ONEWOOD GROUP

BRADFORD ROAD, BATLEY

Drainage and SuDS Maintenance and Management Plan

June 2021

Rev A

icis design limited
ref. 10688.ms

Bradford Road, Batley

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Bradford Road, Batley

Contents

Bradford Road, Batley

1.0 Introduction

SuDS are a new environmentally friendly approach to managing rainfall that uses landscape features to deal with surface water. SuDS aim to:

- Control the flow, volume and frequency of water leaving a development area;
- Prevent pollution by intercepting silt and cleaning runoff from hard surfaces;
- Provide attractive surroundings for the community;
- Create opportunities for wildlife.

2.0 SuDS and Drainage Networks at Bradford Road, Batley

The SuDS and drainage network are designed to prevent flooding of the Bradford Road site, and to control the surface water run-off from the new development to reduce flood risk to areas outside the site boundary.

The feasible SuDS methods used for the development to prevent flooding and to reduce the surface water run-off from the development site are in the form of **Permeable Surfacing,** attenuation tank **Cellular Units** (attenuation tank)**, oversized pipes,** and a flow control chamber in the form of a **Hydro-Brake.**

Surface water is to discharge from the new building via rainwater pipes to a 225mm – 450mm diameter pipe, and from the car park areas via drainage kerbs and a permeable surfacing system.

The surface water will be conveyed within the network and permeable paving system through the flow control (in the form of a hydro-brake), before discharging to the existing surface water sewer.

Restricted surface water will surcharge the drainage network, and will be attenuated within the attenuation tank (in the form of cellular units), and sub-base of the permeable surfacing system.

3.0 Managing the SuDS

The SuDS at the Bradford Road site have been designed for easy maintenance to comprise:

- Regular day to day care - litter collection and checking the inlets and outlets where water enters or leaves a SuDS feature;
- Occasional tasks - managing and removing any silts that builds up at paving / surface level and upstream drainage networks; checking of inspection chambers to ensure no build up of silts or litter present.
- Remedial work - repairing damage where necessary and maintaining porous gaps of paving.

4.0 SuDS Management Responsibilities

The responsibility for the day to day tasks of maintenance and management will be held by the tenants for the areas of the site under their lease agreement. The overall system management and periodic cleaning and repair will be the responsibility of the site owner, who will also check that the tenants are undertaking their tasks appropriately.

5.0 SuDS Management Plan

Refer to ICIS design Ltd drawings 10688-C-XX-00-GA-6000 to 6002 in Appendix A for the full surface water management / drainage layout details.

Figure 1 below shows an extract from the drainage, highlighting the key drainage areas for management and maintenance.

