons
A layer of dense vegetation underlain by a soil with good containment attenuation potential of at least 300mm in depth	0.6	0.5	0.6
A soil with good contaminant attenuation potential of at least 300mm in depth	0.4	0.3	0.3
Infiltration trench (where a suitable depth of filtration material is included that provides treatment, i.e., graded gravel with sufficient smaller particles but not single size coarse aggregate such as 20mm gravel) underlain by a soil with good contaminant attenuation potential of at least 300mm in depth.	0.4	0.4	0.4
Constructed permeable pavement (where a suitable filtration later is included that provides treatment, and including a geotextile at the base separating the foundation from the subgrade) underlain by a soil with good contaminant attenuation potential of at least 300mm in depth	0.7	0.6	0.7
Bioretention underlain by a soil with good contaminant attenuation potential of at least 300mm in depth	0.8	0.8	0.8
Proprietary treatment systems	These must demonstrate that they can address each of the contaminant types to acceptable levels for inflow concentrations relevant to the contributing drainage area		

**Table 4: SuDS mitigation index**

Runoff Source	Destination of Runoff	Mitigation Index Source	Type of SuDS Component	Total Suspended Solids (TSS)	Metals	Hydrocarbons
Individual driveways, residential car parks and low traffic roads	Ground water	Table 26.4 (for ground waters)	Permeable Pavement	0.7	0.6	0.7

5.4.13 The above analysis demonstrates that the SuDS devices within the design will mitigate any pollution present within the surface water system.

## 5.5 Foul water drainage

5.5.1 The proposed foul runoff will be collected and discharged into the public sewer located on Swanbourne Road. The connection will be made via the existing onsite sewer.

## 5.6 Construction Phase Drainage

5.6.1 It is an offence to cause or knowingly permit the entry of any polluting, poisonous or noxious material in the water environment. If the pollution is serious enough to lower the ecological status of the water body as set out in terms by the Water Framework Directive (2000/60/EC) than prosecution may occur.

5.6.2 Remediation of any damage caused will not require the polluter to be prosecuted first. If the water pollution is serious enough to be classed an environmental damage, the damage will require to be remediated such that the area is returned to the condition it would have been in if the damage had not occurred.

5.6.3 If any pollution has not been reported or the polluter has not taken actions to prevent any further damage; they would then be causing an offence. Third parties (e.g., Private water supply users, landowners, recreation users and the public) who may be affected by possible damage may also report the risk of any environmental damage to the enforcing authority.

5.6.4 The principles of SuDS (Sustainable Drainage Systems) shall be applied to all components of design and construction regarding surface water management. Any design or site works that may impact on the site drainage or the water quality shall:

- Soakaway where soils allow
- Consider and manage erosion
- Remove pollutants in surface water
- Retain any silts on site and prevent silts from discharging to watercourses or drains
- Keep runoff rates at existing greenfield runoff
- Prevent accidental spillages reaching watercourse

5.6.5 As infiltration on site is viable, the temporary drainage for the development will be in the form of land drains which will discharge into the ground.

5.6.6 Pollution will be controlled via the use of catchpit manholes and geotextiles.

5.6.7 Any potential hazardous substances will be within a controlled compound with a separate drainage system that will contain a penstock valve / containment kit in the event of a spillage.

## 6 Summary and Conclusions

- 6.1.1 CGS Civils has been instructed to produce a Drainage statement under National Planning Policy Framework (NPPF) to support the Planning Application for a detached dwelling.
- 6.1.2 The surface water runoff from roof areas will be discharged into the ground using an underground geocellular soakaway, while all hard-paved areas will be constructed using self-draining porous paving.
- 6.1.3 The proposed foul runoff will be collected and discharged into the public combined sewers located on Swanbourne Road.
- 6.1.4 The report has demonstrated that the proposed drainage measures ensure that suitable means of surface water and foul drainage can be achieved for the proposed development.
- 6.1.5 A maintenance schedule has been written up for the drainage network including the SuDS features and can be found within **Appendix E**.

## **7 Appendices**

### **7.1 Appendix A – Site Plan**

**GENERAL NOTES**

Dimensions to be checked on site before commencing work. Any discrepancies shall be reported to the architect immediately.

Do not scale from these drawings except for planning purposes. Use figured dimensions only.

**ACCOMPANYING DOCUMENTATION**

All details shown on Helyer Davies Architects drawings are to be read in conjunction with the project specification and other consultants drawings and details.



REV	DATE	AMENDMENT	DRAWN
C	09-09-24	Revised layout	TW
B	02-02-24	Revised layout	TW
A	01-02-24	Revisions with topo info	TW

**H** Helyer Davies Architects

www.hdarchitects.co.uk  
 mail@hdarchitects.co.uk  
 01243 370 715

Unit 1 The Old Flour Mill . Queen St  
 Emsworth . PO10 7BT

**PROJECT**

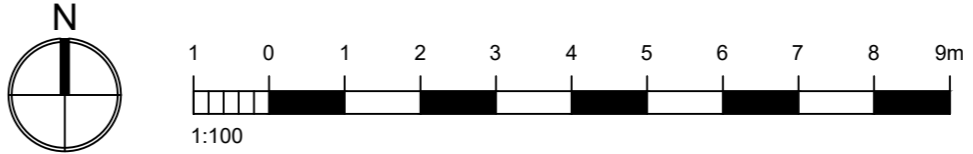
16 Swanbourne Road  
 Littlehampton

**DRAWING** Proposed site layout

**SCALE** As noted @A2

<b>DATE</b> Sep-24	<b>DRAWN</b> TW
<b>DRAWING No.</b> 23123 - 02	<b>REV</b> C

**PROPOSED SITE PLAN**  
 1:100  
 Ordnance Survey (c) Crown Copyright 2023. All rights reserved. Licence number 100022432





7.2 **Appendix B – BGS Borehole Logs and BRE365 Infiltration Test Results**



# Norwest Holst Soil Engineering Ltd.

Borehole No. **5**

Contract No. F4403  
Location Littlehampton  
Client Arun District Council  
Method of Boring Percussion  
Diameter of Borehole 150mm

## BOREHOLE LOG

0329 0329  
Sheet 1 of 1  
Chainage  
Ground Level 8.36 m.A.O.D.  
Date 9/33/79

Description of Strata	Legend	Depth Below G.L. (m)	O.D. Level (m)	Casing Depth at Sampling	Sampling and Coring	"N"/R.Q.D. %	Daily Progress
TOPSOIL		0.25	8.1				
MADEGROUND: Soft dark brown silty clay with domestix refuse		3.30	5.1				
Firm brown silty sandy CLAY with occasional medium subangular chert gravel		5.00	3.4				

<p>Type of Sample</p> <p>Is S.P.T.    ■ Undisturbed</p> <p>Ic. C.P.T.    × Vane</p> <p>O Jar        ▲ Water</p> <p>● Bulk      ■ Piezometer</p>	<p>Remarks (Observations of Ground Water etc.)</p> <p>Borehole dry</p>
---	--



**NGRC  
BOREHOLE RECORDS  
ADJUSTMENT FORM**

**QUARTER SHEET**

TQ00SW

**BH REGISTRATION NUMBER**

209 - 225

**RECORDS ENTERED AND HELD BY WALLINGFORD**

**BH REGISTRATION NUMBER(S)**



TQ 0319 0304

TQ 00/71

332/62 Cornfield Cottages, Wick, Littlehampton. (Disused)

W.S.Sx. II, p. 192. Surface +15. Lining tubes: 42 x 2 in from surface.  
R.W.L. -3. Dando, 1898.

Drift )	...	...	...	65	65
Uck )					

Soakaway Test Pit Record Log

Test Pit Dimensions:

Pit 1

a	Depth of Test Pit	1	m
b	Width of Test Pit	1	m
c	Length of Test Pit	1	m
Test Pit Volume: (a x b x c)			
		1 cubic m	m <sup>3</sup>

	Test 1	Test 2	Test 3
Time taken to drain from 750mm to 250mm	30min	33min	32min

Soakaway Test Pit Record Log

Test Pit Dimensions:

Pit 2

a	Depth of Test Pit		m
b	Width of Test Pit		m
c	Length of Test Pit		m
Test Pit Volume: (a x b x c)			
			m <sup>3</sup>

	Test 1	Test 2	Test 3
Time taken to drain from 750mm to 250mm			



Job: 16 Swanbourne Road, Littlehampton - Test 1

### Infiltration Calculator

$$f = \frac{V_{p75-25}}{a_{p50} \times t_{p75-25}}$$

$V_{p75-25}$  = Effective storage volume between 75% and 25% effective depth

$a_{p50}$  = Internal surface area of the trial pit up to 50% effective depth and including the base area

$t_{p75-25}$  = The time for the water level to fall from 75% to 25% effective depth

$f$  = Infiltration rate

Trial pit width = 

1
---

Trial pit depth = 

1
---

Trial pit length = 

1
---

$a_{p50}$  = 3 m/squared

$t_{p75-25}$  = 1800 seconds

$V_{p75-25}$  = 0.5 m/cubed

**F** = 

9.26E-05
----------



Job: 16 Swanbourne Road, Littlehampton - Test 2

### Infiltration Calculator

$$f = \frac{V_{p75-25}}{a_{p50} \times t_{p75-25}}$$

$V_{p75-25}$  = Effective storage volume between 75% and 25% effective depth

$a_{p50}$  = Internal surface area of the trial pit up to 50% effective depth and including the base area

$t_{p75-25}$  = The time for the water level to fall from 75% to 25% effective depth

$f$  = Infiltration rate

Trial pit width = 

1
---

Trial pit depth = 

1
---

Trial pit length = 

1
---

$a_{p50}$  = 3 m/squared

$t_{p75-25}$  = 1980 seconds

$V_{p75-25}$  = 0.5 m/cubed

**F** = 

8.42E-05
----------



Job: 16 Swanbourne Road, Littlehampton - Test 3

### Infiltration Calculator

$$f = \frac{V_{p75-25}}{a_{p50} \times t_{p75-25}}$$

$V_{p75-25}$  = Effective storage volume between 75% and 25% effective depth

$a_{p50}$  = Internal surface area of the trial pit up to 50% effective depth and including the base area

$t_{p75-25}$  = The time for the water level to fall from 75% to 25% effective depth

$f$  = Infiltration rate

Trial pit width = 

1
---

Trial pit depth = 

1
---

Trial pit length = 

1
---

$a_{p50}$  = 3 m/squared

$t_{p75-25}$  = 1920 seconds

$V_{p75-25}$  = 0.5 m/cubed

**F** = 

8.68E-05
----------

7.3 **Appendix C – Existing Drainage CCTV Survey, Proposed Drainage Drawings and Hydraulic Calculations**

**Project**

**Project Name:** 16 Swanbourne Road  
**Project Description:** CCTV survey, trace and plot  
**Project Status:** Complete  
**Project Date:** 14/02/2025  
**Inspection Standard:** MSCC5 Sewers & Drainage GB (SRM5 Scoring)



# **EYES ON DRAINAGE**

## **CCTV-Trace-Plot-Map-Repair**

## Table of Contents

Project Name	Project Number	Project Date
16 Swanbourne Road		14/02/2025

Project Information .....	P-1
Scoring Summary .....	P-3
Project Pictures .....	P-4
Section Profile .....	P-6
Section Summary .....	P-7
Section Item 1: A > MH3 (AX) .....	1
Section Item 2: SVP > MH3 (SVPX) .....	3
Section Item 3: SVP1 > MH3 (SVP1X) .....	5
Section Item 4: MH3 > MH2 (MH3X) .....	7
Section Item 5: MH4 > MH2 (MH4X) .....	9
Section Item 6: FWG > MH2 (FWGX) .....	11
Section Item 7: MH2 > MH1 (MH2X) .....	13
Section Item 8: MH5 > MH1 (MH5X) .....	15
Section Item 9: MH1 > Sewer (MH1X) .....	17
Section Item 10: MH6 > MH5 (MH6X) .....	20
Section Item 11: FP > MH4 (FPX) .....	22
Section Item 12: RWP > SK (RWPX) .....	24
Section Item 13: FP > FP (FPX) .....	26
Section Item 14: RWP1 > RWP1 (RWP1X) .....	28
Disclaimer .....	30



**Project Information**

<b>Project Name</b> 16 Swanbourne Road	<b>Project Number</b>	<b>Project Date</b> 14/02/2025
---	-----------------------	-----------------------------------

**Client**

**Company:** CGS Civils  
**Department:** Richard Cobden House  
**Street:** Lion Street  
**Town or City:** Chichester  
**County:** West Sussex  
**Post Code:** PO19 1LW  
**Phone:** 01243 933253



**Site**

**Street:** 16 Swanbourne Rd  
**Town or City:** Littlehampton  
**County:** West Sussex  
**Post Code:** BN17 6HS

**Contractor**

**Company:** Eyes On Drainage Services Ltd  
**Contact:** Jay Young  
**Department:** Merrion House  
**Street:** Bines Green  
**Town or City:** Horsham  
**County:** West Sussex  
**Post Code:** RH13 8EH  
**Phone:** [Redacted]  
**Mobile:** [Redacted]  
**Email:** [Redacted]





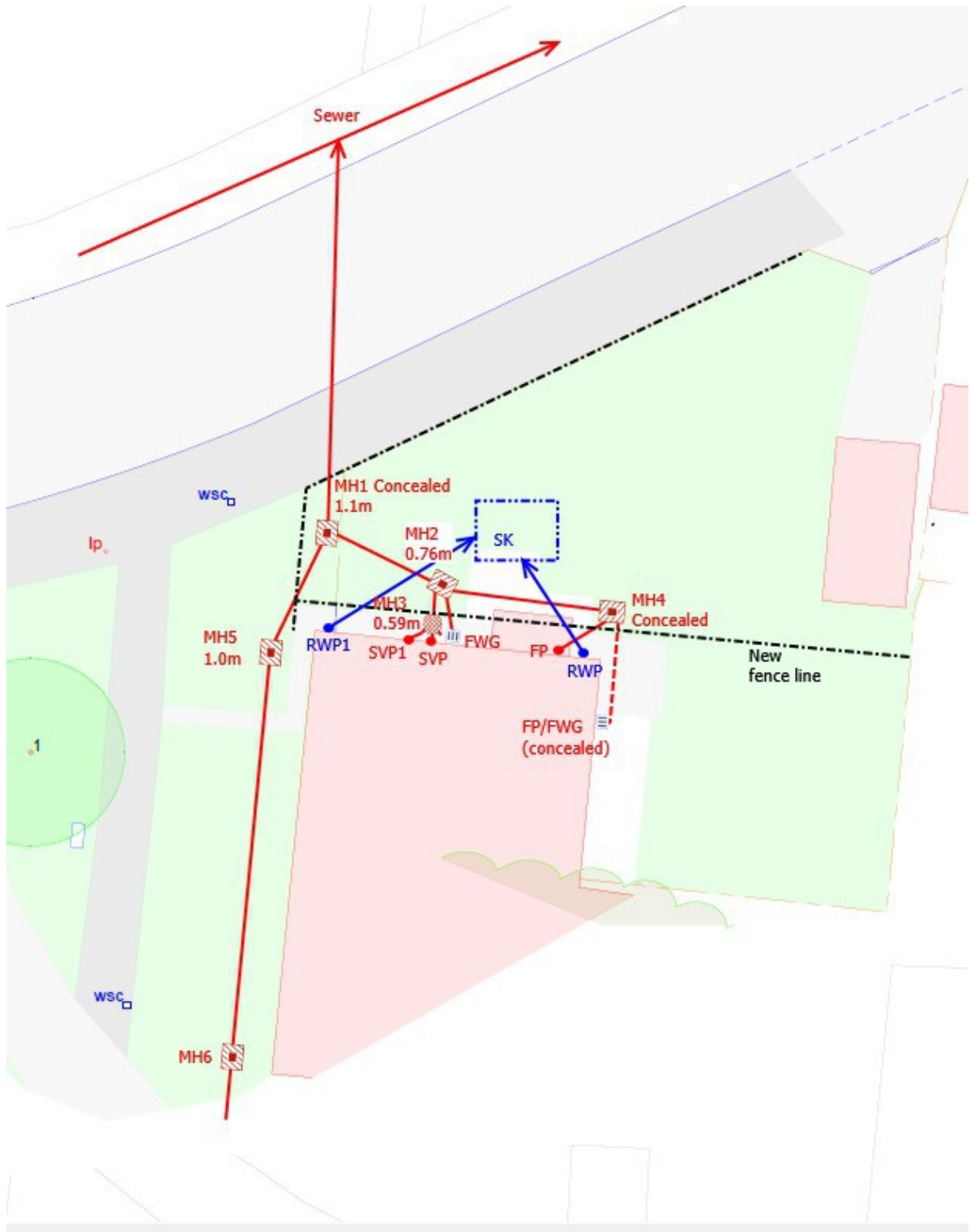
**Project Information**

Project Name  
16 Swanbourne Road

Project Number

Project Date  
14/02/2025

**Project Drawing, Page '16 Swanbourne Road'**



## Scoring Summary

**Project Name**  
16 Swanbourne Road

**Project Number**

**Project Date**  
14/02/2025

### Structural Defects

Section	PLR	Grade	Description
All inspected pipes are in an acceptable structural condition (< grade 3).			

### Service / Operational Condition

Grade 3: Best practice suggests consideration should be given to maintenance activities in the medium term.

Grade 4: Best practice suggests consideration should be given to maintenance activity to avoid potential blockages.

Grade 5: Best practice suggests that this pipe is at a high risk of backing up or causing flooding.

Section	PLR	Grade	Description
5	MH4X	3	Settled deposits, fine, 5% cross-sectional area loss, finish
6	FWGX	3	Attached deposits, other at joint from 6 o'clock to 9 o'clock, 5% cross-sectional area loss
8	MH5X	3	Attached deposits, grease from 3 o'clock to 9 o'clock, 15% cross-sectional area loss
9	MH1X	3	Attached deposits, fouling from 4 o'clock to 8 o'clock, 10% cross-sectional area loss, finish
10	MH6X	3	Attached deposits, fouling from 5 o'clock to 7 o'clock, 10% cross-sectional area loss
12	RWPX	3	Settled deposits, fine, 10% cross-sectional area loss, finish

### Abandoned Surveys

Section	PLR	Description
11	FPX	Survey abandoned
14	RWP1X	Survey abandoned

### Information

These scoring summaries are based on the SRM grading from the WRc.



**Project Pictures**

**Project Name**  
16 Swanbourne Road

**Project Number**

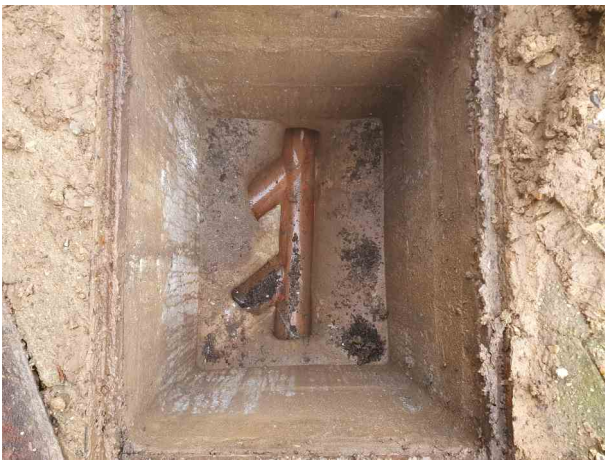
**Project Date**  
14/02/2025



Front of property



MH1 under building materials



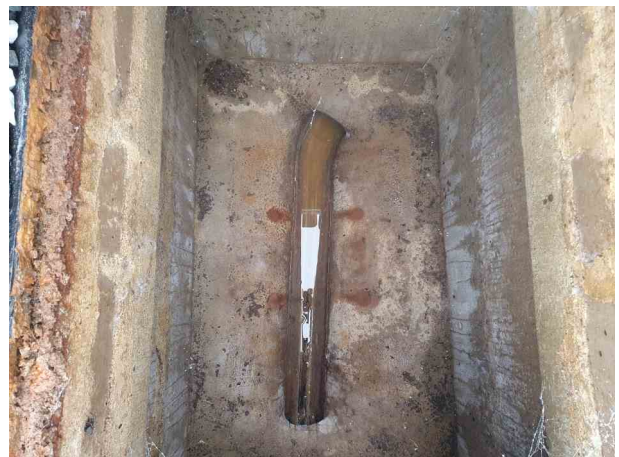
MH2



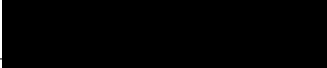
MH3



MH3 with connections



MH5

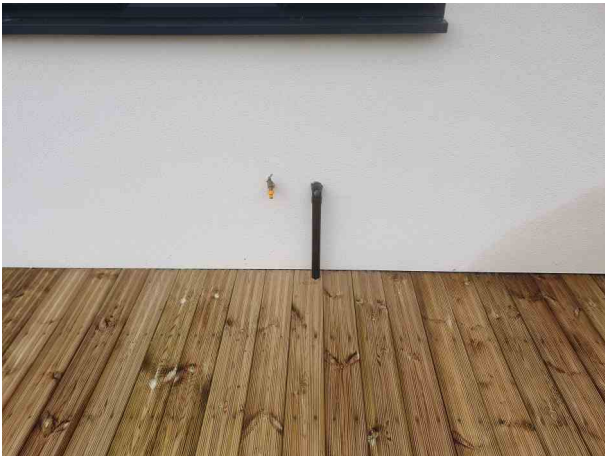


**Project Pictures**

**Project Name**  
16 Swanbourne Road

**Project Number**

**Project Date**  
14/02/2025



FP with assumed FWG beneath decking



RWP and FP access



RWP1



Soakaway located in middle of pic

## Section Profile

**Project Name**  
16 Swanbourne Road

**Project Number**

**Project Date**  
14/02/2025

### Circular, 40 mm

Item No.	Upstream Node	Downstream Node	Date	Road	Material	Total Length	Inspected Length
13	FP	FP	11/02/2025	Swanbourne Rd	Polyvinyl chloride	0.00 m	0.00 m

**Total: 1 Inspection x Circular 40 mm, 0 mm = 0.00 m Total Length and 0.00 m Inspected Length**

### Circular, 75 mm

Item No.	Upstream Node	Downstream Node	Date	Road	Material	Total Length	Inspected Length
12	RWP	SK	11/02/2025	Swanbourne Rd	Polyvinyl chloride	4.50 m	4.50 m

**Total: 1 Inspection x Circular 75 mm, 0 mm = 4.50 m Total Length and 4.50 m Inspected Length**

### Circular, 100 mm

Item No.	Upstream Node	Downstream Node	Date	Road	Material	Total Length	Inspected Length
1	A	MH3	11/02/2025	Swanbourne Rd	Polyvinyl chloride	0.10 m	0.10 m
2	SVP	MH3	11/02/2025	Swanbourne Rd	Polyvinyl chloride	0.40 m	0.40 m
3	SVP1	MH3	11/02/2025	Swanbourne Rd	Polyvinyl chloride	0.60 m	0.60 m
4	MH3	MH2	11/02/2025	Swanbourne Rd	Pitch fibre	1.00 m	1.00 m
5	MH4	MH2	11/02/2025	Swanbourne Rd	Vitrified clay	5.10 m	5.10 m
6	FWG	MH2	11/02/2025	Swanbourne Rd	Pitch fibre	1.20 m	1.20 m
7	MH2	MH1	11/02/2025	Swanbourne Rd	Pitch fibre	3.30 m	3.30 m
8	MH5	MH1	11/02/2025	Swanbourne Rd	Pitch fibre	4.00 m	4.00 m
9	MH1	Sewer	11/02/2025	Swanbourne Rd	Vitrified clay	14.40 m	14.40 m
10	MH6	MH5	11/02/2025	Swanbourne Rd	Pitch fibre	14.30 m	14.30 m

**Total: 10 Inspections x Circular 100 mm, 0 mm = 44.40 m Total Length and 44.40 m Inspected Length**

**Total: 12 Inspections = 48.90 m Total Length and 48.90 m Inspected Length**

## Section Summary

<b>Project Name</b> 16 Swanbourne Road	<b>Project Number</b>	<b>Project Date</b> 14/02/2025
---	-----------------------	-----------------------------------

