Life Sciences, Edge Hill University

Response to Condition 13

12.12.2023

AJP Ref: 222-076

PREPARED BY John Marshall

0151 227 1462 info@ajpltd.co.uk www.ajpltd.co.uk 4th Floor, 1 Dale Street, Liverpool, L2 2ET

Response to Condition 13

Prepared for Edge Hill University

Life Sciences - Edge Hill University

Record of Approval	Originator:	Approved:	Date:
	J. Marshall - Engineer	J. Smith - Director	12.12.2023
Version	Author:	Change Description:	
01	John Marshall	Initial issue	12.12.2023

Contents

Alan Johnston Partnership Ltd.

Company No. 13204766

Life Sciences, Edge Hill University

Response to Condition 13

1.0 Introduction

This document has been produced in relation to the development of the Life Sciences Unit at Edge Hill Campus, as approved by West Lancashire Borough Council Planning department under the Decision Notice Reference : 2022-0878-FUL. It addresses the requirements of Condition 13 and provides evidence to enable discharge of the Condition. The text of the Condition is summarised below:

The commencement of use of the development shall not be permitted until a site-specific Operation and Maintenance Manual for the lifetime of the development, pertaining to the surface water drainage system and prepared by a suitably competent person, has been submitted to and approved in writing by the Local Planning Authority. The details of the manual to be submitted for approval shall include, as a minimum:

a) A timetable for its implementation;
b) Details of SuDS components and connecting drainage structures, including watercourses and their ownership, and maintenance, operational and access requirement for each component;
c) Pro-forma to allow the recording of each inspection and maintenance activity, as well as allowing any faults to be recorded and actions taken to rectify issues;
d) The arrangements for adoption by any public body or statutory undertaker, or any other arrangements to secure the operation of the sustainable drainage scheme in perpetuity;
e) Details of financial management including arrangements for the replacement of major components at the end of the manufacturer's recommended design life;
f) Details of whom to contact if pollution is seen in the system or if it is not working correctly; and
g) Means of access for maintenance and easements. Thereafter the drainage system shall be retained, managed, and maintained in accordance with the approved details.
Reason: To ensure that surface water flood risks from development to the future users of the land and neighbouring land are minimised, together with those risks to controlled waters, property, and ecological systems, and to ensure that the sustainable drainage system is subsequently maintained pursuant to the requirements of Paragraph 169 of the National Planning Policy Framework.

2.0 RESPONSE TO CONDITION 13

Section A - Timetable for Implementation

To satisfy the requirements of Section A, it is stated that the maintenance requirements of the SuDs systems shall be implemented immediately on occupation of the building, and as stated below in Section B.

Section B - Details of SuDS components

It is proposed that the surface and foul water drainage systems and Surface water systems will be a private, therefore the drainage system maintenance requirements will be the responsibility of a responsible organisation as nominated by EHU; in accordance with the CIRIA SUDS Manual C753.

The S.W attenuation for the development, shall consist of cellular storage units that shall remain private and therefore be the responsibility of an appointed responsible organisation in accordance with the CIRIA SUDS Manual C753. Accordingly, as stated in the SUDS Manual the operation and maintenance of the attenuation shall be as the modified version of table 21.3 below.

Table 21.3 (modified) : Operation and maintenance requirements for attenuation storage tanks

Maintenance Schedule	Required Action	Typical Frequency
Regular Maintenance	Inspect and identify any areas not operating correctly. If required take remedial action	Monthly for 3 months, then annually as minimum
	Remove debris from the catchment surface / ACO Channels	Monthly
	Remove sediment from upstream catchpit chambers	Annually, or as required
Remedial Action	Repair inlets, outlets, vents and cellular storage units	As required
Monitoring	Inspect / check all inlets, outlets and vents to ensure they are in good condition and operating as designed	Annually
	CCTV Survey inside of cellular system for sedimentation build-up and remove if necessary	Every 5 years minimum or as required

The remaining drainage systems (Hydrobrake unit) will be maintained in accordance with manufacturer's requirements which will be provided within the O&M manual which will be issued as a compliance requirement to the maintenance contractor on completion of the works.

