VERIFICATION REPORT

Introduction

This report includes information about the drainage strategy and its implementation as per the engineer's drawing (figure 1) and Appendix 1. The report includes photographic evidence throughout of the construction process.

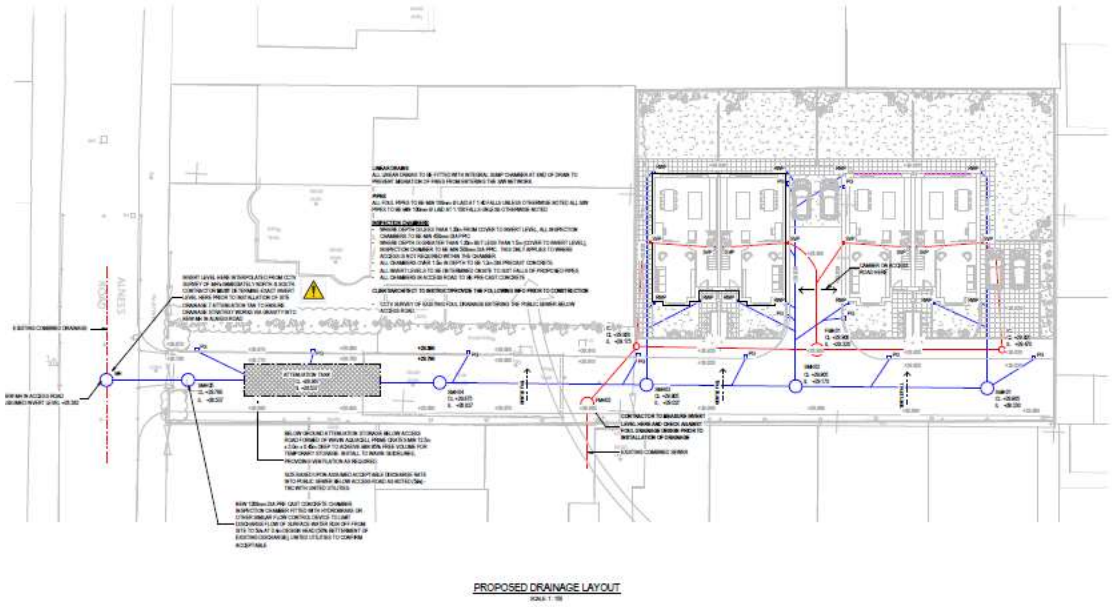


Figure 1

Foul water

All of the manholes have been installed as per the engineers drawings, and have all been connected to FMH02, which discharges into the existing combined sewer with unrestricted flow. Figures 1, 2 and 3 show the foul water connections.



Figure 1



Figure 2



Figure 3

Surface Water

A Manhole (MH) was installed on Alness Road for the discharge of the Surface Water at a rate of 5 litres per second, as agreed and adopted by United Utilities (UU), see Appendix 2.

The MH SMH05 was installed as per the engineer drawings (Figure 1) and a hydro-valve system was installed in SMH05, to control the flow as designed and agreed by United Utilities, this can be seen in Figure 4 and 5. Appendix 3 shows the type of hydro-valve used and installation guide.



Figure 4



Figure 5

Attenuation Tank

An Ecobloc maxx, single layer attenuation tank was manufactured by Graf UK limited and installed. The tank is 3.2m x 12.8m x 0.40m deep and was installed before the hydro-valve to accommodate the storage of water from the rain water and road gulleys. This can be seen in the images below and the design and standard detail of installation for the attenuation tank can be found in Appendix 4.



Figure 6

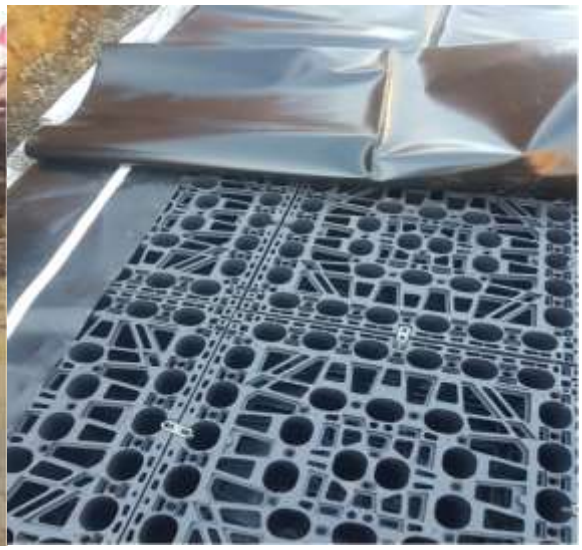


Figure 7



Figure 8



Figure 9

Catch Pit Manhole

The SMH04 catch pit manhole was installed as per standard detail for the attenuation tank. This was installed to catch any debris coming through the system before the water flows to the tank. The maintenance of this can be found in the maintenance strategy. The images below show the catch pit.



