

NOTES:-

- THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL OTHER BEAR STRUCTURE PROJECT DRAWINGS AND SPECIFICATIONS
- ALL EXISTING DRAINAGE LEVELS AND OUTFALL POINTS SHALL BE SURVEYED AND VERIFIED BY THE CONTRACTOR PRIOR TO THE COMMENCEMENT OF THE WORKS. ANY DISCREPANCIES SHALL BE REPORTED TO THE ENGINEER IMMEDIATELY
- PIPEWORK UNDER ADOPTABLE HIGHWAY WITH LESS THAN 1.2m COVER, AND OTHER TRAFFICKED AREAS WITH LESS THAN 0.9m COVER TO RECEIVE CONCRETE ENCASEMENT
- MANHOLE/INSPECTION CHAMBER COVERS SHOULD NOT BRIDGE DIFFERENT SURFACES. CHAMBER COVER CLASS TO BE D400 IN TRAFFICKED AREAS OR B125 IN PEDESTRIAN-ONLY AREAS
- WHERE TWO PIPELINES (OTHER THAN PLASTIC PIPES) CROSS WITH LESS THAN 300mm SEPARATION PIPES ARE TO BE SURROUNDED WITH CLASS 2 CONCRETE SURROUND FOR NOT LESS THAN 1m CENTERED ON THE CROSSING POINT. CONCRETE SURROUND TO BE EXTENDED AS NECESSARY TO WITHIN 150mm OF NEAREST FLEXIBLE JOINTS
- ALL PIPEWORK TO BE LAID WITH SOFFIT TO SOFFIT CONNECTIONS UNLESS NOTED OTHERWISE.
- ALL PRIVATE DRAINAGE TO BE INSTALLED IN ACCORDANCE WITH CURRENT APPROVED DOCUMENT - BUILDING REGULATIONS PART H
- ALL SURFACE WATER DRAINAGE AND FOUL DRAINAGE PIPEWORK TO BE Ø150mm OR Ø100mm RESPECTIVELY UNLESS SPECIFIED OTHERWISE
- ALL CONNECTIONS TO THE PUBLIC SEWERAGE SYSTEM ARE TO BE MADE TO THE SATISFACTION OF THE ADOPTING AUTHORITY AND WILL BE SUBJECT TO A SECTION 104/106 APPLICATION TO BE CARRIED OUT BY THE CONTRACTOR
- IT IS RECOMMENDED THAT THE DOWNSTREAM CONNECTIONS AND INVERTS ARE CONFIRMED PRIOR TO CONSTRUCTION OF ANY DRAINAGE. DRAINAGE SHOULD THEN BE INSTALLED FROM THE CONNECTION POINT TO THE DISCHARGE COLLECTION POINTS (GULLIES/RWPS/SVPS)
- NRW PERMIT REQUIRED FOR FOUL DOMESTIC DISCHARGE TO GROUND VIA SEPTIC TANK/SEWAGE TREATMENT PLANT AND DRAINAGE FIELD.
- AN ALLOWANCE FOR 18 PERSONS HAS BEEN USED FOR SIZING THE FOUL PACKAGE TREATMENT PLANT AND DRAINAGE FIELD IN ACCORDANCE WITH CONDITION 7 OF PLANNING REF: 2006/00025/FUL

DRAINAGE KEY

- Proposed Private Package Treatment Plant (Klargester BT4U4 or Similar Approved)
- Proposed Foul Sampling Chamber (Private)
- Proposed Foul Water Drain (Private)
- Proposed Sewage Treatment Area

Demolished Farm Buildings

SEWAGE TREATMENT PLANT & DRAINAGE FIELD NOTES

Porosity test results determined from trial pits carried out as part of Condition 7 discharge (Planning ref: 2006/00025/FUL). The below summarises the approach taken as part of the condition discharge to calculate the required drainage field area:

Trial pits were excavated to a depth of 1.0 metre below existing ground level. These locations are illustrated on drawing DWG J7/180E.

A 300mm square hole to a depth of 250mm was excavated at the base of each trial pit.

