Hampton Pre-Prep and Prep School: Drainage Strategy

FINAL
P23533_R1_REV2
MAY 2024

Document Control

Title

Hampton Pre-Prep and Prep School: Drainage Strategy

Client

Hampton Pre-Prep and Prep School,
Wensleydale Rd,
Hampton
TW12 2LP

Reference

P23533_R1_REV2

Status

Final

Document Control

Document Reference	Issue Date	Comments	Written by	Approved by
P23533_R1	February 2023	First issue	BS	JEM
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P23533_R1_REV2	May 2024	Updated with new drawings	JEM	JEM

Contents

Tables

Figures

Appendices

1 Introduction

1.1 INSTRUCTION

Yellow Sub Geo Ltd (Yellow Sub) was instructed by Land Use Consultants Ltd (LUC) on behalf of Hampton Pre-Prep and Prep School (the Client) to provide a sustainable drainage strategy for a proposed extension to the existing School in Hampton (the Site). Instruction to proceed was provided by email on the 6th February 2023.

This report was updated in May 2024 to reflect minor changes to the scheme and support the revised planning application.

1.2 BACKGROUND

The Client is seeking to obtain planning permission for an extension and new school hall to replace an existing school hall and a number of outbuildings at the Site. The Site falls within the London Borough of Richmond upon Thames, which is the Lead Local Flood Authority (LLFA) and the LLFA team have provided the following comments:

> *"If you are discharging at the greenfield rate and you have shown calculations for the greenfield rate, then that is usually acceptable (for the runoff rate category). If the greenfield rate is too low and it has been justified why it is not achievable then 2 l/s is normally considered appropriate. However, in addition to discharging at this rate into a surface water sewer proposals should also show a preference for green over grey features and they should incorporate the following:*
>
> - *Rainwater use as a resource (rainwater harvesting, blue roofs or water butts).*
> - *Rainwater infiltration to the ground (in many cases applicants will have to conduct infiltration testing to show why or why this is not suitable).*
> - *Rainwater attenuation in green infrastructure features (green roofs, rain gardens and attenuation planters for example). Having a small site is not considered sufficient justification for not including at least one form of green rainwater attenuation feature. They can be small scale if that is all that's possible.*
>
> *If the above mentioned are not possible then justification is usually required."*

1.3 SCOPE OF THE REPORT

The scope of this assessment is as follows:

- To provide a baseline description of the hydrology, geology and hydrogeology and flood risk for the Site;
- To understand the context of the proposed development;
- To consider local and regional surface water management and Sustainable Drainage Systems (SuDS) guidance and standards;
- Undertake an assessment of potential destinations for discharging surface water runoff;
- Provide estimates of surface water runoff rates; and,
- Present a suitable SuDS strategy for managing surface water runoff from the proposed development, including a SuDS Maintenance and Management Plan.

