

Birch Tree Farm

Foul Sewage and Surface Water Drainage Statement

February 2026





DOCUMENT CONTROL

Pelham Transport Consulting Ltd. has prepared this report in accordance with the instructions from Mr & Mrs R Upton of Birch Tree Farm, Ansty. Pelham Transport Consulting Ltd. shall not be liable for the use of any information contained herein for any purpose other than the sole and specific use for which it was prepared.

Report Reference	Issue	Description	Originator	Checked	Authorised
BTF/45891/003	V1	Issue	R Pelham 13/02/26	R Pelham 13/02/26	R Pelham 13/02/26

CONTACT:

Telephone: 07900 390535

Pelham Transport Consulting Ltd

3 Mill Hill Drive,

Shoreham-by-sea

West Sussex, BN43 5TJ

Contents

1	Introduction	4
1.1	Background.....	4
1.2	Report Structure	5
2	Planning Application and Requirements.....	6
2.1	Proposals	6
2.2	Planning Permission	6
3	Existing Site Details	10
3.1	Site Location	10
3.2	Existing Topography and Water Courses.....	11
3.3	Existing Sewers/Drains	11
3.4	Hydrogeology and Filtration	13
3.5	Flooding Risk Summary	15
4	Foul and Surface Water Drainage Strategy Summary	16
4.1	Introduction.....	16
4.2	Existing Site Drainage	16
4.3	Foul Water Drainage Proposals	16
4.4	Surface Water Drainage Strategy	16
5	Proposed Foul and Surface Water Drainage Scheme	18
5.1	Introduction.....	18
5.2	Proposed Foul Drainage Scheme.....	18
5.3	Proposed Surface Water Drainage Scheme	19
5.4	Maintenance Schedule	19
6	Hydraulic Calculations.....	22
6.1	Introduction.....	22
6.2	Pipe Sizing.....	22
6.3	Surface Water Storage Volume	24
7	Summary of Key Drainage Proposals.....	25
	Foul Water Drainage Strategy.....	25
	Surface Water Drainage Strategy	25
	Maintenance Measures	26

1 Introduction

1.1 Background

- 1.1.1 Pelham Transport Consulting have been commissioned by Mr & Mrs R Upton of Birch Tree Farm, Ansty to prepare a Foul Sewage and Surface Water Drainage Statement for the proposed application for a 3 bedroom property at Birch Tree Farm in Ansty.
- 1.1.2 The statement is to provide the relevant information as required to discharge the planning application condition as approved by Mid Sussex District Council (MSDC) under planning reference DM/25/2332 granted on 8th December 2025.
- 1.1.3 The statement has referred to the following guidance and standards in reviewing the foul and surface water requirements to provide a safe sustainable proposal for the site.
- Design and Construction Guidance for foul and surface water sewers (approved Version 2.2 29 June 2022)
 - National standards for sustainable drainage systems (SuDS) (Updated 30 July 2025)
 - The Building Regulations 2010 Drainage and waste disposal Part H (2015 edition)
 - Annex B National Build Standards Design and Construction of new gravity foul sewers and lateral drains Water Industry Act 1991 Section 106B Flood and Water Management Act 2010 Section 42 (December 2011, Defra)
 - The SuDS Manual (C753)
 - Guidance on the construction of SuDS (C768)
 - West Sussex LLFA Policy and EA Climate Change Guidance

1.2 Report Structure

1.2.1 The report has been prepared by Pelham Transport Consulting (PTC) and is structured as follows:

- Chapter 2 Planning Application and Requirements
- Chapter 3 Existing Site Details
- Chapter 4 Foul and Surface Water Strategy Summary
- Chapter 5 Proposed Foul and Surface Water Drainage Scheme
- Chapter 6 Hydraulic Calculations
- Chapter 7 Summary of Key Drainage Proposals

2 Planning Application and Requirements

2.1 Proposals

2.1.1 The site proposals are shown on Figure 2.1 below and include the following as set out in the Planning Application:

- Residential dwelling on ground and first floor;
- Ground Floor (90.2 sqm) including lounge, kitchen and dining room, utility room, 1 double bedroom and shower;
- First Floor (294 sqm) including 2 double bedrooms and a shower;
- Bin Store and Cycle Store; and
- Car Parking space on existing gravel surface

2.1.2 The location of the proposed dwelling is shown on in Appendix A.

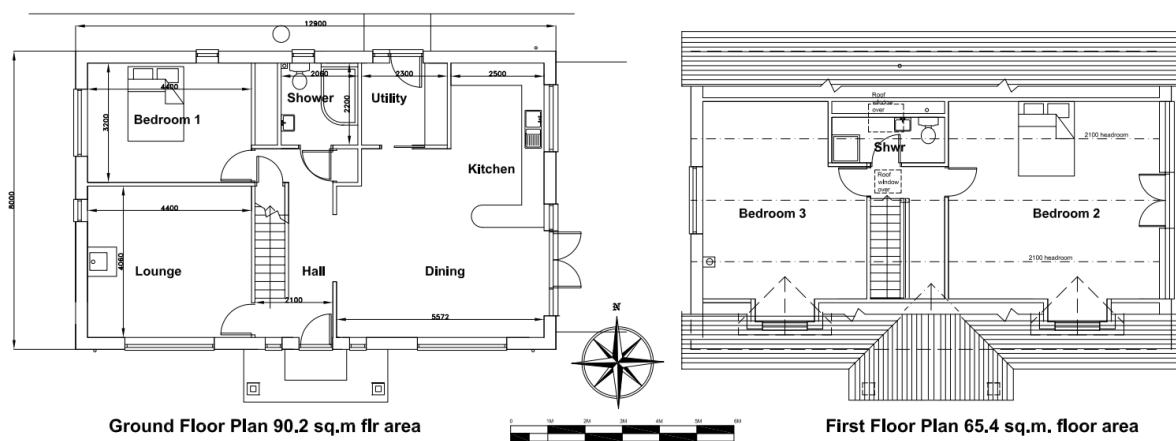


Figure 4.1 Ground Floor and First Floor Plan

2.2 Planning Permission

2.2.1 Permission in Principle application for one dwelling was permitted under reference DM/25/1453.

2.2.2 Following the in principle approval Planning Permission was submitted and was granted approval on 8th December 2025. A number of conditions were attached to the approval and one related to drainage was as follows:

Planning Condition 5. The development hereby permitted shall not commence unless and until details of the proposed foul and surface water drainage and means of disposal have been submitted to and approved in writing by the local planning authority. The building shall not be occupied or brought into use, until all the approved drainage works have been carried out in accordance with the agreed details.

Reason: To ensure that the proposal is satisfactorily drained and to accord with Policy DP41 of the Mid Sussex District Plan 2014 - 2031.

- 2.2.3 Policy DP41 relates to flood risk and drainage and requires development to demonstrate it is safe across its lifetime and not increase the risk of flooding elsewhere. Para 170 of the NPPF relates to planning and flood risk and states: 'Inappropriate development in areas at risk of flooding should be avoided by directing development away from areas at highest risk (whether existing or future). Where development is necessary in such areas, the development should be made safe for its lifetime without increasing flood risk elsewhere.' The site is at very low flood risk and the Council's Drainage and Flood Risk Engineer has raised no objection to the proposal subject to a condition securing further details. As such the application is considered to comply with Policy DP41 of the Mid Sussex District Plan.
- 2.2.4 During the planning application consultation the Flood Risk and Drainage Team made the following comments:
- 2.2.5 The Flood Risk and Drainage Team acknowledge that the information submitted in relation to the drainage strategy shows that, in principle, foul water drainage could, subject to detailed design, be provided on the site. The applicant is advised they will need to demonstrate there is sufficient capacity within the existing private foul drainage infrastructure to accept the additional flows at the detailed design stage. Evidence of communication from Southern Water will also be required regarding the increased flows at the detailed design stage. Information into our general requirements for detailed foul water drainage design is included within our 'General Drainage Information Guide'. This level of information will be required to address the recommended drainage condition. To ensure the final drainage design meets with the latest design requirements we would advise the applicant to confirm the design parameters required prior to undertaking detailed design.
- 2.2.6 The requirements under Mid Sussex District Council General Drainage Information Guide are as below:

Table 1: Detailed drainage design summary – surface water

Requirement
<i>For all designs</i>
Greenfield runoff rate details for the area to be drained (using FEH or a similar approved method)
On-site infiltration test results
Plans / details of areas to be drained based on finalised development plans
Calculations showing the system has been designed to cater for the 1 in 30 with climate change and 1 in 100 with climate change storm events

Calculations should use a CV value of 1.0
Detailed drainage plans, including invert levels and pipe diameters, showing entire drainage system
Maintenance and management plan
<i>For soakaways</i>
Sizing calculations (to cater for 6-hour, 1 in 100-year plus climate change event)
Half drain time (<24 hours)
Construction details
<i>For discharge to watercourse</i>
Discharge rate (1 in 1 or QBar Greenfield rate for drained area)
Outfall location and construction details
Attenuation sizing calculations (to cater for 1 in 100-year plus climate change event)
<i>For discharge to sewer</i>
Discharge rates (restricted to 1 in 1 or QBar Greenfield rate for drained area unless otherwise agreed with sewerage provider)
Discharge location and manhole number
Outline approval from sewerage provider in relation to connection, discharge rate and connection location
Attenuation sizing calculations (to cater for 1 in 100-year plus climate change event)

Table 2: Detailed drainage design requirements – foul water

Requirement
<i>For all designs</i>
Plans showing entire drainage system, including invert levels, pipe diameters, falls and outfall/connection location
Drainage systems should be located within land under the control of the applicant
Foul flow calculations and confirmation proposed system is sized appropriately
<i>For connection to main foul sewer</i>
Discharge location and manhole number

Evidence of communication with Water Authority regarding connection
<i>For non-mains system with drainage field</i>
Evidence of permeability (infiltration) test results specific to treated effluent drainage fields
Evidence that either: a) The system meets latest General Binding Rules, or b) An Environmental Permit application is to be submitted
<i>For non-mains system with discharge to open water</i>
Evidence that either: a) The system meets latest General Binding Rules, or b) An Environmental Permit application is to be submitted
Outfall location and construction details

3 Existing Site Details

3.1 Site Location

3.1.1 The site is located in Ansty accessed by a private lane to the north of the former Ansty Cross public house off Cuckfield Road. The private lane leads to Birch Tree Farm which includes a single-storey dwelling, an agriculture barn and a recently constructed dwelling Meadow View. To the east is a caravan site, Birch Tree Farm is surrounded by ploughed fields to the north and east. A further residential build Wellingtonia Lodge lies to the south, the former Ansty public house is now a small housing development to the west with a petrol station and Isuzu car garage to the south-west.

3.1.2 A site location plan is shown on Figure 3.1 below.



Figure 3.1 Site Location (Google Maps)



3.2 Existing Topography and Water Courses

- 3.2.1 A topographic survey is shown in Appendix A. The site slopes gently to the south from approximately 77.8m AOD at the bend in the existing access road to Birch Tree Farm. The access leads to a gate at 77.3m AOD turning to the east. The site has a downhill easterly gradient to 76.6m AOD to the rear. From north to south the gradient is a high of 77.38m AOD to the north-west parking area to 76.59m AOD to the south-east rear garden.
- 3.2.2 There is an ephemeral pond in the wooded area to the south at top of bank levels of around 75.50m AOD. The site generally falls from a height of 78 AOD falling in a southerly direction. An ephemeral pond lies 110m to the south with 75 AOD with a gradual fall of 1:35-1:40. There are no other natural watercourses or drainage features in the vicinity.

3.3 Existing Sewers/Drains

- 3.3.1 Southern Water (SW) sewer records show a 150mm Foul Sewer from a manhole Ref. No. 1303 at Birch Tree Farm Lane in a southerly direction behind the Cross Cottages and to a manhole Ref. No. 1205 behind the Shell petrol station.
- 3.3.2 A private 100mm foul sewer connects to the SW sewer from Birch Tree Farm and Wellingtonia Lodge. A branch connects from south of The Barn that provides a sluice for the caravan site. A recent connection from Meadow View includes a pumped system due to the upward gradient. The private foul sewer connects across Isuzu car garage to the SW foul sewer north of the Shell petrol station.
- 3.3.3 A surface water drain connects The Barn to an ephemeral pond to the south of Birch Tree Farm.
- 3.3.4 An existing drainage layout plan is shown below on Figure 3.2.