Time taken for water to seep away in each trial pit (TP) was then observed as:

TP1 = 2 hours 52 minutes = 172 min x 60 = 10320 seconds
TP2 = 2 hours 20 minutes = 140 min x 60 = 8400 seconds
TP3 = 1 hours 44 minutes = 104 min x 60 = 6240 seconds

Percolation value is calculated as = drainage in seconds/depth of water placed in hole

Percolation value for TP1 = $\frac{10320}{250} = 41.28$ seconds

Percolation value for TP2 = $\frac{8400}{250} = 33.60$ seconds

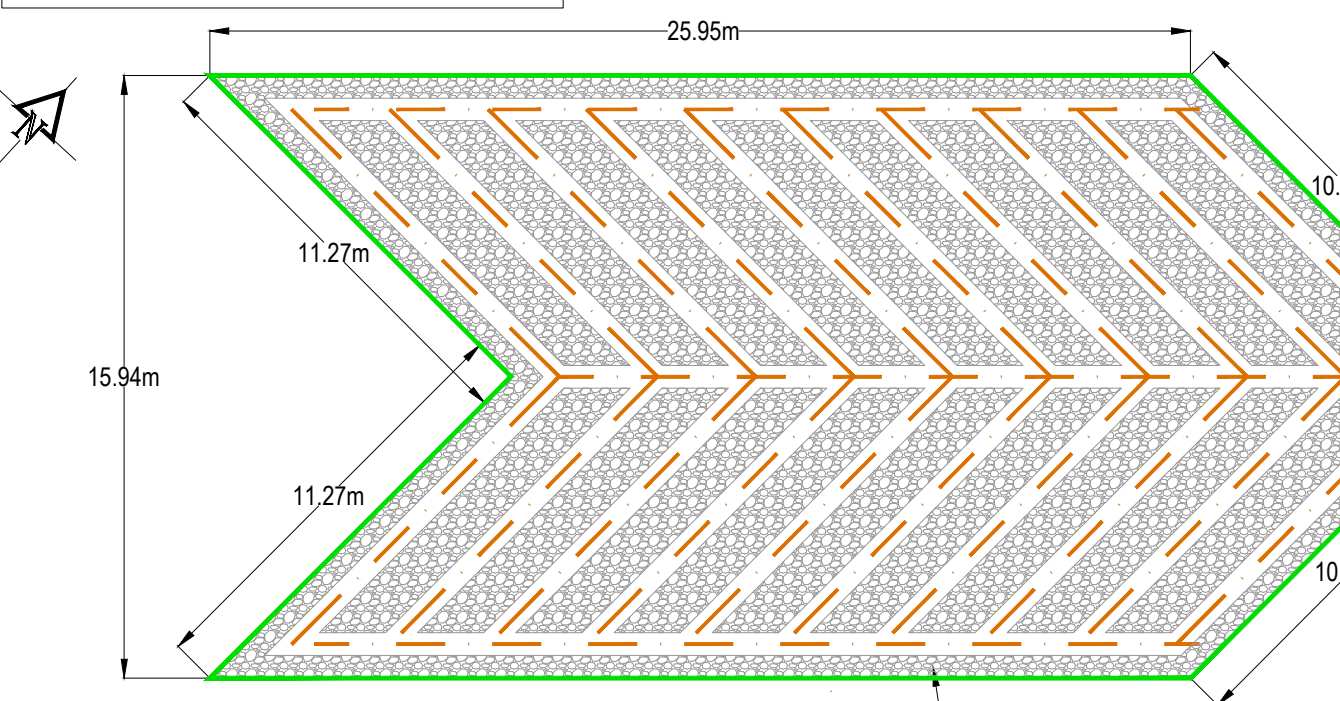
Percolation value for TP3 = $\frac{6240}{250} = 24.96$ seconds

- Average figure for Percolation value (P) = $\frac{41.28 + 33.60 + 24.96}{3} = 33.28$ seconds/mm
- Area required for soakaway land drain (A) = $P \times V \times 0.25$
- Where P = maximum numbers of persons served by the tank - assuming normal domestic residential use
- Therefore, A = $18 \times 33 \times 0.25 = 148.50$ square metres
- Assuming a 600mm wide trench, $\frac{148.50}{0.6} = 247.50$ linear metres of pipe-work is required

Based on the results of the test, it was confirmed that discharge to ground would be a feasible option to serve foul discharge from the proposed holiday units. The area required for the drainage field area was calculated as 148.50 square metres.