1.4 LIMITATIONS

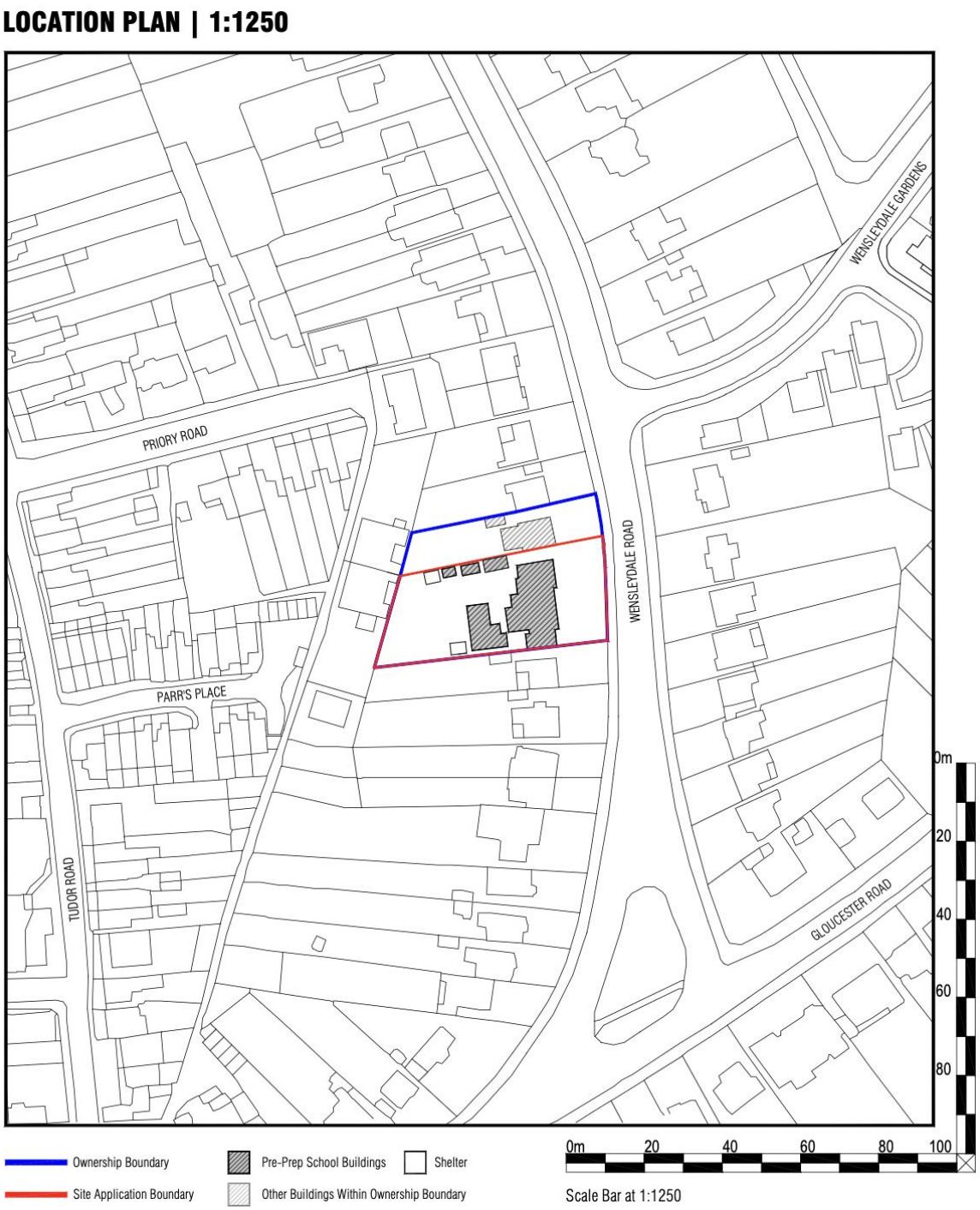
This report is written strictly for the benefit of the Client and bound by the conditions presented in Appendix A.

2 Site setting

2.1 SITE LOCATION

The location of the Site is at NGR TQ 13546 70105 (513546,170105) and is shown in Figure 2.1.

Figure 2.1 Site location



2.2 TOPOGRAPHY

The Site is at a general elevation of approximately 17.0m above Ordnance Datum (m aOD).

2.3 HYDROLOGY AND FLOOD RISK

The River Thames lies approximately 800m to the south and the Longford River approximately 600m to the east. There are numerous lakes and reservoirs to the west and south of the Site along the River Thames valley.

According to the Environment Agency (EA), the Site is located within Flood Zone 1 and is therefore at very low risk of fluvial/ tidal flooding.

2.4 GEOLOGY AND HYDROGEOLOGY

According to British Geological Survey (BGS) 1:50,000 scale mapping, the geological sequence underlying the Site is as follows:

- Superficial deposits: Taplow Gravel Member (sand and gravel); and,
- Solid geology: London Clay Formation (clay, silt and sand).

The Taplow Gravel Member beneath the Site is classified by the EA as a Secondary A Aquifer. These are defined by the EA as 'permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers'.