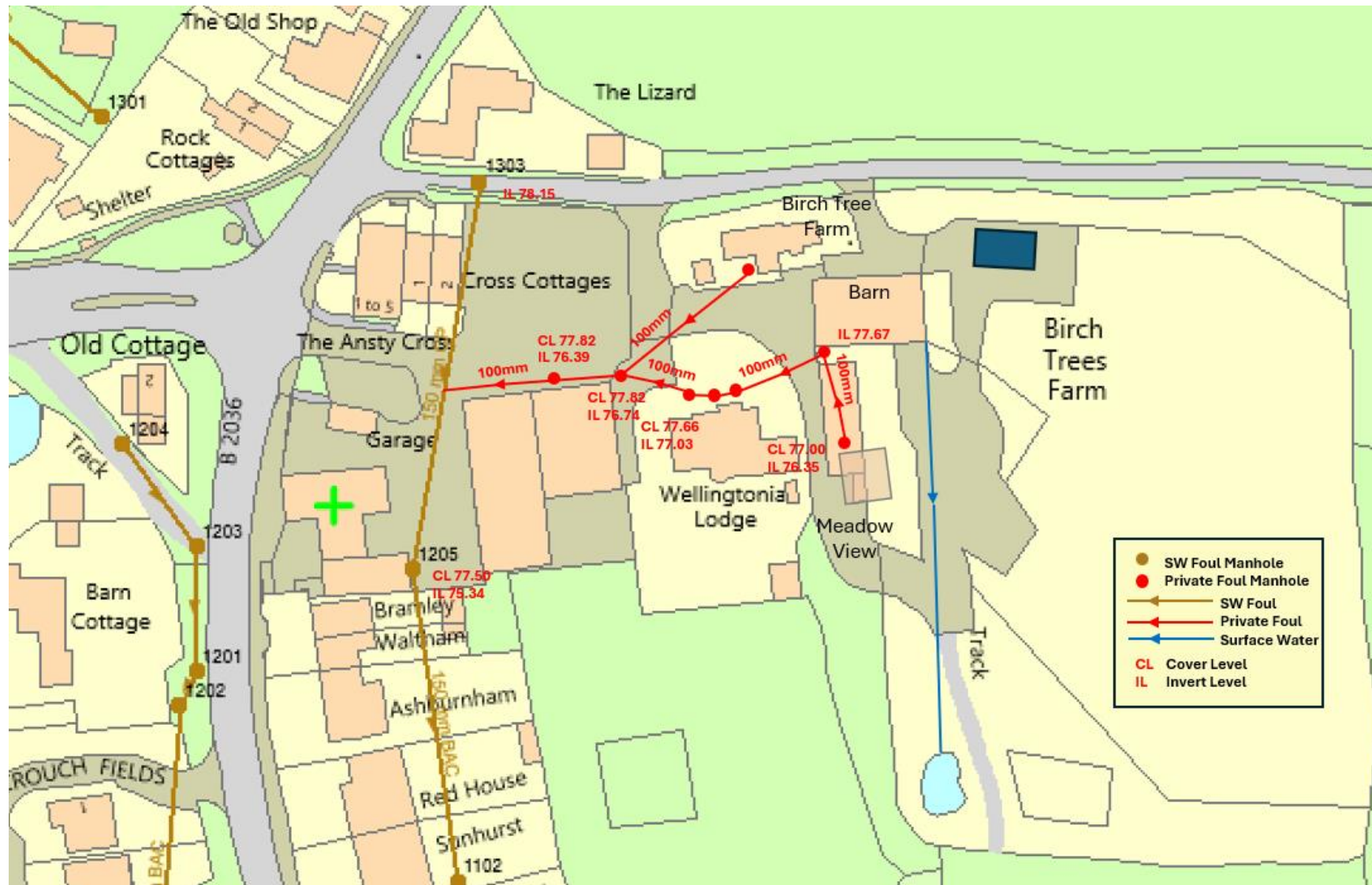


Figure 3.2 Existing Foul Sewer and Surface Water Drainage

3.4 Hydrogeology and Filtration

- 3.4.1 The BGS Hydrogeology map is shown on Figure 3.3 below and shows moderate productive aquifers with spring lines and perched aquifers common. The type of soil is a factor in determining the percolation of rainfall between gaps in soil to aquifers running to water courses. The site is Sandstone of the Ashdown Formation and Wadhurst Clay. Borehole testing shows Silty Clay in the vicinity of the property at the south known as Meadow View. There has been no reports of any groundwater flooding by the owner.
- 3.4.2 Slip trenches were dug at the site in December 2025 to a depth of 2.2m and are shown on Figure 3.4 and 3.5. This showed Silty Clay after removal of the topsoil. The trenches were observed over a number of weeks during heavy rain periods in January 2026, it was observed that the trenches had standing water however the rainfall was very high at 142mm total which is 180% of the LTA (long term average) in the south-east.
- 3.4.3 Site investigation was previously undertaken in August 2022 including boreholes and soakage testing in relation to the adjoining property Meadowview around 35m away. A falling head test was carried out on 25 August 2022 and demonstrated a rate of 1.1×10^{-6} m/s, commensurate with the clay soil type. 3 further soakage tests were carried out to BRE365 methodology on 29 January – 03 February 2023 in the location of the proposed infiltration feature. The saturated result is calculated to be slightly less than the falling head test at 7.8×10^{-7} m/s. Excerpts from the SI report and 3 subsequent tests are attached in Appendix B.

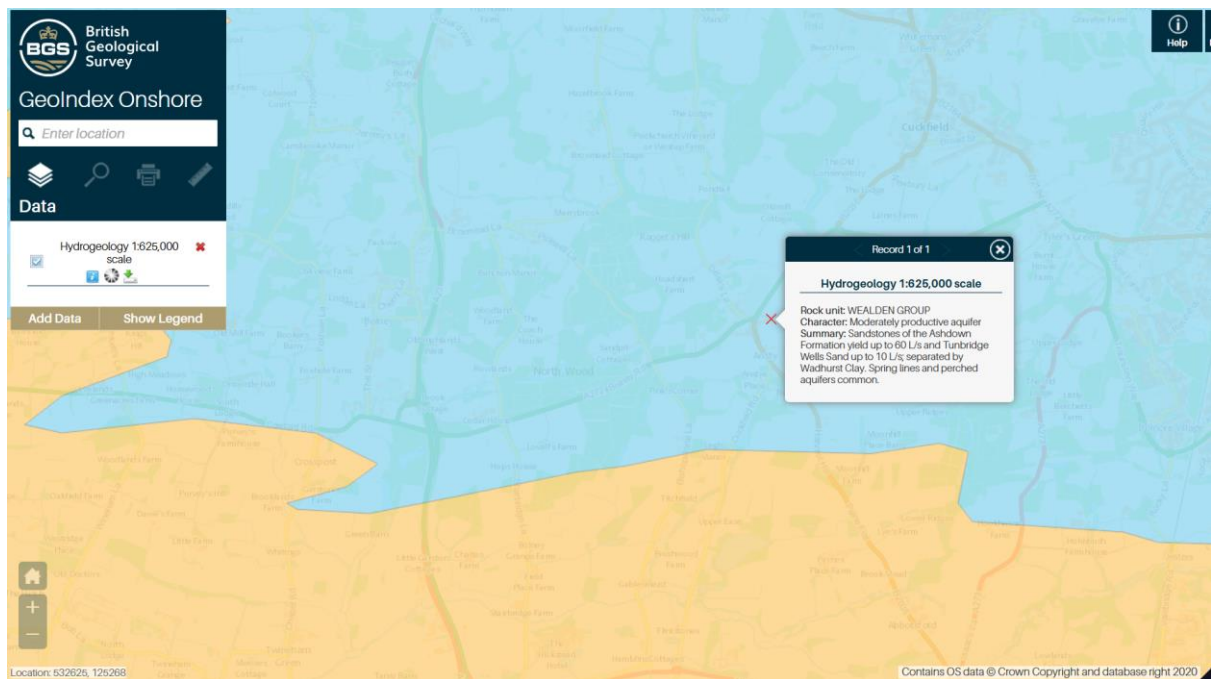


Figure 3.3 Hydrogeology Map



Figure 3.4 Slip Trench A



Figure 3.4 Slip Trench B

3.5 Flooding Risk Summary

- 3.5.1 A summary of the Flood Risk is shown on Table 3.1 below. This would suggest that the site has a low risk of surface water flooding.

Critical Flood Information	
Topographic elevation at ground level	78 AOD falling in a southerly direction. 75 AOD at 110m with a gradual fall of 1:35-1:40.
Lowest Point of Electrical Risk (LPER)	No electrical connections on site
Flooding from watercourses	0.1% -1% (1 in 1000yr) flood
Flooding from rivers	None
Flooding from sea	None
Surface water flooding	0.1% -1% (1 in 1000yr) flood there is a risk to the west around the existing Birch Tree Farm single-storey dwelling
Flooding from groundwater	Infiltration tests to determine percolation
Flood protection to site	None

Table 3.1 Flood Risk Summary

4 Foul and Surface Water Drainage Strategy Summary

4.1 Introduction

- 4.1.1 This section sets out the proposed means of managing foul discharge from the development. Wherever feasible foul sewage should be discharges to the public foul sewer network so this can be treated and removed over any pollutants removing the need of any environmental permit.
- 4.1.2 It is a requirement of the NPPF to ensure that surface water run-off from any proposed development has negligible consequence on downstream areas, either in terms of impact upon downstream sewer capacity or flood risk impacts due to discharge to a watercourse. The existing and proposed surface water run-off regime is considered below.

4.2 Existing Site Drainage

- 4.2.1 There is no existing foul water drainage on the site. The nearest foul water supply is detailed in Section 3 and are shown on Figure 3.2.
- 4.2.2 The existing site is laid gravel permeable surface and there is no existing drainage system in place. It is assumed that runoff drains naturally via infiltration.
- 4.2.3 A surface water drain connects The Barn to an ephemeral pond to the south of Birch Tree Farm.

4.3 Foul Water Drainage Proposals

- 4.3.1 It is proposed to connect to the existing Foul Water network through a series of manholes and pump to the existing lateral drain between Birch Tree Farm and Wellingtonia Lodge. A proposed layout is shown on Figure 6.1 below.
- 4.3.2 Due to the topography of the site and the depth of known lateral connections a rising main/pump is likely to be required.

4.4 Surface Water Drainage Strategy

- 4.4.1 Based on the existing site topography, any surface water will tend to percolate from the north to the south of the site but the infiltration rate is low and doesn't meet the requirement of a half drain time in 24 hours required for soakaway to prevent flooding. There is some filtration of the existing gravel surface but there is no additional capacity for additional surface water from rainfall from roof areas or hardstanding.
- 4.4.2 It is therefore proposed to store rainfall run-off in an attenuation tank to reduce the risk of flooding and to discharge at a low rate using the existing surface water system from The Barn to the ephemeral pond to the south away from residential accommodation and is shown indicatively on Figure 4.1 below.

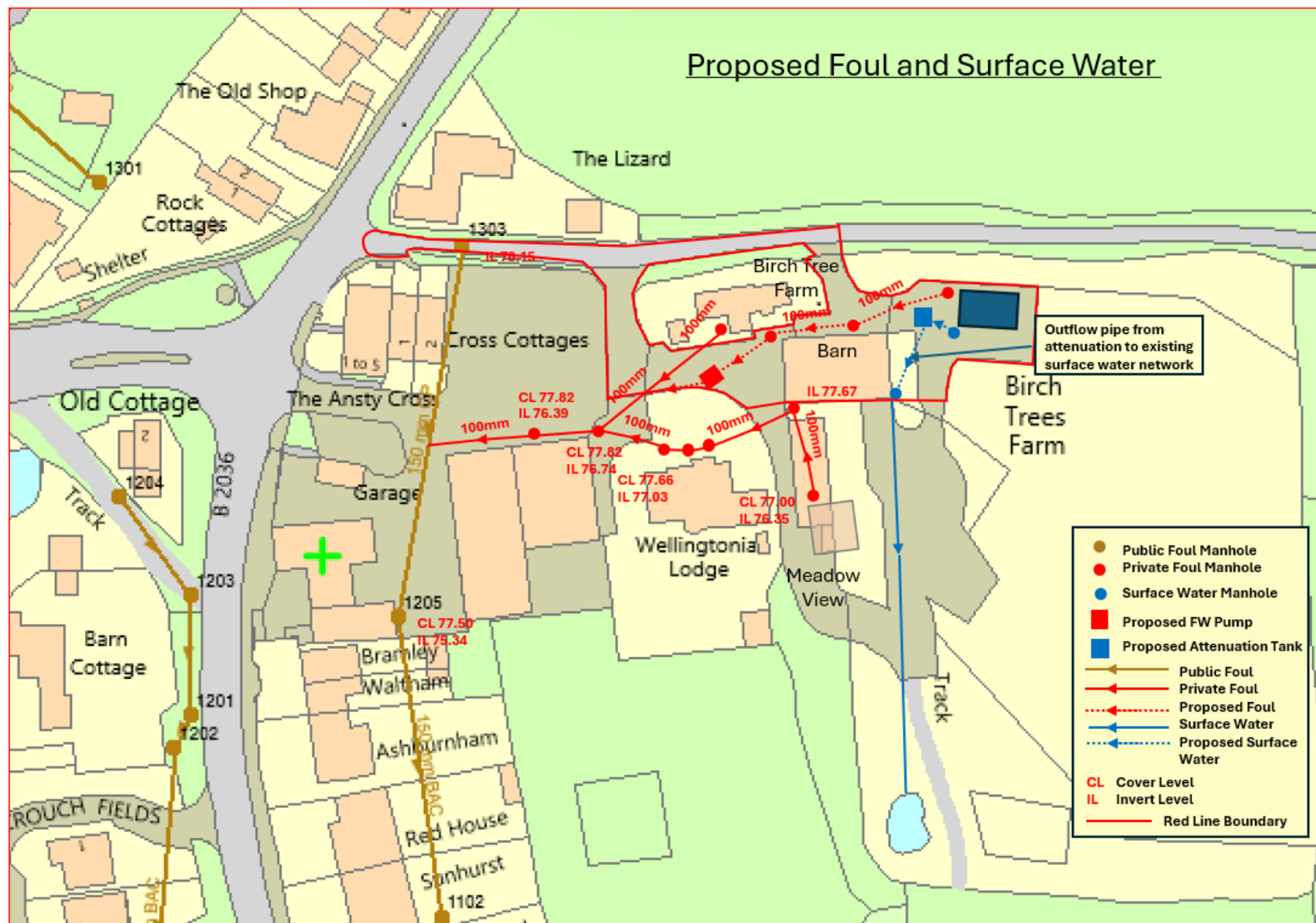


Figure 4.1 Proposed Foul and Surface Water Strategy Layout

5 Proposed Foul and Surface Water Drainage Scheme

5.1 Introduction

- 5.1.1 This section sets out the proposed foul and surface water scheme in accordance with the various guidance and standards set out in Section 1 to manage the Foul and Surface Drainage Systems. The scheme includes provisions for foul drainage systems, ensuring that expected foul water discharge is assessed and managed appropriately. Sustainable Drainage Systems (SuDS) incorporates standards for SuDS, focusing on managing surface water runoff from new infrastructure and developments.
- 5.1.2 The design considers risk management principles to ensure that surface water flow from developed sites replicates pre-developed conditions as much as possible. These elements aim to enhance the management of surface water and reduce flood risks in urban areas.