The shared hard surfaces proposed for the development shall require regular annual sweep and suction brush following leaf fall in autumn. An annual inspection of control chamber, ACO channels and the inspection chambers and catch pit manholes, shall be necessary to remove any silt build up and check the free flow use of the hydrobrake.

The details of the SuDS features can be found in Appendix A.

Section C - Pro Forma

Copies of the typical Pro forma can be found in Appendix B.

Section D- Adoption Agreements

The SuDS systems in service of this proposed development shall remain private and not be put forward for adoption, therefore this section should be disregarded as not relevant to the proposals.

Section E- Details of Financial Management

The maintenance of the SuDS features shall be carried out by Edge Hill University Facilities Management, in perpetuity. The FM of Edge Hill University is funded by the continual operation of the University as a going concern..

Section F- Contact Details for Pollution Concerns

In the case of Pollution being seen within the systems the necessary immediate contact information can be seen in Appendix C.

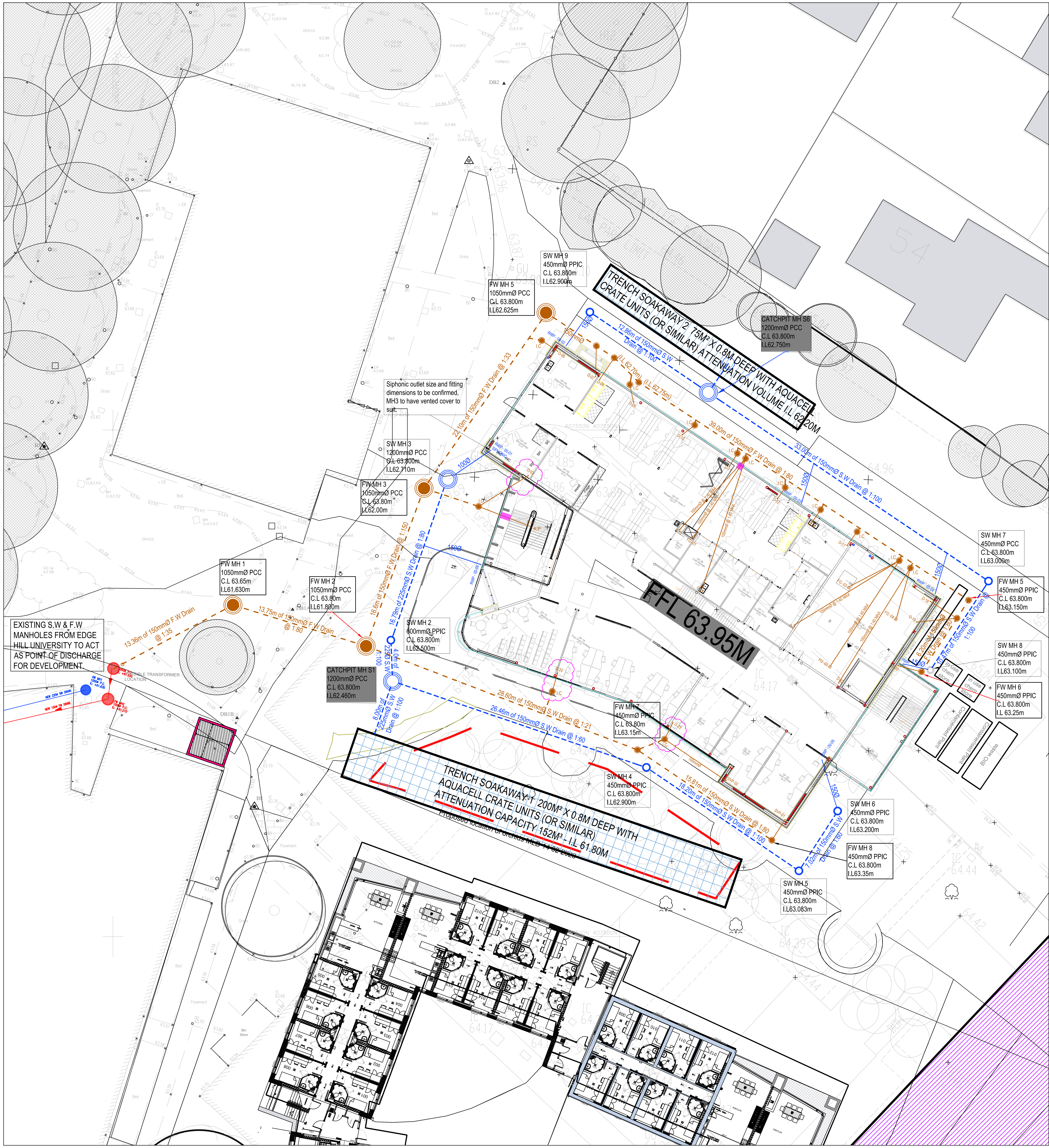
Section G- Access & Easements

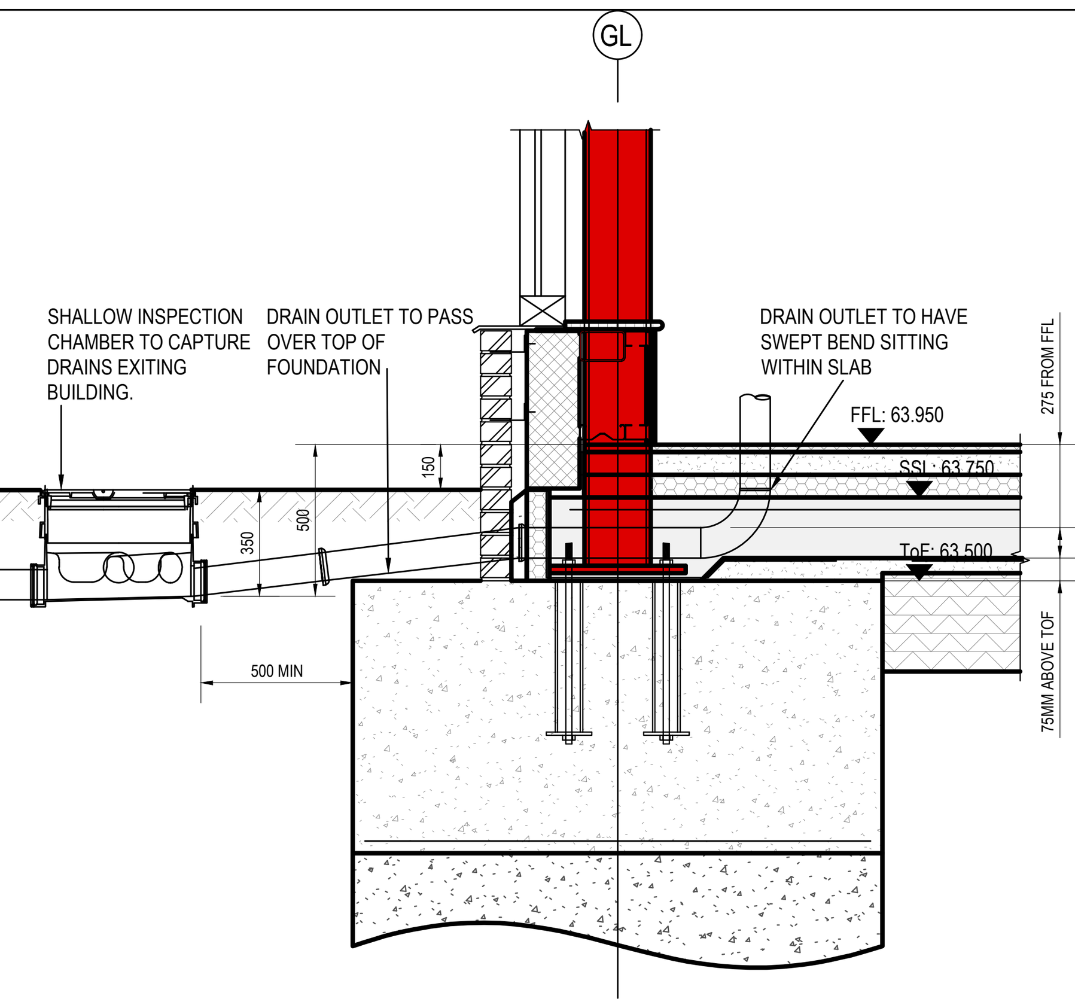
The details of access to the SuDS features and their necessary stand off distances are shown in Appendix A.