The underlying London Clay Formation is classified as an unproductive stratum. These are described by the EA as deposits with low permeability that have negligible significance for water supply or river base flow.

The nearest BGS published borehole[1] is approximately 120m to the west which recorded 0.9m of made ground underlain by 0.95m of Taplow Gravels Member with the London Clay Formation beneath. Based on this, it is likely that the superficial deposits beneath the Site may be quite thin with the London Clay Formation relatively close to the surface.

The soils are described as "Loamy soils with naturally high groundwater"[2] and this could be a result of clay at shallow depth.

The Site is not in a source protection zone. The geology suggests drainage by soakaway is unlikely to be feasible but this has not been tested on Site.

[1] BGS ID: 581253 : British National Grid (27700) : 513430,170070
[2] Soilscapes online soils viewer, Cranfield University, http://www.landis.org.uk/soilscapes

3 Existing site and proposed development characteristics

3.1 PROPOSED DEVELOPMENT

The proposed development is for an extension to the existing building and a new school hall to replace an existing school hall and a number of outbuildings at the Site.

Existing and proposed Site plans are shown in Appendix B, indicating the footprint areas[3] of each of the buildings in the proposal. Existing and proposed building areas are shown in Table 3.1 and indicate that the proposed new building will have a footprint area of 127.2m^2 and that the overall drained roof area on Site will increase by 33.5m^2, or 9% compared to the existing building area.

Surface finishes for the surrounding areas and playgrounds are varied and it has been assumed that none drain to sewer.

Table 3.1 Building areas

Drained areas				
Existing buildings	**Area (m^2)**		**Proposed buildings**	**Area (m^2)**
Shelter 1	11.3		Hall	129.2
Outbuilding 1	7.6		Pre-prep main building	272.6
Outbuilding 2	11.1			
Garage	18.9			
Shelter 2	12.0			
Kindergarten	81.8			
Main building	223.7			
Total area	**366.3**			**401.8**

3.2 EXISTING SURFACE WATER DRAINAGE

The existing buildings are assumed to be formally drained by the surface water sewer which is located in Wensleydale Road.

The existing buildings have a drained area of 366.3m^2 (0.0366 Ha), as shown in Table 3.1 and runoff to sewer has been calculated assuming 100% runoff from the roofs and no runoff from the surrounding surfaces. In accordance with the Modified Rational Method, the peak existing run-off from the Site is calculated from the formula:

$$Q = 3.61 \times Cv \times A \times i$$

Where Cv is the volumetric runoff coefficient, A is the catchment area in hectares and i is the peak rainfall intensity in mm/hr. As the Site is small a critical duration of 30 minutes has been

[3] Building areas are taken from drawings and are approximate

estimated, and rainfall intensities for this duration have been obtained from the Flood Estimation Handbook using 2013 rainfall frequency analysis (see Appendix C).

For the peak 1 in 1 year return period 30 minute storm event, this gives an existing discharge rate from the Site of:

Q_1 = 3.61 x 0.75 x 0.0366 x 14.5 = **1.4 litres/sec**

and, for the peak 1 in 100 year return period storm event, this gives an existing discharge rate from the Site of:

Q_{100} = 3.61 x 0.75 x 0.0366 x 72.9 = **7.2 litres/sec**

3.3 GREENFIELD RUNOFF

Greenfield runoff has been estimated using the standard IoH report 124 approach[4], for the 0.122 Ha Site.

Using the available information for the Site, the HR Wallingford site[5] has been used to provide an estimate of annual average peak flow of 0.18l/s. The annual average peak flow has a probability of 1 in 2.3, and other probabilities can be derived from it as provided in Table 3.2.

Table 3.2 Calculated greenfield runoff rates

Return period (years)	Peak greenfield rate (l/s)
1	0.16
30	0.43
100	0.59

Further details of the greenfield runoff calculations are provided in Appendix D.

[4] Flood Estimation for Small Catchments. Institute of Hydrology report 124 (now Centre for Ecology and Hydrology).