5.2 Proposed Foul Drainage Scheme

- 5.2.1 As outlined in the foul drainage strategy is to connect to the existing Foul Water network through piped sewage from the dwelling through a series of manholes. From review of the current gradients it is not possible to connect with conventional gravity system and a pump with rising main is required.
- 5.2.2 The Proposed Drainage Layout is attached in Appendix C. This shows the pipe diameters, gradients, inspection chambers and manhole sizes in accordance with current design standards to prevent blockages, sedimentation and ensuring effective drainage.
- 5.2.3 A new private package pumping station and rising main will be installed which will connect to the existing private chamber onsite and discharge to the public foul sewer by indirect connection. The pump chamber will contain sufficient storage volume for 24 hours emergency storage as required by Part H of the Building Regulations. A service agreement will be maintained in addition to high level warnings and alarm features to ensure any failure is attended to promptly. Details of the pump specification including performance and capacity data are shown in Appendix D.
- 5.2.4 Southern Water have confirmed that there is capacity on the foul network to connect with a discharge of 6 l/s and correspondence is included in Appendix E.

5.3 Proposed Surface Water Drainage Scheme

- 5.3.1 As outlined in the surface water drainage strategy is to proposed to store rainfall run-off in an attenuation tank and to discharge at a low rate using the existing surface water system from The Barn to the ephemeral pond to the south.
- 5.3.2 The Proposed Drainage Layout is attached in Appendix C. This shows the pipe diameters, gradients, inspection chambers and manhole sizes in accordance with current design standards to prevent blockages, sedimentation and ensuring effective drainage.
- 5.3.3 The attenuation tank will be installed to the front of the property under the existing gravel area that will be used for parking and is away from the building line meeting the requirements in Part H of the Building Regulations. This will connect to the existing surface water via a Hydro-brake manhole with flow control limiting the discharge after a storm event. At a slow rate the surface water will discharge to the existing surface water pipe at The Barn and then follow the existing system to the ephemeral pond to the south of the site. Details of the attenuation tank specification including performance and capacity data are shown in Appendix F.

5.4 Maintenance Schedule

- 5.4.1 Surface Water Drainage Maintenance schedule will provide general management and maintenance procedures for the various components comprising the proposed surface water drainage system serving the proposed development. This section has been produced in accordance with current best practice and the recommendations and guidance set out in CIRIA C697 'The SuDs Manual'.
- 5.4.2 Permeable Pavements need to be regularly cleared of silt and other debris to ensure their permeability is preserved. Current advice suggests a minimum of three surface sweepings per year. However, manufacturer's specific recommendations should always be followed. A brush and suction cleaner, which can be a lorry mounted device or smaller precinct sweeper, should be used and the sweeping regime should be as follows:
- End of Winter (April) – to collect winter debris
 - Mid-Summer (July/August) – to collect dust and flower other plant type deposits
 - End of Autumn (November) – to collect leaf fall.

5.4.3 In addition to surface sweeping and vacuuming the following maintenance regime would also be recommended.

Maintenance Schedule	Required Works / Action	Frequency
Regular Maintenance	Brushing and Vacuuming	Three times a year as above or as required following further monitoring.
Occasional Maintenance	Removal of weed growth	3 Monthly
Ongoing Monitoring	- Inspection for evidence of poor operation of ponding marks. - Inspect debris accumulation on surface and adjust sweeping regime if necessary. - Inspect silt accumulation in inspection chambers and remove as necessary.	3 Monthly , 24 – 48hr after a storm. Annually Annually

Table 5.1 Recommended Maintenance Requirements (permeable pavements)

- 5.4.4 Rehabilitation of the surface laying course should be carried out if evidence of poor performance is observed during the quarterly inspections.
- 5.4.5 Attenuation Tank Regular inspection of cellular storage tank systems is required to ensure effective long-term performance of the system.

Maintenance Schedule	Required Works / Action	Frequency
Regular Maintenance	- Inspect and identify incorrect operation - Debris removal from catchment area using sweeping and vacuuming. - Removal of silt and debris from rain water gutters. - Removal of sediment from pre-treatment components i.e. catchpits.	- Monthly 3 monthly 6 monthly 6 monthly

Table 5.2 – Recommended Maintenance Requirements (attenuation tank)

- 5.4.6 Pump station maintenance involves planning periodic services of a pump station, either annually or biannually, subject to the critical nature of the application served, the risks and significance attributed to a system failure, which all feed directly into the frequency of required service intervals. During scheduled maintenance, key components should be observed:
- Pumps, valves and level controls are cleaned to ensure no blockages or obstructions inhibit their operation.
 - All electro-mechanical components are tested to ensure they are performing efficiently according to the original design End of Autumn (November) – to collect leaf fall.
 - Key items prone to wear (impellers, mechanical seals) are checked and replaced when necessary and finally, lubricating oils within the pump are also checked for contamination and replaced if necessary.
- 5.4.7 General Maintenance Regular inspection and maintenance of drainage system (foul and surface water) is essential to ensure effective long term performance of the system. Maintenance needs of the system should be monitored and schedules adjusted to suit the specific requirements of the development. The following maintenance regime would be recommended as a minimum but actions and frequencies should be adjusted to suit the specific requirements of this development. However, as previously discussed, component specific regimes and any manufacturer's specific recommendations should always be followed

6 Hydraulic Calculations

6.1 Introduction

- 6.1.1 Correct sizing of drainage runs is essential to ensure that flows are conveyed off-site effectively and efficiently. Appropriately designed systems help maintain operational performance and reduce the risk of future maintenance issues.
- 6.1.2 Undersized drainage pipes can result in flows running at excessively high levels, creating a significant risk of surcharge during periods of heavy rainfall. Inadequate capacity may also restrict ventilation, potentially leading to the accumulation of harmful sewer gases.
- 6.1.3 Conversely, oversized drainage systems can reduce flow depth to a level where solids, silt, and grit are unable to remain in suspension. This can lead to settlement within the system and increase the likelihood of blockages. Oversizing should therefore be avoided in foul water systems. However, in certain circumstances it may be acceptable for surface water drainage, where additional capacity can serve as temporary storage acting as a detention feature to manage peak flows and reduce downstream flood risk.

6.2 Pipe Sizing

- 6.2.1 This section shows ways of calculating hydraulic flow characteristics for surface, foul and combined drains using methods detailed in BS EN752 which is satisfactory for most drainage systems. It also outlines the importance of choosing the correct pipe sizes, gradients and speed of flow for drainage systems.
- 6.2.2 The estimated discharge for this dwelling in accordance with Part H Building Regulations has been calculated at 3.2 litres/sec. The following details have been checked in reference to BS EN752 for 100/110mm pipe at 1/80 gradient as shown on the scheme design.
- 100mm pipe size (F) Gradient 1/80 (G)
 - Discharge 5.88 litres/sec (J) Velocity 0.75 (H)
 - Proportional Discharge Coefficient (E/J) $= 3.2/5.88 = 0.54$ (K)
 - Proportion of full-bore values Velocity 1.038 (L) Discharge 0.585 (M)
 - ACT Velocity (H x L) $= 0.75 \times 1.038 = 0.78$ m/s greater than 0.7 m/s

- 110mm Osmapipe size (F) Gradient 1/80 (G)
- Discharge 6.312 litres/sec (J) Velocity 0.766 (H)
- Proportional Discharge Coefficient (E/J) $= 3.2/6.312 = 0.51$ (K)
- Proportion of full-bore values Velocity 1.000 (L) Discharge 0.5 (M)
- ACT Velocity (H x L) $= 0.766 \times 1.000 = 0.77$ m/s greater than 0.7 m/s

6.2.3 BS EN752 includes the 'flat rate of rainfall' method for assessing the peak discharge of surface water and is suitable for drains that do not exceed 200m in length. This assumes a flat rate of rainfall of 50mm/hour for 100/110mm pipe at 1/100 gradient as shown on the scheme design.

- Calculation of drained area

Flat Roof		x 1.0
Pitched Roof at	30 degrees	x 1.29
	45 degrees	x 1.50
	60 degrees	x 1.87
	70 degrees	x 0.50

Roof pitch on all angles is 45 degrees.

- Total calculated roof area 112.715 sqm
- $\times 1.50 = 169.073$ (B)
- Rainfall intensity 50mm/hour
- Flow Rate = 2.348 l/s (C)
- Paved area 21.8 sqm (D)
- Flow Rate = 0.303 l/s (E)
- Total Discharge l/s = (C) + (E) 2.651 l/s (F)
- 100mm pipe size (F) Gradient 1/100 (G)
- Discharge 6.14 litres/sec (J) Velocity 0.78 (H)

6.3 Surface Water Storage Volume

- 6.3.1 To calculate the surface water storage volume the HR Wallingford design tool has been used and the output is attached in Appendix G. This shows a max storage volume of 28 cubic metres at 1:100 year storm with climate change of +45% and urban creep of +10%. This is with a discharge rate of 1 l/s to discharge.

7 Summary of Key Drainage Proposals

Foul Water Drainage Strategy

7.1.1 Connection to Existing Network:

Foul water from the new dwelling will connect to the *existing private foul sewer* that runs between Birch Tree Farm and Wellingtonia Lodge, with final discharge into the **Southern Water public foul sewer**.

7.1.2 Pumping Requirement:

Due to ground levels, a **private pumping station and rising main** are required. Gravity connection is not feasible.

7.1.3 Pump Station Specification:

Provides **minimum 24-hour emergency storage** (as per Building Regulations Part H). Includes alarms, high-level warnings, and a maintenance contract. Details of pump performance included in Appendix D.

7.1.4 Foul Drainage Design:

Full layout provided in Appendix C, including pipe sizing, gradients, manholes, and inspection chambers. Checked against BS EN 752 for hydraulic capacity. Estimated foul discharge: **3.2 L/s**.

Surface Water Drainage Strategy

7.1.5 Infiltration Not Feasible:

Site soils are predominantly **silty clay** with poor infiltration (7.8×10^{-7} to 1.1×10^{-6} m/s). Soakaways fail the **24-hour half-drain time** requirement.

7.1.6 Attenuation & Controlled Discharge:

Surface water will be managed via an **attenuation tank** located under the existing gravel parking area, safely outside the building footprint.

7.1.7 Discharge Route:

Runoff will be released at a **restricted rate of 1 L/s** via a Hydro-brake. Discharge connects to the **existing surface water drain** serving The Barn. Final destination: **ephemeral pond** south of the site—away from residential dwellings.

7.1.8 Storage Requirements:

Calculated using HR Wallingford tool (Appendix G). Maximum required storage: **28 m³** for 1:100 year +45% climate change +10% urban creep.

Maintenance Measures

7.1.9 Permeable surfacing:

Minimum **three suction sweeps per year** (spring, summer, autumn).

7.1.10 Attenuation tank:

Regular inspection to ensure long-term performance as per manufacturer and SuDS guidance.

7.1.11 Pump station:

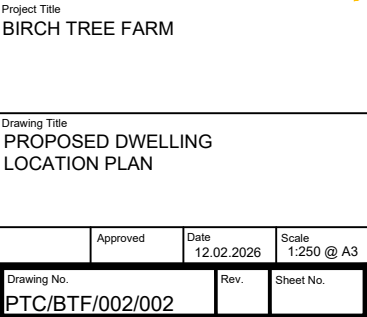
Annual or biannual servicing including pump checks, cleaning, testing electromechanical components, and replacing worn parts.