3.0 CONCLUSION

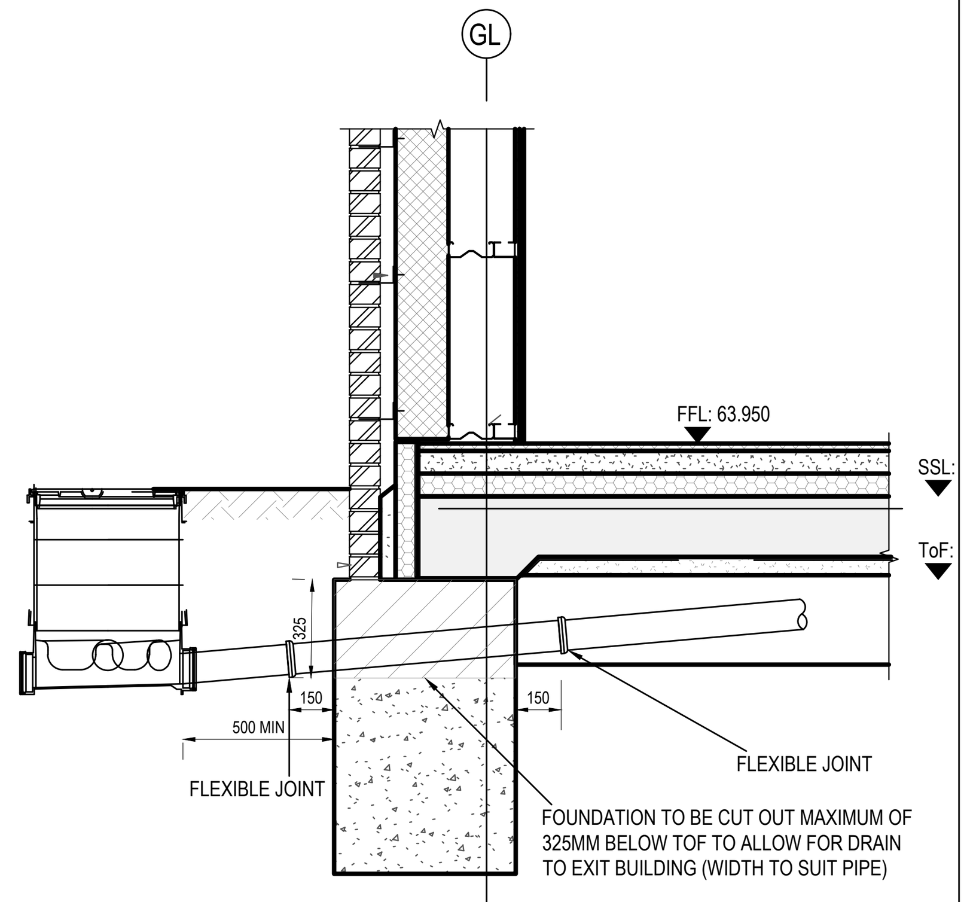
On the basis of the above explanations and information within the Appendices of this document, it is considered that sufficient information has been provided to enable the discharge of Condition 13.

