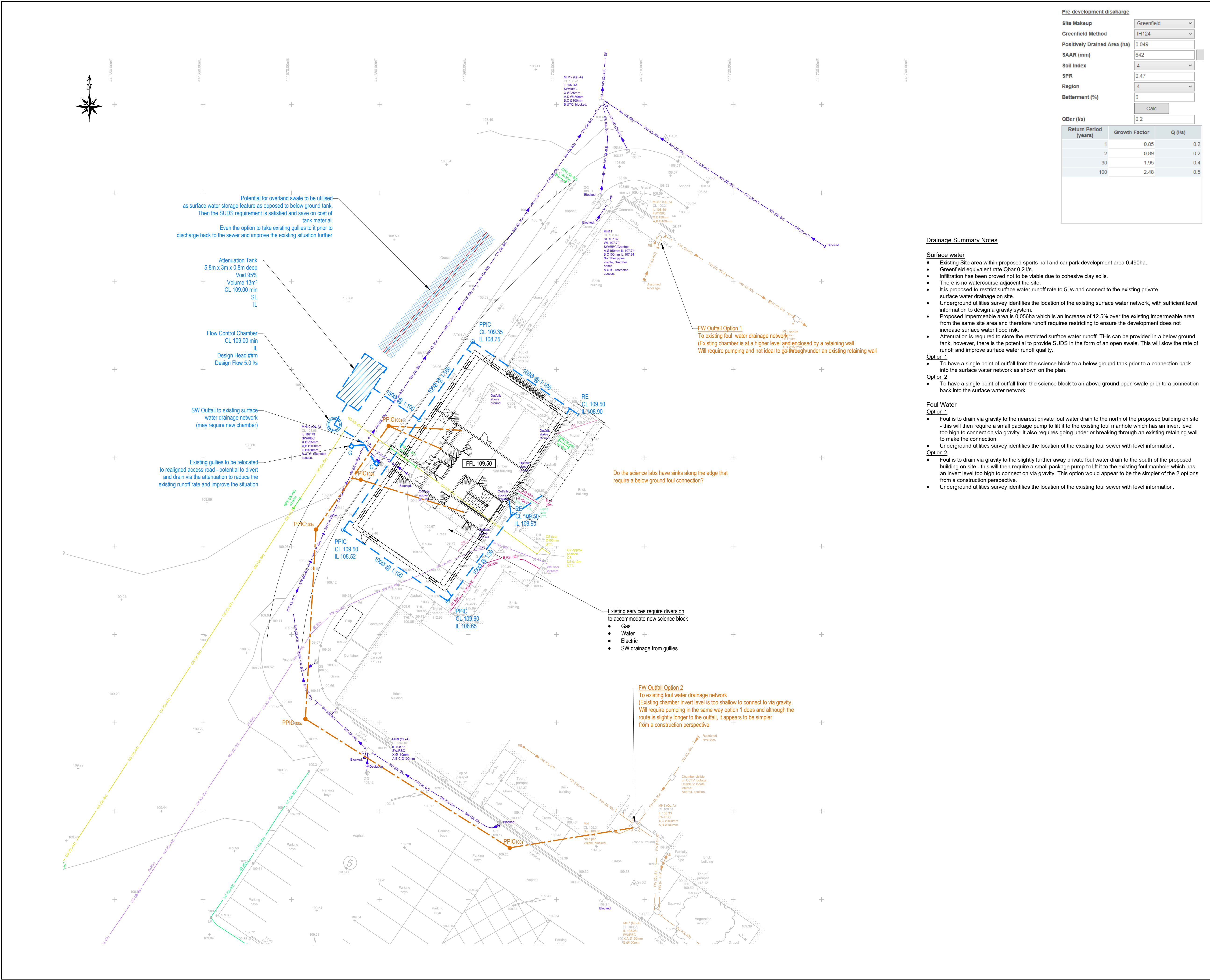




Pre-development discharge

Site Makeup:

Greenfield Method:

Positively Drained Area (ha):

SAAR (mm):

Soil Index:

SPR:

Region:

Betterment (%):

Calc.