Number of sections	14
Total length of sections	49.40 m
Total length of inspected sections	49.40 m
Total length of not inspected sections	0.00 m
Number of abandoned inspections	2
Number of section inspection photos	49
Number of section inspection videos	14
Number of section inspection scans	0
Number of section inclination measurements	0

<b>PLR:</b> AX	<b>Upstream Node:</b> A
<b>Inspection Direction:</b> Upstream	<b>Downstream Node:</b> MH3
<b>Inspected Length:</b> 0.10 m	<b>Dia/Height:</b> 100 mm
<b>Total Length:</b> 0.10 m	<b>Material:</b> Polyvinyl chloride

No.	m+	Code	Observation
1	0.00	MH	Start node, manhole, reference: MH3
2	0.00	WL	Water level, 0% of the vertical dimension
3	0.10	MHF	Finish node, manhole, reference: A. Capped

<b>PLR:</b> SVPX	<b>Upstream Node:</b> SVP
<b>Inspection Direction:</b> Upstream	<b>Downstream Node:</b> MH3
<b>Inspected Length:</b> 0.40 m	<b>Dia/Height:</b> 100 mm
<b>Total Length:</b> 0.40 m	<b>Material:</b> Polyvinyl chloride

No.	m+	Code	Observation
1	0.00	MH	Start node, manhole, reference: MH3
2	0.00	WL	Water level, 0% of the vertical dimension
3	0.20	LU	Line deviates up
4	0.40	MHF	Finish node, manhole, reference: SVP

<b>PLR:</b> SVP1X	<b>Upstream Node:</b> SVP1
<b>Inspection Direction:</b> Upstream	<b>Downstream Node:</b> MH3
<b>Inspected Length:</b> 0.60 m	<b>Dia/Height:</b> 100 mm
<b>Total Length:</b> 0.60 m	<b>Material:</b> Polyvinyl chloride

No.	m+	Code	Observation
1	0.00	MH	Start node, manhole, reference: MH3
2	0.00	WL	Water level, 0% of the vertical dimension
3	0.10	LR	Line deviates right
4	0.40	LU	Line deviates up

## Section Summary

**Project Name**  
 16 Swanbourne Road

**Project Number**
**Project Date**  
 14/02/2025

No.	m+	Code	Observation
5	0.60	MHF	Finish node, manhole, reference: SVP1

<b>PLR:</b>	MH3X	<b>Upstream Node:</b>	MH3
<b>Inspection Direction:</b>	Downstream	<b>Downstream Node:</b>	MH2
<b>Inspected Length:</b>	1.00 m	<b>Dia/Height:</b>	100 mm
<b>Total Length:</b>	1.00 m	<b>Material:</b>	Pitch fibre

No.	m+	Code	Observation
1	0.00	MH	Start node, manhole, reference: MH3
2	0.00	WL	Water level, 0% of the vertical dimension
3	1.00	MHF	Finish node, manhole, reference: MH2

<b>PLR:</b>	MH4X	<b>Upstream Node:</b>	MH4
<b>Inspection Direction:</b>	Upstream	<b>Downstream Node:</b>	MH2
<b>Inspected Length:</b>	5.10 m	<b>Dia/Height:</b>	100 mm
<b>Total Length:</b>	5.10 m	<b>Material:</b>	Vitrified clay

No.	m+	Code	Observation
1	0.00	MH	Start node, manhole, reference: MH2
2	0.00	DES	Settled deposits, fine, 5% cross-sectional area loss, start
3	0.00	WL	Water level, 0% of the vertical dimension
4	0.20	MCPF	Pipe material changes to pitch fibre at this point
5	0.20	LL	Line deviates left
6	2.10	DES	Settled deposits, fine, 5% cross-sectional area loss, finish
7	5.10	MHF	Finish node, manhole, reference: MH4

<b>PLR:</b>	FWGX	<b>Upstream Node:</b>	FWG
<b>Inspection Direction:</b>	Upstream	<b>Downstream Node:</b>	MH2
<b>Inspected Length:</b>	1.20 m	<b>Dia/Height:</b>	100 mm
<b>Total Length:</b>	1.20 m	<b>Material:</b>	Pitch fibre

No.	m+	Code	Observation
1	0.00	MH	Start node, manhole, reference: MH2
2	0.00	WL	Water level, 0% of the vertical dimension
3	0.80	DEZJ	Attached deposits, other at joint from 6 o'clock to 9 o'clock, 5% cross-sectional area loss, Jointing compound
4	0.80	MCVC	Pipe material changes to vitrified clay at this point
5	1.00	LU	Line deviates up
6	1.20	GYF	Finish node, gully, reference: FWG

<b>PLR:</b>	MH2X	<b>Upstream Node:</b>	MH2
<b>Inspection Direction:</b>	Downstream	<b>Downstream Node:</b>	MH1
<b>Inspected Length:</b>	3.30 m	<b>Dia/Height:</b>	100 mm
<b>Total Length:</b>	3.30 m	<b>Material:</b>	Pitch fibre

No.	m+	Code	Observation
1	0.00	MH	Start node, manhole, reference: MH2
2	0.00	WL	Water level, 0% of the vertical dimension
3	3.30	MHF	Finish node, manhole, reference: MH1

## Section Summary

<b>Project Name</b> 16 Swanbourne Road	<b>Project Number</b>	<b>Project Date</b> 14/02/2025
---	-----------------------	-----------------------------------

<b>PLR:</b> MH5X	<b>Upstream Node:</b> MH5
<b>Inspection Direction:</b> Downstream	<b>Downstream Node:</b> MH1
<b>Inspected Length:</b> 4.00 m	<b>Dia/Height:</b> 100 mm
<b>Total Length:</b> 4.00 m	<b>Material:</b> Pitch fibre

No.	m+	Code	Observation
1	0.00	MH	Start node, manhole, reference: MH5
2	0.00	WL	Water level, 5% of the vertical dimension
3	0.80	WL	Water level, 10% of the vertical dimension
4	1.60	WL	Water level, 20% of the vertical dimension
5	2.00	WL	Water level, 30% of the vertical dimension
6	3.20	WL	Water level, 20% of the vertical dimension
7	3.40	DEG	Attached deposits, grease from 3 o'clock to 9 o'clock, 15% cross-sectional area loss
8	3.50	WL	Water level, 10% of the vertical dimension
9	4.00	MHF	Finish node, manhole, reference: MH1

<b>PLR:</b> MH1X	<b>Upstream Node:</b> MH1
<b>Inspection Direction:</b> Downstream	<b>Downstream Node:</b> Sewer
<b>Inspected Length:</b> 14.40 m	<b>Dia/Height:</b> 100 mm
<b>Total Length:</b> 14.40 m	<b>Material:</b> Vitrified clay

No.	m+	Code	Observation
1	0.00	MH	Start node, manhole, reference: MH1
2	0.00	WL	Water level, 10% of the vertical dimension
3	0.40	DEF	Attached deposits, fouling from 4 o'clock to 8 o'clock, 20% cross-sectional area loss, start
4	1.80	DEF	Attached deposits, fouling from 4 o'clock to 8 o'clock, 10% cross-sectional area loss, change
5	9.50	DEF	Attached deposits, fouling from 4 o'clock to 8 o'clock, 10% cross-sectional area loss, finish
6	13.70	JN	Junction at 12 o'clock, 100mm dia
7	14.00	LD	Line deviates down
8	14.00	LR	Line deviates right
9	14.40	BRF	Finish node, major connection without manhole, reference: Sewer

<b>PLR:</b> MH6X	<b>Upstream Node:</b> MH6
<b>Inspection Direction:</b> Upstream	<b>Downstream Node:</b> MH5
<b>Inspected Length:</b> 14.30 m	<b>Dia/Height:</b> 100 mm
<b>Total Length:</b> 14.30 m	<b>Material:</b> Pitch fibre

No.	m+	Code	Observation
1	0.00	MH	Start node, manhole, reference: MH5
2	0.00	WL	Water level, 0% of the vertical dimension
3	0.50	WL	Water level, 10% of the vertical dimension
4	0.50	DEF	Attached deposits, fouling from 5 o'clock to 7 o'clock, 10% cross-sectional area loss
5	0.60	WL	Water level, 15% of the vertical dimension
6	1.00	WL	Water level, 25% of the vertical dimension, Continuous
7	14.30	MHF	Finish node, manhole, reference: MH6

<b>PLR:</b> FPX	<b>Upstream Node:</b> FP
<b>Inspection Direction:</b> Downstream	<b>Downstream Node:</b> MH4
<b>Inspected Length:</b> 0.50 m	<b>Dia/Height:</b> 100 mm
<b>Total Length:</b> 0.50 m	<b>Material:</b> Vitrified clay

## Section Summary

<b>Project Name</b> 16 Swanbourne Road	<b>Project Number</b>	<b>Project Date</b> 14/02/2025
---	-----------------------	-----------------------------------

No.	m+	Code	Observation
1	0.00	MH	Start node, manhole, reference: FP
2	0.00	WL	Water level, 0% of the vertical dimension
3	0.20	REM	General remark, Line deviates horizontal
4	0.30	MCPF	Pipe material changes to pitch fibre at this point
5	0.50	SA	Survey abandoned, Unable to continue

<b>PLR:</b> RWPX	<b>Upstream Node:</b> RWP
<b>Inspection Direction:</b> Downstream	<b>Downstream Node:</b> SK
<b>Inspected Length:</b> 4.50 m	<b>Dia/Height:</b> 75 mm
<b>Total Length:</b> 4.50 m	<b>Material:</b> Polyvinyl chloride

No.	m+	Code	Observation
1	0.00	MH	Start node, manhole, reference: RWP
2	0.00	WL	Water level, 0% of the vertical dimension
3	3.10	DES	Settled deposits, fine, 10% cross-sectional area loss, start
4	4.50	DES	Settled deposits, fine, 10% cross-sectional area loss, finish
5	4.50	SKF	Finish node, soakaway, reference: SK

<b>PLR:</b> FPX	<b>Upstream Node:</b> FP
<b>Inspection Direction:</b> Unknown	<b>Downstream Node:</b> FP
<b>Inspected Length:</b> 0.00 m	<b>Dia/Height:</b> 40 mm
<b>Total Length:</b>	<b>Material:</b> Polyvinyl chloride

No.	m+	Code	Observation
1	0.00	MH	Start node, manhole, reference: FP
2	0.00	WL	Water level, 0% of the vertical dimension
3	0.00	MHF	Finish node, manhole, reference: FP, Suspected concealed FWG

<b>PLR:</b> RWP1X	<b>Upstream Node:</b> RWP1
<b>Inspection Direction:</b> Unknown	<b>Downstream Node:</b> RWP1
<b>Inspected Length:</b> 0.00 m	<b>Dia/Height:</b> 75 mm
<b>Total Length:</b>	<b>Material:</b> Polyvinyl chloride

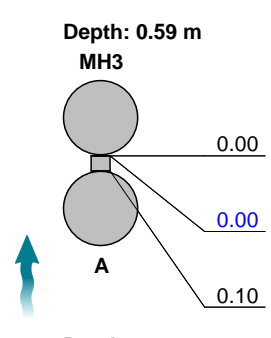
No.	m+	Code	Observation
1	0.00	MH	Start node, manhole, reference: RWP1
2	0.00	WL	Water level, 0% of the vertical dimension
3	0.00	SA	Survey abandoned, Unable to survey, assumed to discharge to soakaway

### Section Inspection - 11/02/2025 - AX

Item No. 1	Insp. No. 1	Date 11/02/25	Time 8:48	Client's Job Ref Not Specified	Weather No Rain Or Snow	Pre Cleaned No	PLR AX
Operator TN		Vehicle EY13S ON		Camera P542	Preset Length Not Specified	Legal Status Private Drain	Alternative ID Not Specified

Town or Village:	Littlehampton	Inspection Direction:	Upstream	Upstream Node:	A
Road:	Swanbourne Rd	Inspected Length:	0.10 m	Upstream Pipe Depth:	
Location:	Gardens (private)	Total Length:	0.10 m	Downstream Node:	MH3
Surface Type:	Concrete Footway	Joint Length:		Downstream Pipe Depth:	0.590 m
Use:	Foul	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	100 mm		
Flow Control:	No flow control	Material:	Polyvinyl chloride		
Year Constructed:	Not Specified	Lining Type:	No Lining		
Inspection Purpose:	Routine inspection	Lining Material:	No Lining		

**Comments:**  
**Recommendations:**

Scale:	1:50	Position [m]	Code	Observation	MPEG	Photo	Grade
							
		0.00	MH	Start node, manhole, reference: MH3	00:00:00		
		0.00	WL	Water level, 0% of the vertical dimension	00:00:18	1	
		0.10	MHF	Finish node, manhole, reference: A. Capped	00:00:31	2	

Construction Features					Miscellaneous Features				
Structural Defects					Service & Operational Observations				
STR No. Def	STR Peak	STR Mean	STR Total	STR Grade	SER No. Def	SER Peak	SER Mean	SER Total	SER Grade
0	0.0	0.0	0.0	1.0	0	0.0	0.0	0.0	1.0



### Section Pictures - 11/02/2025 - AX

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
1	Upstream	AX		



1, 00:00:18, 0.00 m  
Water level, 0% of the vertical dimension



2, 00:00:31, 0.10 m  
Finish node, manhole, reference: A. Capped

### Section Inspection - 11/02/2025 - SVPX

Item No. 2	Insp. No. 1	Date 11/02/25	Time 8:48	Client's Job Ref Not Specified	Weather No Rain Or Snow	Pre Cleaned No	PLR SVPX
Operator TN		Vehicle EY13S ON		Camera P542	Preset Length Not Specified	Legal Status Private Drain	Alternative ID Not Specified

Town or Village:	Littlehampton	Inspection Direction:	Upstream	Upstream Node:	SVP
Road:	Swanbourne Rd	Inspected Length:	0.40 m	Upstream Pipe Depth:	
Location:	Gardens (private)	Total Length:	0.40 m	Downstream Node:	MH3
Surface Type:	Concrete Footway	Joint Length:		Downstream Pipe Depth:	0.590 m
Use:	Foul	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	100 mm		
Flow Control:	No flow control	Material:	Polyvinyl chloride		
Year Constructed:	Not Specified	Lining Type:	No Lining		
Inspection Purpose:	Routine inspection	Lining Material:	No Lining		

**Comments:**  
**Recommendations:**

Scale:	1:50	Position [m]	Code	Observation	MPEG	Photo	Grade
		Depth: 0.59 m					
		MH3					
		0.00	MH	Start node, manhole, reference: MH3	00:00:00		
		0.00	WL	Water level, 0% of the vertical dimension	00:00:04	1	
		0.20	LU	Line deviates up	00:00:04	2	
		0.40	MHF	Finish node, manhole, reference: SVP	00:00:20	3	
		SVP					
		Depth: m					

Construction Features					Miscellaneous Features				
Structural Defects					Service & Operational Observations				
STR No. Def	STR Peak	STR Mean	STR Total	STR Grade	SER No. Def	SER Peak	SER Mean	SER Total	SER Grade
0	0.0	0.0	0.0	1.0	0	0.0	0.0	0.0	1.0



### Section Pictures - 11/02/2025 - SVPX

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
2	Upstream	SVPX		



1, 00:00:04, 0.00 m  
Water level, 0% of the vertical dimension



2, 00:00:04, 0.20 m  
Line deviates up



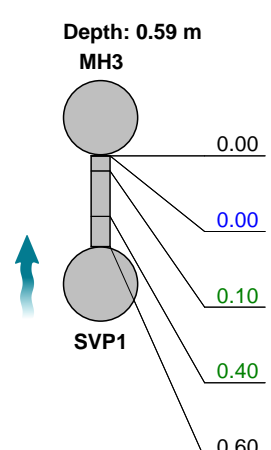
3, 00:00:20, 0.40 m  
Finish node, manhole, reference: SVP

### Section Inspection - 11/02/2025 - SVP1X

Item No. 3	Insp. No. 1	Date 11/02/25	Time 8:49	Client's Job Ref Not Specified	Weather No Rain Or Snow	Pre Cleaned No	PLR SVP1X
Operator TN		Vehicle EY13S ON		Camera P542	Preset Length Not Specified	Legal Status Private Drain	Alternative ID Not Specified

Town or Village:	Littlehampton	Inspection Direction:	Upstream	Upstream Node:	SVP1
Road:	Swanbourne Rd	Inspected Length:	0.60 m	Upstream Pipe Depth:	
Location:	Gardens (private)	Total Length:	0.60 m	Downstream Node:	MH3
Surface Type:	Concrete Footway	Joint Length:		Downstream Pipe Depth:	0.590 m
Use:	Foul	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	100 mm		
Flow Control:	No flow control	Material:	Polyvinyl chloride		
Year Constructed:	Not Specified	Lining Type:	No Lining		
Inspection Purpose:	Routine inspection	Lining Material:	No Lining		

**Comments:**  
**Recommendations:**

Scale:	1:50	Position [m]	Code	Observation	MPEG	Photo	Grade																														
<div style="display: flex; align-items: flex-start;"> <div style="margin-right: 20px;"> <p>Depth: 0.59 m</p>  <p>Depth: m</p> </div> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">0.00</td> <td style="text-align: center;">MH</td> <td>Start node, manhole, reference: MH3</td> <td style="text-align: center;">00:00:00</td> <td></td> <td></td> </tr> <tr> <td style="text-align: center;">0.00</td> <td style="text-align: center;">WL</td> <td>Water level, 0% of the vertical dimension</td> <td style="text-align: center;">00:00:05</td> <td style="text-align: center;">1</td> <td></td> </tr> <tr> <td style="text-align: center;">0.10</td> <td style="text-align: center;">LR</td> <td>Line deviates right</td> <td style="text-align: center;">00:00:05</td> <td></td> <td></td> </tr> <tr> <td style="text-align: center;">0.40</td> <td style="text-align: center;">LU</td> <td>Line deviates up</td> <td style="text-align: center;">00:00:21</td> <td style="text-align: center;">2</td> <td></td> </tr> <tr> <td style="text-align: center;">0.60</td> <td style="text-align: center;">MHF</td> <td>Finish node, manhole, reference: SVP1</td> <td style="text-align: center;">00:00:29</td> <td style="text-align: center;">3</td> <td></td> </tr> </table> </div>								0.00	MH	Start node, manhole, reference: MH3	00:00:00			0.00	WL	Water level, 0% of the vertical dimension	00:00:05	1		0.10	LR	Line deviates right	00:00:05			0.40	LU	Line deviates up	00:00:21	2		0.60	MHF	Finish node, manhole, reference: SVP1	00:00:29	3	
0.00	MH	Start node, manhole, reference: MH3	00:00:00																																		
0.00	WL	Water level, 0% of the vertical dimension	00:00:05	1																																	
0.10	LR	Line deviates right	00:00:05																																		
0.40	LU	Line deviates up	00:00:21	2																																	
0.60	MHF	Finish node, manhole, reference: SVP1	00:00:29	3																																	

Construction Features					Miscellaneous Features				
Structural Defects					Service & Operational Observations				
STR No. Def	STR Peak	STR Mean	STR Total	STR Grade	SER No. Def	SER Peak	SER Mean	SER Total	SER Grade
0	0.0	0.0	0.0	1.0	0	0.0	0.0	0.0	1.0

**Section Pictures - 11/02/2025 - SVP1X**

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
3	Upstream	SVP1X		



1, 00:00:05, 0.00 m  
Water level, 0% of the vertical dimension



2, 00:00:21, 0.40 m  
Line deviates up



3, 00:00:29, 0.60 m  
Finish node, manhole, reference: SVP1

### Section Inspection - 11/02/2025 - MH3X

Item No. 4	Insp. No. 1	Date 11/02/25	Time 8:58	Client's Job Ref Not Specified	Weather No Rain Or Snow	Pre Cleaned No	PLR MH3X
Operator TN		Vehicle EY13S ON		Camera P542	Preset Length Not Specified	Legal Status Private Drain	Alternative ID Not Specified

Town or Village:	Littlehampton	Inspection Direction:	Downstream	Upstream Node:	MH3
Road:	Swanbourne Rd	Inspected Length:	1.00 m	Upstream Pipe Depth:	0.590 m
Location:	Gardens (private)	Total Length:	1.00 m	Downstream Node:	MH2
Surface Type:	Concrete Footway	Joint Length:		Downstream Pipe Depth:	0.760 m
Use:	Foul	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	100 mm		
Flow Control:	No flow control	Material:	Pitch fibre		
Year Constructed:	Not Specified	Lining Type:	No Lining		
Inspection Purpose:	Routine inspection	Lining Material:	No Lining		

**Comments:**  
**Recommendations:**

Scale:	1:50	Position [m]	Code	Observation	MPEG	Photo	Grade
		Depth: 0.59 m MH3					
		0.00	MH	Start node, manhole, reference: MH3	00:00:00		
		0.00	WL	Water level, 0% of the vertical dimension	00:00:04	1	
		1.00	MHF	Finish node, manhole, reference: MH2	00:00:24	2	
		Depth: 0.76 m MH2					



Construction Features					Miscellaneous Features				
Structural Defects					Service & Operational Observations				
STR No. Def	STR Peak	STR Mean	STR Total	STR Grade	SER No. Def	SER Peak	SER Mean	SER Total	SER Grade
0	0.0	0.0	0.0	1.0	0	0.0	0.0	0.0	1.0



**Section Pictures - 11/02/2025 - MH3X**

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
4	Downstream	MH3X		



1, 00:00:04, 0.00 m  
Water level, 0% of the vertical dimension



2, 00:00:24, 1.00 m  
Finish node, manhole, reference: MH2

### Section Inspection - 11/02/2025 - MH4X

Item No. 5	Insp. No. 1	Date 11/02/25	Time 9:21	Client's Job Ref Not Specified	Weather No Rain Or Snow	Pre Cleaned No	PLR MH4X
Operator TN		Vehicle EY13S ON		Camera P542	Preset Length Not Specified	Legal Status Private Drain	Alternative ID Not Specified

Town or Village:	Littlehampton	Inspection Direction:	Upstream	Upstream Node:	MH4
Road:	Swanbourne Rd	Inspected Length:	5.10 m	Upstream Pipe Depth:	
Location:	Gardens (private)	Total Length:	5.10 m	Downstream Node:	MH2
Surface Type:	Various	Joint Length:		Downstream Pipe Depth:	0.760 m
Use:	Foul	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	100 mm		
Flow Control:	No flow control	Material:	Vitrified clay		
Year Constructed:	Not Specified	Lining Type:	No Lining		
Inspection Purpose:	Routine inspection	Lining Material:	No Lining		

**Comments:**  
**Recommendations:**

Scale:	1:50	Position [m]	Code	Observation	MPEG	Photo	Grade
		Depth: 0.76 m					
		MH2					
		0.00	MH	Start node, manhole, reference: MH2	00:00:00		
		0.00	S01	DES Settled deposits, fine, 5% cross-sectional area loss, start	00:00:04		
		0.00	WL	Water level, 0% of the vertical dimension	00:00:05	1	
		0.20	MCPF	Pipe material changes to pitch fibre at this point	00:00:22	2	
		0.20	LL	Line deviates left	00:00:41		
		2.10	F01	DES Settled deposits, fine, 5% cross-sectional area loss, finish	00:00:41	3	3
		5.10	MHF	Finish node, manhole, reference: MH4	00:01:33	4	
		MH4					
		Depth: m					

Construction Features					Miscellaneous Features				
Structural Defects					Service & Operational Observations				
STR No. Def	STR Peak	STR Mean	STR Total	STR Grade	SER No. Def	SER Peak	SER Mean	SER Total	SER Grade
0	0.0	0.0	0.0	1.0	1	2.0	1.2	6.0	3.0

**Section Pictures - 11/02/2025 - MH4X**

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
5	Upstream	MH4X		



1, 00:00:05, 0.00 m  
Water level, 0% of the vertical dimension



2, 00:00:22, 0.20 m  
Pipe material changes to pitch fibre at this point



3, 00:00:41, 2.10 m  
Settled deposits, fine, 5% cross-sectional area loss, finish