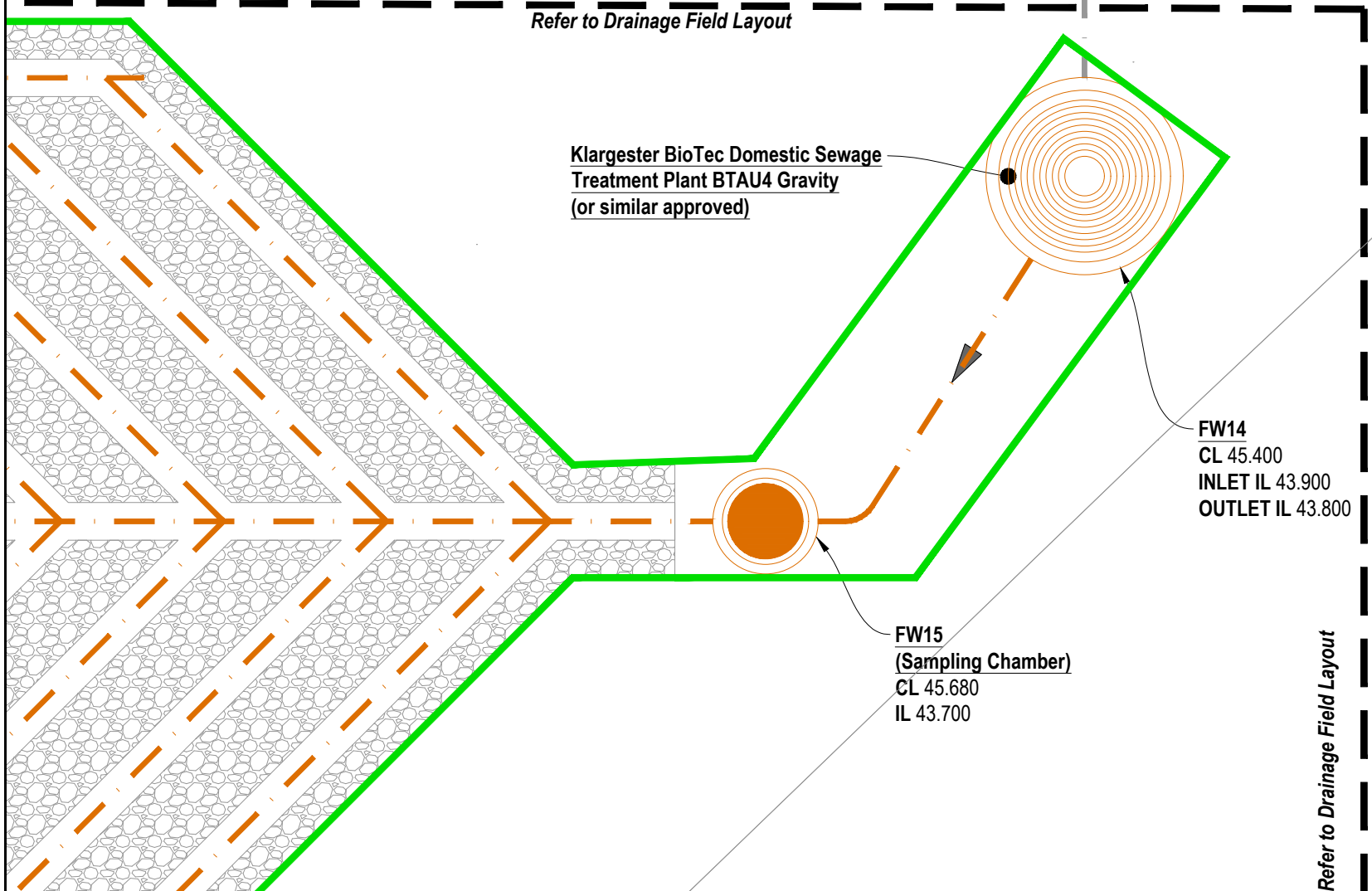
Assuming a 600mm wide trench, 247.50 linear metres of pipe work would be required to achieve the required drainage. The perforated pipe work used for the irrigation drain should be of a rigid type with round perforations, which are downward facing.

NOTE: The layout of distribution pipes shown within the drainage field is indicative only for demonstrating the linear pipework required and should not be used for setting out purposes. NRW and building control to confirm layout of drainage field prior to construction



DRAINAGE FIELD LAYOUT (INDICATIVE)

Scale: 1:200



PROPOSED DRAINAGE LAYOUT

Scale: 1:100

Rev.	Date.	Details.	By.	Chk.

Amendments


Rugged by design
Sophia House 28 Cathedral Road Cardiff CF11 9LJ
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Project:
**NEW HOLIDAY UNITS
FLEMINGSTON COURT FARM**

Title:
**PROPOSED DRAINAGE LAYOUT
SEWAGE TREATMENT PLAN**

Drawing Status:
INFORMATION (NOT FOR CONSTRUCTION)

Drawn:	Checked:	Scale(s) at A1:
WH	PC	AS SHOWN
Date:	Job No.	Drawing No.
02.11.22	P0348	0005
		Revision
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