7.1.12 General system maintenance:

Regular inspections of both foul and surface water systems, with adjustments to schedules as needed.

APPENDIX A TOPOGRAPHICAL SURVEY AND LOCATION PLAN





APPENDIX B SITE TESTING

Project Title : <i>BIRCH TREES FARM ANSTY</i>						Project No.:	
TRIAL PIT RESULTS						Pit No. & Location	
Date : <i>25 - 08 - 22</i>				Engineer : <i>W.K.R</i>		<i>BH1</i>	
Ground Level							
Description	Legend	Water Level	Depth	Reduced Level	Samples	Insitu Tests	Remarks
<i>Concrete</i>	<i>2.2.2.</i>		<i>0m 0.075</i>				
<i>Grey silty CLAY, heavy ferruginous deposits</i>	<i>-x- -x- -x-</i>		<i>0.45</i>		<i>D</i>		
<i>Orange brown silty CLAY, becoming very stiff</i>	<i>-x- -x- -x- -x- -x-</i>	<i>Dry</i>	<i>1m</i>		<i>D</i>	<i>V</i>	<i>S_a = 105 kN/m²</i>
<i>Too hard to auger</i>			<i>1.30</i>		<i>D</i>		
						<i>P</i>	<i>N = 33 blows/300mm</i>
			<i>2m</i>				
			<i>3m</i>				
							<i>Time</i>
							<i>W.L. (mm)</i>
							<i>10-05</i>
							<i>270</i>
							<i>10</i>
							<i>291</i>
							<i>20</i>
							<i>317</i>
			<i>4m</i>				<i>25</i>
							<i>331</i>
							<i>40</i>
							<i>357</i>
							<i>11-02</i>
							<i>392</i>
							<i>-15</i>
			<i>5m</i>				<i>408</i>
KEY:- D Disturbed sample B Bulk sample W Water sample U U100 Undisturbed				INSITU TESTS :- Shear strength in K Pa P Penetrometer (<i>PERTH</i>) V Vane test			

Project Title : <i>BIRCH TREES FARM ANSTY</i>						Project No.:	
TRIAL PIT RESULTS						Pit No. & Location	
Date : <i>25 - 08 - 22</i>				Engineer : <i>M.K.R</i>		<i>BH 2</i>	
Ground Level							
Description	Legend	water Level	Depth	Reduced Level	Samples	Insitu Tests	Remarks
<i>TOPSOIL (dry)</i>			0m				
<i>Brown yellow silty CLAY, stiff consistency</i>		<i>Dry</i>	<i>0.40</i>		<i>D</i>	<i>P</i>	<i>N = 17 bbs / 300mm</i>
					<i>D</i>		
<i>Too hard to drill</i>			<i>1m.05</i>			<i>P</i>	<i>N = 33 bbs / 300mm</i>
			2m				
							<i>BH 3 Sample of topsoil</i>
							<i>BH 4 Sample of brown silty clay below 80mm of concrete.</i>
			3m				
			4m				
			5m				

KEY:-

D Disturbed sample

B Bulk sample

W Water sample

U U100 Undisturbed

INSITU TESTS :-

Shear strength in K Pa

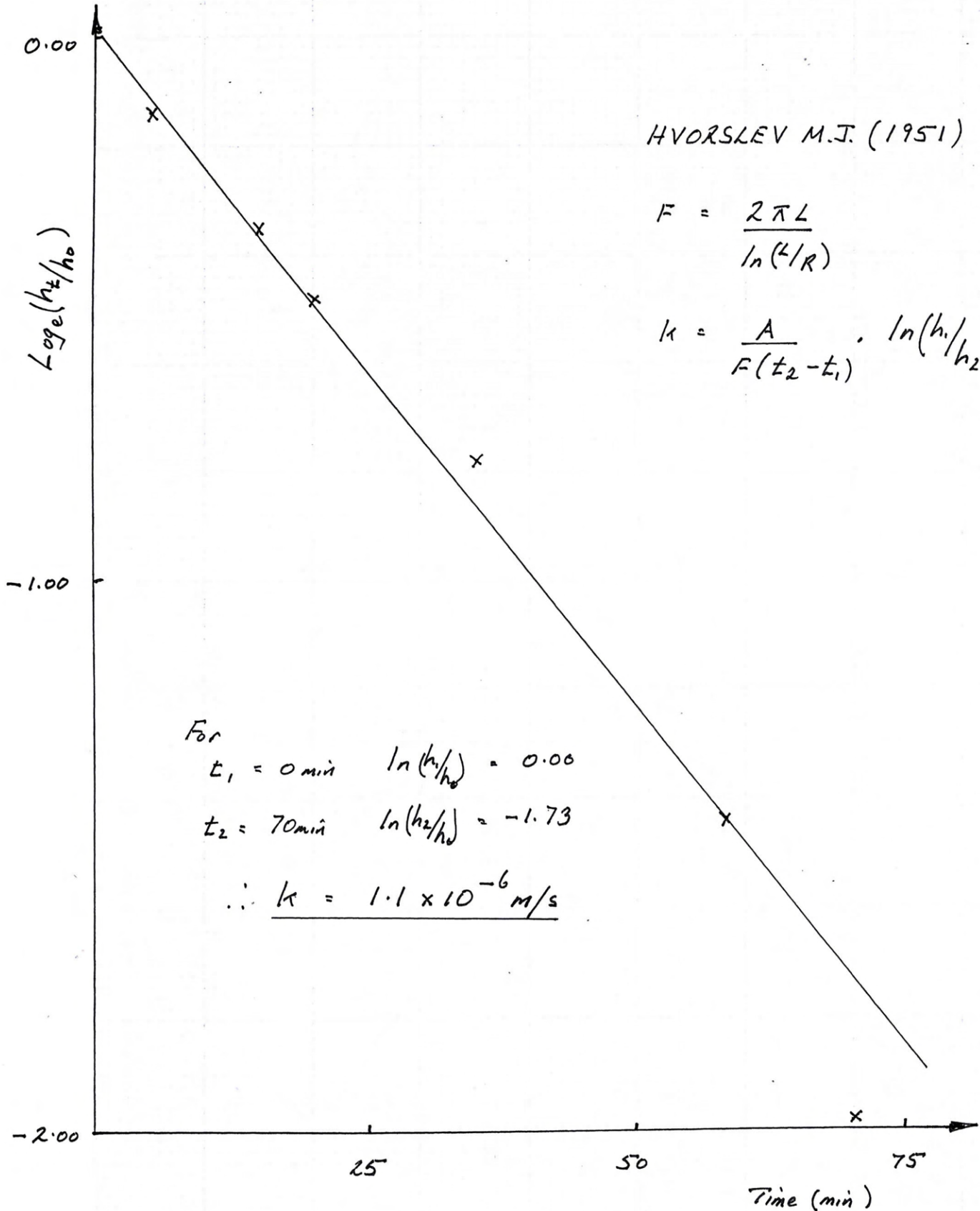
P Penetrometer (*PERTH*)

V Vane test

BIRCH TREES FARM ANSTY

BOREHOLE N°1

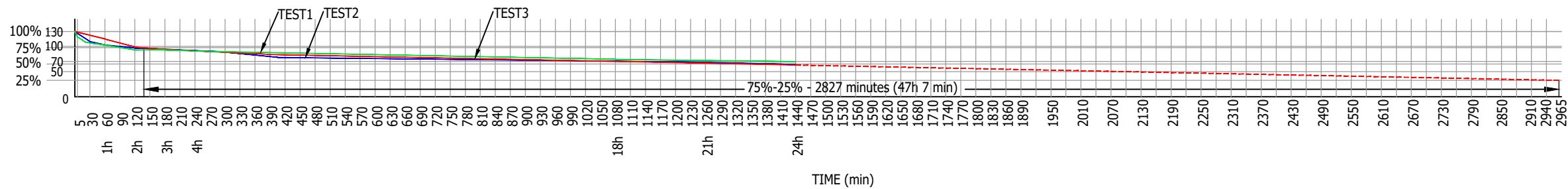
FALLING HEAD PERMEABILITY TEST



GENERAL NOTES

1. The location, size, depth and identification of existing services that may be shown or referred to on this drawing have been assessed from non intrusive observations , record drawings or the like. The contractor shall safely carry out intrusive investigations, trial holes or soundings prior to commencing work to satisfy himself that it is safe to proceed and that the assessments are accurate. any discrepancies shall be notified to gta prior to works commencing.
2. Tender or billing drawings shall not be used for construction or the ordering of materials.
3. Do not scale. All dimensions and levels to be site confirmed.
4. This drawing shall be read in conjunction with all relevant architects, consultants drawings and specifications, together with H&S plan requirements
5. Copyright : This drawing must not be copied, amended nor reproduced without the prior written agreement of gta.
6. All drawings specifications and recommendations made by gta are subject to Local Authority and other relevant Statutory Authorities approval. Any works or services made abortive due to the client proceeding prior to these approvals is considered wholly at the Clients risk. gta hold no responsibility for resulting abortive works or costs.

Rev	Amendments	Date	Dsn	Chk



MEADOW VIEW CUCKFIELD ROAD ANSTY RH17 5AG
SOAKAWAY TEST RESULTS GRAPH



Maple House, 192-198 London Road,
Burgess Hill, West Sussex, RH15 9RD
Tel.01444 871444 Web: www.gtacivils.co.uk

Client

Architect

Project

Title

Status

Date
07.02.2023

Scale @ A3
1:100

Drawing Number
SK01

Rev.

APPENDIX C DRAINAGE LAYOUT AND STANDARD DETAILS

STANDARD NOTES

1.THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECT'S AND ENGINEER'S DRAWINGS AND THE SPECIFICATIONS.

2.THIS DRAWING SHOULD NOT BE SCALED.

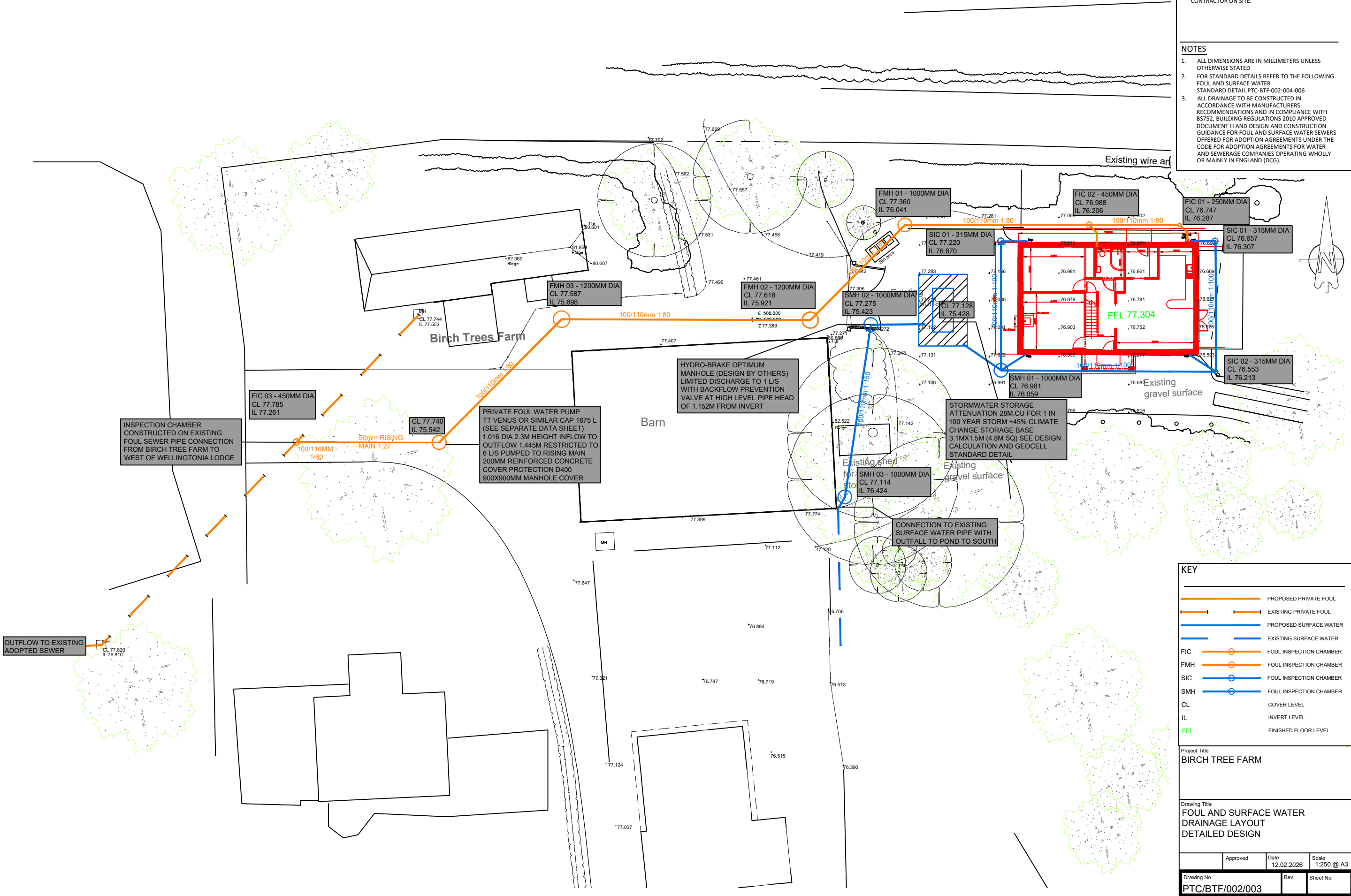
3.ALL DIMENSIONS ARE TO BE VERIFIED BY THE CONTRACTOR ON SITE.

NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE STATED

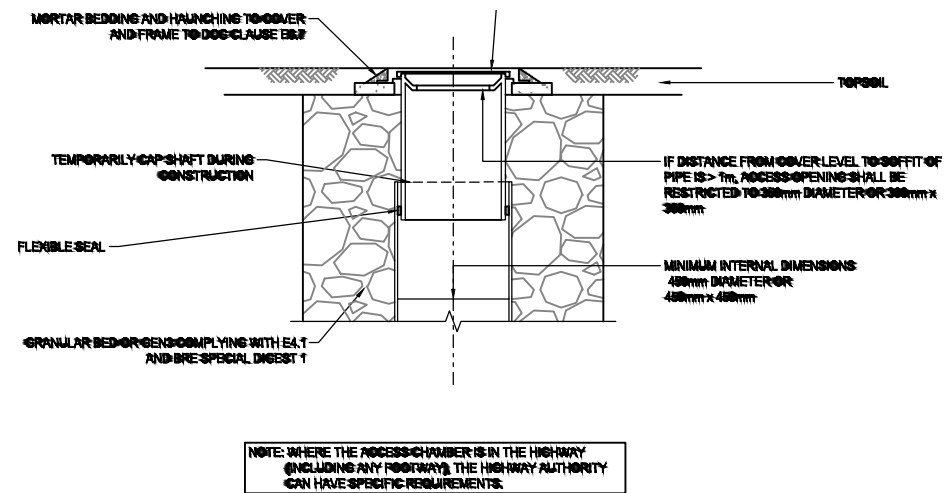
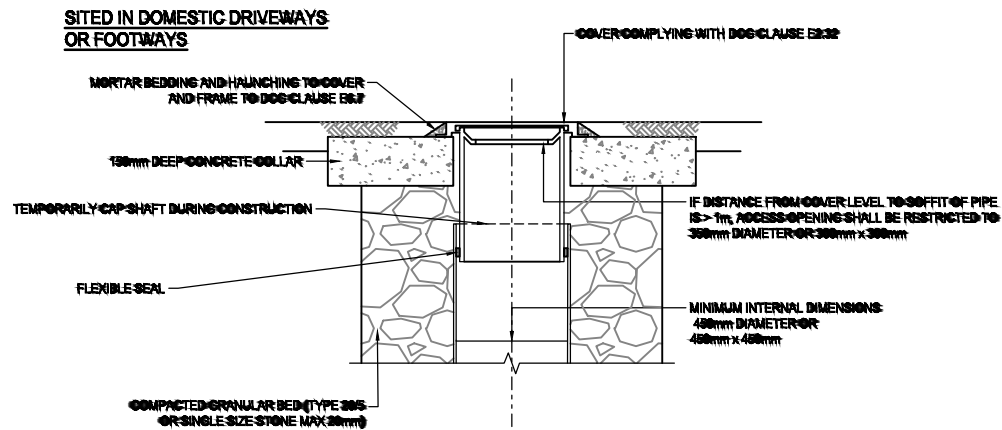
2. FOR STANDARD DETAILS REFER TO THE FOLLOWING FOUL AND SURFACE WATER STANDARD DETAIL PTC-BTF-002-004-006

3. ALL DRAINAGE TO BE CONSTRUCTED IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS AND IN COMPLIANCE WITH BS752, BUILDING REGULATIONS 2010 APPROVED DOCUMENT H AND DESIGN AND CONSTRUCTION GUIDANCE FOR FOUL AND SURFACE WATER SEWERS OFFERED FOR ADOPTION AGREEMENTS UNDER THE CODE FOR ADOPTION AGREEMENTS FOR WATER AND SEWERAGE COMPANIES OPERATING WHOLLY OR MAINLY IN ENGLAND (DCG).

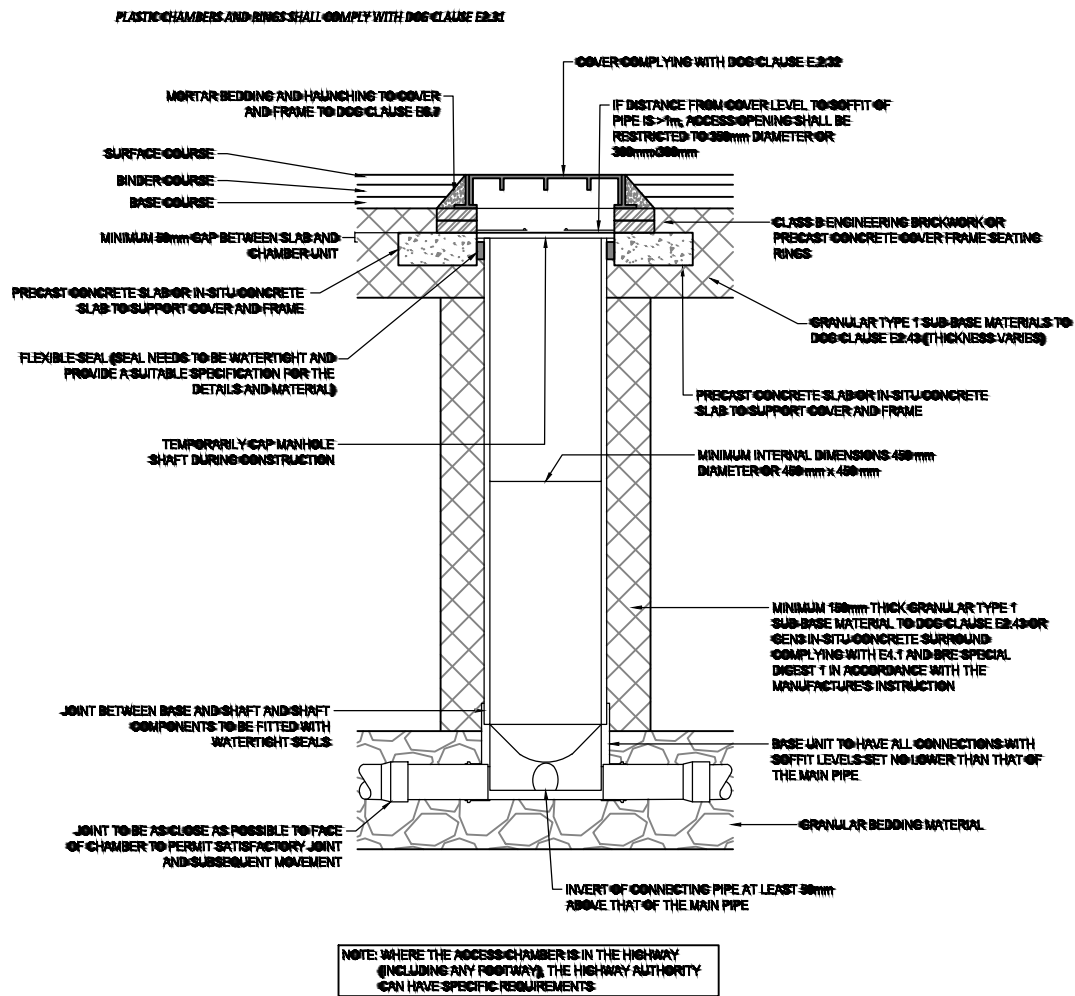


KEY	
	PROPOSED PRIVATE FOUL
	EXISTING PRIVATE FOUL
	PROPOSED SURFACE WATER
	EXISTING SURFACE WATER
	FIC FOUL INSPECTION CHAMBER
	FMH FOUL INSPECTION CHAMBER
	SIC FOUL INSPECTION CHAMBER
	SMH FOUL INSPECTION CHAMBER
CL	COVER LEVEL
IL	INVERT LEVEL
FFL	FINISHED FLOOR LEVEL

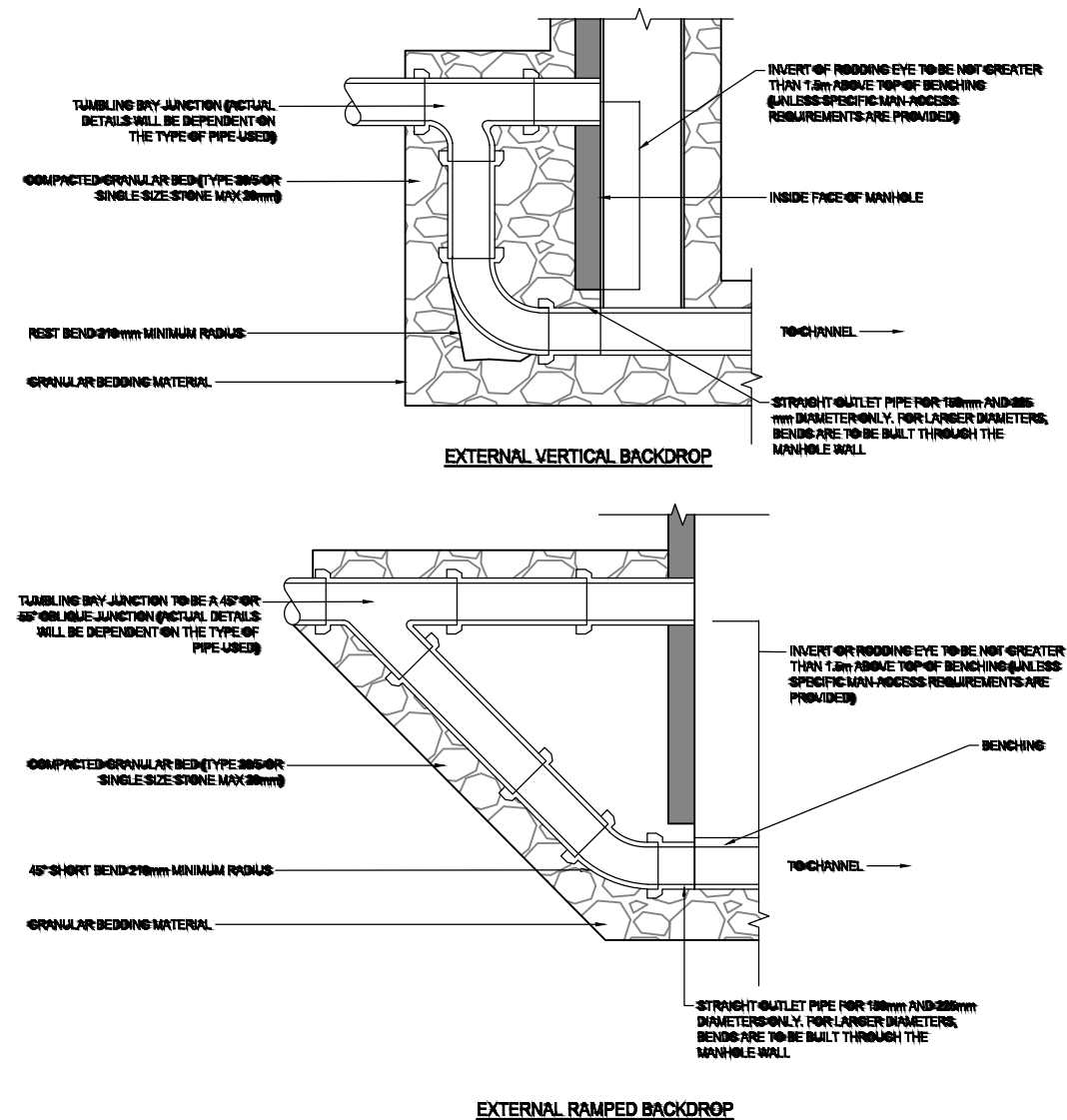
Project Title BIRCH TREE FARM			
Drawing Title FOUL AND SURFACE WATER DRAINAGE LAYOUT DETAILED DESIGN			
Approved	Date 12.02.2026	Scale 1:250 @ A3	
Drawing No. PTC/BTF/002/003	Rev.	Sheet No.	



TYPICAL INSPECTION CHAMBER DETAIL - TYPE D
FLEXIBLE MATERIAL CONSTRUCTION ALTERNATIVE TOP DETAILS
FOR USE OF LIGHT VEHICLE LOADING OR LANDSCAPE AREAS
(NTS)



TYPICAL INSPECTION CHAMBER DETAIL - TYPE D
DEPTH FROM COVER LEVEL TO SOFFIT OF PIPE UP TO 3m
FLEXIBLE MATERIAL CONSTRUCTION FOR USE IN AREAS SUBJECT TO VEHICLE LOADING
(NTS)



TYPICAL VERTICAL AND RAMPED BACKDROP DETAIL (FLEXIBLE MATERIALS)
FOR USE IN MANHOLES TYPE A TO D
(NTS)

STANDARD NOTES

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECT'S AND ENGINEER'S DRAWINGS AND THE SPECIFICATIONS.