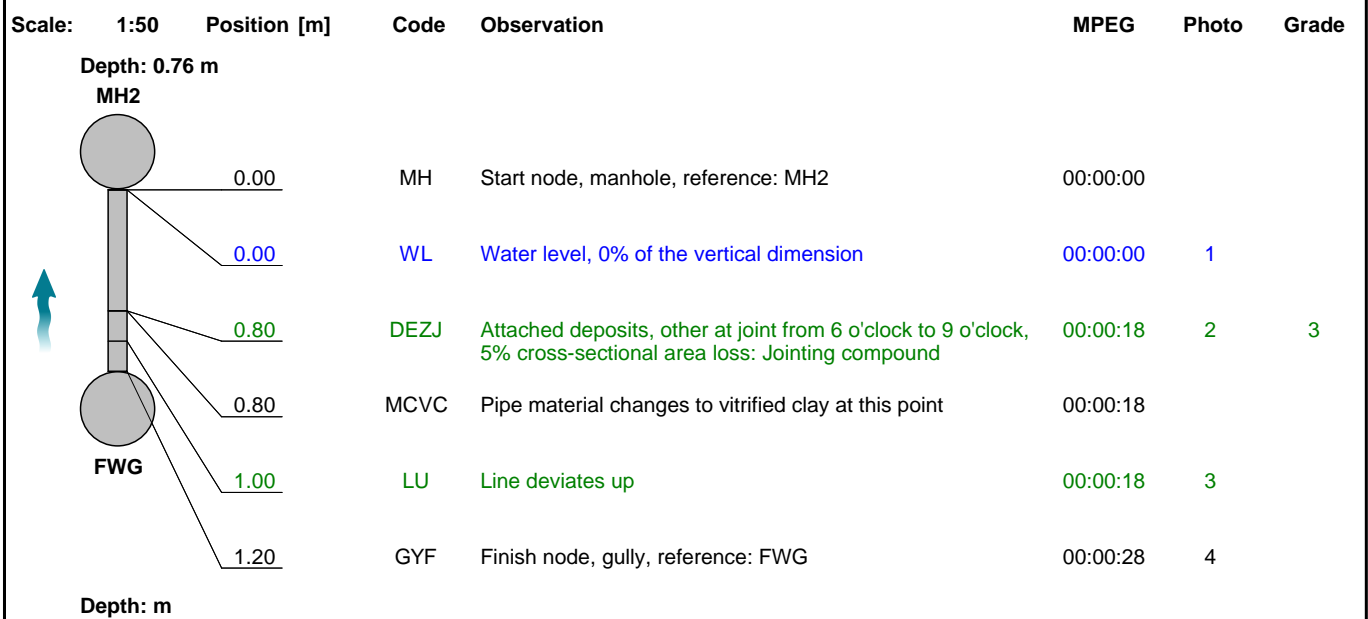
4, 00:01:33, 5.10 m  
Finish node, manhole, reference: MH4

### Section Inspection - 11/02/2025 - FWGX

Item No. 6	Insp. No. 1	Date 11/02/25	Time 9:36	Client's Job Ref Not Specified	Weather No Rain Or Snow	Pre Cleaned No	PLR FWGX
Operator TN		Vehicle EY13S ON		Camera P542	Preset Length Not Specified	Legal Status Private Drain	Alternative ID Not Specified

Town or Village:	Littlehampton	Inspection Direction:	Upstream	Upstream Node:	FWG
Road:	Swanbourne Rd	Inspected Length:	1.20 m	Upstream Pipe Depth:	
Location:	Gardens (private)	Total Length:	1.20 m	Downstream Node:	MH2
Surface Type:	Various	Joint Length:		Downstream Pipe Depth:	0.760 m
Use:	Foul	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	100 mm		
Flow Control:	No flow control	Material:	Pitch fibre		
Year Constructed:	Not Specified	Lining Type:	No Lining		
Inspection Purpose:	Routine inspection	Lining Material:	No Lining		

**Comments:**  
**Recommendations:**



Construction Features					Miscellaneous Features				
Structural Defects					Service & Operational Observations				
STR No. Def	STR Peak	STR Mean	STR Total	STR Grade	SER No. Def	SER Peak	SER Mean	SER Total	SER Grade
0	0.0	0.0	0.0	1.0	1	2.0	1.7	2.0	3.0

**Section Pictures - 11/02/2025 - FWGX**

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
6	Upstream	FWGX		



1, 00:00:00, 0.00 m  
Water level, 0% of the vertical dimension



2, 00:00:18, 0.80 m  
Attached deposits, other at joint from 6 o'clock to 9 o'clock, 5% cross-sectional area loss, Jointing compound



3, 00:00:18, 1.00 m  
Line deviates up



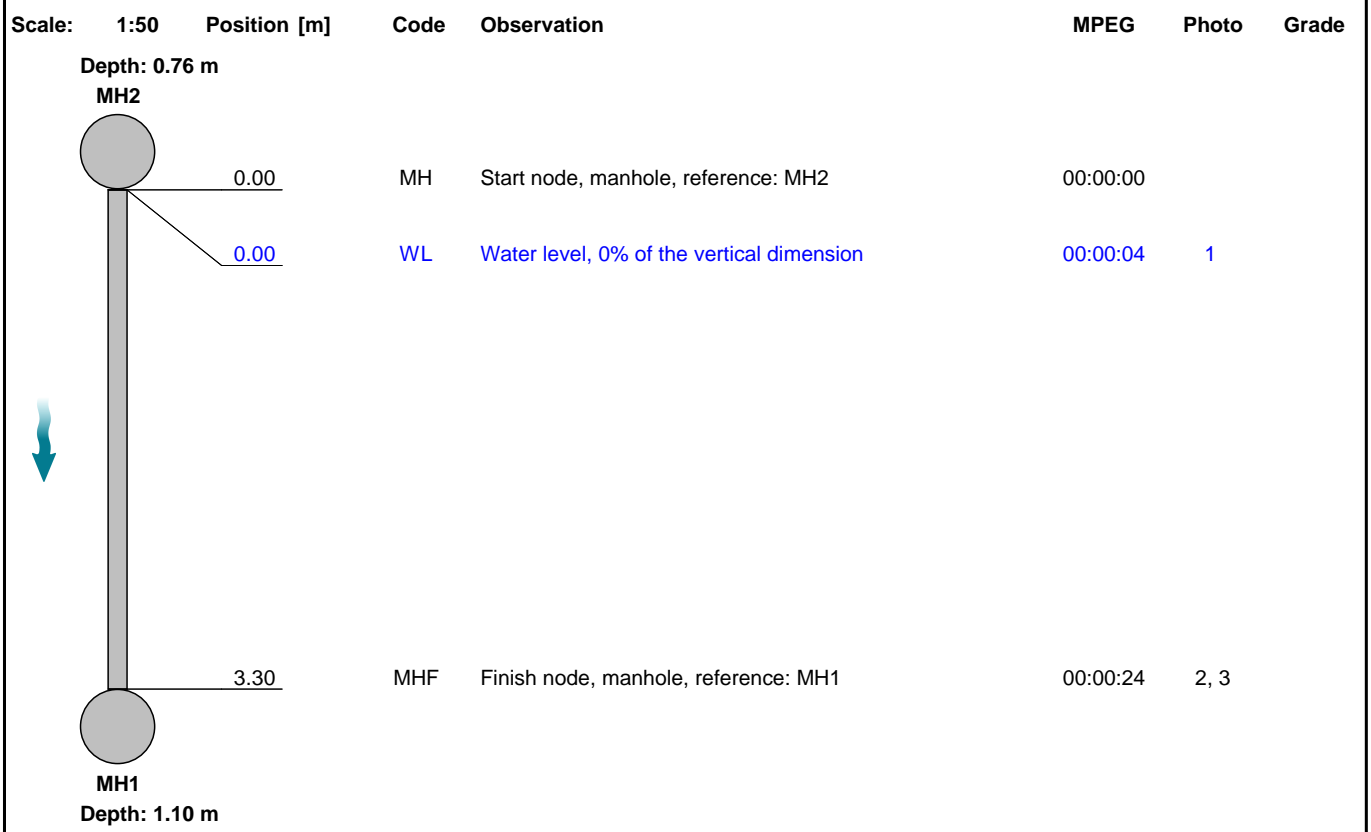
4, 00:00:28, 1.20 m  
Finish node, gully, reference: FWG

### Section Inspection - 11/02/2025 - MH2X

Item No. 7	Insp. No. 1	Date 11/02/25	Time 9:38	Client's Job Ref Not Specified	Weather No Rain Or Snow	Pre Cleaned No	PLR MH2X
Operator TN		Vehicle EY13S ON		Camera P542	Preset Length Not Specified	Legal Status Private Drain	Alternative ID Not Specified

Town or Village:	Littlehampton	Inspection Direction:	Downstream	Upstream Node:	MH2
Road:	Swanbourne Rd	Inspected Length:	3.30 m	Upstream Pipe Depth:	0.760 m
Location:	Gardens (private)	Total Length:	3.30 m	Downstream Node:	MH1
Surface Type:	Mud	Joint Length:		Downstream Pipe Depth:	1.100 m
Use:	Foul	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	100 mm		
Flow Control:	No flow control	Material:	Pitch fibre		
Year Constructed:	Not Specified	Lining Type:	No Lining		
Inspection Purpose:	Routine inspection	Lining Material:	No Lining		

**Comments:**  
**Recommendations:**



Construction Features					Miscellaneous Features				
Structural Defects					Service & Operational Observations				
STR No. Def	STR Peak	STR Mean	STR Total	STR Grade	SER No. Def	SER Peak	SER Mean	SER Total	SER Grade
0	0.0	0.0	0.0	1.0	0	0.0	0.0	0.0	1.0

**Section Pictures - 11/02/2025 - MH2X**

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
7	Downstream	MH2X		



1, 00:00:04, 0.00 m  
Water level, 0% of the vertical dimension



2, 00:00:24, 3.30 m  
Finish node, manhole, reference: MH1



3, 00:00:24, 3.30 m  
Finish node, manhole, reference: MH1

### Section Inspection - 11/02/2025 - MH5X

Item No. 8	Insp. No. 1	Date 11/02/25	Time 10:02	Client's Job Ref Not Specified	Weather No Rain Or Snow	Pre Cleaned No	PLR MH5X
Operator TN		Vehicle EY13S ON		Camera P542	Preset Length Not Specified	Legal Status Private Drain	Alternative ID Not Specified

Town or Village:	Littlehampton	Inspection Direction:	Downstream	Upstream Node:	MH5
Road:	Swanbourne Rd	Inspected Length:	4.00 m	Upstream Pipe Depth:	1.000 m
Location:	Gardens (private)	Total Length:	4.00 m	Downstream Node:	MH1
Surface Type:	Various	Joint Length:		Downstream Pipe Depth:	1.100 m
Use:	Foul	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	100 mm		
Flow Control:	No flow control	Material:	Pitch fibre		
Year Constructed:	Not Specified	Lining Type:	No Lining		
Inspection Purpose:	Routine inspection	Lining Material:	No Lining		

**Comments:**  
**Recommendations:**

Scale:	1:50	Position [m]	Code	Observation	MPEG	Photo	Grade																																																															
<div style="display: flex; align-items: center;"> <div style="flex: 1;"> <p style="text-align: center;">Depth: 1.00 m MH5</p>  <p style="text-align: center;">Depth: 1.10 m MH1</p> </div> <table border="1" style="margin-left: 20px; border-collapse: collapse;"> <tr> <td style="text-align: right;">0.00</td> <td style="text-align: left;">MH</td> <td>Start node, manhole, reference: MH5</td> <td style="text-align: right;">00:00:00</td> <td></td> <td></td> <td></td> </tr> <tr> <td style="text-align: right;">0.00</td> <td style="text-align: left;">WL</td> <td>Water level, 5% of the vertical dimension</td> <td style="text-align: right;">00:00:04</td> <td></td> <td style="text-align: center;">1</td> <td></td> </tr> <tr> <td style="text-align: right;">0.80</td> <td style="text-align: left;">WL</td> <td>Water level, 10% of the vertical dimension</td> <td style="text-align: right;">00:00:09</td> <td></td> <td style="text-align: center;">2</td> <td></td> </tr> <tr> <td style="text-align: right;">1.60</td> <td style="text-align: left;">WL</td> <td>Water level, 20% of the vertical dimension</td> <td style="text-align: right;">00:00:16</td> <td></td> <td style="text-align: center;">3</td> <td></td> </tr> <tr> <td style="text-align: right;">2.00</td> <td style="text-align: left;">WL</td> <td>Water level, 30% of the vertical dimension</td> <td style="text-align: right;">00:00:21</td> <td></td> <td style="text-align: center;">4</td> <td></td> </tr> <tr> <td style="text-align: right;">3.20</td> <td style="text-align: left;">WL</td> <td>Water level, 20% of the vertical dimension</td> <td style="text-align: right;">00:00:29</td> <td></td> <td></td> <td></td> </tr> <tr> <td style="text-align: right;">3.40</td> <td style="text-align: left;">DEG</td> <td>Attached deposits, grease from 3 o'clock to 9 o'clock, 15% cross-sectional area loss</td> <td style="text-align: right;">00:00:31</td> <td></td> <td></td> <td style="text-align: center;">3</td> </tr> <tr> <td style="text-align: right;">3.50</td> <td style="text-align: left;">WL</td> <td>Water level, 10% of the vertical dimension</td> <td style="text-align: right;">00:00:31</td> <td></td> <td style="text-align: center;">5</td> <td></td> </tr> <tr> <td style="text-align: right;">4.00</td> <td style="text-align: left;">MHF</td> <td>Finish node, manhole, reference: MH1</td> <td style="text-align: right;">00:00:44</td> <td></td> <td style="text-align: center;">6</td> <td></td> </tr> </table> </div>								0.00	MH	Start node, manhole, reference: MH5	00:00:00				0.00	WL	Water level, 5% of the vertical dimension	00:00:04		1		0.80	WL	Water level, 10% of the vertical dimension	00:00:09		2		1.60	WL	Water level, 20% of the vertical dimension	00:00:16		3		2.00	WL	Water level, 30% of the vertical dimension	00:00:21		4		3.20	WL	Water level, 20% of the vertical dimension	00:00:29				3.40	DEG	Attached deposits, grease from 3 o'clock to 9 o'clock, 15% cross-sectional area loss	00:00:31			3	3.50	WL	Water level, 10% of the vertical dimension	00:00:31		5		4.00	MHF	Finish node, manhole, reference: MH1	00:00:44		6	
0.00	MH	Start node, manhole, reference: MH5	00:00:00																																																																			
0.00	WL	Water level, 5% of the vertical dimension	00:00:04		1																																																																	
0.80	WL	Water level, 10% of the vertical dimension	00:00:09		2																																																																	
1.60	WL	Water level, 20% of the vertical dimension	00:00:16		3																																																																	
2.00	WL	Water level, 30% of the vertical dimension	00:00:21		4																																																																	
3.20	WL	Water level, 20% of the vertical dimension	00:00:29																																																																			
3.40	DEG	Attached deposits, grease from 3 o'clock to 9 o'clock, 15% cross-sectional area loss	00:00:31			3																																																																
3.50	WL	Water level, 10% of the vertical dimension	00:00:31		5																																																																	
4.00	MHF	Finish node, manhole, reference: MH1	00:00:44		6																																																																	

Construction Features					Miscellaneous Features				
Structural Defects					Service & Operational Observations				
STR No. Def	STR Peak	STR Mean	STR Total	STR Grade	SER No. Def	SER Peak	SER Mean	SER Total	SER Grade
0	0.0	0.0	0.0	1.0	1	4.0	1.0	4.0	3.0

**Section Pictures - 11/02/2025 - MH5X**

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
8	Downstream	MH5X		



1, 00:00:04, 0.00 m  
Water level, 5% of the vertical dimension



2, 00:00:09, 0.80 m  
Water level, 10% of the vertical dimension



3, 00:00:16, 1.60 m  
Water level, 20% of the vertical dimension



4, 00:00:21, 2.00 m  
Water level, 30% of the vertical dimension



5, 00:00:31, 3.50 m  
Water level, 10% of the vertical dimension



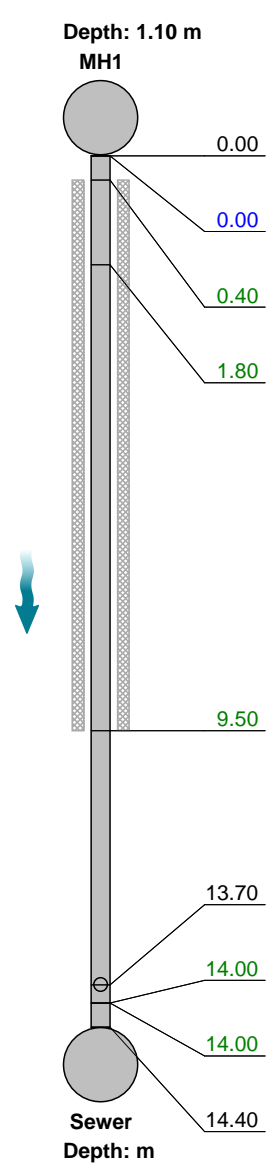
6, 00:00:44, 4.00 m  
Finish node, manhole, reference: MH1

### Section Inspection - 11/02/2025 - MH1X

Item No. 9	Insp. No. 1	Date 11/02/25	Time 10:08	Client's Job Ref Not Specified	Weather No Rain Or Snow	Pre Cleaned No	PLR MH1X
Operator TN		Vehicle EY13S ON		Camera P542	Preset Length Not Specified	Legal Status Private Drain	Alternative ID Not Specified

Town or Village:	Littlehampton	Inspection Direction:	Downstream	Upstream Node:	MH1
Road:	Swanbourne Rd	Inspected Length:	14.40 m	Upstream Pipe Depth:	1.100 m
Location:	Gardens (private)	Total Length:	14.40 m	Downstream Node:	SEWER
Surface Type:	Various	Joint Length:		Downstream Pipe Depth:	
Use:	Foul	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	100 mm		
Flow Control:	No flow control	Material:	Vitrified clay		
Year Constructed:	Not Specified	Lining Type:	No Lining		
Inspection Purpose:	Routine inspection	Lining Material:	No Lining		

**Comments:**  
**Recommendations:**

Scale:	1:125	Position [m]	Code	Observation	MPEG	Photo	Grade																																																															
<div style="display: flex; align-items: center;"> <div style="flex: 1;"> <p>Depth: 1.10 m MH1</p>  <p style="text-align: center;">Sewer Depth: m</p> </div> <table border="1" style="margin-left: 20px; border-collapse: collapse;"> <tr> <td style="text-align: right;">0.00</td> <td style="text-align: center;">MH</td> <td style="text-align: left;">Start node, manhole, reference: MH1</td> <td style="text-align: right;">00:00:00</td> <td></td> <td></td> <td></td> </tr> <tr> <td style="text-align: right;">0.00</td> <td style="text-align: center;">WL</td> <td style="text-align: left;">Water level, 10% of the vertical dimension</td> <td style="text-align: right;">00:00:04</td> <td></td> <td style="text-align: center;">1</td> <td></td> </tr> <tr> <td style="text-align: right;">0.40</td> <td style="text-align: center;">S01</td> <td style="text-align: left;">DEF Attached deposits, fouling from 4 o'clock to 8 o'clock, 20% cross-sectional area loss, start</td> <td style="text-align: right;">00:00:08</td> <td></td> <td style="text-align: center;">2</td> <td></td> </tr> <tr> <td style="text-align: right;">1.80</td> <td style="text-align: center;">C01</td> <td style="text-align: left;">DEF Attached deposits, fouling from 4 o'clock to 8 o'clock, 10% cross-sectional area loss, change</td> <td style="text-align: right;">00:00:15</td> <td></td> <td style="text-align: center;">3</td> <td></td> </tr> <tr> <td style="text-align: right;">9.50</td> <td style="text-align: center;">F01</td> <td style="text-align: left;">DEF Attached deposits, fouling from 4 o'clock to 8 o'clock, 10% cross-sectional area loss, finish</td> <td style="text-align: right;">00:00:21</td> <td></td> <td style="text-align: center;">4</td> <td style="text-align: center;">3</td> </tr> <tr> <td style="text-align: right;">13.70</td> <td style="text-align: center;">JN</td> <td style="text-align: left;">Junction at 12 o'clock, 100mm dia</td> <td style="text-align: right;">00:01:03</td> <td></td> <td style="text-align: center;">5</td> <td></td> </tr> <tr> <td style="text-align: right;">14.00</td> <td style="text-align: center;">LD</td> <td style="text-align: left;">Line deviates down</td> <td style="text-align: right;">00:01:05</td> <td></td> <td style="text-align: center;">6</td> <td></td> </tr> <tr> <td style="text-align: right;">14.00</td> <td style="text-align: center;">LR</td> <td style="text-align: left;">Line deviates right</td> <td style="text-align: right;">00:01:05</td> <td></td> <td style="text-align: center;">7</td> <td></td> </tr> <tr> <td style="text-align: right;">14.40</td> <td style="text-align: center;">BRF</td> <td style="text-align: left;">Finish node, major connection without manhole, reference: Sewer</td> <td style="text-align: right;">00:01:09</td> <td></td> <td style="text-align: center;">7</td> <td></td> </tr> </table> </div>								0.00	MH	Start node, manhole, reference: MH1	00:00:00				0.00	WL	Water level, 10% of the vertical dimension	00:00:04		1		0.40	S01	DEF Attached deposits, fouling from 4 o'clock to 8 o'clock, 20% cross-sectional area loss, start	00:00:08		2		1.80	C01	DEF Attached deposits, fouling from 4 o'clock to 8 o'clock, 10% cross-sectional area loss, change	00:00:15		3		9.50	F01	DEF Attached deposits, fouling from 4 o'clock to 8 o'clock, 10% cross-sectional area loss, finish	00:00:21		4	3	13.70	JN	Junction at 12 o'clock, 100mm dia	00:01:03		5		14.00	LD	Line deviates down	00:01:05		6		14.00	LR	Line deviates right	00:01:05		7		14.40	BRF	Finish node, major connection without manhole, reference: Sewer	00:01:09		7	
0.00	MH	Start node, manhole, reference: MH1	00:00:00																																																																			
0.00	WL	Water level, 10% of the vertical dimension	00:00:04		1																																																																	
0.40	S01	DEF Attached deposits, fouling from 4 o'clock to 8 o'clock, 20% cross-sectional area loss, start	00:00:08		2																																																																	
1.80	C01	DEF Attached deposits, fouling from 4 o'clock to 8 o'clock, 10% cross-sectional area loss, change	00:00:15		3																																																																	
9.50	F01	DEF Attached deposits, fouling from 4 o'clock to 8 o'clock, 10% cross-sectional area loss, finish	00:00:21		4	3																																																																
13.70	JN	Junction at 12 o'clock, 100mm dia	00:01:03		5																																																																	
14.00	LD	Line deviates down	00:01:05		6																																																																	
14.00	LR	Line deviates right	00:01:05		7																																																																	
14.40	BRF	Finish node, major connection without manhole, reference: Sewer	00:01:09		7																																																																	

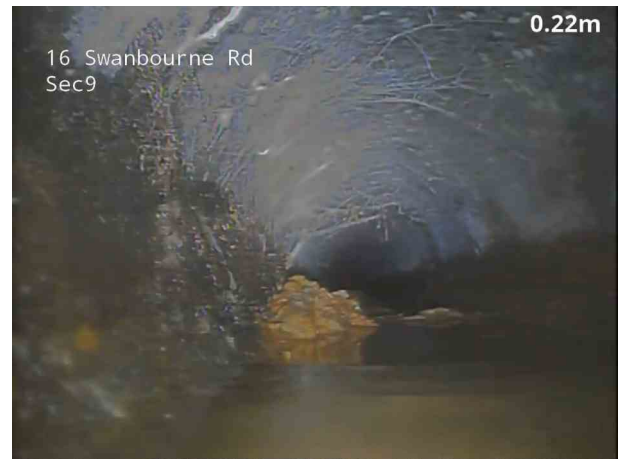
Construction Features					Miscellaneous Features				
Structural Defects					Service & Operational Observations				
STR No. Def	STR Peak	STR Mean	STR Total	STR Grade	SER No. Def	SER Peak	SER Mean	SER Total	SER Grade
0	0.0	0.0	0.0	1.0	1	2.0	0.4	6.0	3.0