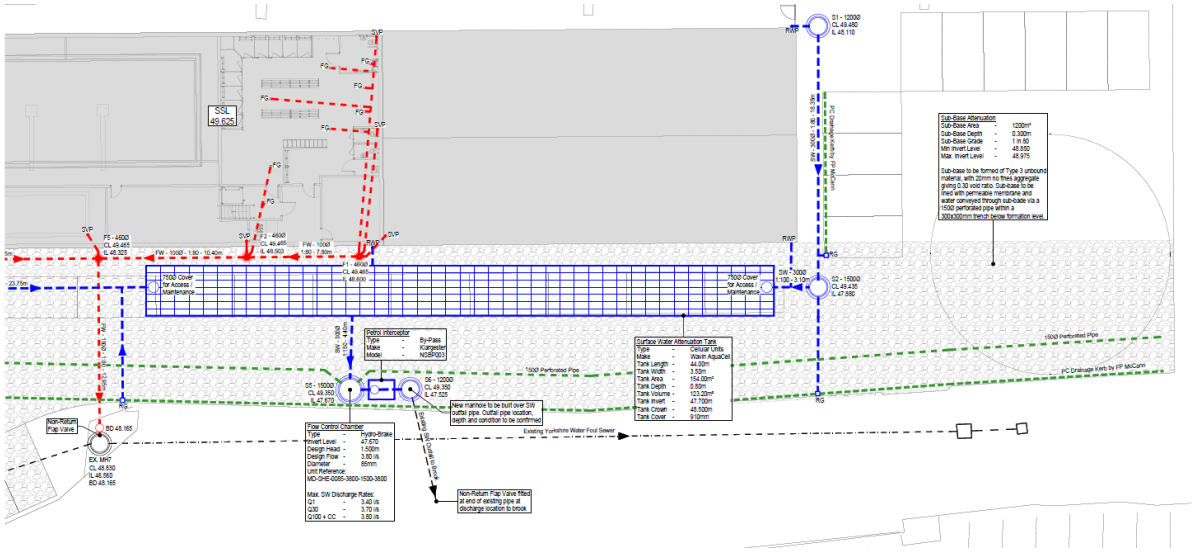


Figure 1 – SW Network and SuDS Maintenance Plan

6.0 SuDS Maintenance Specification

Attenuation Tank and Flow Control

REGUALAR MAINTENANCE	**Frequency**
Litter Management.. Pick up all litter within development area and remove off site.	Daily
OCCASIONAL TASKS	
Inlets and Outlets.. Remove silt from manholes	2 monthly or after extreme rainfall
Attenuation tank.. Annual inspection, remove silt and check free flow	Annually
REMEDIAL WORK	
Inspect areas around attenuation tank and flow control chamber regularly to check for damage to covers or failure damage to flow control orifice. Replace if necessary.	As required

Permeable Surfacing, Gullies, Pipes and Inspection Chambers

REGUALAR MAINTENANCE	**Frequency**
Litter Management.. Pick up all litter in permeable paving and landscape areas and remove off site.	Daily
Hard Surfaces.. Sweep regularly, removing debris from site.	Monthly
OCCASIONAL TASKS	
Inspection Chambers.. Annual inspection, remove silt and check free flow.	Annually
Hard Surfaces.. Brush and suction clean annually to remove silt blockage and enhance design life.	Annually
REMEDIAL WORK	
Inspect SuDS system regularly to check for damage or failure. Undertake remedial work including specialist cleaning, jet wash of pipes etc. as required.	As required

7.0 Spillage – Emergency Action

Most spillages on development sites are of compounds that do not pose a serious risk to the environment if they enter the drainage in a slow and controlled manner, with time available for natural breakdown in a treatment system. Therefore, small spillages of oil, milk or other known organic substances should be removed where possible using soak mats as recommended by the Environment Agency with residual spillage allowed to bio-remediate in the drainage system.

In the event of a serious spillage, either by volume or of unknown or toxic compounds, then isolate the spillage with soil, turf or fabric and block outlet pipes from chamber(s) downstream of the spillage with a bung(s). (A bung for blocking pipes may be made by wrapping soil or turf in a plastic sheet or close woven fabric.)

Contact the Environment Agency immediately.

Appendix A - Surface Water Drainage Layout

General Drainage Notes:

Existing details shown on this drawing including kerblines, existing drains, chambers, sewers, pipework, stub connections where new connections, diversions or abandonment are shown, invert levels and pipe sizes shall be checked and confirmed to the engineer prior to the commencement of any works. Any discrepancies shall be reported to the engineer for action prior to any new construction.

All existing drainage depths, size and conditions, to which the proposed drainage is to connect, are to be confirmed prior to the commencement of any drainage works.

All drainage works shall be carried out in accordance with the requirements of the local authority and in conjunction with all relevant British Standards and Codes of Practice

All drainage shall comply with the typical drainage construction details and the requirements of BS EN 752.

Access covers and frames shall comply with the loadings specified and to BS EN 124 and kitemarked or if recessed covers are specified then in accordance with FACTA association equivalent.

The proposed building outlines shown on this drawing are for information only. Refer to Architects plans for precise location setting out information and details.

All underslab drainage shall be clear of foundations unless shown otherwise with long radius bends kept to a minimum and used where unavoidable.

All private drainage pipework for foul and surface water systems have been designed on the basis of UPVC to BS EN 1401-1, unless noted otherwise.

Where new drainage is situated within 5 metres of new or existing trees the pipework shall be encased in concrete to reduce the risk of root ingress.

Concrete encasement of the pipework shall be required where the vertical clearance between two pipes crossing is less than 300mm.

All existing drainage shall be assumed to be 'live' and shall be maintained at all times during the works. Existing drainage shall be reconnected to the new drainage system unless proven to be redundant for abandonment. All existing drainage to be abandoned shall be sealed by appropriate means.

Upon completion all new drainage installation together with any existing drainage retained shall be jetted and CCTV surveyed upon completion. Contractor to ensure that the drainage system is fully operational, free of excess debris/silt and all identified faults rectified.