Return Period (years)	Growth Factor	Q (l/s)
1	0.85	0.2
2	0.89	0.2
30	1.95	0.4
100	2.48	0.5

Drainage Summary Notes

- Surface water**
- Existing Site area within proposed sports hall and car park development area 0.490ha.
 - Greenfield equivalent rate Qbar 0.2 l/s.
 - Infiltration has been proved not to be viable due to cohesive clay soils.
 - There is no watercourse adjacent the site.
 - It is proposed to restrict surface water runoff rate to 5 l/s and connect to the existing private surface water drainage on site.
 - Underground utilities survey identifies the location of the existing surface water network, with sufficient level information to design a gravity system.
 - Proposed impermeable area is 0.056ha which is an increase of 12.5% over the existing impermeable area from the same site area and therefore runoff requires restricting to ensure the development does not increase surface water flood risk.
 - Attenuation is required to store the restricted surface water runoff. This can be provided in a below ground tank, however, there is the potential to provide SUDS in the form of an open swale. This will slow the rate of runoff and improve surface water runoff quality.
- Option 1**
- To have a single point of outfall from the science block to a below ground tank prior to a connection back into the surface water network as shown on the plan.
- Option 2**
- To have a single point of outfall from the science block to an above ground open swale prior to a connection back into the surface water network.
- Foul Water**
- Option 1**
- Foul is to drain via gravity to the nearest private foul water drain to the north of the proposed building on site - this will then require a small package pump to lift it to the existing foul manhole which has an invert level too high to connect on via gravity. It also requires going under or breaking through an existing retaining wall to make the connection.
 - Underground utilities survey identifies the location of the existing foul sewer with level information.
- Option 2**
- Foul is to drain via gravity to the slightly further away private foul water drain to the south of the proposed building on site - this will then require a small package pump to lift it to the existing foul manhole which has an invert level too high to connect on via gravity. This option would appear to be the simpler of the 2 options from a construction perspective.
 - Underground utilities survey identifies the location of the existing foul sewer with level information.

CDM Regulations:
The reader is notified that CDM regulations may apply to the contract, and that appropriate Health & Safety Risk Assessments and Method Statements will be needed to comply with the Regulations where applicable.

It is the Client's responsibility to make suitable arrangements for managing their project, enabling those carrying it out to manage health and safety risks in a proportionate way.

It is the Client's responsibility in appointing (IN WRITING) as soon as possible, appropriately experienced Contractors and Designers to the project (Including the Principal Designer and Principal Contractor) to carry out tasks as required under the Contract.

Further guidance on CDM Regulations can be obtained from the Health & Safety Executives website: www.hse.gov.uk/cis41.pdf.

Notes:

Proposed finished floor level:

Proposed external level:

Proposed surface gradient:

Proposed private surface water drain:

Proposed private foul water drain:

Proposed Private Surface Water Drain (Rodding eye, Mini access chamber, PPIC with 1000 pipework):

Proposed Private Surface Water Drain (PPIC with 1500 main runs, reduced access chamber PPIC, PCCIC):

Proposed private geocellular storage crates:

Proposed private surface water gully:

Proposed private dry swale:

Proposed Private Foul Water Drain (Mini access chamber, PPIC with 1000 pipework):

Proposed Private Foul Water Drain (PPIC with 1500 main runs, reduced access chamber PPIC, PCCIC):

FW MH# D400 12000 PCC CL ## (1500)

Rev:	Date:	Comments:	By:
------	-------	-----------	-----



Structural Engineering Consultants

GMB Consultancy
16 Commerce Square, Lace Market
Nottingham, NG1 1HS
+44 (0) 7341 220346
gmb@gmbconsultancy.co.uk gmbconsultancy.co.uk

Client: **S2E**

Project: **REDMOOR ACCADAMY SCIENCE BLOCK**

Title: **DRAINAGE STRATEGY**

Drawn By: CN	Sheet Size: A1	Status: PRELIMINARY	Date: 11.08.23
Checked By: GB	Scale: 1:200	Revision: -	Drawing No: 2023_237_301

This drawing contains confidential information of GMB Consultancy ("The Company") and the copyright, design right and/or other intellectual property rights in the drawing belong to The Company. All rights conferred by the law and by virtue of international copyright and other conventions are recovered to the company. This drawing and the information contained therein or any part thereof must not be reproduced, disclosed or used for purposes other than those for which prior written consent of The Company has been given.