2. THIS DRAWING SHOULD NOT BE SCALED.

3. ALL DIMENSIONS ARE TO BE VERIFIED BY THE CONTRACTOR ON SITE.

NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE STATED

2. TO BE READ IN CONJUNCTION WITH BELOW FOUL AND SURFACE WATER DRAINAGE LAYOUT PTC-BTF-002-003

3. ALL DRAINAGE TO BE CONSTRUCTED IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS AND IN COMPLIANCE WITH BS752, BUILDING REGULATIONS 2010 APPROVED DOCUMENT H AND DESIGN AND CONSTRUCTION GUIDANCE FOR FOUL AND SURFACE WATER SEWERS OFFERED FOR ADOPTION AGREEMENTS UNDER THE CODE FOR ADOPTION AGREEMENTS FOR WATER AND SEWERAGE COMPANIES OPERATING WHOLLY OR MAINLY IN ENGLAND (DCG).

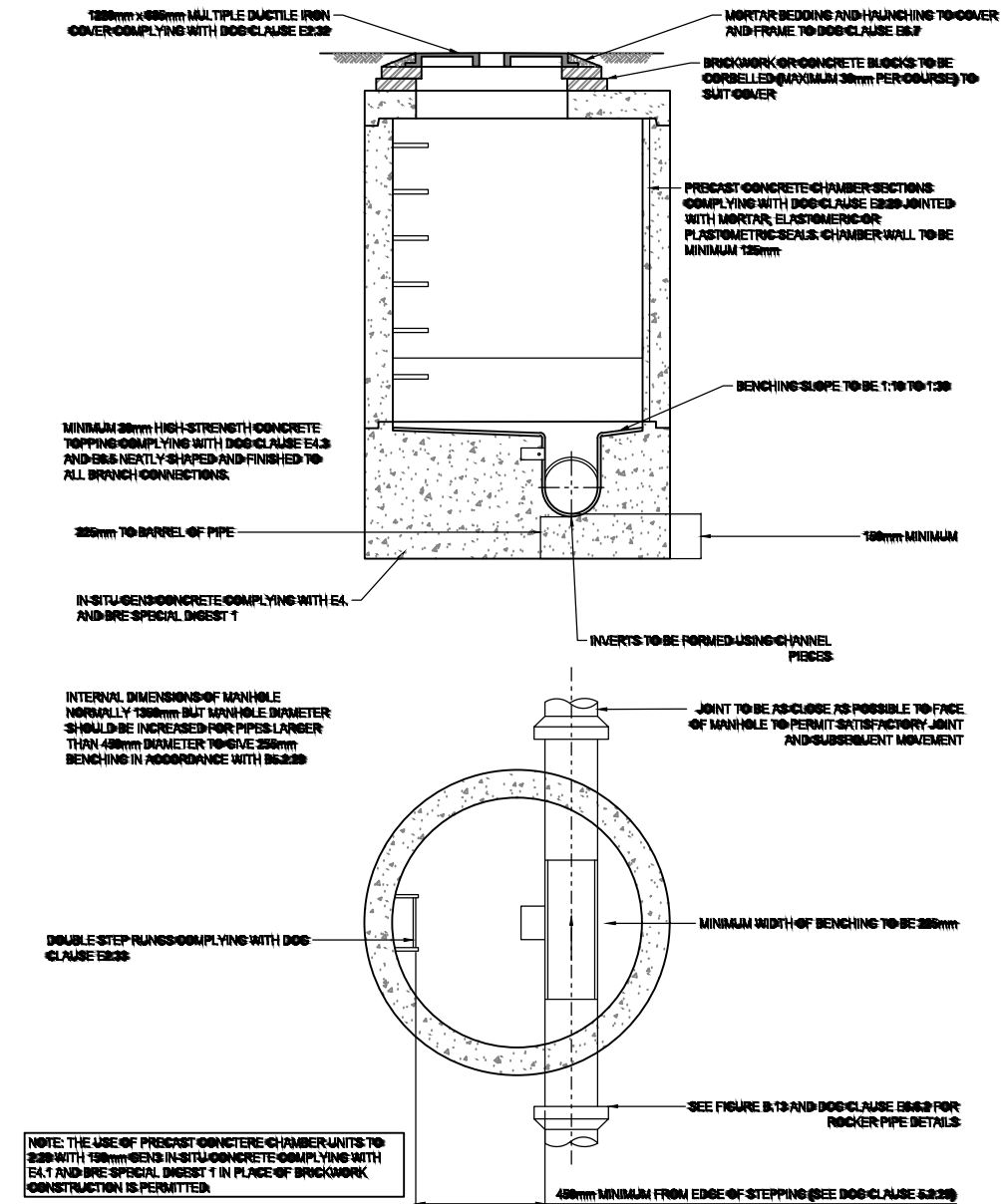
Project Title			
BIRCH TREE FARM			
Drawing Title			
FOUL AND SURFACE WATER STANDARD DETAILS INSPECTION CHAMBER			
Approved	Date	Scale	NTS
12.02.2026			
Drawing No.	Rev.	Sheet No.	
PTC/BTF/002/004			

STANDARD NOTES

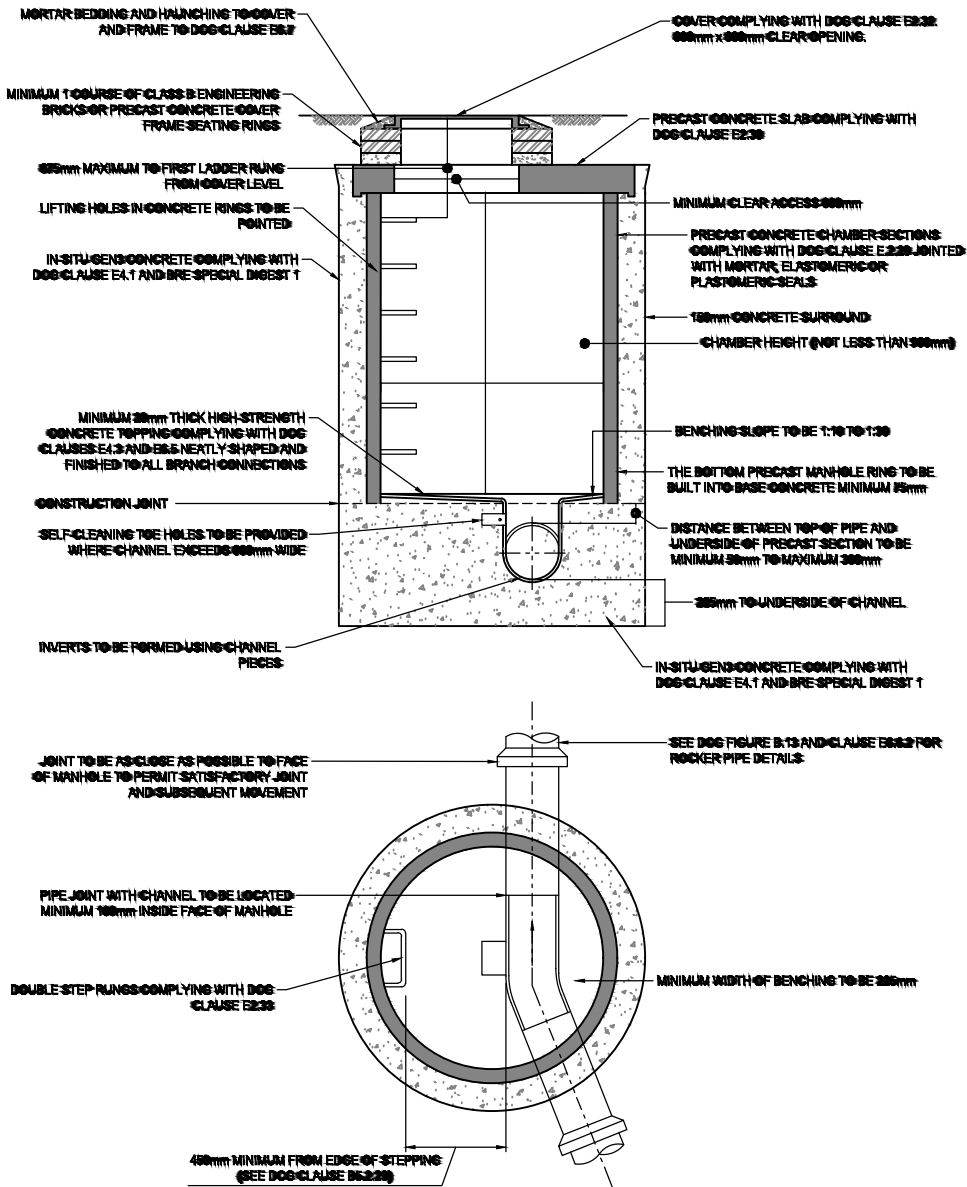
- 1.THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECT'S AND ENGINEER'S DRAWINGS AND THE SPECIFICATIONS.
- 2.THIS DRAWING SHOULD NOT BE SCALED.
- 3.ALL DIMENSIONS ARE TO BE VERIFIED BY THE CONTRACTOR ON SITE.

NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE STATED
2. TO BE READ IN CONJUNCTION WITH BELOW FOUL AND SURFACE WATER DRAINAGE LAYOUT PTC-BTF-002-003
3. ALL DRAINAGE TO BE CONSTRUCTED IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS AND IN COMPLIANCE WITH BS752, BUILDING REGULATIONS 2010 APPROVED DOCUMENT H AND DESIGN AND CONSTRUCTION GUIDANCE FOR FOUL AND SURFACE WATER SEWERS OFFERED FOR ADOPTION AGREEMENTS UNDER THE CODE FOR ADOPTION AGREEMENTS FOR WATER AND SEWERAGE COMPANIES OPERATING WHOLLY OR MAINLY IN ENGLAND (DCG).



TYPICAL MANHOLE DETAIL - TYPE C
DEPTH FROM COVER LEVEL TO SOFFIT OF PIPE LESS THAN 1.5m
RIGID MATERIAL CONSTRUCTION
NTS



TYPICAL MANHOLE DETAIL - TYPE B
DEPTH FROM COVER LEVEL TO SOFFIT OF PIPE 1.5m TO 3m
ALTERNATIVE RIGID MATERIAL CONSTRUCTION WITH CONCRETE SURROUND
NTS

Project Title

BIRCH TREE FARM

Drawing Title

FOUL AND SURFACE WATER
STANDARD DETAILS
MANHOLE

Approved	Date 12.02.2026	Scale NTS
Drawing No. PTC/BTF/002/005	Rev.	Sheet No.

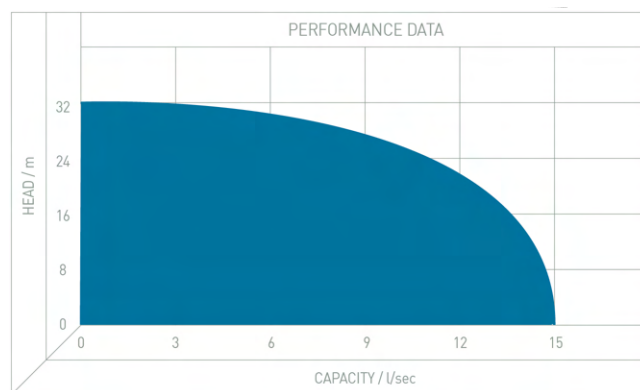
APPENDIX D PUMP STATION

Mercury & Venus Package Pumping Stations

Designed and manufactured in the UK, the BBA Approved Mercury and Venus Package Pumping Stations have been designed and manufactured by T-T to provide an efficient and economical way of installing a sewage/drainage pumping station. These tanks feature a square access opening.

Features

- Pump chambers are well engineered and manufactured, and have passed rigorous and detailed testing, site inspections and factory production control assessment.
- Each pump chamber is made of strong, medium-density polyethylene
- Smooth internal walls aid the hygienic disposal of effluents, to avoid smells and septicity.
- Packages come complete with pipework pre-assembled in the chamber, ready for installation into the ground, after which the pumps and control equipment are added.
- All package pumping stations are supplied with controls for fully automatic operation, and a high-level alarm indicator.
- Units can be adapted to suit individual requirements at manufacturing stage.
- Packages are available on short lead-times to fit in with tight construction schedules.
- Square, pedestrian rated access cover.



Options Available

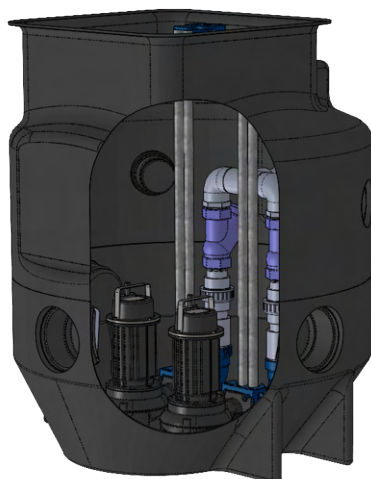
MERCURY SINGLE/DUAL PUMP

The Mercury is ideal for small flows from a single dwelling and where excavation depth is limited.