HEALTH & SAFETY: The works shall be carried out by specialist competent and experienced contractors. All operatives shall have received full and appropriate training with appropriate qualifications for the operations they are required to undertake. All work shall be carried out in accordance with the relevant Health & Safety Regulations.

Site Specific Drainage Notes:

Architect to confirm proposed rainwater locations prior to the commencement of any drainage works.

All external levels and subsequent cover levels of proposed drainage network to be conformed by Architect prior to commencement of any drainage works

Existing surface and foul water drainage pipe manhole details, depths, condition etc to be confirmed prior to the commencement of any drainage works.

All drainage to remain live during construction and diversion stage.

All foul water pipes to be 100Ø, and all surface water pipes to be 150Ø unless shown otherwise.

Rainwater Pipe to have invert level of 600mm below finished floor level, unless stated otherwise.

Drainage Specifications

Foul water pipes to be Polypipe to BS EN 1401-1 or similar.

Surface water pipes to be Polypipe Ridgidrain or similar.

Manholes to be PCC by FP McCann or similar.

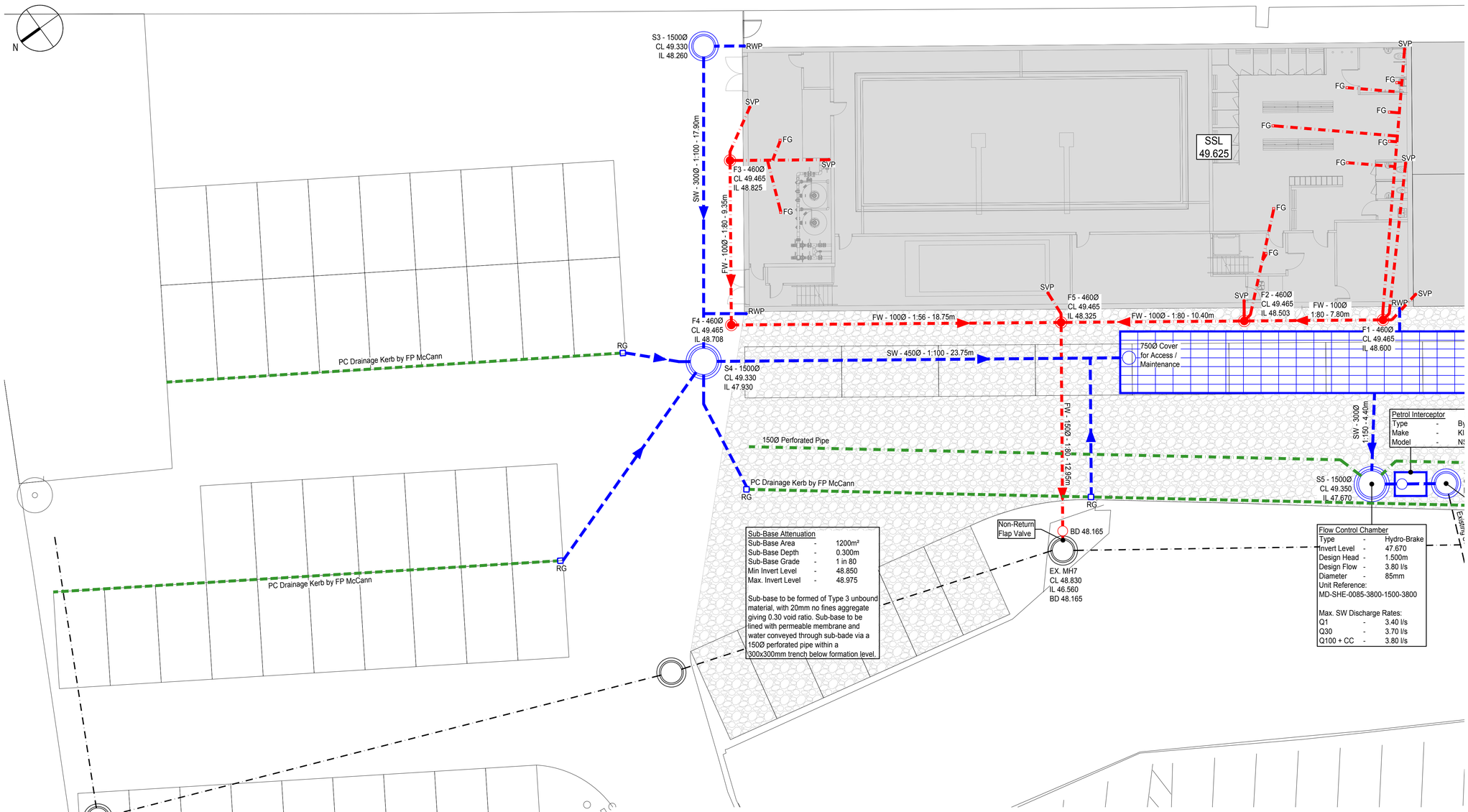
Flow control to be Hydro-Brakes by Hydro International

Inspection chambers to be Polypipe or similar.