Appendix A SuDS Details



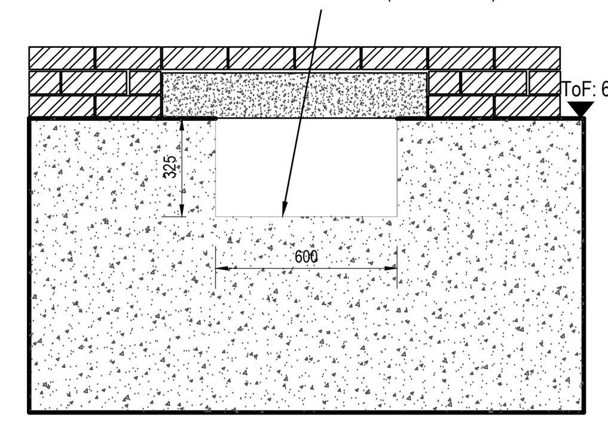


DRAIN OUTLET PENETRATION OVER PAD FOUNDATION

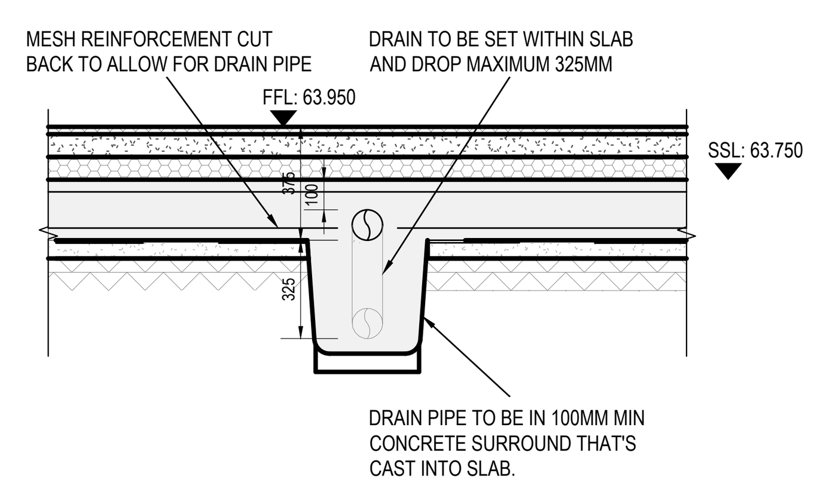


DRAIN OUTLET PENETRATION THROUGH FOUNDATION SECTION

FOUNDATION TO BE CUT OUT MAXIMUM OF 325MM BELOW TOF TO ALLOW FOR DRAIN TO EXIT BUILDING - WIDTH TO SUIT PIPE (MAX 600MM)



DRAIN OUTLET PENETRATION THROUGH FOUNATION ELEVATION



GENERAL NOTES

1. SETTING OUT SHALL BE UNDERTAKEN USING ONLY THE INFORMATION GIVEN. DISTANCES SHOULD NOT BE SCALED FROM THIS DRAWING.
2. ALL SEWERS SHALL BE CONSTRUCTED IN ACCORDANCE WITH SEWERS FOR ADOPTION 6TH EDITION AND UNITED UTILITIES DETAILS & GUIDELINES.
3. THE MINIMUM GRAVITY PIPE DIAMETER UNDER ADOPTABLE HIGHWAYS SHALL BE 150MM
4. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY ALL INFORMATION GIVEN WITH REGARDS TO EXISTING SERVICES AND DRAINAGE CONNECTIONS ETC. PRIOR TO COMMENCING THE WORKS. THE RATES SHALL INCLUDE FOR HAND DIG AROUND SERVICES WHERE NECESSARY. THE CONTRACTOR SHALL ADHERE TO THE CDM REGULATIONS AT ALL TIMES
5. THE OUTSIDES OF ALL SEWERS SHALL BE A MINIMUM OF 1.0M FROM KERB LINES AND THE OUTSIDE OF MANHOLES SHALL BE A MINIMUM OF 0.5M FROM KERB LINES
6. EXISTING FLOWS IN WATERCOURSES, SEWERS AND LAND DRAINS SHALL BE MAINTAINED AT ALL TIMES 7. ONLY TRAINED PERSONNEL SHALL BE PERMITTED TO ENTER CONFINED SPACES
7. ALL MATERIALS TO BEAR THE RELEVANT B.S. KITEMARK AND COMPLY FULLY WITH THE SPECIFICATIONS. ALL CONCRETE & CONCRETE PRODUCTS MUST USE SULPHATE RESISTANT CEMENT (UNLESS THE SITE INVESTIGATION REPORT PROVES THAT SULPHATE ATTACK FROM SOILS AND GROUNDWATER WILL NOT OCCUR TO WITHSTAND A CLASS
8. ALL OPENING NOTICES ETC. AS REQUIRED UNDER HIGHWAYS ACTS ETC. ARE TO BE OBTAINED PRIOR TO COMMENCEMENT OF WORKS. ALL WORKS ARE TO BE INSPECTED BY L.A., NHBC OR THE NETWORK OPERATOR AS APPLICABLE.
9. WHERE "ULTRA RIB" UPVC PIPES (OR SIMILAR APPROVED) ARE USED IN ADOPTABLE DRAINAGE THEY SHALL STILL BE HANDLED AND LAID IN ACCORDANCE WITH THE SPECIFICATION AND GUIDANCE ISSUED BY THE HIGH PERFORMANCE PIPE ASSOCIATION.
10. A CLASS S BED AND SURROUND MUST BE USED FOR SUCH PIPES. TRENCH BACKFILL IN HIGHWAYS TO WITHIN 1M OF HIGHWAY SHALL, AS DIRECTED BY THE HIGHWAY AUTHORITY BE A SUITABLE GRANULAR MATERIAL ALL IN ACCORDANCE WITH SEWERS FOR ADOPTION CL. 4.3.4. 12. SLAB LEVELS SHALL NOT BE VARIED WITHOUT REFERENCE TO THE ENGINEER FOR GUIDANCE
11. DOMESTIC DRAINAGE SHALL BE TO BUILDING REGULATIONS APPROVED DOCUMENT H. 110MM U.P.V.C. PIPES LAID TO THE FOLLOWING MINIMUM FALLS UNLESS OTHERWISE SHOWN.