Compatible pumps:

- Cutter 80mm
- Grinder 50mm
- Vortex 50mm/80mm

Dual pumps only available with 50mm vortex/grinder.



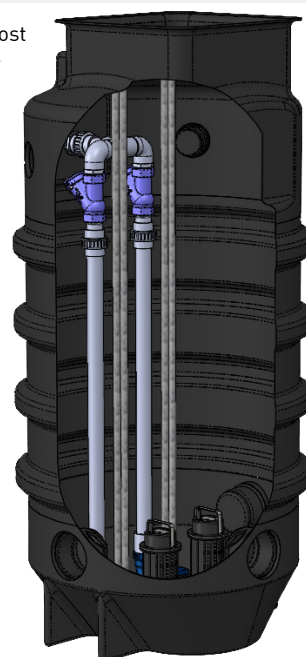
VENUS SINGLE/DUAL PUMP

The Venus chamber is the most popular size for use in single dwellings, toilet blocks or small offices.

Compatible pumps:

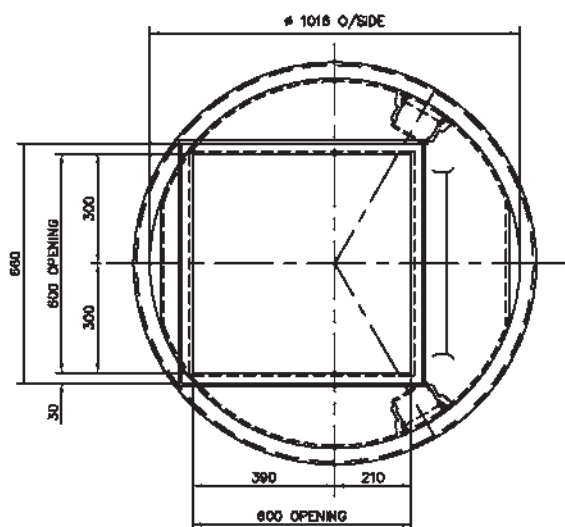
- Cutter 80mm
- Grinder 50mm
- Vortex 50mm/80mm

Dual pumps only available with 50mm vortex/grinder.

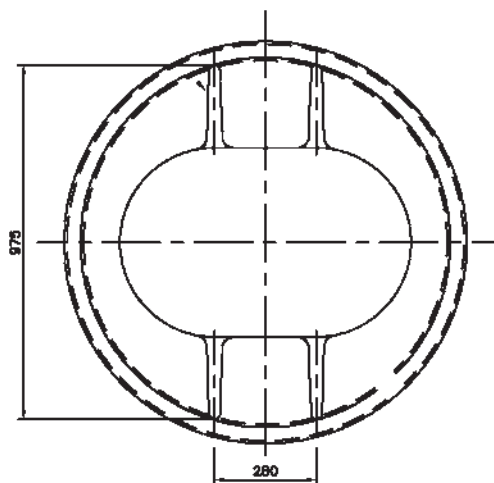


Dimensional Drawings

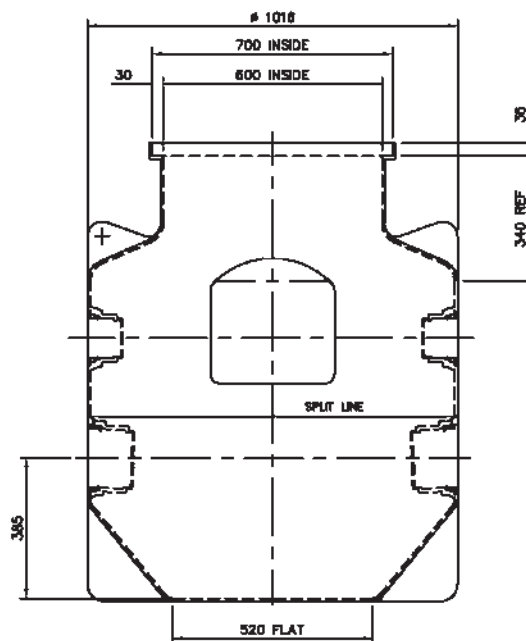
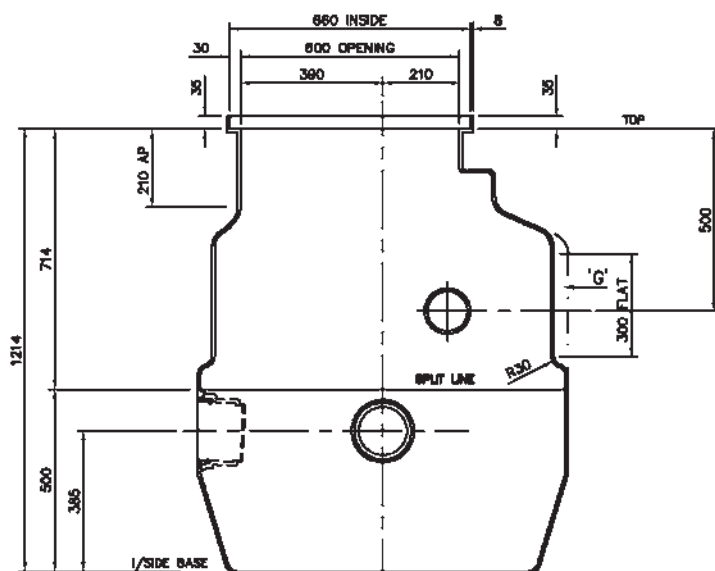
MERCURY SINGLE/DUAL PUMP



PLAN VIEW ON TOP OF TANK

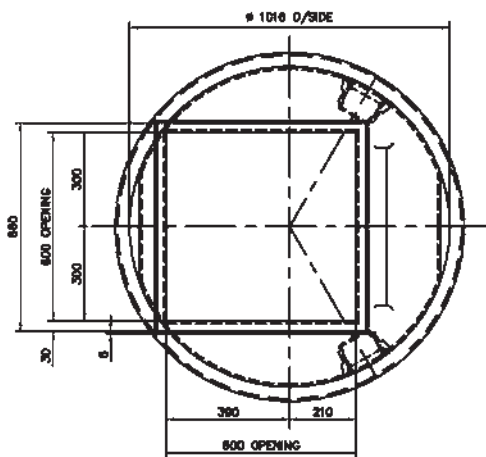


PLAN VIEW ON TANK BOTTOM

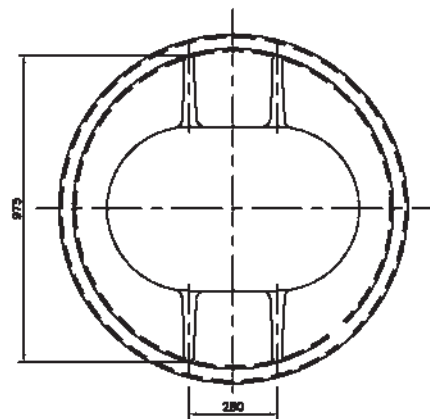


Dimensional Drawings

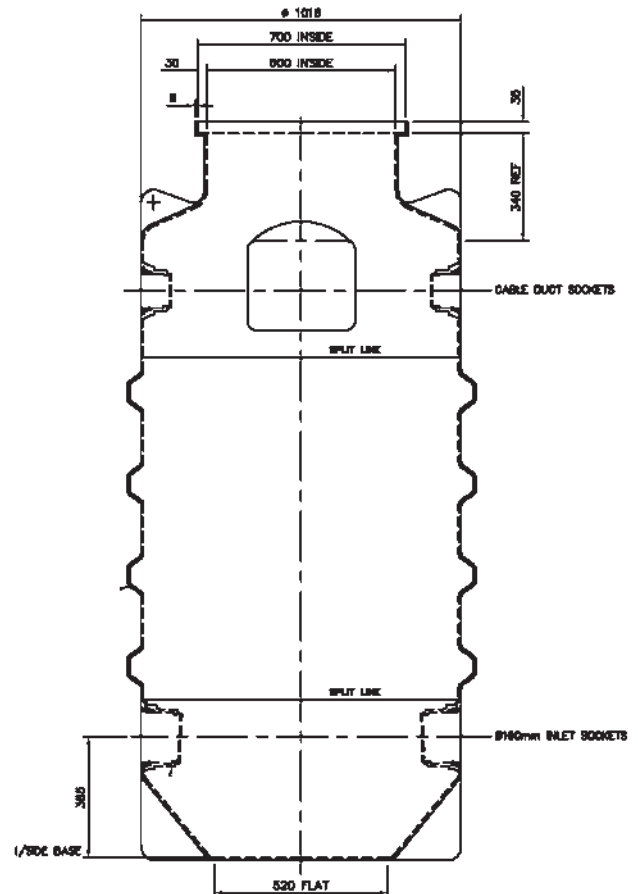
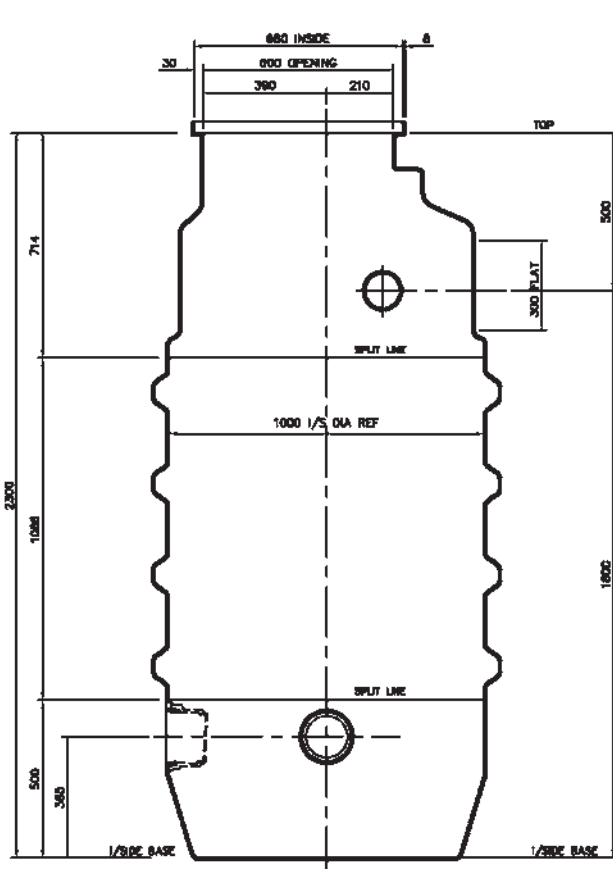
VENUS SINGLE/DUAL PUMP



PLAN VIEW ON TOP OF TANK



PLAN VIEW ON TANK BOTTOM



APPENDIX E SOUTHERN WATER CORRESPONDENCE



Controllable Valve			Flow Control			Inlet-Outfall	
Damboards	Penstock	Valve	Anti Flood Device	Pumped Anti Flood Device	Reflux Valve	Inlet	Outfall
Manhole							
BIF Bifurcation	Cascade	CP Catchpit	Head Of Public Sewer	IC Interceptor Chamber	Manhole	S Soakaway	WO Washout
Outfall Headworks		Overflow Chamber		Pipe Bridge		Pumping Station	
Outfall Headworks	CSO Combined Sewer Overflow	Emergency Overflow		Pipe Bridge		Micro Pumping Station	Pumping Station
Sewer Level Monitor		Storage		Treatment Works		Weir	
Sewer Level Monitor	Storm Tank	Tidal Storage Tank		Treatment Works		Weir	Wastewater Site
Wastewater Pipe				Wastewater Use		Developer Services	
Culverted Water Course	Syphon	Tank Sewer		Foul	Build Over Agreement	Section 104	
Drain	Trunk Sewer			Combined	Wastewater Area		
Outfall	Vacuum Main			Sludge			Catchment
Overflow	Decommissioned Pipe			Treated Effluent			Sub-Catchment
Rising Main				Surface Water			
Sewer				Private			

Map Title: DSA000048209 GIS

Printed By: Kelly.Donaldson

Date Printed: 13/10/2025

Map Scale: 750

The information provided is believed to be correct but is provided on an 'as is' basis and without any warranty or condition express or implied, statutory or otherwise as to its quality or fitness for purpose. Actual positions of assets should always be determined on site.





Mid Sussex District Council
Oaklands Road
Haywards Heath
West Sussex
RH16 1SS

Your ref
DM/25/2332

Our ref
DSA000048209

Date
12th of November 2025

Contact
Tel 0330 303 0119

Dear Sir/Madam,

Proposal: Erection of a single 3no bedroom dwelling and associated development.

Site: Birch Trees Farm Cuckfield Road Ansty Haywards Heath.

Thank you for your correspondence, please see our comments below regarding the above application.