[5] UK Sustainable Drainage Guidance and Tools. HR Wallingford. http://geoservergisweb2.hrwallingford.co.uk/uksd/surfacewaterstorage_js.htm#Top

4 Drainage Strategy

4.1 CLIMATE CHANGE

The central climate change allowance in the catchment for the 2070s epoch is a 40% increase in rainfall and this has been applied to the 2003 rainfall data when assessing the runoff from the proposed development.

4.2 RATES OF RUNOFF

The proposed development will have a drained area of 129.2m^2 (0.0129 Ha), as shown in Table 3.1 and runoff to sewer has been calculated assuming 100% runoff from the roofs and no runoff from the surrounding surfaces using the Modified Rational Method.

As the proposed development is small, a critical duration of 15 minutes has been estimated, and rainfall intensities for this duration have been obtained from the Flood Estimation Handbook for 2013 rainfall frequency analysis (see Appendix C), with a 40% uplift for climate change.

For the peak 1 in 1 year return period 15 minute storm event, this gives a discharge rate from the Site of:

Q_1 = 3.61 x 0.75 x 0.0129 x 31.6 = **1.1 litres/sec**

and, for the peak 1 in 100 year return period 15 minute storm event, this gives a discharge rate from the Site of:

Q_{100} = 3.61 x 0.75 x 0.0129 x 156.7 = **5.4 litres/sec**

4.3 POTENTIAL DISCHARGE ROUTES

Potential routes for surface water disposal are presented as a hierarchy in national planning policy guidance[6] as follows:

1. harvesting and re-use;
2. into the ground (infiltration);
3. to a surface water body;
4. to a surface water sewer, highway drain, or another drainage system; and,
5. to a combined sewer.

4.3.1 Harvesting and re-use

The roof area is very small for internal non-potable water use (e.g. toilet flushing) so the water saving would not justify the cost of installing a capture system, storage, treatment and dual plumbing. External water uses are limited on Site, but rainwater butts can provide a handy source for watering of landscape areas including school projects.

The provision of rainwater butts is also a requirement in the London Plan.

4.3.2 Infiltration

Whilst the Site is located on superficial River Terrace Deposits, nearby boreholes have shown this to be thin with the London Clay Formation close to the surface. Surrounding boreholes have also indicated a high groundwater table. Therefore, disposal of surface water by

[6] Flood Risk and Coastal Change, paragraph 80. Reference ID: 7-080-20150323, revised 25/8/22.

soakaways is unlikely to be feasible but a suitable site investigation would be required to confirm this.

4.3.3 Surface Water

There are no surface watercourses nearby and the area is urbanised, making long-distance pipework difficult and expensive. Disposal to surface water is therefore not feasible.

4.3.4 Surface Water Sewer

Connection to the existing drainage system is already available so this route is low cost and sustainable. However, attenuation will be required before discharge via this route.

4.3.5 Other Drainage Systems

These are the last option in the hierarchy (e.g. combined or foul sewer) and would not be acceptable if other routes are available. Therefore, at this stage they are not considered further.

4.4 SUDS DESIGN FOR THE PROPOSED DEVELOPMENT

Drainage of the proposed development will be to sewer, following suitable SuDS elements and attenuation.

The LLFA require that SuDS elements are incorporated into the design. These can include, amongst other options, green roofs, swales, raingardens and infiltration trenches.

Many of these options are inappropriate in a cramped, urbanised setting, particularly where open water, such as storage ponds and swales could pose a hazard to Site users such as in a school setting. The proposed development buildings have flat roofs but some of the roof area is reserved for solar panels, so the use of a green or sedum roof is feasible but limited. The proposed roof plan is shown in Appendix E.

The water quality benefits of using SuDS are minimal if the discharge is ultimately to sewer, but some local biodiversity benefits may be achievable on the sedum roofs.