	FOUL	S.W.
HEAD RUN	1 IN 40	1 IN 60
ELSEWHERE	1 IN 80	1 IN 100

12. POLYPROPYLENE INSPECTION CHAMBERS TO BE PROVIDED TO ALL PRIVATE DRAINAGE LESS THAN 1.10m DEEP. WHERE PRIVATE DRAINAGE RUNS ARE DEEPER THAN 1.10m, REDUCED ACCESS CHAMBERS TO BE PROVIDED.
13. WHEREVER PLASTIC PIPES ARE TO BE USED FOR THE CONSTRUCTION OF ADOPTABLE DRAINAGE, STRUCTURED WALL PLASTIC PIPES MUST BE USED WHICH MUST COMPLY WITH BS EN 13476-1 AND WIS 4-35-01

LEGEND

- PROPOSED SURFACE WATER SEWER MANHOLE
- PROPOSED FOUL WATER SEWER MANHOLE
- PROPOSED COMBINED WATER SEWER MANHOLE
- EXISTING SURFACE WATER MANHOLE
- EXISTING COMBINED WATER MANHOLE
- PROPOSED FOUL WATER SEWER
- PROPOSED SURFACE WATER SEWER
- PROPOSED COMBINED SEWER
- PROPOSED SURFACE WATER DRAIN WITH 450mmØ INSPECTION CHAMBER
- I.C — PROPOSED FOUL WATER DRAIN WITH 450mmØ INSPECTION CHAMBER
- G — HIGHWAY GULLY
- 53.000 — FINISHED FLOOR LEVEL
- ACO — ACO CHANNEL (OR SIMILAR)
- RAIN WATER PIPE WITH TRAPPED GULLY
- SOIL VENT PIPE
- BACK INLET GULLY
- SOIL STACK
- FG — FOUL GULLY
- NOTCHED AREA OF FOUNDATIONS TO ALLOW FOR DRAIN CROSS OVER (SEE DETAIL)