Figure 10



Figure 11

Road Gullies

Dual outlet trapped Gully's were installed as per the engineer drawings (Appendix 1). See picture below.



Figure 12

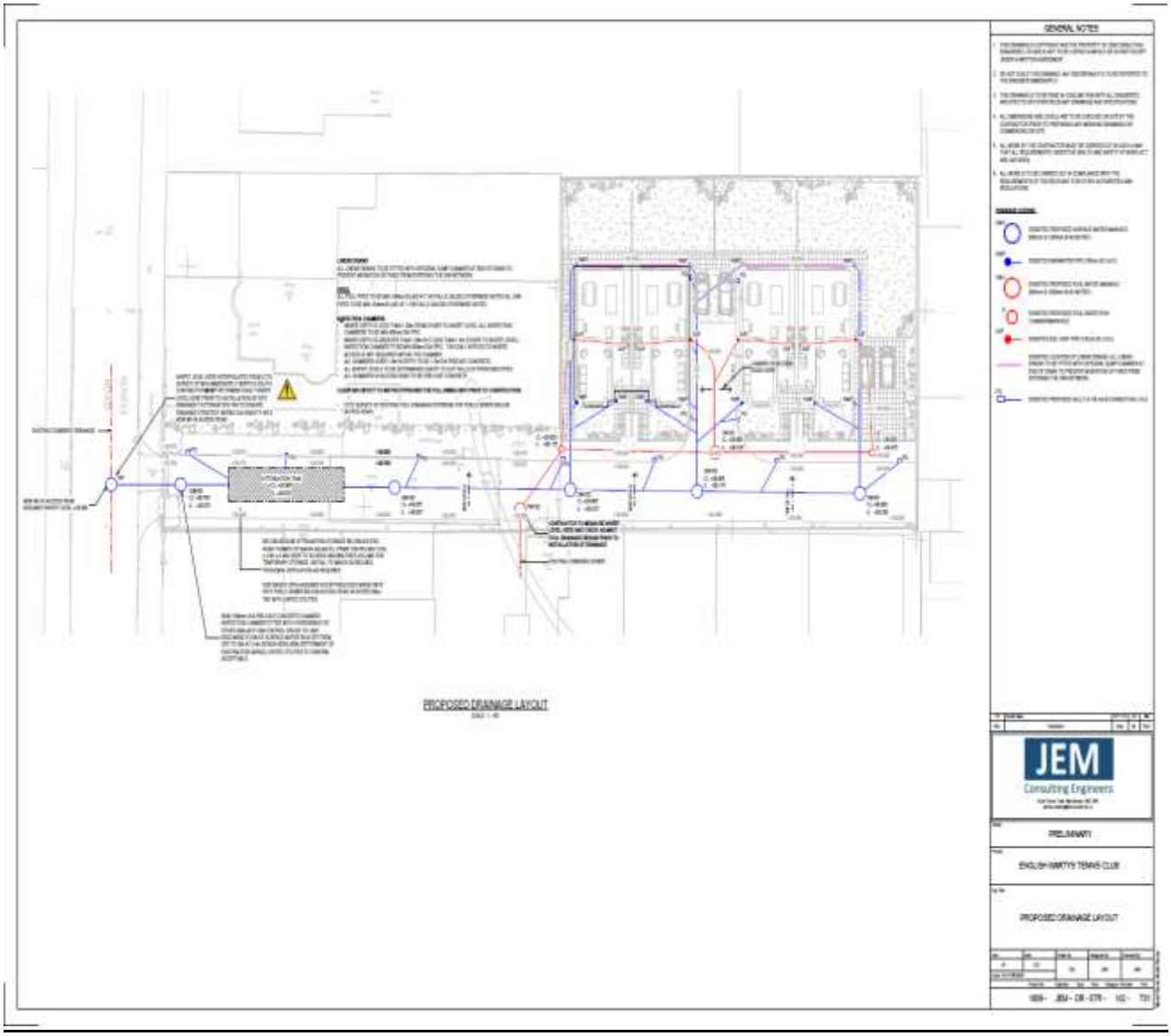
Rainwater Gullies

Bottle trap gullies have been used for the rainwater discharge, the bottle gully doesn't require a tight bend in the pipe to trap the water instead it uses a removable inner sleeve that creates a space between itself and the wall of the gully that the water is forced up to reach the outlet pipe. This can be seen in the picture below.