4.5 ATTENUATION STORAGE

Attenuation is required to limit the rate of runoff. The greenfield runoff rates for the Site are provided in Table 3.2 which indicates a peak discharge of 0.16 l/s/Ha and 0.59 l/s/Ha for the 1 in 1 year and 1 in 100 year events.

These rates are very small as a result of the small Site size. The LLFA recognise that this is a frequent difficulty on small urban sites and permit the use of 2 l/s for the 100 year peak discharge rate as an alternative.

If discharge from the Site is to be restricted to 2 l/s, then storage will be required to attenuate the flow. This has been estimated as 5.4 l/s for the 100 year 15 minute duration event (with 40% climate change allowance). The storage required has been calculated as the difference in volume from the runoff and the volume at which water can be discharge over the duration of the rainfall event, for a range of rainfall durations.

Table 4.1 shows the maximum storage required to restrict the outflow to 2 l/s, assuming 100% runoff from the 129m^2 of roofed area on the proposed building, in the 1 in 100 year event with 100% runoff and a 40% climate change increase. Restricting the outflow to 2 l/s would require storing approximately 3.18m^3 of runoff for the critical duration, which is shown in Table 4.1 to be 0.25 hours (highlighted in red).

Table 4.1 Attenuation storage requirements

Storage required for discharge from effective runoff area of 129.2m^2				
Duration (hr)	**100 year rainfall +40% CC (mm)**	**Volume (m^3)**	**Outflow volume at 2l/s (m^3)**	**Storage required (m^3)**
0.25	39.2	5.0	1.8	**3.18**
0.5	51.0	6.5	3.6	2.89
0.75	58.3	7.4	5.4	2.02
1	63.4	8.1	7.2	0.86
1.25	68.2	8.7	9.0	0.00
1.5	72.5	9.2	10.8	0.00
1.75	76.3	9.7	12.6	0.00
2	79.8	10.1	14.4	0.00
2.25	82.8	10.5	16.2	0.00
2.5	85.5	10.9	18.0	0.00
2.75	88.0	11.2	19.8	0.00
3	90.2	11.5	21.6	0.00

In addition to the storage of extreme 100 year storms, it is also desirable to capture runoff from smaller storms of up to 5mm which occur more frequently and contain the majority of contaminants (the first flush). These smaller storms often comprise 50% or more of the total annual runoff from a roof.

5mm of rain over the 129.2m^2 of proposed roof represents 0.005 x 129.2 = 0.646m^3 of runoff.

4.6 STORAGE DESIGN

The potential for storage on the roof of the building, in a green or sedum roof, is limited as described above. A total area of 39.25 m^2 is proposed for the two sedum roofs. Assuming these can hold up to 10 mm of rainfall within the substrate then a total storage of 0.34 m^3 of rainfall is possible and the "first flush" of rainfall (0.166 m^3) on these two areas will be retained.

Surface storage is inappropriate as it will introduce open water into a sensitive school setting, which could be hazardous. Therefore, the proposed SuDS drainage train will comprise:

- Rainwater butts, as required in the London Plan. Whilst these will provide some storage they cannot be considered as attenuation storage as there is a high chance that they will be full in the event of a storm; and,
- SuDS planters[7], either fed from the rainwater butt overflow, or directly fed from rainwater downpipes as dictated by Site details. These provide storage in soil or aggregate within the planter and introduce vegetation into the environment. At the detailed design stage, all roof drainage from the proposed building will drain through a series of planters.

The storage provided by these is variable depending on size but they should be designed to contain, in total, at least the remaining 0.48 m^3 of first flush rainfall.

[7] Sudsplanters.com

Overflow from the SuDS planters will discharge to an underground attenuation tank under the playground before final discharge to sewer. A tank with a void ratio of 95% with a length of 1.8 m, width of 1.5 m and a depth of 1.2 m would provide 3.08 m^3 of attenuation, but other arrangements may be possible.

Surface water will then be discharged to the public sewer network through a flow control device via the existing surface water connection.

4.7 SUDS OWNERSHIP

The planters, sedum roof and attenuation tank would be owned by the Site owners who would be responsible for maintenance and upkeep.