DRAINAGE SCHEME SET OUT IN ACCORDANCE WITH :
3936 -ABW-XX-00 DR-A-4710-C3
NJSR-LS-GR-DR-A-20000-4

REV	DATE	DESCRIPTION	BY	CHK	APP
C01	27.11.2023	RAISED TO CONSTRUCTION STATUS	JPR	JLS	JLS

DRAWING STATUS: **CONSTRUCTION**

CLIENT: EDGE HILL UNIVERSITY

ARCHITECT: ABW ARCHITECTS

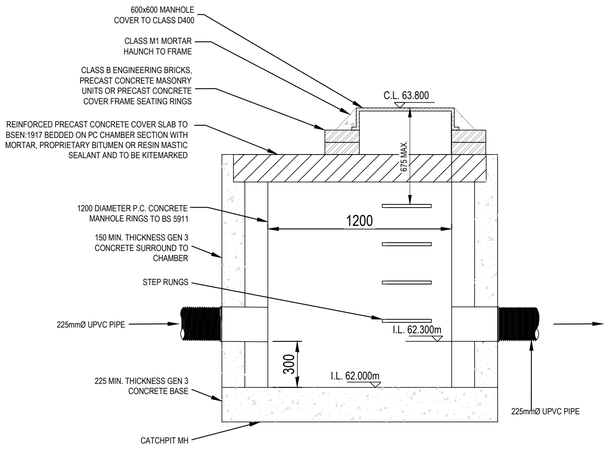
PROJECT: LIFE SCIENCES UNIT

TITLE: OUTLINE DRAINAGE STRATEGY

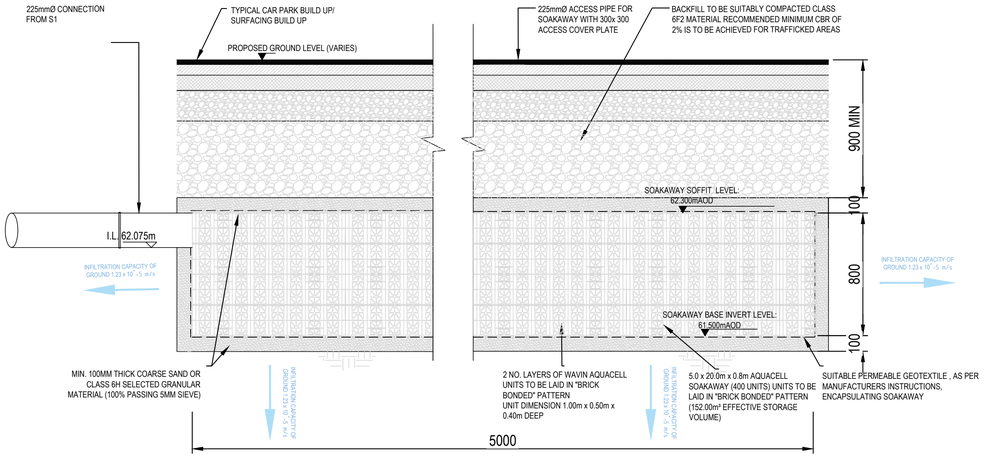
STATUS:	PROJECT No.	PROJECT	ORIGINATOR	VOL/SYS	LEVEL	TYPE	ROLE	DRAWING No.	REV:
S2	222-076	EDG-	AJP	-ZZ	- 00	-DR	- C	- 1000	C01

SCALE @ A1:	DESIGNED:	DRAWN:	CHECKED:	APPROVED:	DATE:
1:200	JCM	JCM	JLS	JLS	JULY 2022

AJP consulting engineers est. 1978
0151 227 1462 info@ajpltd.co.uk 1 Dale Street, Liverpool, L2 2ET



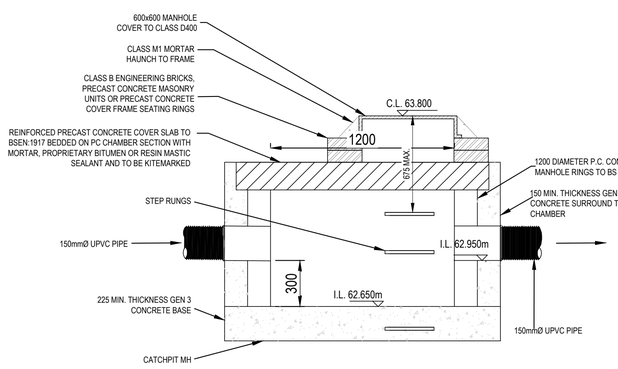
CATCHPIT MANHOLE S1



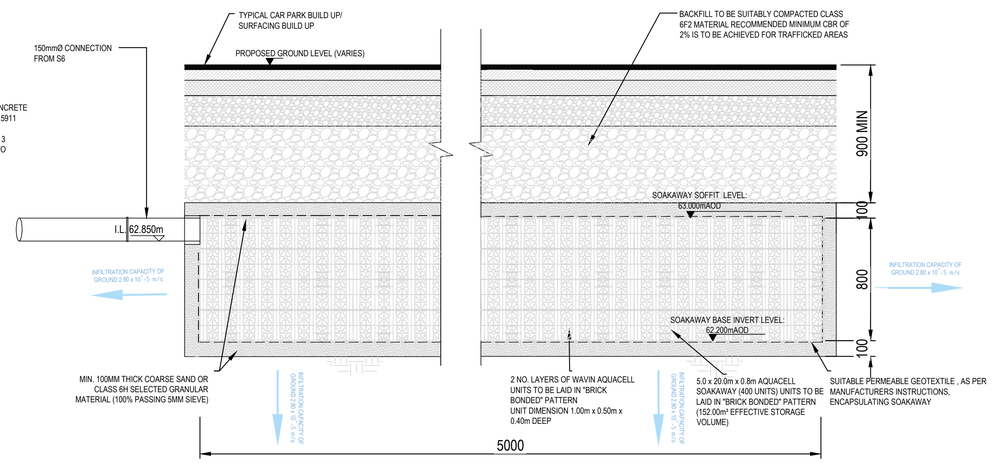
SOAKAWAY 1 DETAIL

(SCALE 1:20)