Figure 13

Appendix 1


GENERAL NOTES
PROPOSED DRAINAGE LAYOUT
JEM
Consulting Engineers
PRELIMINARY
ENGLISH MARTYRS TENNIS CLUB
PROPOSED DRAINAGE LAYOUT

Appendix 2

United Utilities Water Ltd
Developer Services & Planning

Your Reference	EC4908
Our Reference	4200028902
Date	22ND January 2020

Dear Sir/Madam

Location:	- English Martyrs, Alness Road, Manchester M16 8HW

I am writing to you in reference to your recent sewer connection application. I can confirm that the connection has been inspected a5t - English Martyrs, Alness Road, Manchester M16 8HW and is deemed as satisfactory.

Please accept this letter as our final approval for this sewer connection.

Should you need to enquire about this application please telephone our Customer Service Centre on 0345 072 6067 and quote the above reference number.

Yours faithfully

Sharon Hitch

Developer Services and Metering

United Utilities Inspection Notice

This form is to confirm a new connection has been made to an existing public sewer under Section 106 of the Water Industry Act 1991

United Utilities
helping life flow smoothly

Site details: Details of the site or premise that have been connected to the public sewer	
United Utilities notification reference (EC/NC/SC/WC)	EC4908
Site address	English Martyrs, Alness Road, Manchester M16 8HW
Development type	New property

Contractor Details			
Contractor name / Company Name	Scott Bland Civils Ltd		
Contractor Email Addess	Scott.blandcivils@gmail.com		
Works Supervisor	Scott Bland		
Confirm sewer 'log on' & 'log off' procedure followed	Yes ☑	No ☐	

Principal Contractor Details (if applicable)	
Company name (if applicable)	Mai Construction
Name of Contact for Project	Ibraheem Al-Bayati
Email Address	Info@MaiConstruction.co.uk
Number of site inspections conducted by United Utilities	1

Connection details			
Sewer connection type	Surface Water		
Surface Water sewer pipesize diameter	150mm		
Connecting into:	300mm	Existing Sewer Type	Combined
Connecting to asset:	a new manhole		
Connection Location	Alness Road		

Outcome	
Connection status	Satisfactory

Comments
I can confirm that the Surface Water Sewer connection is SATISFACTORY - 150mm Surface Water Sewer connecting into the 300mm Combined connected via a new manhole in Alness Road

Approved: I confirm the sewer connection detailed above has been satifactorily completed and inspected

Developer Services Inspector	Phil Harper
Date of Inspection	22/01/2020

Appendix 3

JFC CIVILS
Quality Plastic Solutions

Hydro-Valve Installation Instructions

Installation Instructions For Small Mounting Box In Ø1.05m / Ø1.2m / Ø1.35m / Ø1.5m Circular Manhole Chambers

Step 1

Cut a hole in the circular manhole to allow the inlet and outlet pipes through at the correct invert level.

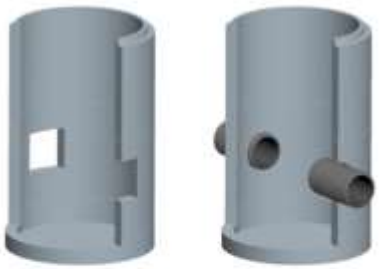


Figure 1 - Step 1 & 2

Step 2

Install the inlet and outlet pipes at the correct invert level. Grout around the pipes and finish outlet pipe flush with inside of manhole.

Step 3

Mount the Hydro-Valve on the inside wall of the manhole up against the outlet pipe. Ensure outlet invert level is the same as invert mark on Hydro-Valve. Ensure Hydro-Valve is horizontally level to achieve a good seal with the manhole.



Figure 2 - Step 3 & 4

Step 4

Drill the manhole through the 6 holes in the Hydro-Valve.

Step 5

Fix the Hydro-Valve to the manhole with the steel stud anchors supplied. Tighten bolts until the neoprene gasket is fully compressed to achieve a watertight seal between Hydro-Valve and manhole wall.