4.8 SUDS MAINTENANCE

Regular maintenance is essential to ensure effective operation of the drainage system over the intended lifespan of the proposed development. The SuDs planters should be maintained according to manufacturer's specification, but low maintenance planting regimes can be utilised.

The Sedum roof should be inspected at least twice a year for weeds and seeds carried by the wind preferably in spring and autumn. In addition, the drainage system should be checked to ensure it is still functioning properly. Any weeds and leaves blown into the gutters and drains should be removed.

Attenuation tanks require minimal maintenance, particularly after the sediment settlement provided upstream in the planters. Manufacturer's advice should be followed.

Appendices

Appendix A: Report Conditions

Report Conditions

This report has been prepared by Yellow Sub Geo Ltd. (Yellow Sub Geo) in its professional capacity as soil and groundwater specialists, with reasonable skill, care and diligence within the agreed scope and terms of contract and taking account of the manpower and resources devoted to it by agreement with its client, and is provided by Yellow Sub Geo solely for the internal use of its client.

The advice and opinions in this report should be read and relied on only in the context of the report as a whole, taking account of the terms of reference agreed with the client. The findings are based on the information made available to Yellow Sub Geo at the date of the report (and will have been assumed to be correct) and on current UK standards, codes, technology and practices as at that time. They do not purport to include any manner of legal advice or opinion. New information or changes in conditions and regulatory requirements may occur in future, which will change the conclusions presented here.

Where necessary and appropriate, the report represents and relies on published information from third party, publicly and commercially available sources which is used in good faith of its accuracy and efficacy. Yellow Sub Geo cannot accept responsibility for the work of others.

This report is confidential to the client. The client may submit the report to regulatory bodies, where appropriate. Should the client wish to release this report to any other third party for that party's reliance, Yellow Sub Geo may, by prior written agreement, agree to such release, provided that it is acknowledged that Yellow Sub Geo accepts no responsibility of any nature to any third party to whom this report or any part thereof is made known. Yellow Sub Geo accepts no responsibility for any loss or damage incurred as a result, and the third party does not acquire any rights whatsoever, contractual or otherwise, against Yellow Sub Geo except as expressly agreed with Yellow Sub Geo in writing. Yellow Sub Geo reserves the right to withhold and/ or negotiate the transference of reliance on this report, subject to legal and commercial review

Appendix B: Existing and Proposed Block Plans

NORTH

WENSLEYDALE ROAD

45

43

41

39

0m 1 2 3 4 5 6 7 8 9

0m 1 2 3 4 5 6 7 8 9 10

Scale Bar at 1:100

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Ownership Boundary
Site Application Boundary
Pre-Prep School Buildings
Other Buildings Within Ownership Boundary
Shelter

REV A - FOOTPRINT OF NO. 39 AMENDED - 11.01.23

Hampton Pre-Prep School **Pre-Prep Hall**	25 July, 2022 Drawn by MR 1:100 @ A1 **Planning Application**	PROJECT No. **1829**	**Existing Block Plan** **A-002**	Rev **A**

NORTH

WENSLEYDALE ROAD

45

43

41

39

REV C - ROOF TO LINK EXTENSION ENLARGED - 09.11.23
REV B - SHED RELOCATED, AIR HANDLING UNITS MOVED TO GROUND FLOOR, EXTENSION REDUCED BY 2M AND HALL END MODULE REDUCED IN SIZE - 05.03.23
REV A - FOOTPRINT OF NO. 39 AMENDED - 11.01.23

0m 1 2 3 4 5 6 7 8 9 10

Scale Bar at 1:100

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Ownership Boundary
Site Application Boundary
Pre-Prep School Buildings
Other Buildings Within Ownership Boundary