Attenuation tank to be WAVIN AquaCell Prime or similar.

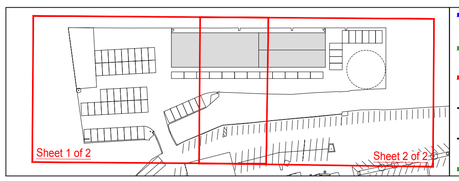
Petrol Interceptor to be Klargester By-Pass or similar

Channel Drains to be ACO 150D 0.0 or Similar



UP STREAM MH DETAILS								PIPE DETAILS			DOWN STREAM MH DETAILS			FURTHER INFORMATION
MH	CL	IL	DEPTH TO SOFFIT	MH SIZE	MH TYPE	COVER SIZE	COVER TYPE	PIPE SIZE	PIPE GRADIENT	PIPE LENGTH	D / S MH	D / S CL	D / S IL	
F1	49.465	48.600	0.765	460	PPIC	460	B125	100	80	7.80	F2	49.465	48.503	Polypipe IC
F2	49.465	48.503	0.862	460	PPIC	460	B125	100	80	10.40	F5	49.465	48.375	Polypipe IC
F3	49.465	48.825	0.540	460	PPIC	460	B125	100	80	9.35	F4	49.465	48.708	Polypipe IC
F4	49.465	48.708	0.657	460	PPIC	460	B125	100	56	18.75	F5	49.465	48.375	Polypipe IC
F5	49.465	48.325	0.990	460	PPIC	460	B125	150	80	12.95	EX. MH7	48.830	46.560	Polypipe IC

S1	49.480	48.110	1.070	1200	E	750x600	D400	300	80	18.35	S2	49.435	47.880	PCC Manhole
S2	49.435	47.880	1.255	1500	E	750x600	D400	300	100	3.10	Connection to Attenuation Tank			PCC Manhole
S3	49.330	48.260	0.770	1500	E	750x600	D400	300	100	17.90	S4	49.330	48.080	PCC Manhole
S4	49.330	47.930	0.950	1500	E	750x600	D400	450	100	23.75	Connection to Attenuation Tank			PCC Manhole
S5	49.350	47.670	1.580	1500	Flow Control	750x600	D400	100	80	2.00	Connection to Petrol Interceptor			Flow Control Chamber
S6	49.350	47.525	TBC	1200	E	750x600	D400	Ecisting Outfall Pipe. Details TBC			-	-	-	PCC Manhole



Proposed Surface Water Drainage
Proposed Perforated Pipe
Proposed Foul Water Drainage
Existing Surface Water Outfall Pipe
Existing Yorkshire Water Foul Sewer
RG Concrete Dish Channel + Gully

Rev T3 | Number 6001 | Type GA | Level 00 | Zone XX | Role C

Rev.	Description	Date
T3	Paving Note Amended	29.04.21
T2	Value Engineering Amendments	23.04.21
T1	Tender Issue	22.01.21