**Section Pictures - 11/02/2025 - MH1X**

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
9	Downstream	MH1X		



1, 00:00:04, 0.00 m  
Water level, 10% of the vertical dimension



2, 00:00:08, 0.40 m  
Attached deposits, fouling from 4 o'clock to 8 o'clock, 20% cross-sectional area loss, start



3, 00:00:15, 1.80 m  
Attached deposits, fouling from 4 o'clock to 8 o'clock, 10% cross-sectional area loss, change



4, 00:00:21, 9.50 m  
Attached deposits, fouling from 4 o'clock to 8 o'clock, 10% cross-sectional area loss, finish



5, 00:01:03, 13.70 m  
Junction at 12 o'clock, 100mm dia



6, 00:01:05, 14.00 m  
Line deviates down

**Section Pictures - 11/02/2025 - MH1X**

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
9	Downstream	MH1X		



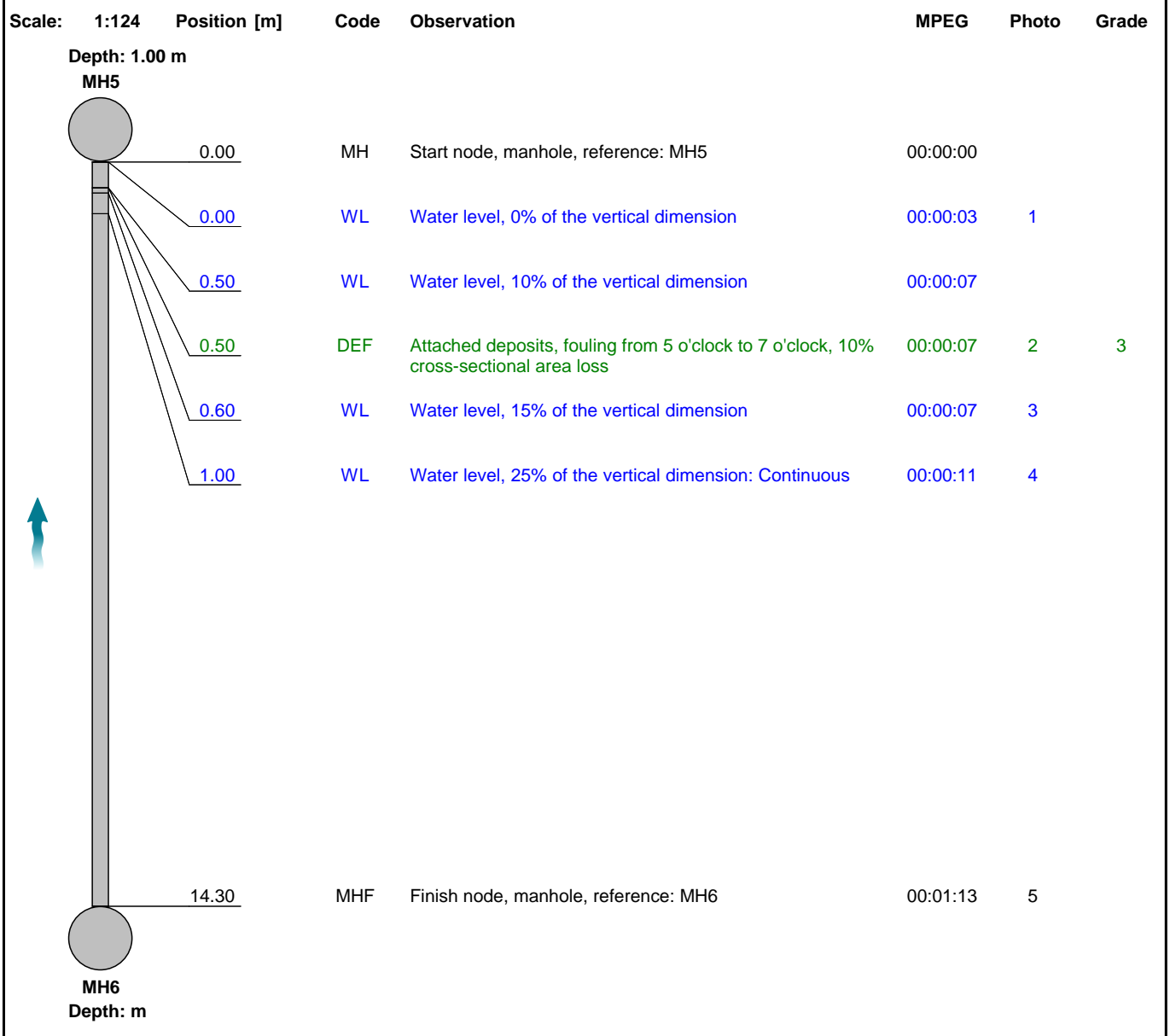
7, 00:01:09, 14.40 m  
Finish node, major connection without manhole, reference:  
Sewer

### Section Inspection - 11/02/2025 - MH6X

Item No. 10	Insp. No. 1	Date 11/02/25	Time 10:16	Client's Job Ref Not Specified	Weather No Rain Or Snow	Pre Cleaned No	PLR MH6X
Operator TN		Vehicle EY13S ON		Camera P542	Preset Length Not Specified	Legal Status Private Drain	Alternative ID Not Specified

Town or Village:	Littlehampton	Inspection Direction:	Upstream	Upstream Node:	MH6
Road:	Swanbourne Rd	Inspected Length:	14.30 m	Upstream Pipe Depth:	
Location:	Gardens (private)	Total Length:	14.30 m	Downstream Node:	MH5
Surface Type:	Various	Joint Length:		Downstream Pipe Depth:	1.000 m
Use:	Foul	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	100 mm		
Flow Control:	No flow control	Material:	Pitch fibre		
Year Constructed:	Not Specified	Lining Type:	No Lining		
Inspection Purpose:	Routine inspection	Lining Material:	No Lining		

**Comments:**  
**Recommendations:**



Construction Features					Miscellaneous Features				
Structural Defects					Service & Operational Observations				
STR No. Def	STR Peak	STR Mean	STR Total	STR Grade	SER No. Def	SER Peak	SER Mean	SER Total	SER Grade
0	0.0	0.0	0.0	1.0	1	2.0	0.1	2.0	3.0

**Section Pictures - 11/02/2025 - MH6X**

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
10	Upstream	MH6X		



1, 00:00:03, 0.00 m  
Water level, 0% of the vertical dimension



2, 00:00:07, 0.50 m  
Attached deposits, fouling from 5 o'clock to 7 o'clock, 10% cross-sectional area loss



3, 00:00:07, 0.60 m  
Water level, 15% of the vertical dimension



4, 00:00:11, 1.00 m  
Water level, 25% of the vertical dimension, Continuous



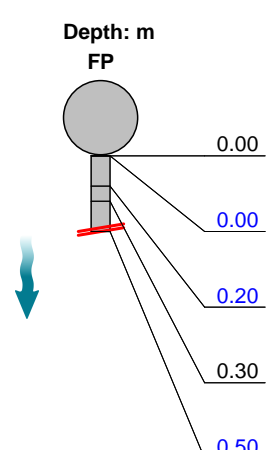
5, 00:01:13, 14.30 m  
Finish node, manhole, reference: MH6

### Section Inspection - 11/02/2025 - FPX

Item No. 11	Insp. No. 1	Date 11/02/25	Time 10:22	Client's Job Ref Not Specified	Weather No Rain Or Snow	Pre Cleaned No	PLR FPX
Operator TN		Vehicle EY13S ON		Camera P542	Preset Length Not Specified	Legal Status Private Drain	Alternative ID Not Specified

Town or Village:	Littlehampton	Inspection Direction:	Downstream	Upstream Node:	FP
Road:	Swanbourne Rd	Inspected Length:	0.50 m	Upstream Pipe Depth:	
Location:	Gardens (private)	Total Length:	0.50 m	Downstream Node:	MH4
Surface Type:	Various	Joint Length:		Downstream Pipe Depth:	
Use:	Foul	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	100 mm		
Flow Control:	No flow control	Material:	Vitrified clay		
Year Constructed:	Not Specified	Lining Type:	No Lining		
Inspection Purpose:	Routine inspection	Lining Material:	No Lining		

**Comments:**  
**Recommendations:**

Scale:	1:50	Position [m]	Code	Observation	MPEG	Photo	Grade																																			
<div style="display: flex; align-items: flex-start;"> <div style="margin-right: 20px;"> <p>Depth: m</p> <p>FP</p>  </div> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%;"></td> <td style="width: 10%;">0.00</td> <td style="width: 10%;">MH</td> <td style="width: 40%;">Start node, manhole, reference: FP</td> <td style="width: 10%;">00:00:00</td> <td style="width: 5%;"></td> <td style="width: 5%;"></td> </tr> <tr> <td></td> <td>0.00</td> <td>WL</td> <td>Water level, 0% of the vertical dimension</td> <td>00:00:04</td> <td>1</td> <td></td> </tr> <tr> <td></td> <td>0.20</td> <td>REM</td> <td>General remark: Line deviates horizontal</td> <td>00:00:04</td> <td></td> <td></td> </tr> <tr> <td></td> <td>0.30</td> <td>MCPF</td> <td>Pipe material changes to pitch fibre at this point</td> <td>00:00:04</td> <td>2</td> <td></td> </tr> <tr> <td></td> <td>0.50</td> <td>SA</td> <td>Survey abandoned: Unable to continue</td> <td>00:00:27</td> <td>3</td> <td></td> </tr> </table> </div>									0.00	MH	Start node, manhole, reference: FP	00:00:00				0.00	WL	Water level, 0% of the vertical dimension	00:00:04	1			0.20	REM	General remark: Line deviates horizontal	00:00:04				0.30	MCPF	Pipe material changes to pitch fibre at this point	00:00:04	2			0.50	SA	Survey abandoned: Unable to continue	00:00:27	3	
	0.00	MH	Start node, manhole, reference: FP	00:00:00																																						
	0.00	WL	Water level, 0% of the vertical dimension	00:00:04	1																																					
	0.20	REM	General remark: Line deviates horizontal	00:00:04																																						
	0.30	MCPF	Pipe material changes to pitch fibre at this point	00:00:04	2																																					
	0.50	SA	Survey abandoned: Unable to continue	00:00:27	3																																					

Construction Features					Miscellaneous Features				
Structural Defects					Service & Operational Observations				
STR No. Def	STR Peak	STR Mean	STR Total	STR Grade	SER No. Def	SER Peak	SER Mean	SER Total	SER Grade
0	0.0	0.0	0.0	1.0	0	0.0	0.0	0.0	1.0



### Section Pictures - 11/02/2025 - FPX

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
11	Downstream	FPX		



1, 00:00:04, 0.00 m  
Water level, 0% of the vertical dimension



2, 00:00:04, 0.30 m  
Pipe material changes to pitch fibre at this point



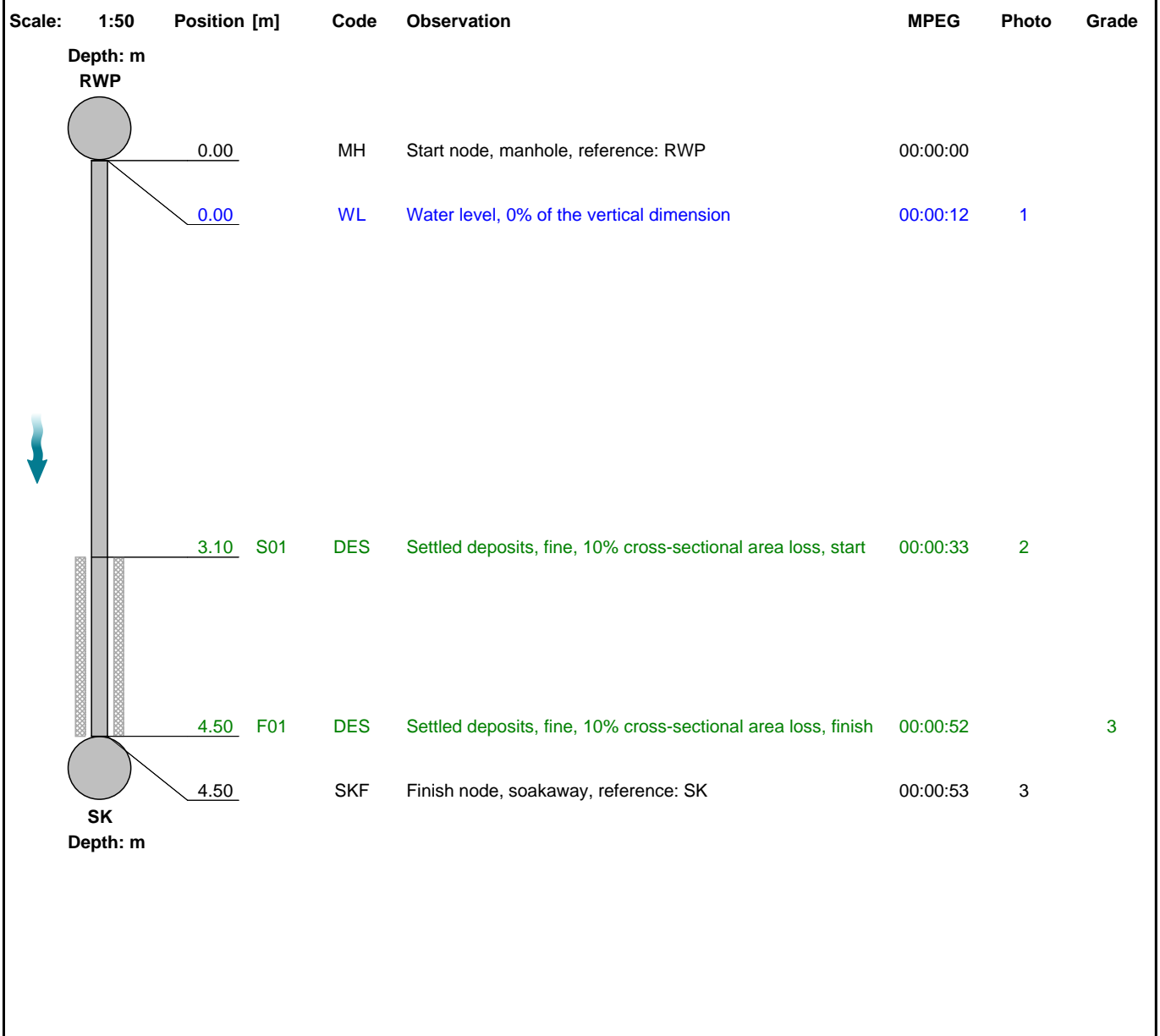
3, 00:00:27, 0.50 m  
Survey abandoned, Unable to continue

### Section Inspection - 11/02/2025 - RWPX

Item No. 12	Insp. No. 1	Date 11/02/25	Time 10:27	Client's Job Ref Not Specified	Weather No Rain Or Snow	Pre Cleaned No	PLR RWPX
Operator TN		Vehicle EY13S ON		Camera P542	Preset Length Not Specified	Legal Status Private Drain	Alternative ID Not Specified

Town or Village:	Littlehampton	Inspection Direction:	Downstream	Upstream Node:	RWP
Road:	Swanbourne Rd	Inspected Length:	4.50 m	Upstream Pipe Depth:	
Location:	Gardens (private)	Total Length:	4.50 m	Downstream Node:	SK
Surface Type:	Various	Joint Length:		Downstream Pipe Depth:	
Use:	Surface water	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	75 mm		
Flow Control:	No flow control	Material:	Polyvinyl chloride		
Year Constructed:	Not Specified	Lining Type:	No Lining		
Inspection Purpose:	Routine inspection	Lining Material:	No Lining		

**Comments:**  
**Recommendations:**



Construction Features					Miscellaneous Features				
Structural Defects					Service & Operational Observations				
STR No. Def	STR Peak	STR Mean	STR Total	STR Grade	SER No. Def	SER Peak	SER Mean	SER Total	SER Grade
0	0.0	0.0	0.0	1.0	1	2.0	0.9	4.0	3.0

**Section Pictures - 11/02/2025 - RWPX**

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
12	Downstream	RWPX		



16 Swanbourne Rd  
Sec12

-0.11m

1, 00:00:12, 0.00 m  
Water level, 0% of the vertical dimension



16 Swanbourne Rd  
Sec12

2.96m

2, 00:00:33, 3.10 m  
Settled deposits, fine, 10% cross-sectional area loss, start



16 Swanbourne Rd  
Sec12

4.50m

3, 00:00:53, 4.50 m  
Finish node, soakaway, reference: SK

### Section Inspection - 11/02/2025 - FPX

Item No. 13	Insp. No. 1	Date 11/02/25	Time 10:30	Client's Job Ref Not Specified	Weather No Rain Or Snow	Pre Cleaned No	PLR FPX
Operator TN		Vehicle EY13S ON		Camera P542	Preset Length Not Specified	Legal Status Private Drain	Alternative ID Not Specified

Town or Village:	Littlehampton	Inspection Direction:	Unknown	Upstream Node:	FP
Road:	Swanbourne Rd	Inspected Length:	0.00 m	Upstream Pipe Depth:	
Location:	Gardens (private)	Total Length:	0.00 m	Downstream Node:	FP
Surface Type:	Various	Joint Length:		Downstream Pipe Depth:	
Use:	Surface water	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	40 mm		
Flow Control:	No flow control	Material:	Polyvinyl chloride		
Year Constructed:	Not Specified	Lining Type:	No Lining		
Inspection Purpose:	Routine inspection	Lining Material:	No Lining		

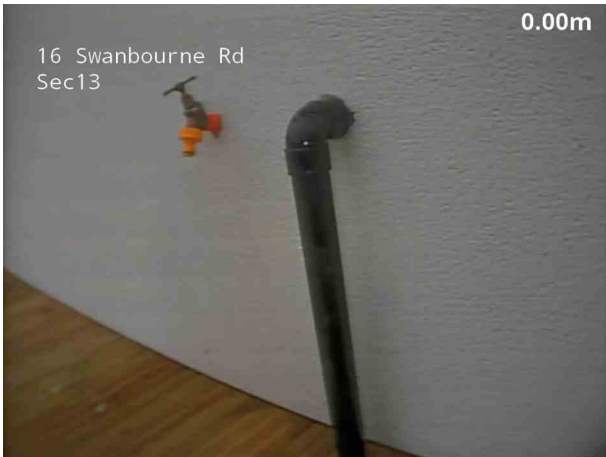
**Comments:**  
**Recommendations:**

Scale:	1:50	Position [m]	Code	Observation	MPEG	Photo	Grade
		Depth: m FP					
		0.00	MH	Start node, manhole, reference: FP	00:00:00		
		0.00	WL	Water level, 0% of the vertical dimension	00:00:03	1	
		0.00	MHF	Finish node, manhole, reference: FP: Suspected concealed FWG	00:00:12	2	
		Depth: m					

Construction Features					Miscellaneous Features				
Structural Defects					Service & Operational Observations				
STR No. Def	STR Peak	STR Mean	STR Total	STR Grade	SER No. Def	SER Peak	SER Mean	SER Total	SER Grade
0	0.0	0.0	0.0	1.0	0	0.0	0.0	0.0	1.0


**Section Pictures - 11/02/2025 - FPX**

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
13	Unknown	FPX		



1, 00:00:03, 0.00 m  
Water level, 0% of the vertical dimension



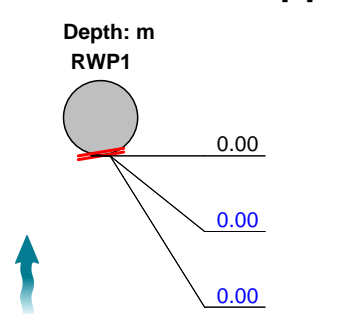
2, 00:00:12, 0.00 m  
Finish node, manhole, reference: FP, Suspected concealed FWG

### Section Inspection - 11/02/2025 - RWP1X

Item No. 14	Insp. No. 1	Date 11/02/25	Time 10:32	Client's Job Ref Not Specified	Weather No Rain Or Snow	Pre Cleaned No	PLR RWP1X
Operator TN		Vehicle EY13S ON		Camera P542	Preset Length Not Specified	Legal Status Private Drain	Alternative ID Not Specified

Town or Village:	Littlehampton	Inspection Direction:	Unknown	Upstream Node:	RWP1
Road:	Swanbourne Rd	Inspected Length:	0.00 m	Upstream Pipe Depth:	
Location:	Gardens (private)	Total Length:	0.00 m	Downstream Node:	RWP1
Surface Type:	Various	Joint Length:		Downstream Pipe Depth:	
Use:	Surface water	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	75 mm		
Flow Control:	No flow control	Material:	Polyvinyl chloride		
Year Constructed:	Not Specified	Lining Type:	No Lining		
Inspection Purpose:	Routine inspection	Lining Material:	No Lining		

**Comments:**  
**Recommendations:**

Scale:	1:50	Position [m]	Code	Observation	MPEG	Photo	Grade
		Depth: m RWP1					
			MH	Start node, manhole, reference: RWP1	00:00:00		
			WL	Water level, 0% of the vertical dimension	00:00:08	1	
			SA	Survey abandoned: Unable to survey, assumed to discharge to soakaway	00:00:08	2	

Construction Features					Miscellaneous Features				
Structural Defects					Service & Operational Observations				
STR No. Def	STR Peak	STR Mean	STR Total	STR Grade	SER No. Def	SER Peak	SER Mean	SER Total	SER Grade
0	0.0	0.0	0.0	1.0	0	0.0	0.0	0.0	1.0

**Section Pictures - 11/02/2025 - RWP1X**

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
14	Unknown	RWP1X		



1, 00:00:08, 0.00 m  
 Water level, 0% of the vertical dimension



2, 00:00:08, 0.00 m  
 Survey abandoned, Unable to survey, assumed to discharge to soakaway

**Disclaimer**

Although every effort has been made to produce a thorough and precise report, Eyes On Drainage Services Ltd cannot be held liable for any discrepancies or omissions. Furthermore Eyes On Drainage Services Ltd cannot be held responsible for any actions taken based on the information supplied within this report.