Completed Capacity Check

There is currently adequate capacity in the local sewerage network to accommodate a Pumped foul flow of 6 l/s for the above development at manhole reference TQ29231303. Please note that no surface water flows (existing or proposed) can be accommodated within the existing foul sewerage system unless agreed by the Lead Local Flood Authority in consultation with Southern Water, after the hierarchy Part H3 of Building Regulations has been complied with.

Development Site is not within Southern Water's Supply Area

The development site is not located within Southern Water's statutory area for water supply services. Please contact South East Water who are the relevant statutory undertaker.

Connection to public sewer

Southern Water requires a formal application for a connection to the public sewer to be made by the applicant or developer. To make an application visit Southern Water's Get Connected service: <https://developerservices.southernwater.co.uk> and please read our New Connections Charging Arrangements documents which are available on our website via the following link: <https://www.southernwater.co.uk/developing-building/connection-charging-arrangements>



We request that should this planning application receive planning approval, the following informative is attached to the consent: Construction of the development shall not commence until details of the proposed means of foul sewerage and surface water disposal have been submitted to and approved in writing by the Local Planning Authority in consultation with Southern Water.

Proposed SUDS features

If it is the intention of the developer for Southern Water to adopt the proposed SuDS, the system shall be designed and constructed in line with the Design and Construction Guidance www.water.org.uk/sewerage-sector-guidance-approved-documents/

No Soakaways should be connected to the public surface water sewer.

The supporting documents make reference to drainage using Sustainable Drainage Systems (SuDS). Where SuDS form part of a continuous sewer system, and are not an isolated end of pipe SuDS component, adoption of SuDS will be considered if requested by the developer if they comply with: Design and Construction Guidance (Appendix C), CIRIA guidance and Southern Water SuDS Guidance available here:

<https://www.water.org.uk/sewerage-sector-guidance-approved-documents/>

<https://www.ciria.org/ItemDetail?iProductCode=C753F&Category=FREEPUBS>

<https://www.southernwater.co.uk/media/l4ndl3db/suds-final-080824.pdf>

Where SuDS rely upon facilities which are not adoptable by sewerage undertakers the applicant will need to ensure that arrangements exist for the long-term maintenance of the SuDS facilities. It is critical that the effectiveness of these systems is maintained in perpetuity. Good management will avoid flooding from the proposed surface water system, which may result in the inundation of the foul sewerage system.

Thus, where a SuDS scheme is to be implemented, the drainage details submitted to the Local Planning Authority should:

- Specify the responsibilities of each party for the implementation of the SuDS scheme.
- Specify a timetable for implementation.
- Provide a management and maintenance plan for the lifetime of the development.

This should include the arrangements for adoption by any public authority or statutory undertaker and any other arrangements to secure the operation of the scheme throughout its lifetime. This initial assessment does not prejudice any future assessment or commit to any adoption agreements under Section 104 of the Water Industry Act 1991.

Tree planting

We have restrictions on the proposed tree planting adjacent to Southern Water sewers, rising mains or water mains. Reference should be made to Southern Water's publication "A Guide to Tree Planting near water Mains and Sewers" (https://www.southernwater.co.uk/media/pddob0vn/ds-tree-planting-guide-1_nwm.pdf)



The Sewerage Sector Guidance (<https://www.water.org.uk/sewerage-sector-guidance-approved-documents/>) with regards to any landscaping proposals and our restrictions and maintenance of tree planting adjacent to sewers, rising mains and water mains.

Condition: In order to protect public apparatus, Southern Water requests that if consent is granted, the following pre commencement condition is attached to the planning permission; The developer must advise the local authority (in consultation with Southern Water) of the landscaping proposals in proximity of public apparatus in order to protect it in accordance with Southern Water's guidance, prior to the commencement of the development.

For further advice, please contact Southern Water, Southern House, Yeoman Road, Worthing, West Sussex, BN13 3NX (Tel: 0330 303 0119)

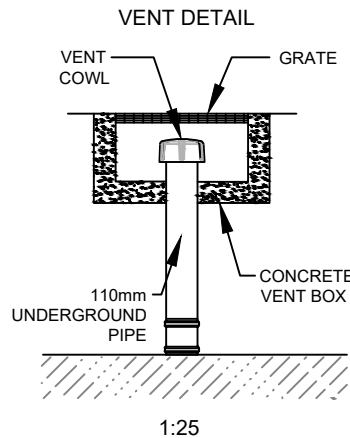
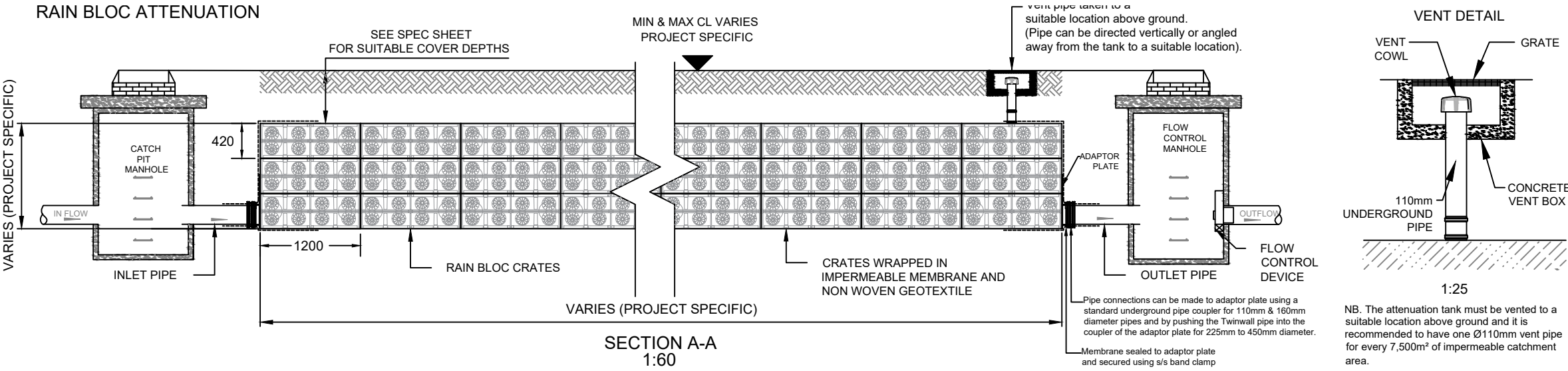
Website: southernwater.co.uk or by email at: SouthernWaterPlanning@southernwater.co.uk

Yours faithfully,

Future Growth Planning Team
southernwater.co.uk/developing-building/planning-your-development

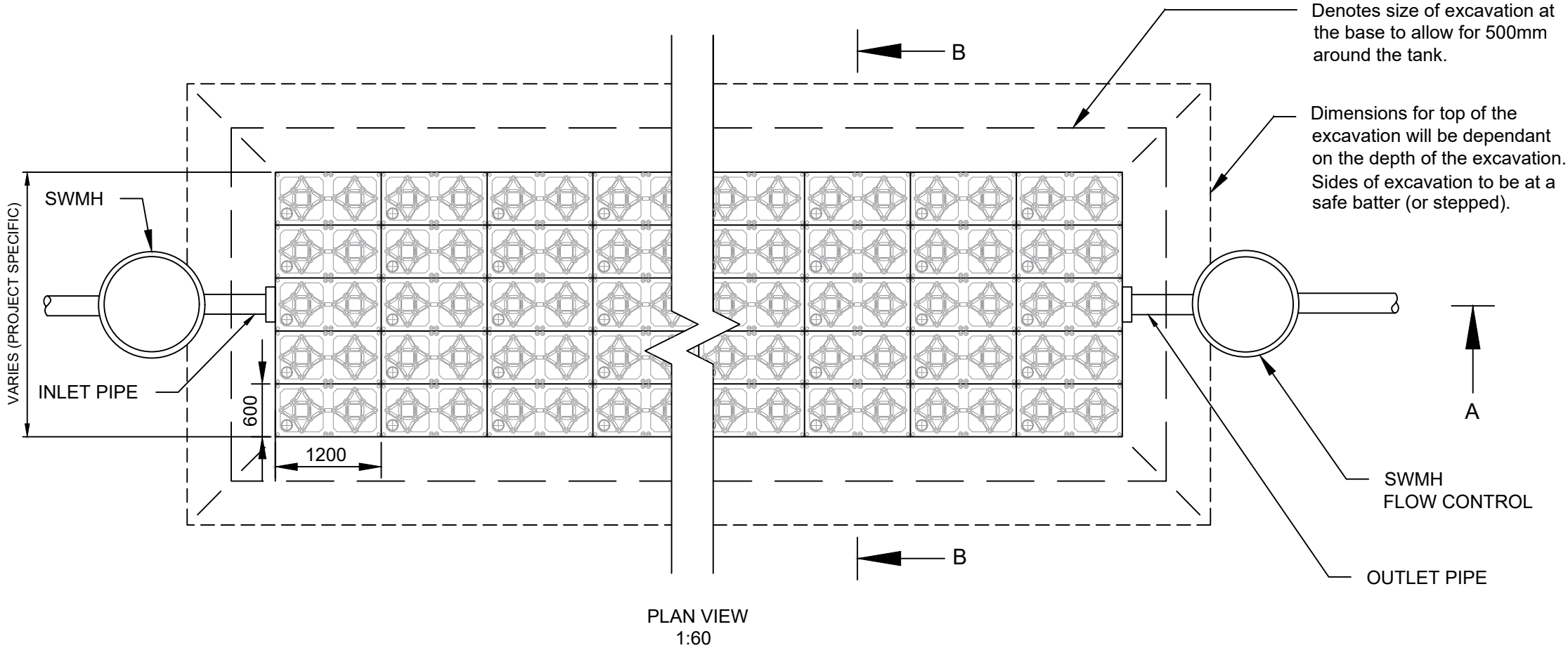
APPENDIX F ATTENUATION TANK

RAIN BLOC ATTENUATION



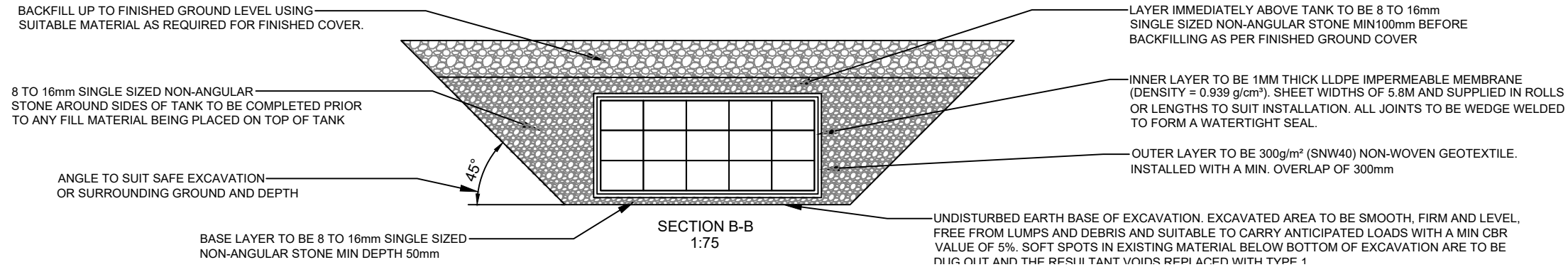
- STANDARD NOTES
1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECT'S AND ENGINEER'S DRAWINGS AND THE SPECIFICATIONS.
 2. THIS DRAWING SHOULD NOT BE SCALED.
 3. ALL DIMENSIONS ARE TO BE VERIFIED BY THE CONTRACTOR ON SITE.

- NOTES
1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE STATED
 2. TO BE READ IN CONJUNCTION WITH BELOW FOUL AND SURFACE WATER DRAINAGE LAYOUT PTC-BTF-002-003
 3. ALL DRAINAGE TO BE CONSTRUCTED IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS AND IN COMPLIANCE WITH BS752, BUILDING REGULATIONS 2010 APPROVED DOCUMENT H AND DESIGN AND CONSTRUCTION GUIDANCE FOR FOUL AND SURFACE WATER SEWERS OFFERED FOR ADOPTION AGREEMENTS UNDER THE CODE FOR ADOPTION AGREEMENTS FOR WATER AND SEWERAGE COMPANIES OPERATING WHOLLY OR MAINLY IN ENGLAND (DCG).



Crate	
Dimensions (mm)	1200 x 600 x 420
Gross Volume (m3)	0.300m³
Net Volume (m3)	0.285m³
Material	Polypropylene (Upcyclen TV30)
Weight	17kg
Void Ratio	95%
Inspectable	No
*UCS Vertical	450 kN/m²
*UCS Lateral	150 kN/m²
*Ultimate Compression Strength	

NOTE: EXCAVATION TO EXCEED TANK SIZE BY 500MM ON ALL SIDES TO ALLOW FOR ACCESS



Project Title			
BIRCH TREE FARM			
Drawing Title			
FOUL AND SURFACE WATER STANDARD DETAILS ATTENUATION TANK			
Approved	Date	Scale	
	12.02.2026	NTS	
Drawing No.	Rev.	Sheet No.	
PTC/BTF/002/006			

APPENDIX G SURFACE WATER STORAGE VOLUME OUTPUT