Project
Bradford Road, Batley

Client
Onewood Group

Drawn	Checked	Approved	Date	Scale @ A1
MS	GS	GC	22.01.21	1:125

Drawing Title
Below Ground Drainage Layout
Sheet 1

Drawing Status
Tender

Project No.	Drawing No.	Revision
10688 – C – XX – 00 – GA – 6001	– T3	

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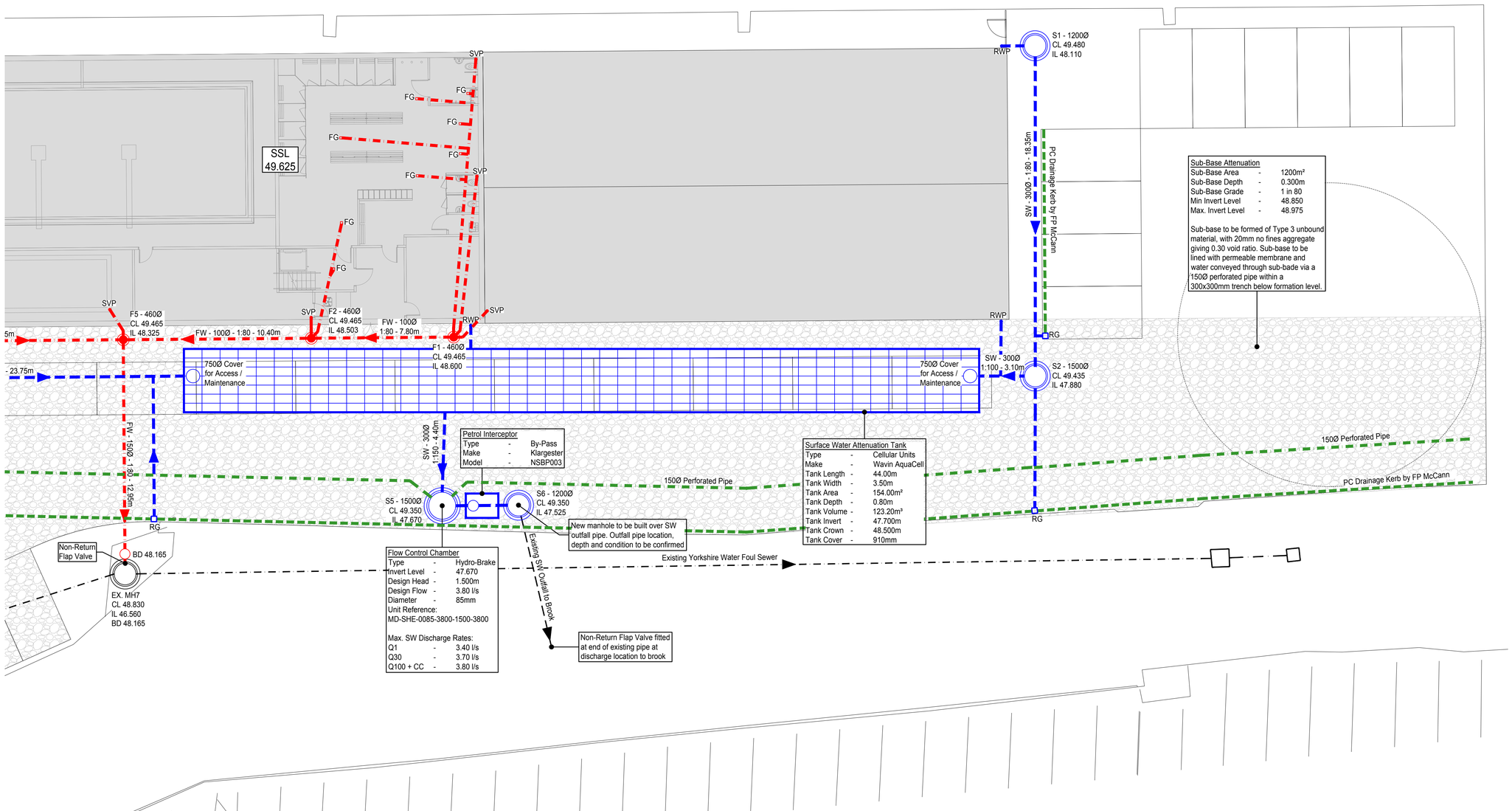

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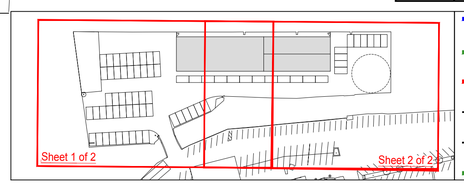

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Rev. T3 | Number 6002 | Type GA | Level 00 | Zone XX | Role C

Rev.	Description	Date
T3	Paving Note Amended	29.04.21
T2	Value Engineering Amendments	23.04.21
T1	Tender Issue	22.01.21

Project: Bradford Road, Batley
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Drawn	Checked	Approved	Date	Scale @ A1
MS	GS	GC	22.01.21	1:125

Drawing Title: Below Ground Drainage Layout Sheet 2
Drawing Status: Tender

Project No.	Drawing No.	Revision
10688 – C – XX – 00 – GA – 6002	– T3	

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