- STANDARD DRAINAGE NOTES
- DO NOT SCALE FROM THIS DRAWING. REFER TO FIGURED DIMENSIONS ONLY. THE CONTRACTOR SHOULD CHECK ALL DIMENSIONS ON SITE.
  - ALL DIMENSIONS IN MILLIMETRES AND ALL LEVELS ARE IN METERS UNLESS NOTED OTHERWISE.
  - THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT ARCHITECT AND ENGINEERING DETAILS, DRAWINGS AND SPECIFICATIONS.
  - ANY DISCREPANCIES SHOULD BE REPORTED TO THE ARCHITECT AND/OR ENGINEER IMMEDIATELY, SO THAT CLARIFICATION CAN BE SOUGHT PRIOR TO THE COMMENCEMENT OF WORK.
  - BEFORE COMMENCING CONSTRUCTION THE CONTRACTOR MUST CHECK THE INVERT LEVELS OF EXISTING SEWERS TO WHICH CONNECTIONS ARE MADE. IN ADDITION THE CONTRACTOR MUST LOCATE AND DETERMINE INVERT LEVELS OF THE EXISTING SPURS TO WHICH CONNECTIONS ARE PROPOSED. ANY DISCREPANCIES ARE TO BE NOTIFIED TO THE ENGINEER IMMEDIATELY, PRIOR TO CONSTRUCTION.
  - ALL DRAINAGE WORKS SHOULD COMMENCE AT THE PROPOSED DOWNSTREAM CONNECTION POINT. THE WORKS CONTINUING UPSTREAM FOLLOWING CONFIRMATION OF THE TIE-IN INVERT LEVELS TO THE ENGINEER. CONNECTIONS TO MANHOLES OR LARGER SIZED PIPES ETC. SHOULD BE SOFFIT TO SOFFIT UNLESS OTHERWISE INSTRUCTED BY THE ENGINEER, IF THIS IS NOT POSSIBLE INFORM THE ENGINEER IMMEDIATELY.
  - COVER LEVELS SHOWN ARE APPROXIMATE. COVERS AND FRAMES SHALL BE SET TO FINISHED GROUND LEVELS AND FALLS.
  - ALL UN-REFERENCED PIPES ARE TO BE 100mm DIA.
  - ALL PIPES TO BE ADOPTED, OR CONNECTING TO ADOPTED SEWERS, TO BE VITRIFIED CLAY TO BS EN 285 AND BS65 (SWS ONLY), OR CONCRETE PIPES TO BE EN 1916 AND BS5911-PART 1.
  - ROAD GULLY OUTLET PIPES ARE TO BE 150mm DIA. WITH CONCRETE SURROUND AND FLEXIBLE JOINTS. ALL GULLIES SHALL BE FITTED WITH GRADE D400 GRATINGS AND FRAMES TO BS EN124, UNLESS OTHERWISE STATED.
  - ALL ADOPTABLE SEWERS SHALL BE CONSTRUCTED TO THE STANDARDS AND SPECIFICATION LAID DOWN IN 'SEWERS FOR ADOPTION' 6th EDITION, WITH A VIEW TO ADOPTION UPON COMPLETION OF WORKS.
  - ALL PRIVATE DRAINAGE TO BE IN ACCORDANCE WITH THE BUILDING REGULATIONS APPROVED DOCUMENT PART-H, AND TO THE SATISFACTION OF THE BUILDING CONTROL INSPECTOR.
  - THE CONTRACTOR IS TO KEEP A RECORD OF ANY VARIATIONS MADE ON SITE, INCLUDING THE RELOCATION OF SEWERS OR DRAINS, SO THAT AN AS CONSTRUCTED DRAWING CAN BE PREPARED UPON COMPLETION OF THE PROJECT.
  - STUB CONNECTIONS TO ADOPTABLE MANHOLES SHALL BE MADE FROM VITRIFIED CLAY AND CONSIST OF TWO ROCKER PIPES LAID AT THE SAME GRADIENT AS THE UP OR DOWNSTREAM PIPE.
  - IF ANY SUB SOIL DRAINAGE SYSTEMS ARE UNCOVERED DURING THE WORKS CONTACT THE ENGINEER FOR INSTRUCTIONS. SUB SOIL DRAINS ARE TO BE DIVERTED AROUND NEW WORKS AND CONNECTED INTO THE SURFACE WATER.
  - NO PRIVATE AREAS ARE TO DRAIN ONTO ADOPTABLE AREAS AND VICE VERSA.
  - ALL EXISTING MANHOLE COVER'S, GULLIES, ETC. ARE TO BE RAISED/LOWERED TO SUIT NEW LEVELS.
  - IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CONFIRM THE LOCATION AND DEPTH OF ALL EXISTING SERVICES AND UTILITIES THAT MAY BE PRESENT.
  - UPON COMPLETION BUT PRIOR TO HANDOVER, CONTRACTOR TO CARRY OUT FULL CCTV SURVEY OF DRAINAGE SYSTEM WHICH IS TO BE REVIEWED BY ENGINEER TO ENSURE SATISFACTORY INSTALLATION.
  - MANHOLE AND CHAMBER COVER GRADES:

- 'A15' IN ALL LANDSCAPED AREAS AND ON FOOTPATHS
- 'B125' IN ALL DRIVEWAYS
- 'C250' IN PRIVATE PARKING AREAS
- 'D400' IN CARRIAGEWAY/ACCESS ROAD

Prefixed to drawing numbers shall signify the following:-

PL = PLANNING	Shall not be used for contract or construction purposes
P = PRELIMINARY	Shall not be used for contract or construction purposes
T = TENDER	Shall not be used for construction purposes
C = CONSTRUCTION	These are the only drawings that shall be used for construction purposes
R = RECORD	Record of actual completed work

P1	25.03.25	UPDATED TO SOAKAWAY	KCK	CS	CS
P	15.01.25	PRELIMINARY ISSUE	KCK	CS	CS
REV	DATE	DESCRIPTION	BY	CHK	APP

**cgs**  
**civils**  
Consulting Civil Engineers

CLIENT: LEONARD WOODCOCK

ARCHITECT: HELYER DAVIES ARCHITECTS

JOB TITLE: 16 SWANBOURNE ROAD, LITTLEHAMPTON, BN17 6HS

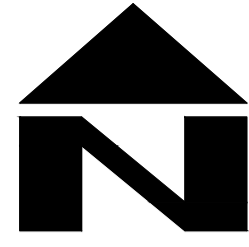
DRAWING TITLE: PROPOSED CONTRIBUTING AREA

DRAWN: KCK	ENGINEER: TZ	CHECKED: CS	APPROVED: CS
DATE: JANUARY 2025	SCALE @ A1: 1:100		
JOB No: C3489	STATUS: P	DRAWING No: 201	REV: P1

CONTRIBUTING AREA PLAN (1:100)

	Proposed roof area : 0.0049 ha		Proposed permeable area : 0.002 ha
	Existing roof area : 0.005 ha		Proposed permeable patio area (self-draining area - excluded from drainage calculations)

**PRELIMINARY**



DESIGN SUBJECT TO THE APPROVAL OF:  
PLANNING AUTHORITY  
BUILDING CONTROL  
WATER AUTHORITY

DESIGN SUBJECT TO THE CONFIRMATION OF:  
EXTERNAL LEVELS DESIGN  
LOCATION AND DEPTH OF EXISTING UTILITIES  
ROOT PROTECTION AREAS

**DRAINAGE LEGEND**

**EXISTING FEATURES**

Ex FWD Existing combined water sewer/drain and manhole

**PROPOSED FEATURES**

- SWD Surface Water Drainage
- FWD Foul Drainage
- Rainwater pipe (as taken from ARC Architecture, 'Site Plan', Rev No: 9839/1001, date November 2024)
- Storm water access chamber (3000)
- Storm water inspection chamber (4500)
- Storm water catchpit chamber (4500)
- Storm water rodding eye
- Extent of permeable paving with porous sub-base
- Storm water orifice flow control chamber (5000)
- Soil stack (type TBC by architect/m&e engineer)
- Foul water access chamber (3000)
- Foul water inspection chamber (4500)
- Proposed permeable patio - Hydropave Textured Slabs by Tobemore or equivalent
- Finished floor level (Assumed - TBC by the Architect)
- 1000 4.5m 1:100 Z BED
- Pipe info - diameter, length, gradient, bedding type

**ABBREVIATIONS**

- MH - MANHOLE
- IC - INSPECTION CHAMBER
- AC - ACCESS CHAMBER
- CP - CATCHPIT
- BC - BRAKE CHAMBER
- RE - RODDING EYE
- IL - INVERT LEVEL
- SL - SUMP LEVEL
- RA - RESTRICTED ACCESS COVER
- CL - COVER LEVEL
- TL - TOP OF CELLULAR SA
- BL - BASE OF CELLULAR SA
- FL - FORMATION LEVEL

**STANDARD DRAINAGE NOTES**

1. DO NOT SCALE FROM THIS DRAWING. REFER TO FIGURED DIMENSIONS ONLY. THE CONTRACTOR SHOULD CHECK ALL DIMENSIONS ON SITE.
2. ALL DIMENSIONS IN MILLIMETRES AND ALL LEVELS ARE IN METERS UNLESS NOTED OTHERWISE.
3. THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT ARCHITECT AND ENGINEERING DETAILS, DRAWINGS AND SPECIFICATIONS.
4. ANY DISCREPANCIES SHOULD BE REPORTED TO THE ARCHITECT AND/OR ENGINEER IMMEDIATELY, SO THAT CLARIFICATION CAN BE SOUGHT PRIOR TO THE COMMENCEMENT OF WORK.
5. BEFORE COMMENCING CONSTRUCTION THE CONTRACTOR MUST CHECK THE INVERT LEVELS OF EXISTING SEWERS TO WHICH CONNECTIONS ARE MADE. IN ADDITION THE CONTRACTOR MUST LOCATE AND DETERMINE INVERT LEVELS OF THE EXISTING SEWERS TO WHICH CONNECTIONS ARE PROPOSED. ANY DISCREPANCIES ARE TO BE NOTIFIED TO THE ENGINEER IMMEDIATELY, PRIOR TO CONSTRUCTION.
6. ALL DRAINAGE WORKS SHOULD COMMENCE AT THE PROPOSED DOWNSTREAM CONNECTION POINT. THE WORKS CONTINUING UPSTREAM FOLLOWING CONFIRMATION OF THE TIE-IN INVERT LEVELS TO THE ENGINEER. CONNECTIONS TO MANHOLES OR LARGER SIZED PIPES ETC. SHOULD BE SOFFIT TO SOFFIT UNLESS OTHERWISE INSTRUCTED BY THE ENGINEER, IF THIS IS NOT POSSIBLE INFORM THE ENGINEER IMMEDIATELY.
7. COVER LEVELS SHOWN ARE APPROXIMATE. COVERS AND FRAMES SHALL BE SET TO FINISHED GROUND LEVELS AND FALLS.
8. ALL UN-REFERENCED PIPES ARE TO BE 100mm DIA
9. ALL PIPES TO BE ADOPTED, OR CONNECTING TO ADOPTED SEWERS, TO BE VITRIFIED CLAY TO BS EN 285 AND BS65 (SWS ONLY), OR CONCRETE PIPES TO BE EN 1916 AND BS5911-PART 1.
10. ROAD GULLY OUTLET PIPES ARE TO BE 150mm DIA. WITH CONCRETE SURROUND AND FLEXIBLE JOINTS. ALL GULLIES SHALL BE FITTED WITH GRADE D400 GRATINGS AND FRAMES TO BS EN124, UNLESS OTHERWISE STATED.
11. ALL ADOPTABLE SEWERS SHALL BE CONSTRUCTED TO THE STANDARDS AND SPECIFICATION LAID DOWN IN 'SEWERS FOR ADOPTION' 6th EDITION, WITH A VIEW TO ADOPTION UPON COMPLETION OF WORKS.
12. ALL PRIVATE DRAINAGE TO BE IN ACCORDANCE WITH THE BUILDING REGULATIONS APPROVED DOCUMENT PART-H, AND TO THE SATISFACTION OF THE BUILDING CONTROL INSPECTOR.
13. THE CONTRACTOR IS TO KEEP A RECORD OF ANY VARIATIONS MADE ON SITE, INCLUDING THE RELOCATION OF SEWERS OR DRAINS, SO THAT AN AS CONSTRUCTED DRAWING CAN BE PREPARED UPON COMPLETION OF THE PROJECT.
14. STUB CONNECTIONS TO ADOPTABLE MANHOLES SHALL BE MADE FROM VITRIFIED CLAY AND CONSIST OF TWO ROCKER PIPES LAID AT THE SAME GRADIENT AS THE UP OR DOWNSTREAM PIPE.
15. IF ANY SUB SOIL DRAINAGE SYSTEMS ARE UNCOVERED DURING THE WORKS CONTACT THE ENGINEER FOR INSTRUCTIONS. SUB SOIL DRAINS ARE TO BE DIVERTED AROUND NEW WORKS AND CONNECTED INTO THE SURFACE WATER.
16. NO PRIVATE AREAS ARE TO DRAIN ONTO ADOPTABLE AREAS AND VICE VERSA.
17. ALL EXISTING MANHOLE COVER'S, GULLIES, ETC. ARE TO BE RAISED/LOWERED TO SUIT NEW LEVELS.
18. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CONFIRM THE LOCATION AND DEPTH OF ALL EXISTING SERVICES AND UTILITIES THAT MAY BE PRESENT
19. UPON COMPLETION BUT PRIOR TO HANDOVER, CONTRACTOR TO CARRY OUT FULL CCTV SURVEY OF DRAINAGE SYSTEM WHICH IS TO BE REVIEWED BY ENGINEER TO ENSURE SATISFACTORY INSTALLATION
20. MANHOLE AND CHAMBER COVER GRADES:

- 'A15' IN ALL LANDSCAPED AREAS AND ON FOOTPATHS
- 'B125' IN ALL DRIVEWAYS
- 'C250' IN PRIVATE PARKING AREAS
- 'D400' IN CARRIAGEWAY/ACCESS ROAD

Prefixed to drawing numbers shall signify the following:-

- PL = PLANNING **Shall not be used for contract or construction purposes**
- P = PRELIMINARY **Shall not be used for contract or construction purposes**
- T = TENDER **Shall not be used for construction purposes**
- C = CONSTRUCTION **These are the only drawings that shall be used for construction purposes**
- R = RECORD **Record of actual completed work**

P-	01.04.25	PRELIMINARY ISSUE	KCK	CS	CS
REV	DATE	DESCRIPTION	BY	CHK	APP

**cgs civils**  
Consulting Civil Engineers

CLIENT: LEONARD WOODCOCK

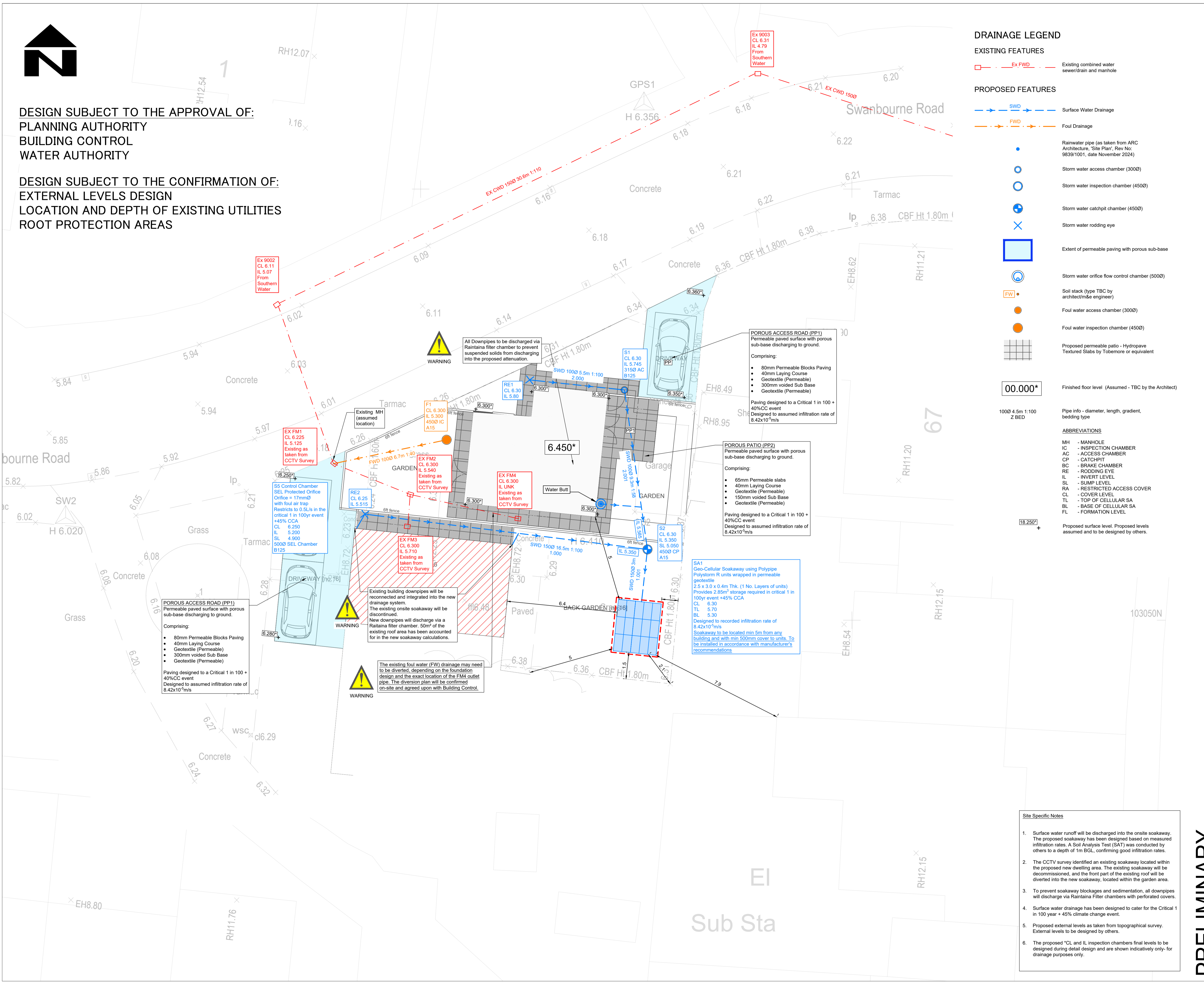
ARCHITECT: HELYER DAVIES ARCHITECTS

JOB TITLE: 16 SWANBOURNE ROAD, LITTLEHAMPTON, BN17 6HS

DRAWING TITLE: PROPOSED DRAINAGE STRATEGY

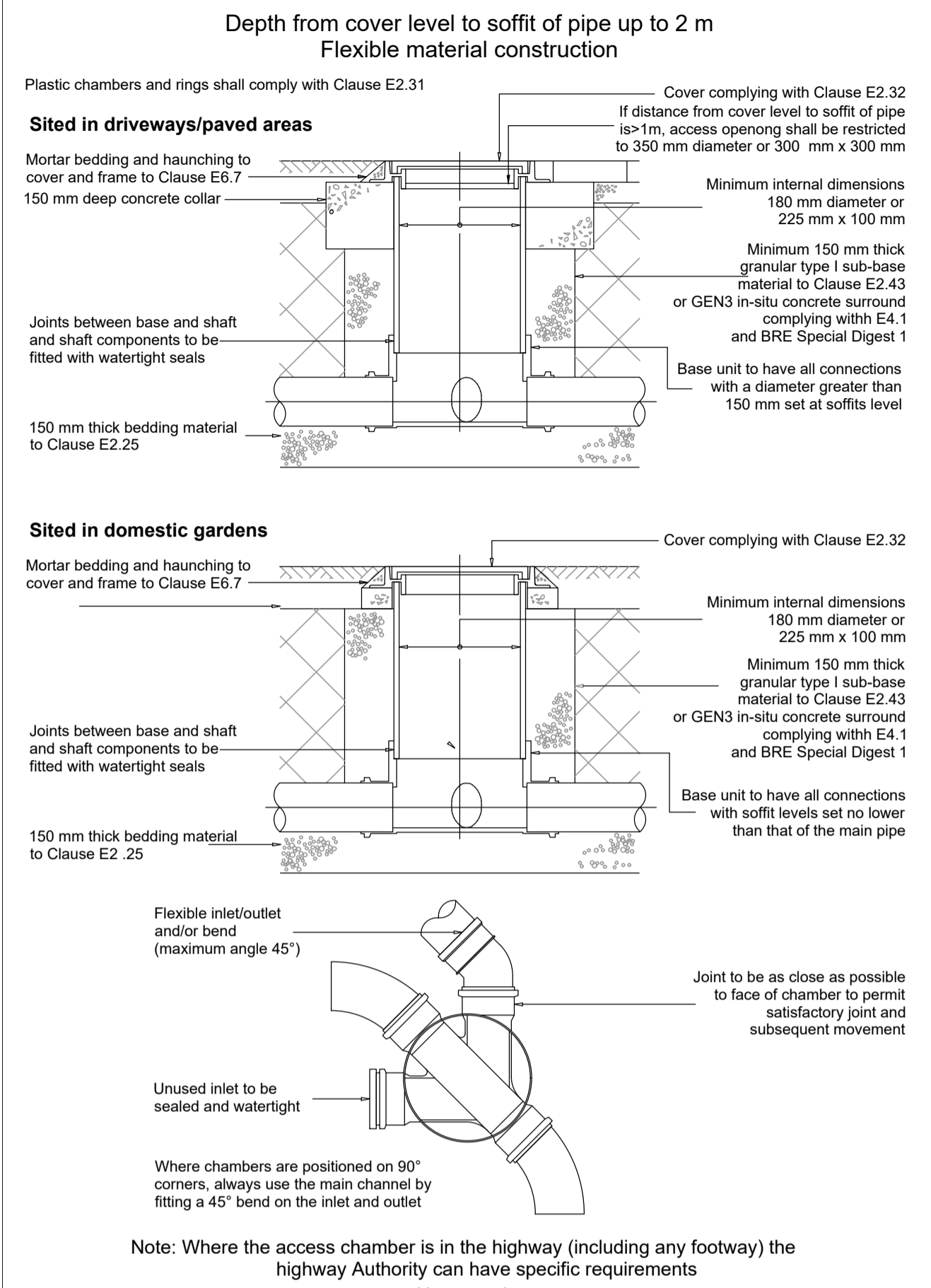
DRAWN: KCK	ENGINEER: TZ	CHECKED: CS	APPROVED: CS
DATE: JANUARY 2025	SCALE @ A1: 1:100		
JOB No: C3489	STATUS: P	DRAWING No: 101	REV: P-

- Site Specific Notes**
1. Surface water runoff will be discharged into the onsite soakaway. The proposed soakaway has been designed based on measured infiltration rates. A Soil Analysis Test (SAT) was conducted by others to a depth of 1m BGL, confirming good infiltration rates.
  2. The CCTV survey identified an existing soakaway located within the proposed new dwelling area. The existing soakaway will be decommissioned, and the front part of the existing roof will be diverted into the new soakaway, located within the garden area.
  3. To prevent soakaway blockages and sedimentation, all downpipes will discharge via Raintaina Filter chambers with perforated covers.
  4. Surface water drainage has been designed to cater for the Critical 1 in 100 year + 45% climate change event.
  5. Proposed external levels as taken from topographical survey. External levels to be designed by others.
  6. The proposed 'CL and IL inspection chambers final levels to be designed during detail design and are shown indicatively only- for drainage purposes only.