Step 6

Fix the first by-pass cord bracket to the underside of the manhole cover vertically above the bypass plate.

Step 7

Fix the second by-pass cord bracket to the underside of the manhole cover adjacent to the access opening.

Step 8

Ensure the by-pass cord bracket operates freely and is accessible from the ground.

Optional Overflow

A high level overflow can be incorporated by piping into the outlet from inside the manhole at the top water level.



Figure 3 - Optional Overflow

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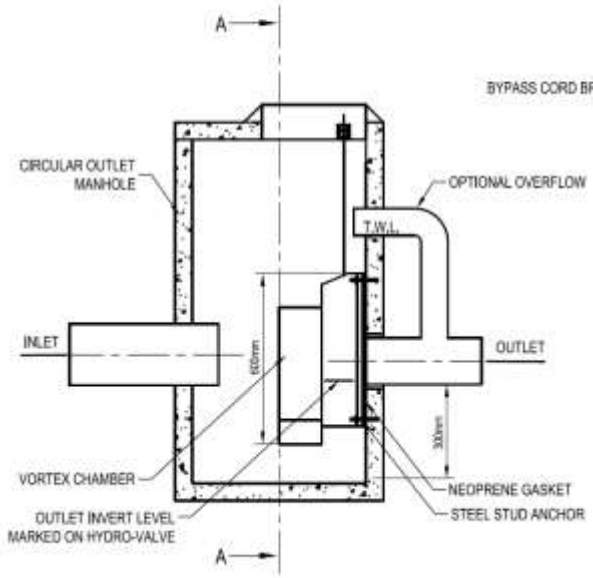
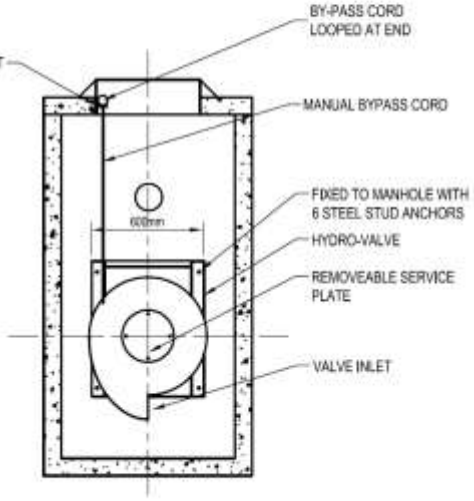
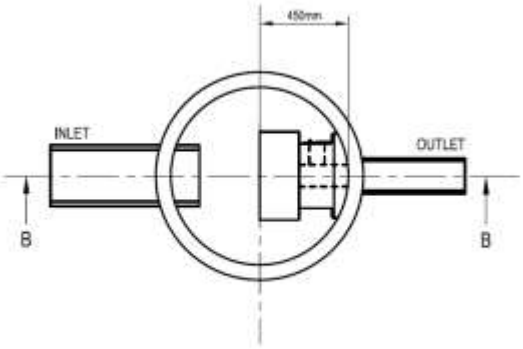
Installation Drawing For Small Mounting Box In Ø1.05m / Ø1.2m / Ø1.35m / Ø1.5m Circular Manhole Chambers



SECTION B-B



SECTION A-A



PLAN



Note:

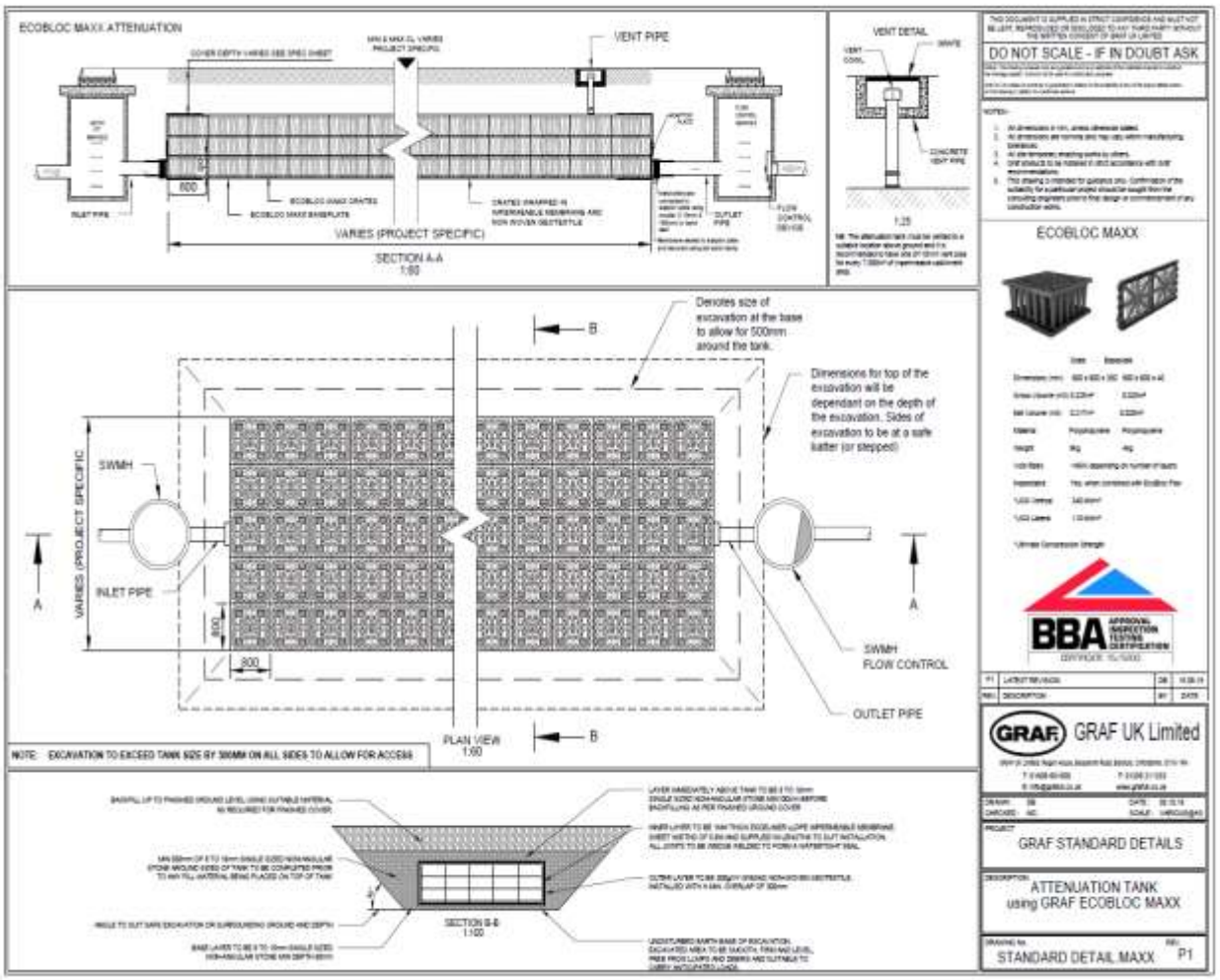
- Typical installation drawing.
- Dimensions shown indicate typical ranges only.
- Actual dimensions dependent on specification.

IRELAND
Tel. +353 93 24066
Email. info@jfccivils.com

UNITED KINGDOM
Tel. +44 1928 583391
Email. infouk@jfccivils.com

Ref. HV-II-SMBC Rev. 001
This document and its informational content are strictly confidential and are the sole property of JFC Manufacturing Co. Ltd. and may not be copied or reproduced in any form without the prior written consent of JFC Manufacturing Co. Ltd. Typical dimensions shown, these may not represent actual dimensions. Contact for more information.

Appendix 4


ECOBLOC MAXX ATTENUATION
VENT PIPE
VENT DETAIL
VARIES (PROJECT SPECIFIC)
SECTION A-A
1:50
Denotes size of excavation at the base to allow for 500mm around the tank.
Dimensions for top of the excavation will be dependant on the depth of the excavation. Sides of excavation to be at a safe batter (or stepped)
SWMH
INLET PIPE
VARIES (PROJECT SPECIFIC)
SWMH FLOW CONTROL
OUTLET PIPE
PLAN VIEW
1:50
NOTE: EXCAVATION TO EXCEED TANK SIZE BY 500MM ON ALL SIDES TO ALLOW FOR ACCESS
SECTION B-B
1:100
DO NOT SCALE - IF IN DOUBT ASK
ECOBLOC MAXX
BBA
GRAF UK Limited
GRAF STANDARD DETAILS
ATTENUATION TANK
using GRAF ECOBLOC MAXX
STANDARD DETAIL MAXX
P1