SOAKAWAY SA1



CATCHPIT MANHOLE S6



SOAKAWAY 1 DETAIL

(SCALE 1:20)

SOAKAWAY SA2

INFILTRATION DESIGN TABLE					
Soakaway Reference	Infiltraiton Design Rate (m/s)	Length (m)	Width (m)	Depth (m)	Soakaway Construction Material
SA 1	1.23 * 10^-5	40	5	0.8000	CRATE UNITS
SA 2	2.8 * 10^-5	25	3	0.8000	CRATE UNITS

SOAKAWAY SYSTEM AS SET OUT FOLLOWING ON SITE INVESTGIATION AND STRATEGY IN OUTLINE DRAINAGE LAYOUT C-1000-P-03

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8. A CLASS S BED AND SURROUND MUST BE USED FOR SUCH PIPES. TRENCH BACKFILL IN HIGHWAYS TO WITHIN 1M OF HIGHWAY SHALL, AS DIRECTED BY THE HIGHWAY AUTHORITY BE A SUITABLE GRANULAR MATERIAL ALL IN ACCORDANCE WITH SEWERS FOR ADOPTION CL. 4.3.4.
9. ALL WORKS TO BE IN ACCORDANCE WITH MANUFACTURERS' INSTRUCTIONS.
10. EXCAVATION FOR INSTALLATION OF TANK SHALL BE ADEQUATELY SUPPORTED AT ALL TIMES.
11. CONSTRUCTION TRAFFIC SHALL AVOID PASSING OVER TANK IF POSSIBLE, TEMPORARY FENCING SHOULD BE PROVIDED AS NECESSARY. ALL TRAFFIC LOADING TO TANK SHOULD BE IN ACCORDANCE WITH ITS DESIGN SPECIFICATIONS
12. ENSURE THAT THE EXCAVATION IS KEPT DRY DURING THE INSTALLATION PROCESS, TO PREVENT PONDING AND FLOTATION OF STORAGE TANK.

REV	DATE	DESCRIPTION	BY	CHK	APP
C01	27.11.2023	RAISED TO CONSTRUCTION STATUS	JPR	JLS	JLS

DRAWING STATUS: **CONSTRUCTION**

CLIENT: EDGE HILL UNIVERSITY

ARCHITECT: ABW ARCHITECTS

PROJECT: LIFE SCIENCES UNIT

TITLE: SUDS SOAKAWAY DETAILS

STATUS:	PROJECT No.	PROJECT	ORIGINATOR	VOL/SYS	LEVEL	TYPE	ROLE	DRAWING No.	REV:
S2	222-076	EDG-	AJP -	ZZ -	00 -	DR -		**C - 1071**	**C01**

SCALE @ A1:	DESIGNED:	DRAWN:	CHECKED:	APPROVED:	DATE:
1:20	JCM	JCM	JLS	JLS	MARCH 2023

AJP consulting engineers
0151 227 1462 info@ajpltd.co.uk 91 Dale Street, Liverpool, L2 2ET

Appendix B Pro Forma

SuDS Inspection Pro Forma:

Date:		
Inspection Number:		
Inspector:		
Action	Further Action Required	Timescale for Implementation
Remove Debris from Aco Channels & Gullies	Y/N	
Remove Sediment from Catchpit manholes	Y/N	
Review of access chambers for blockages	Y/N	
Review of inlets and Outlets	Y/N	
Inspection of water levels	Y/N	
Inspection of surface condition	Y/N	
Additional Items:		

Appendix C Edge Hill FM Contact Information

Head of Estates,
Facilities Management,
Edge Hill University,
St Helens Road,
Ormskirk,
L39 4QP

Tel: 01965 575171