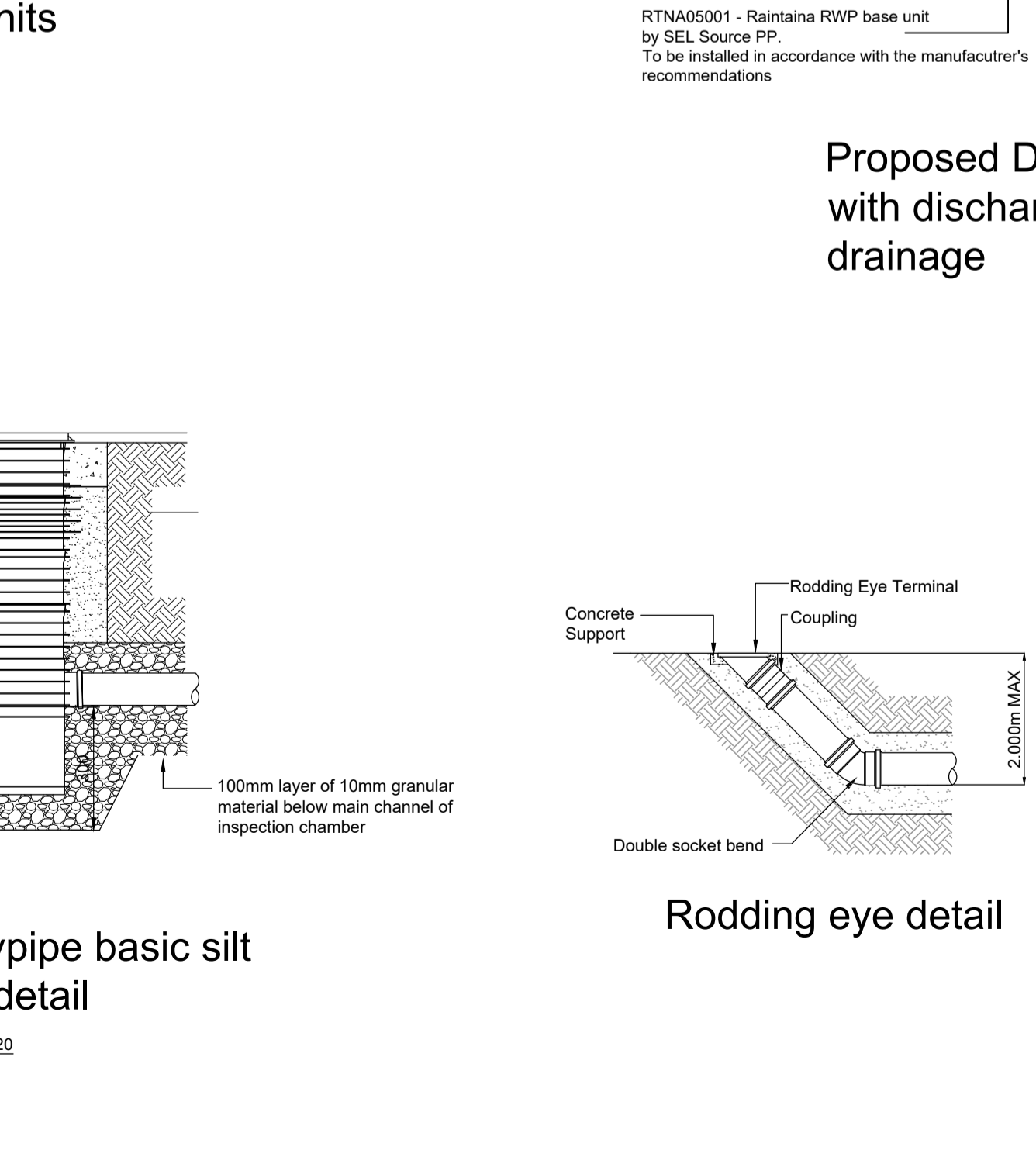
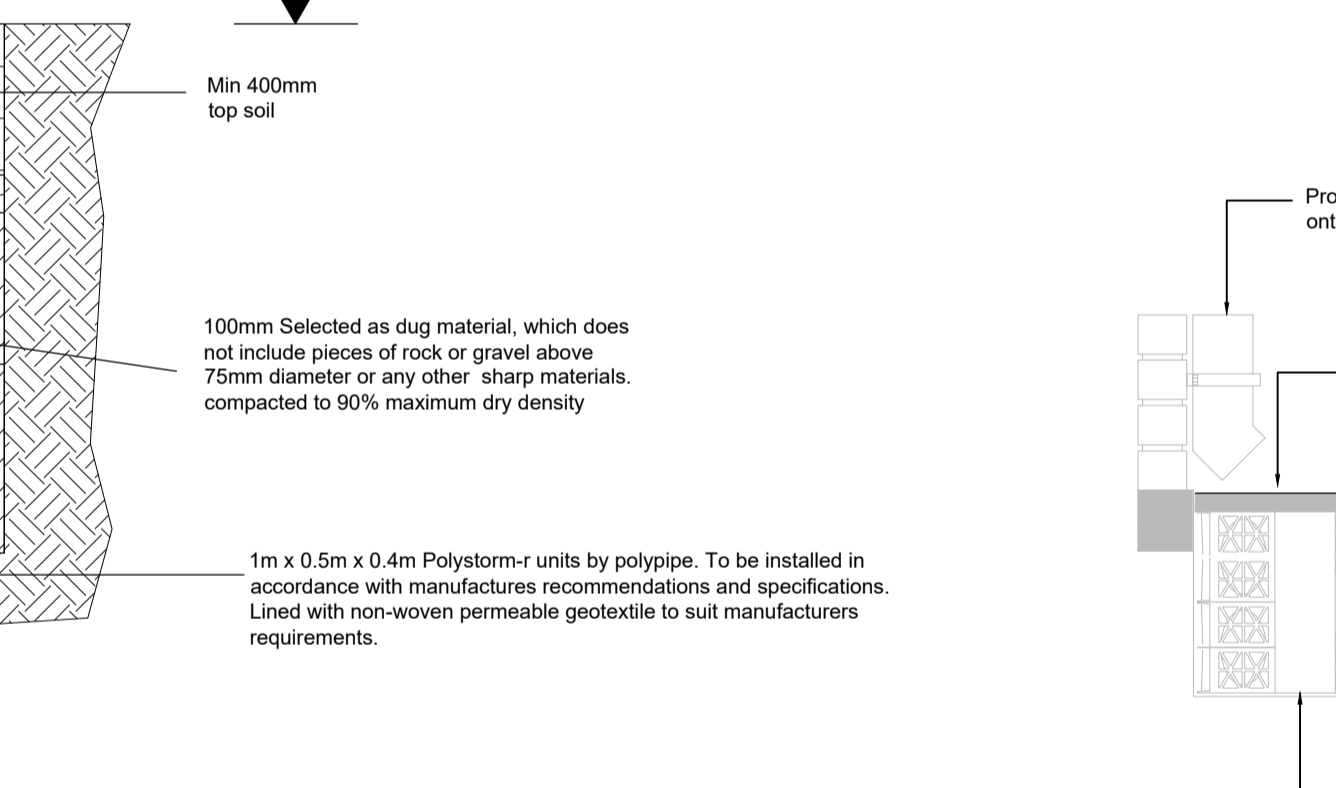
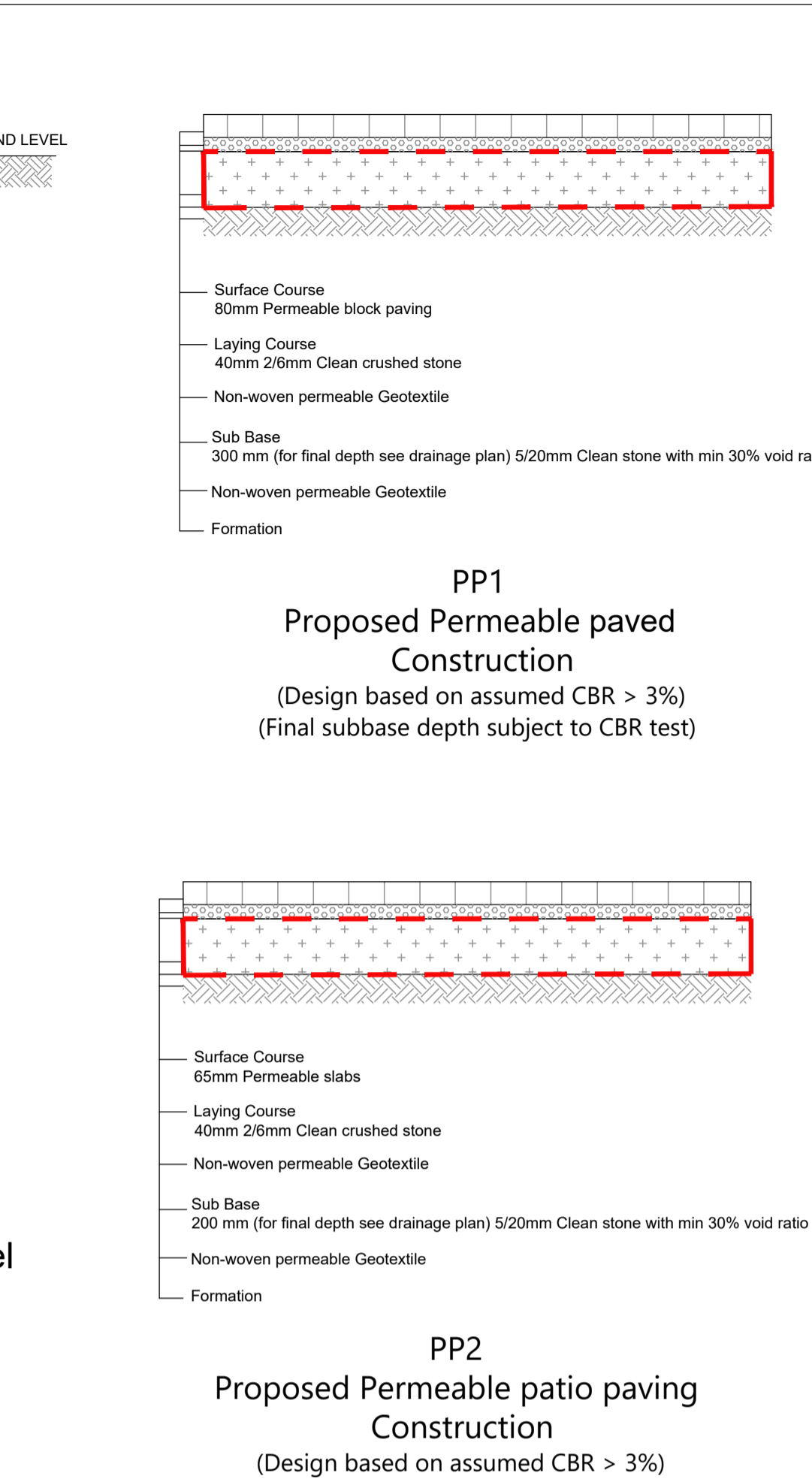
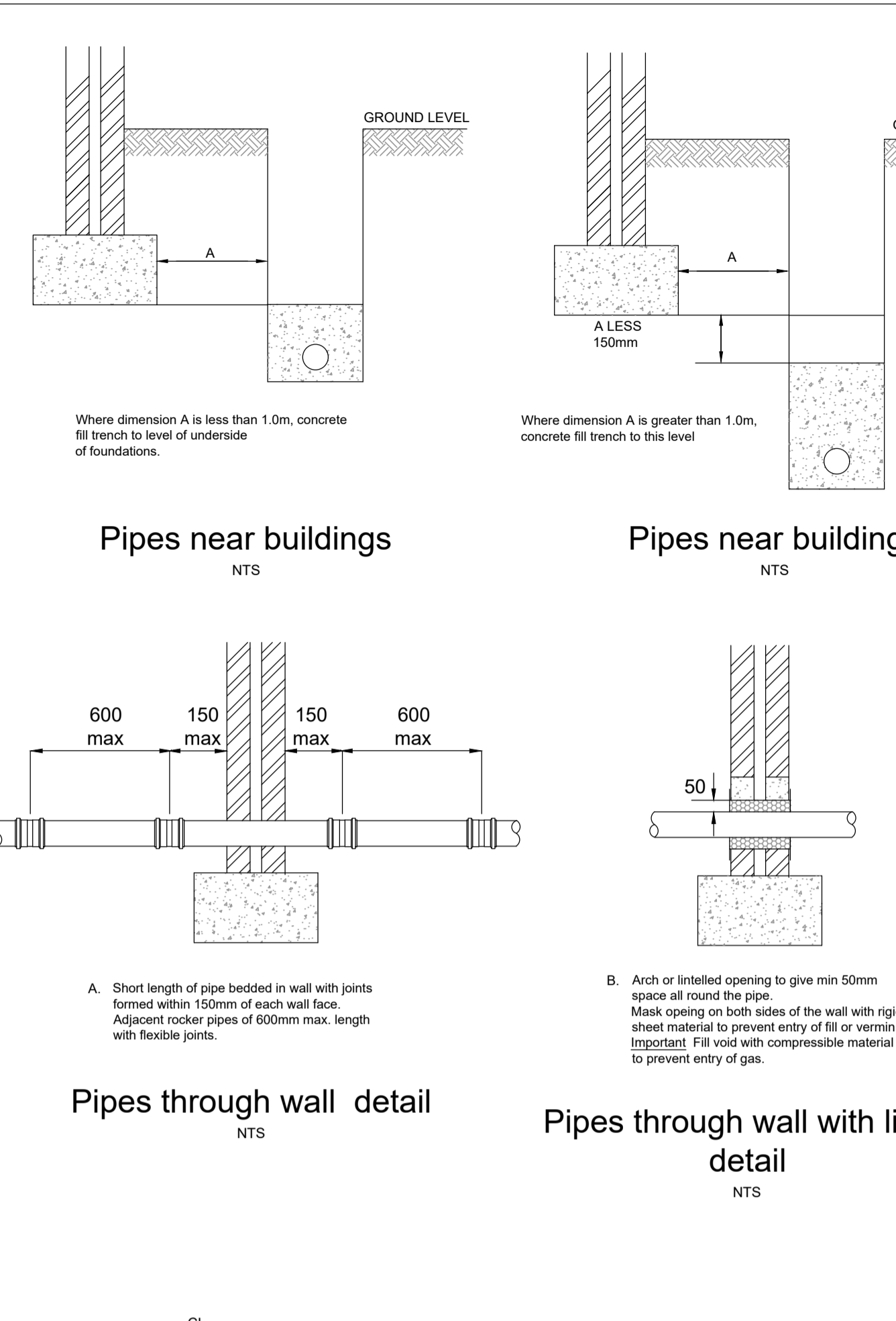
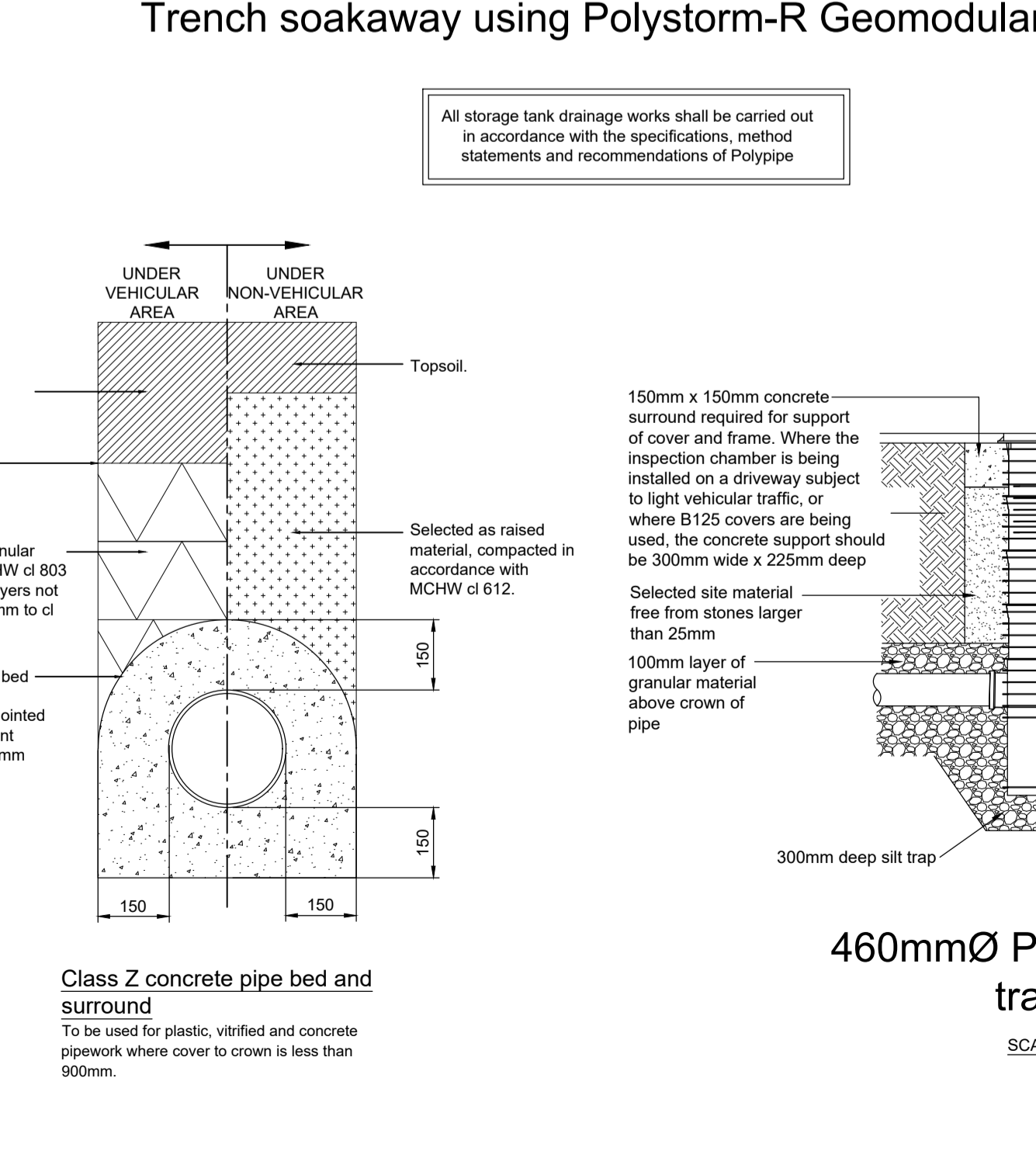
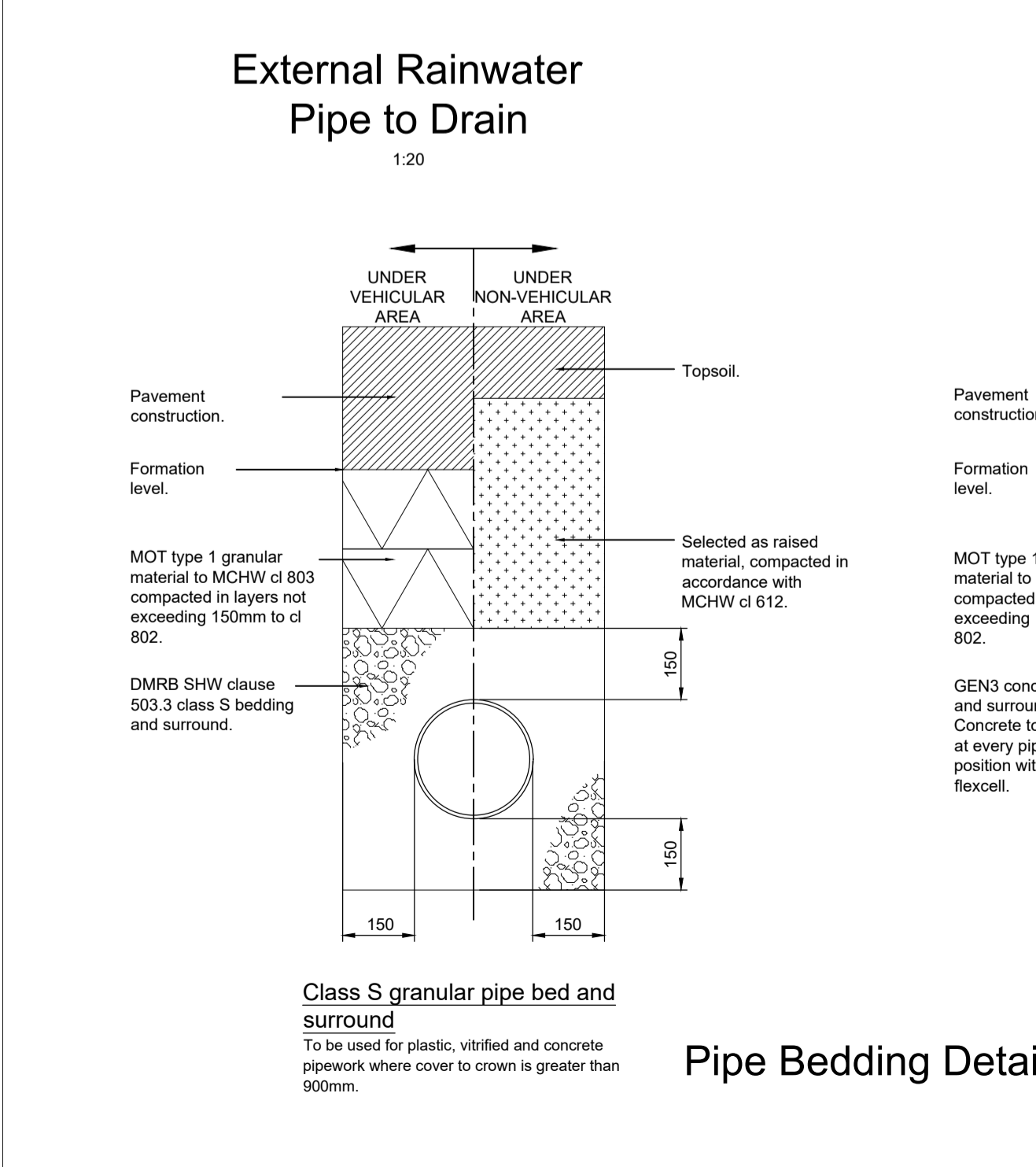
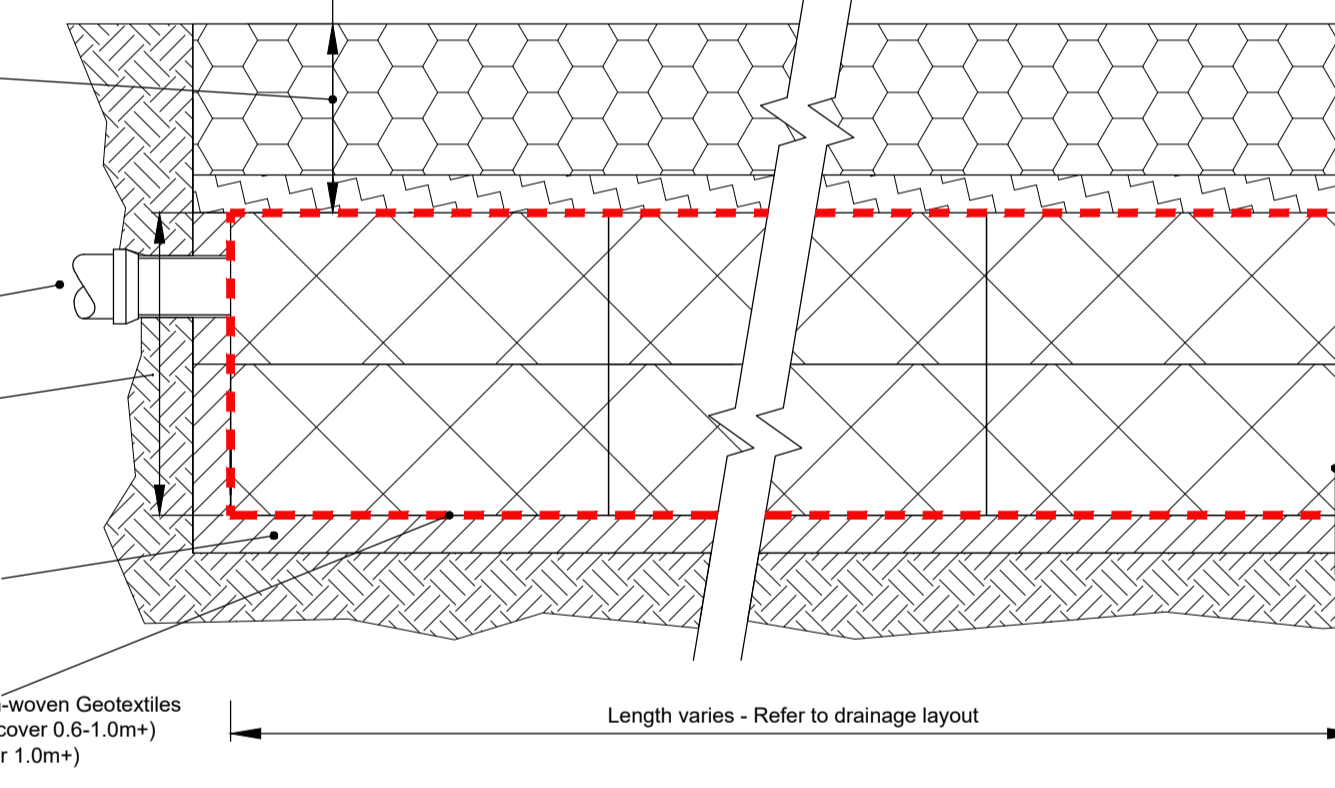
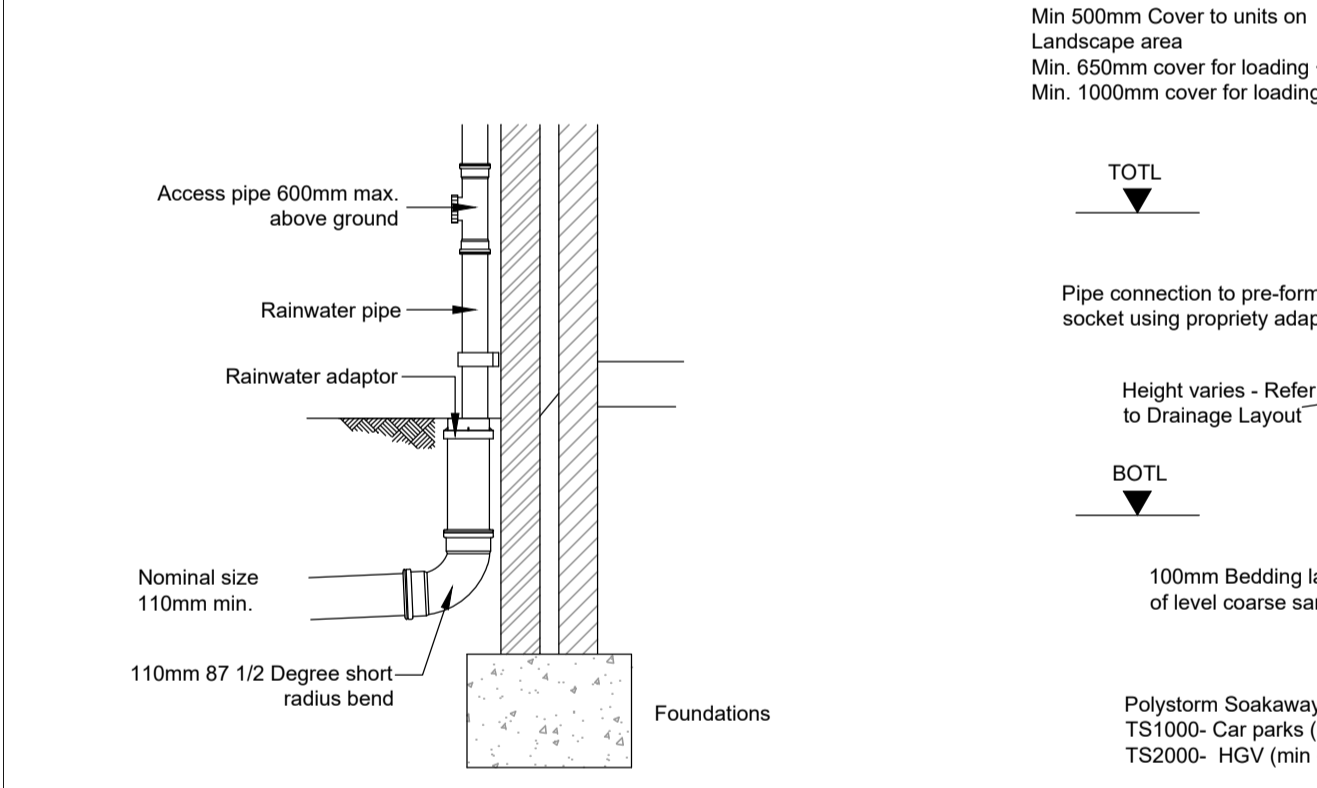
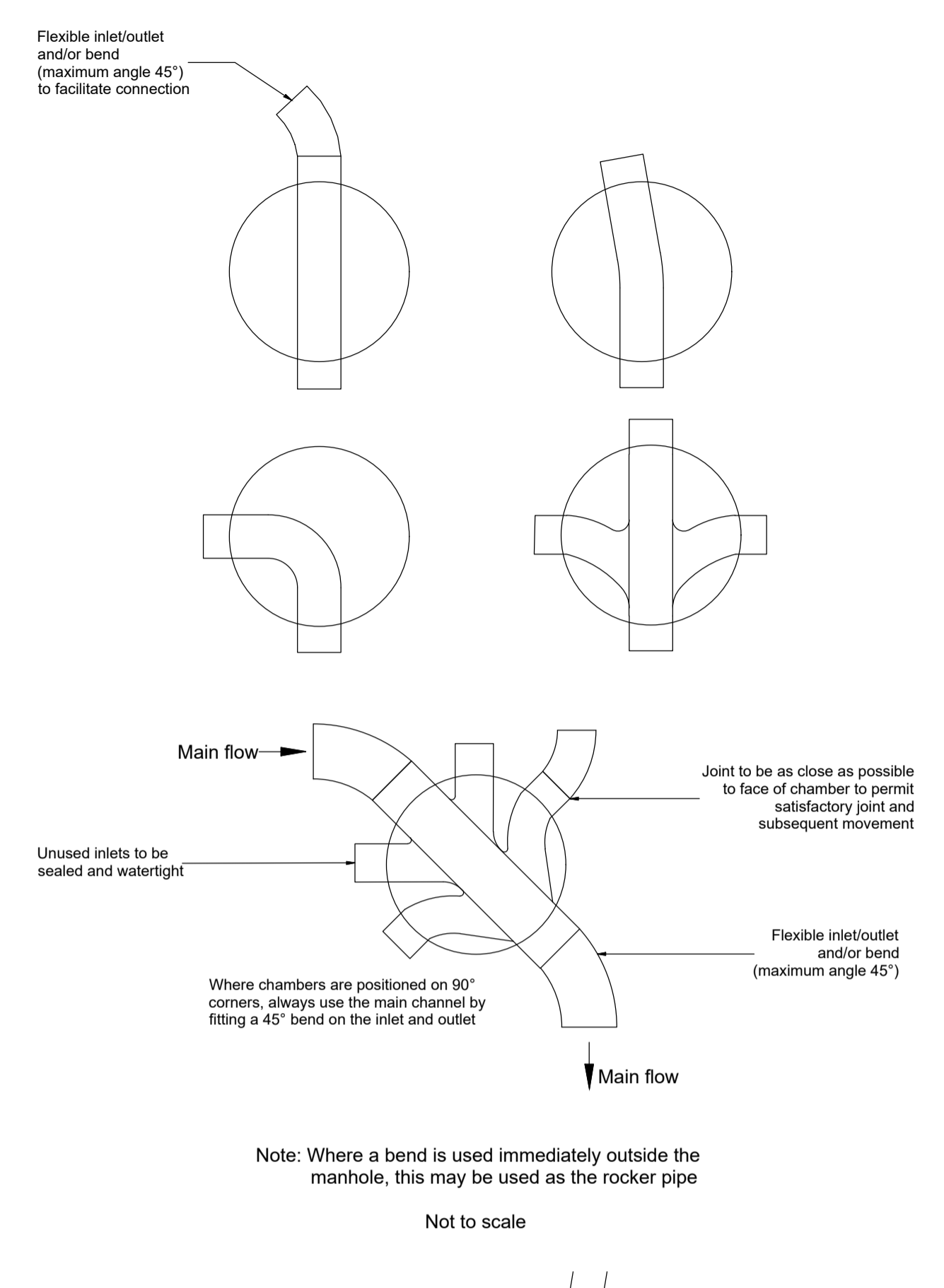


**PRELIMINARY**

### FIGURE B 23 TYPICAL INSPECTION CHAMBER DETAIL - TYPE E



### FIGURE B 22 TYPICAL BASE LAYOUTS FOR TYPE D CHAMBERS



- STANDARD DRAINAGE NOTES
- DO NOT SCALE FROM THIS DRAWING. REFER TO FIGURED DIMENSIONS ONLY. THE CONTRACTOR SHOULD CHECK ALL DIMENSIONS ON SITE.
  - ALL DIMENSIONS IN MILLIMETRES AND ALL LEVELS ARE IN METERS UNLESS NOTED OTHERWISE.
  - THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT ARCHITECT AND ENGINEERING DETAILS, DRAWINGS AND SPECIFICATIONS.
  - ANY DISCREPANCIES SHOULD BE REPORTED TO THE ARCHITECT AND/OR ENGINEER IMMEDIATELY, SO THAT CLARIFICATION CAN BE SOUGHT PRIOR TO THE COMMENCEMENT OF WORK.
  - BEFORE COMMENCING CONSTRUCTION THE CONTRACTOR MUST CHECK THE INVERT LEVELS OF EXISTING SEWERS TO WHICH CONNECTIONS ARE MADE. IN ADDITION THE CONTRACTOR MUST LOCATE AND DETERMINE INVERT LEVELS OF THE EXISTING SPURS TO WHICH CONNECTIONS ARE PROPOSED. ANY DISCREPANCIES ARE TO BE NOTIFIED TO THE ENGINEER IMMEDIATELY, PRIOR TO CONSTRUCTION.
  - ALL DRAINAGE WORKS SHOULD COMMENCE AT THE PROPOSED DOWNSTREAM CONNECTION POINT. THE WORKS CONTINUING UPSTREAM FOLLOWING CONFIRMATION OF THE TIE-IN INVERT LEVELS TO THE ENGINEER. CONNECTIONS TO MANHOLES OR LARGER SIZED PIPES ETC. SHOULD BE SOFFIT TO SOFFIT UNLESS OTHERWISE INSTRUCTED BY THE ENGINEER, IF THIS IS NOT POSSIBLE INFORM THE ENGINEER IMMEDIATELY.
  - COVER LEVELS SHOWN ARE APPROXIMATE. COVERS AND FRAMES SHALL BE SET TO FINISHED GROUND LEVELS AND FALLS.
  - ALL UN-REFERENCED PIPES ARE TO BE 100mm DIA
  - ALL PIPES TO BE ADOPTED, OR CONNECTING TO ADOPTED SEWERS, TO BE VITRIFIED CLAY TO BS EN 285 AND BS65 (SWS ONLY), OR CONCRETE PIPES TO BE EN 1916 AND BS5911:PART 1.
  - ROAD GULLY OUTLET PIPES ARE TO BE 150mm DIA. WITH CONCRETE SURROUND AND FLEXIBLE JOINTS. ALL GULLIES SHALL BE FITTED WITH GRADE D400 GRATINGS AND FRAMES TO BS EN124, UNLESS OTHERWISE STATED.
  - ALL ADOPTABLE SEWERS SHALL BE CONSTRUCTED TO THE STANDARDS AND SPECIFICATION LAID DOWN IN 'SEWERS FOR ADOPTION' 6th EDITION, WITH A VIEW TO ADOPTION UPON COMPLETION OF WORKS.
  - ALL PRIVATE DRAINAGE TO BE IN ACCORDANCE WITH THE BUILDING REGULATIONS APPROVED DOCUMENT PART-H, AND TO THE SATISFACTION OF THE BUILDING CONTROL INSPECTOR.
  - THE CONTRACTOR IS TO KEEP A RECORD OF ANY VARIATIONS MADE ON SITE, INCLUDING THE RELOCATION OF SEWERS OR DRAINS, SO THAT AN AS CONSTRUCTED DRAWING CAN BE PREPARED UPON COMPLETION OF THE PROJECT.
  - STUB CONNECTIONS TO ADOPTABLE MANHOLES SHALL BE MADE FROM VITRIFIED CLAY AND CONSIST OF TWO ROCKER PIPES LAID AT THE SAME GRADIENT AS THE UP OR DOWNSTREAM PIPE.
  - IF ANY SUB SOIL DRAINAGE SYSTEMS ARE UNCOVERED DURING THE WORKS CONTACT THE ENGINEER FOR INSTRUCTIONS. SUB SOIL DRAINS ARE TO BE DIVERTED AROUND NEW WORKS AND CONNECTED INTO THE SURFACE WATER.
  - NO PRIVATE AREAS ARE TO DRAIN INTO ADOPTABLE AREAS AND VICE VERSA.
  - ALL EXISTING MANHOLE COVER'S, GULLIES, ETC. ARE TO BE RAISED/LOWERED TO SUIT NEW LEVELS.
  - IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CONFIRM THE LOCATION AND DEPTH OF ALL EXISTING SERVICES AND UTILITIES THAT MAY BE PRESENT
  - UPON COMPLETION BUT PRIOR TO HANDOVER, CONTRACTOR TO CARRY OUT FULL CCTV SURVEY OF DRAINAGE SYSTEM WHICH IS TO BE REVIEWED BY ENGINEER TO ENSURE SATISFACTORY INSTALLATION
  - MANHOLE AND CHAMBER COVER GRADES:

- 'A15' IN ALL LANDSCAPED AREAS AND ON FOOTPATHS
  - 'B125' IN ALL DRIVEWAYS
  - 'C250' IN PRIVATE PARKING AREAS
  - 'D400' IN CARRIAGEWAY/ACCESS ROAD
- Prefix to drawing numbers shall signify the following:-
- PL = PLANNING **Shall not be used for contract or construction purposes**
  - P = PRELIMINARY **Shall not be used for contract or construction purposes**
  - T = TENDER **Shall not be used for construction purposes**
  - C = CONSTRUCTION These are the only drawings that shall be used for construction purposes
  - R = RECORD Record of actual completed work

REV	DATE	DESCRIPTION	BY	CHK	APP
P1	25.03.25	UPDATED TO SOAKAWAY	KCK	CS	CS
P-	15.01.25	PRELIMINARY ISSUE	KCK	CS	CS

**cgs civils**  
Consulting Civil Engineers

CLIENT: **LEONARD WOODCOCK**

ARCHITECT: **HELPER DAVIES ARCHITECTS**

JOB TITLE: **16 SWANBOURNE ROAD, LITTLEHAMPTON, BN17 6HS**

DRAWING TITLE: **PROPOSED TYPICAL CONSTRUCTION DETAILS**

DRAWN: <b>KCK</b>	ENGINEER: <b>TZ</b>	CHECKED: <b>CS</b>	APPROVED: <b>CS</b>
DATE: <b>JANUARY 2025</b>	SCALE @: <b>AS SHOWN</b>		
JOB No: <b>C3489</b>	STATUS: <b>P</b>	DRAWING No: <b>501</b>	REV: <b>P1</b>

**PRELIMINARY**

### Design Settings

Rainfall Methodology	FEH-22	Minimum Velocity (m/s)	1.00
Return Period (years)	2	Connection Type	Level Soffits
Additional Flow (%)	0	Minimum Backdrop Height (m)	0.200
CV	1.000	Preferred Cover Depth (m)	1.200
Time of Entry (mins)	4.00	Include Intermediate Ground	✓
Maximum Time of Concentration (mins)	30.00	Enforce best practice design rules	✓
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)
RE1	0.002	4.00	6.300	150	502956.320	103063.930	0.500
S1	0.003	4.00	6.300	315	502961.810	103063.350	0.555
S2			6.300	900	502963.150	103054.100	0.950
SA1			6.300	150	502962.390	103049.710	1.000
RE2	0.005	4.00	6.250	150	502946.739	103056.150	0.735
PP1	0.002		6.300		502963.447	103064.773	0.480

### 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	RE1	S1	5.521	0.600	5.800	5.745	0.055	100.0	100	4.12	50.0
2.001	S1	S2	9.347	0.600	5.745	5.585	0.160	58.4	100	4.27	50.0
1.001	S2	SA1	3.000	0.600	5.350	5.300	0.050	60.0	150	4.31	50.0
1.000	RE2	S2	16.539	0.600	5.515	5.350	0.165	100.2	150	4.27	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)	Pro Depth (mm)	Pro Velocity (m/s)
2.000	0.769	6.0	0.4	0.400	0.455	0.002	0.0	17	0.420
2.001	1.010	7.9	0.9	0.455	0.615	0.005	0.0	23	0.672
1.001	1.301	23.0	1.8	0.800	0.850	0.010	0.0	28	0.776
1.000	1.003	17.7	0.9	0.585	0.800	0.005	0.0	23	0.526

### 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	5.521	100.0	100	Circular	6.300	5.800	0.400	6.300	5.745	0.455
2.001	9.347	58.4	100	Circular	6.300	5.745	0.455	6.300	5.585	0.615
1.001	3.000	60.0	150	Circular	6.300	5.350	0.800	6.300	5.300	0.850
1.000	16.539	100.2	150	Circular	6.250	5.515	0.585	6.300	5.350	0.800

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
2.000	RE1	150	Manhole	Adoptable	S1	315	Manhole	Adoptable
2.001	S1	315	Manhole	Adoptable	S2	900	Manhole	Adoptable
1.001	S2	900	Manhole	Adoptable	SA1	150	Manhole	Adoptable
1.000	RE2	150	Manhole	Adoptable	S2	900	Manhole	Adoptable

**Manhole Schedule**

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)	
RE1	502956.320	103063.930	6.300	0.500	150					
						0	2.000	5.800	100	
S1	502961.810	103063.350	6.300	0.555	315		1	2.000	5.745	100
						0	2.001	5.745	100	
S2	502963.150	103054.100	6.300	0.950	900		1	2.001	5.585	100
						2	1.000	5.350	150	
						0	1.001	5.350	150	
SA1	502962.390	103049.710	6.300	1.000	150		1	1.001	5.300	150
RE2	502946.739	103056.150	6.250	0.735	150					
						0	1.000	5.515	150	
PP1	502963.447	103064.773	6.300	0.480		o				

**Simulation Settings**

Rainfall Methodology	FEH-22	Analysis Speed	Normal	Starting Level (m)	
Rainfall Events	Singular	Skip Steady State	x	Check Discharge Rate(s)	x
Summer CV	1.000	Drain Down Time (mins)	240	Check Discharge Volume	x
Winter CV	1.000	Additional Storage (m <sup>3</sup> /ha)	0.0		

**Storm Durations**

15 | 30 | 60 | 120 | 180 | 240 | 360 | 480 | 600 | 720 | 960 | 1440

Return Period (years)	Climate Change (CC %)	Additional Area (A %)	Additional Flow (Q %)
10	0	0	0
30	0	0	0
30	40	0	0
100	0	0	0
100	45	0	0

**Node S5 Online Orifice Control**

Flap Valve	x	Design Depth (m)	0.600	Discharge Coefficient	0.600
Replaces Downstream Link	✓	Design Flow (l/s)	0.5		
Invert Level (m)	0.000	Diameter (m)	0.017		

### Node SA1 Soakaway Storage Structure

Base Inf Coefficient (m/hr)	0.30300	Invert Level (m)	5.300	Depth (m)	0.400
Side Inf Coefficient (m/hr)	0.30300	Time to half empty (mins)	58	Inf Depth (m)	
Safety Factor	2.0	Pit Width (m)	2.500	Number Required	1
Porosity	0.95	Pit Length (m)	3.000		

### Node PP1 Carpark Storage Structure

Base Inf Coefficient (m/hr)	0.30300	Invert Level (m)	5.820	Slope (1:X)	80.0
Side Inf Coefficient (m/hr)	0.30300	Time to half empty (mins)	10	Depth (m)	0.350
Safety Factor	2.0	Width (m)	5.000	Inf Depth (m)	
Porosity	0.30	Length (m)	4.000		

### Approval Settings

Node Size	✓	Minimum Full Bore Velocity (m/s)	
Node Losses	✓	Maximum Full Bore Velocity (m/s)	3.000
Link Size	✓	Proportional Velocity	✓
Minimum Diameter (mm)	150	Return Period (years)	
Link Length	✓	Minimum Proportional Velocity (m/s)	0.750
Maximum Length (m)	100.000	Maximum Proportional Velocity (m/s)	3.000
Coordinates	✓	Surcharged Depth	✓
Accuracy (m)	1.000	Return Period (years)	
Crossings	✓	Maximum Surcharged Depth (m)	0.100
Cover Depth	✓	Flooding	✓
Minimum Cover Depth (m)		Return Period (years)	30
Maximum Cover Depth (m)	3.000	Time to Half Empty	x
Backdrops	✓	Discharge Rates	✓
Minimum Backdrop Height (m)		Discharge Volume	✓
Maximum Backdrop Height (m)	1.500	100 year 360 minute (m <sup>3</sup> )	
Full Bore Velocity	✓		

**Results for 10 year Critical Storm Duration. Lowest mass balance: 100.00%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m <sup>3</sup> )	Flood (m <sup>3</sup> )	Status
15 minute summer	RE1	10	5.825	0.025	0.8	0.0004	0.0000	OK
15 minute summer	S1	10	5.780	0.035	2.0	0.0028	0.0000	OK
60 minute summer	S2	46	5.491	0.141	3.1	0.0897	0.0000	OK
60 minute summer	SA1	47	5.491	0.191	4.2	1.3643	0.0000	OK
15 minute summer	RE2	10	5.550	0.035	2.1	0.0006	0.0000	OK
15 minute summer	PP1	11	5.855	0.035	0.8	0.0749	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m <sup>3</sup> )
15 minute summer	RE1	2.000	S1	0.8	0.406	0.132	0.0109
15 minute summer	S1	2.001	S2	2.0	0.823	0.251	0.0226
60 minute summer	S2	1.001	SA1	4.2	0.650	0.184	0.0522
60 minute summer	SA1	Infiltration		0.4			
15 minute summer	RE2	1.000	S2	2.1	0.535	0.118	0.1124
15 minute summer	PP1	Infiltration		0.6			

**Results for 30 year Critical Storm Duration. Lowest mass balance: 100.00%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m <sup>3</sup> )	Flood (m <sup>3</sup> )	Status
15 minute summer	RE1	10	5.829	0.029	1.1	0.0005	0.0000	OK
15 minute summer	S1	10	5.787	0.042	2.7	0.0033	0.0000	OK
60 minute summer	S2	48	5.562	0.212	4.4	0.1346	0.0000	SURCHARGED
60 minute summer	SA1	48	5.562	0.262	5.6	1.8687	0.0000	OK
60 minute summer	RE2	49	5.562	0.047	1.7	0.0008	0.0000	OK
15 minute summer	PP1	11	5.863	0.043	1.1	0.1143	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m <sup>3</sup> )
15 minute summer	RE1	2.000	S1	1.1	0.444	0.182	0.0137
15 minute summer	S1	2.001	S2	2.7	0.890	0.339	0.0282
60 minute summer	S2	1.001	SA1	5.6	0.730	0.245	0.0528
60 minute summer	SA1	Infiltration		0.4			
60 minute summer	RE2	1.000	S2	1.7	0.473	0.096	0.1845
15 minute summer	PP1	Infiltration		0.7			

**Results for 30 year +40% CC Critical Storm Duration. Lowest mass balance: 100.00%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m <sup>3</sup> )	Flood (m <sup>3</sup> )	Status
15 minute summer	RE1	10	5.834	0.034	1.5	0.0006	0.0000	OK
15 minute summer	S1	10	5.796	0.051	3.8	0.0040	0.0000	OK
120 minute summer	S2	90	5.686	0.336	3.1	0.2136	0.0000	SURCHARGED
120 minute summer	SA1	90	5.686	0.386	4.1	2.7562	0.0000	OK
120 minute summer	RE2	90	5.686	0.171	1.6	0.0031	0.0000	SURCHARGED
15 minute summer	PP1	12	5.875	0.055	1.5	0.1822	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m <sup>3</sup> )
15 minute summer	RE1	2.000	S1	1.5	0.472	0.248	0.0176
15 minute summer	S1	2.001	S2	3.8	0.969	0.478	0.0365
120 minute summer	S2	1.001	SA1	4.1	0.669	0.180	0.0528
120 minute summer	SA1	Infiltration		0.5			
120 minute summer	RE2	1.000	S2	1.6	0.378	0.089	0.2912
15 minute summer	PP1	Infiltration		0.9			

**Results for 100 year Critical Storm Duration. Lowest mass balance: 100.00%**

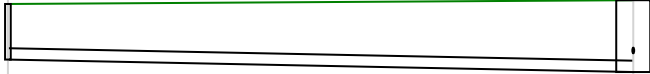
Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m <sup>3</sup> )	Flood (m <sup>3</sup> )	Status
15 minute summer	RE1	10	5.833	0.033	1.4	0.0006	0.0000	OK
15 minute summer	S1	10	5.793	0.048	3.4	0.0037	0.0000	OK
60 minute summer	S2	54	5.641	0.291	4.4	0.1849	0.0000	SURCHARGED
60 minute summer	SA1	54	5.641	0.341	5.4	2.4333	0.0000	OK
60 minute summer	RE2	54	5.641	0.126	2.2	0.0023	0.0000	OK
15 minute summer	PP1	12	5.872	0.052	1.4	0.1620	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m <sup>3</sup> )
15 minute summer	RE1	2.000	S1	1.4	0.474	0.232	0.0164
15 minute summer	S1	2.001	S2	3.4	0.944	0.428	0.0336
60 minute summer	S2	1.001	SA1	5.4	0.739	0.236	0.0528
60 minute summer	SA1	Infiltration		0.5			
60 minute summer	RE2	1.000	S2	2.2	0.456	0.122	0.2758
15 minute summer	PP1	Infiltration		0.9			

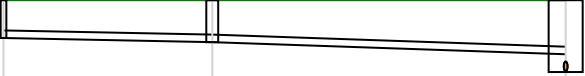
**Results for 100 year +45% CC Critical Storm Duration. Lowest mass balance: 100.00%**

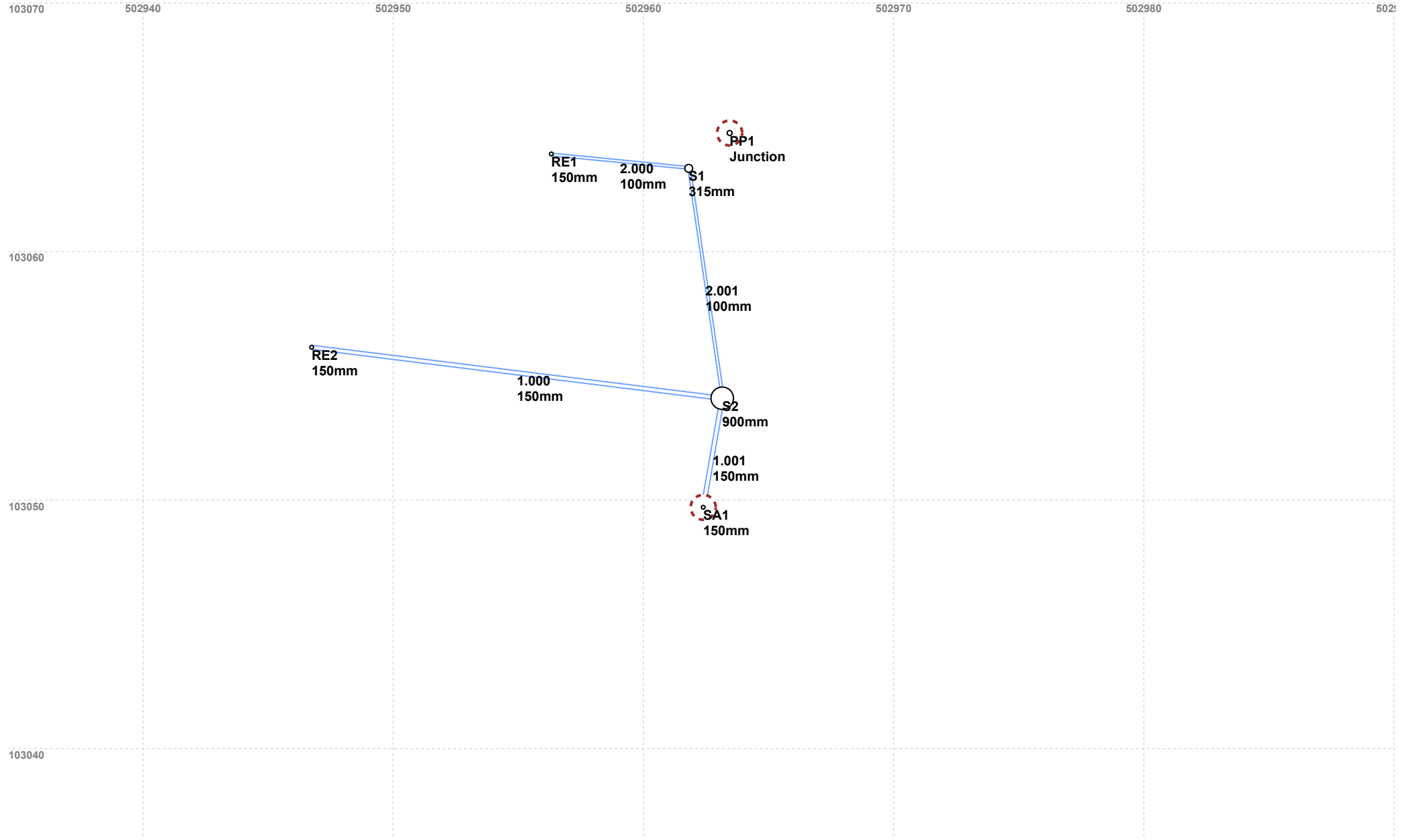
Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m <sup>3</sup> )	Flood (m <sup>3</sup> )	Status
60 minute winter	RE1	60	5.969	0.169	0.9	0.0030	0.0000	SURCHARGED
60 minute winter	S1	59	5.969	0.224	2.2	0.0175	0.0000	SURCHARGED
60 minute winter	S2	59	5.969	0.619	4.3	0.3934	0.0000	SURCHARGED
60 minute winter	SA1	59	5.969	0.669	3.9	2.8656	0.0000	OK
60 minute winter	RE2	59	5.969	0.454	2.2	0.0082	0.0000	FLOOD RISK
15 minute summer	PP1	12	5.895	0.075	2.0	0.3047	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m <sup>3</sup> )
60 minute winter	RE1	2.000	S1	0.9	0.428	0.149	0.0432
60 minute winter	S1	2.001	S2	2.3	0.846	0.286	0.0731
60 minute winter	S2	1.001	SA1	3.9	0.812	0.170	0.0528
60 minute winter	SA1	Infiltration		0.5			
60 minute winter	RE2	1.000	S2	2.1	0.434	0.121	0.2912
15 minute summer	PP1	Infiltration		0.9			

Node Name	RE2	S2
		
A4 drawing		
Hor Scale 200		
Ver Scale 100		
Datum (m) 0.000		
Link Name	1.000	
Section Type	150mm	
Slope (1:X)	100.2	
Cover Level (m)	6.250	6.300
Invert Level (m)	5.515	5.350
Length (m)	16.539	

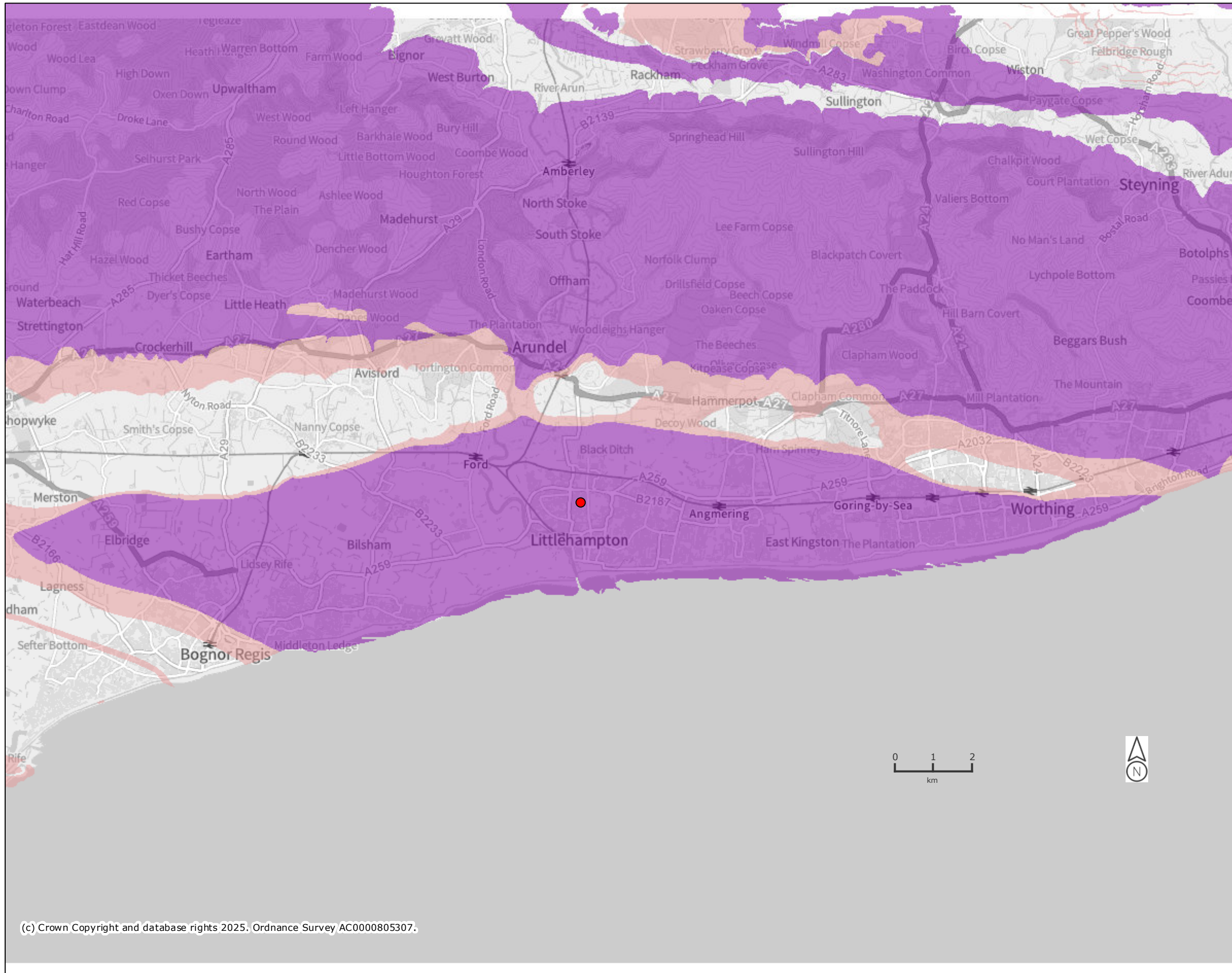
Node Name	S2	SA1
		
A4 drawing		
Hor Scale 200		
Ver Scale 100		
Datum (m) 0.000		
Link Name	1.001	
Section Type	150mm	
Slope (1:X)	60.0	
Cover Level (m)	6.300	6.300
Invert Level (m)	5.350	5.300
Length (m)	3.000	

Node Name	RE1	S1	S2
			
A4 drawing			
Hor Scale 200			
Ver Scale 100			
Datum (m) 0.000			
Link Name	2.000	2.001	
Section Type	100mm	100mm	
Slope (1:X)	100.0	58.4	
Cover Level (m)	6.300	6.300	6.300
Invert Level (m)	5.800	5.745 5.745	5.585
Length (m)	5.521	9.347	



## 7.4 Appendix D – EA Magic Maps

# Aquifer Designation Map (Bedrock)

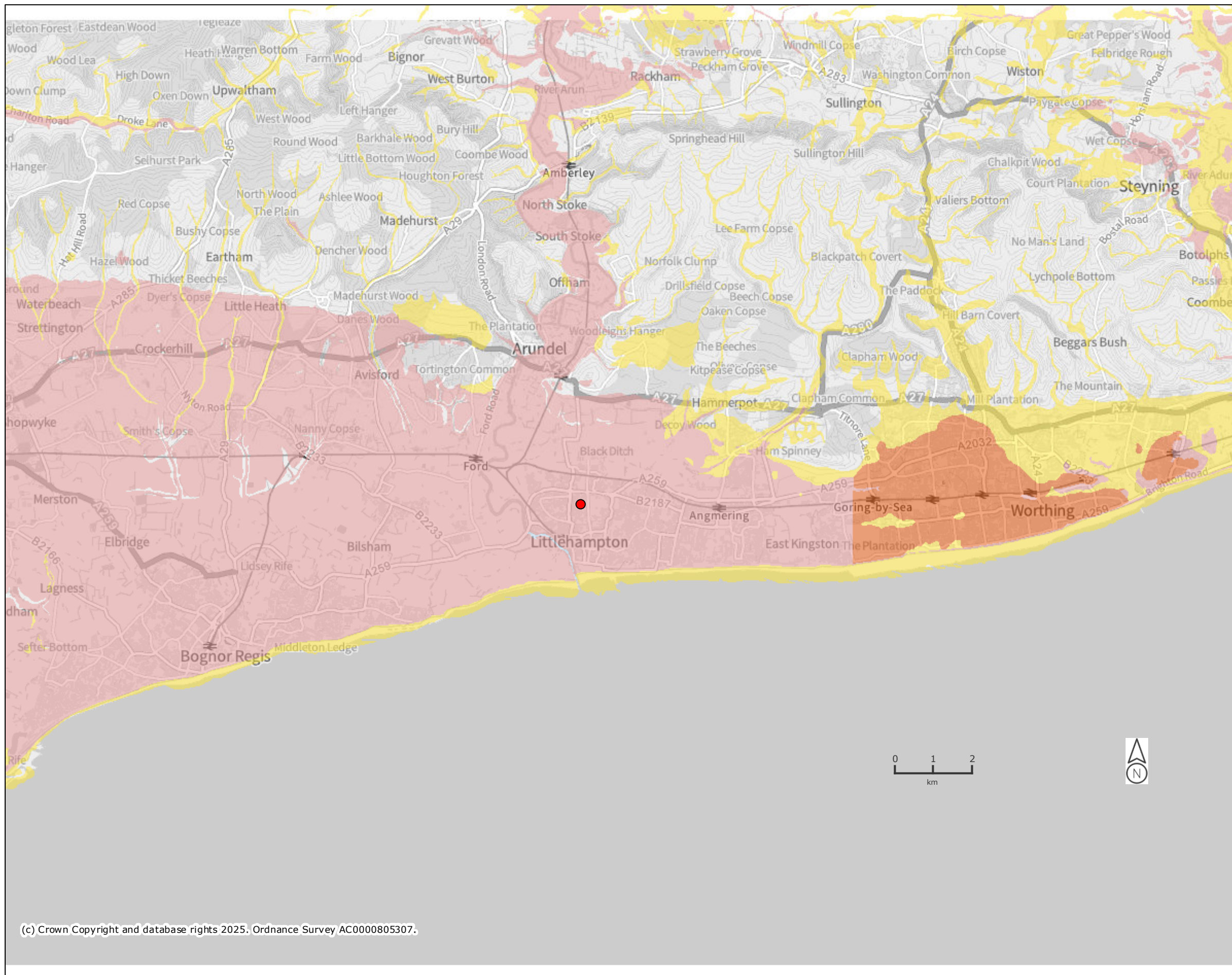


## Legend Aquifer Designation Map (Bedrock) (England)

- Principal
- Secondary A
- Secondary B
- Secondary (undifferentiated)
- Unproductive

Projection = OSGB36  
 xmin = 478700  
 ymin = 91220  
 xmax = 529500  
 ymax = 115500

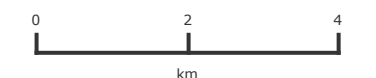
Map produced by MAGiC on 9 January, 2025.  
 Copyright resides with the data suppliers and the map must not be reproduced without their permission. Some information in MAGiC is a snapshot of the information that is being maintained or continually updated by the originating organisation. Please refer to the metadata for details as information may be illustrative or representative rather than definitive at this stage.



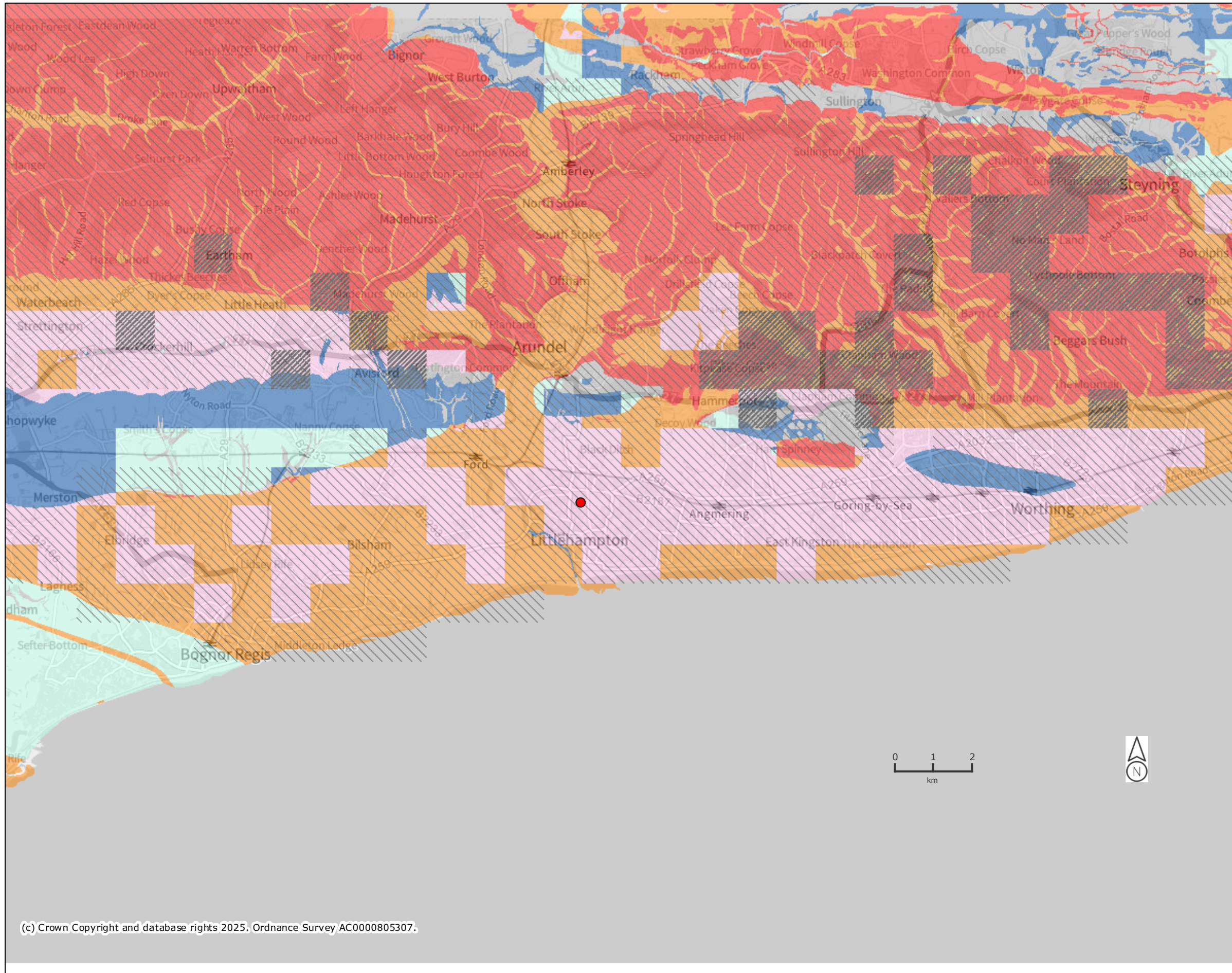
**Legend**  
**Aquifer Designation**  
**Map (Superficial**  
**Drift) (England)**

- Principal
- Secondary A
- Secondary B
- Secondary (undifferentiated)
- Unknown (lakes+landslip)
- Unproductive









Projection = OSGB36  
 xmin = 478700  
 ymin = 91220  
 xmax = 529500  
 ymax = 115500



Map produced by MAGiC on 9 January, 2025.  
 Copyright resides with the data suppliers and the map must not be reproduced without their permission. Some information in MAGiC is a snapshot of the information that is being maintained or continually updated by the originating organisation. Please refer to the metadata for details as information may be illustrative or representative rather than definitive at this stage.



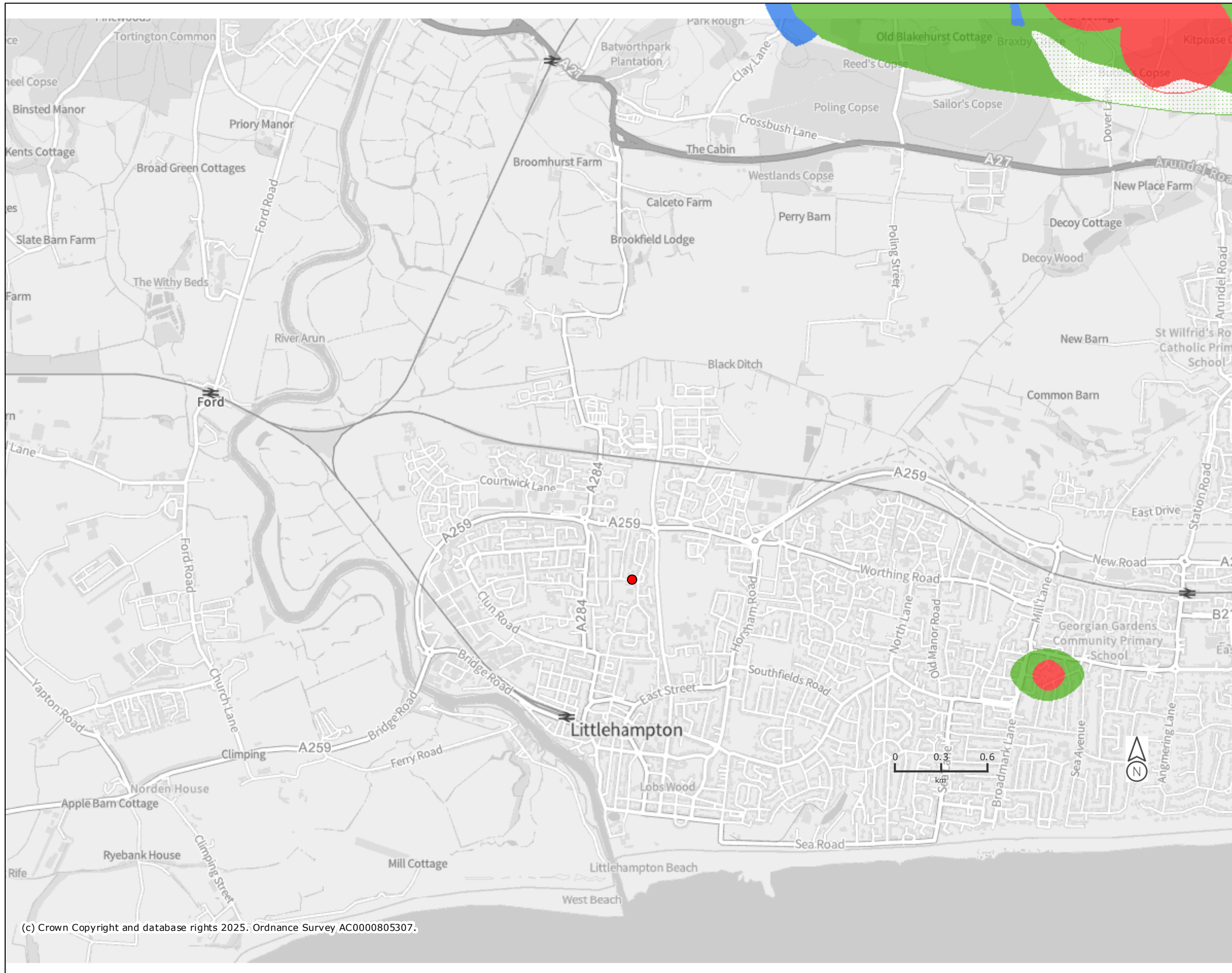
**Legend**  
**Groundwater Vulnerability Map (England)**

-  Local Information
-  Soluble Rock Risk
-  High
-  Medium - High
-  Medium
-  Medium - Low
-  Low
-  Unproductive

Projection = OSGB36  
 xmin = 478700  
 ymin = 91220  
 xmax = 529500  
 ymax = 115500



Map produced by MAGiC on 9 January, 2025.  
 Copyright resides with the data suppliers and the map must not be reproduced without their permission. Some information in MAGiC is a snapshot of the information that is being maintained or continually updated by the originating organisation. Please refer to the metadata for details as information may be illustrative or representative rather than definitive at this stage.



**Legend**

**Source Protection Zones merged (England)**

- Zone I - Inner Protection Zone
- Zone I - Subsurface Activity
- Zone II - Outer Protection Zone
- Zone II - Subsurface Activity
- Zone III - Total Catchment
- Zone III - Subsurface Activity
- Zone of Special Interest

Projection = OSGB36  
 xmin = 496600  
 ymin = 100600  
 xmax = 509300  
 ymax = 106700



Map produced by MAGiC on 9 January, 2025.  
 Copyright resides with the data suppliers and the map must not be reproduced without their permission. Some information in MAGiC is a snapshot of the information that is being maintained or continually updated by the originating organisation. Please refer to the metadata for details as information may be illustrative or representative rather than definitive at this stage.

7.5 **Appendix E – Maintenance Schedule**