Hampton Pre-Prep School
Pre-Prep Hall

16 August, 2022 Drawn by MR
1:100 @ A1
Planning Application

PROJECT No.
1829

Proposed Block Plan
A-011

Rev
C

Appendix C: FEH Point Rainfall data

VERSION	"FEH Web S	Version	1.0.0	exported at	17:43:00	GMT	Fri	17-Feb-23		
Parameters										
Rainfall mod	FEH13									
Calculation t	Design rainfall									
Calculation n	For a point									
Calculation l	Point	GB	515125	167287	TQ	15125	67287			
Fixed duratic	no									
Annual maxi	yes									
Duration hou	Duration day	2 year rainfa	5 year rainfal	10 year rainf	20 year rainf	30 year rainf	50 year rainf	75 year rainf	100 year rain	
0.25	0.01041667	7.17	12.3	15.91	19.42	21.44	24.15	26.37	27.99	
0.5	0.02083333	9.22	15.71	20.32	24.94	27.7	31.25	34.23	36.46	
0.75	0.03125	10.37	17.76	23.01	28.33	31.45	35.56	39.05	41.65	
1	0.04166667	11.27	19.25	25.01	30.75	34.18	38.73	42.49	45.25	
1.25	0.05208333	12.61	21.14	27.24	33.27	36.91	41.76	45.74	48.68	
1.5	0.0625	14.07	23.02	29.35	35.59	39.39	44.45	48.64	51.75	
1.75	0.07291667	15.52	24.8	31.28	37.68	41.61	46.84	51.22	54.51	
2	0.08333333	16.89	26.42	33.01	39.55	43.59	48.97	53.52	56.98	
2.25	0.09375	17.88	27.66	34.38	41.09	45.26	50.8	55.53	59.13	
2.5	0.10416667	18.77	28.76	35.6	42.46	46.75	52.44	57.33	61.07	
2.75	0.11458333	19.58	29.75	36.7	43.7	48.09	53.92	58.96	62.83	
3	0.125	20.31	30.64	37.69	44.82	49.3	55.27	60.44	64.44	
3.25	0.13541667	20.98	31.46	38.6	45.84	50.41	56.5	61.8	65.92	
3.5	0.14583333	21.6	32.2	39.43	46.78	51.42	57.63	63.06	67.28	
3.75	0.15625	22.17	32.89	40.2	47.65	52.36	58.67	64.22	68.55	
4	0.16666667	22.7	33.53	40.91	48.45	53.22	59.64	65.29	69.72	
4.25	0.17708333	23.19	34.12	41.57	49.19	54	60.52	66.27	70.79	
4.5	0.1875	23.64	34.66	42.18	49.87	54.73	61.33	67.19	71.79	
4.75	0.19791667	24.06	35.17	42.75	50.51	55.41	62.1	68.04	72.73	
5	0.20833333	24.46	35.64	43.29	51.11	56.05	62.81	68.85	73.61	
5.25	0.21875	24.84	36.09	43.79	51.67	56.65	63.48	69.6	74.44	
5.5	0.22916667	25.19	36.51	44.27	52.2	57.21	64.12	70.32	75.22	
5.75	0.23958333	25.53	36.91	44.72	52.71	57.74	64.71	70.99	75.97	
6	0.25	25.85	37.29	45.14	53.18	58.24	65.28	71.63	76.67	

Appendix D: Greenfield Runoff Calculations

HR Wallingford
Working with water

Greenfield runoff rate estimation for sites

www.uksuds.com | Greenfield runoff tool

Calculated by:	Bob Sargent
Site name:	Hampton School
Site location:	Hampton

This is an estimation of the greenfield runoff rates that are used to meet normal best practice criteria in line with Environment Agency guidance "Rainfall runoff management for developments", SC030219 (2013) , the SuDS Manual C753 (Ciria, 2015) and the non-statutory standards for SuDS (Defra, 2015). This information on greenfield runoff rates may be the basis for setting consents for the drainage of surface water runoff from sites.

Site Details

Latitude:	51.41857° N
Longitude:	0.36872° W
Reference:	523804142
Date:	Feb 17 2023 18:04

Runoff estimation approach IH124

Site characteristics

Total site area (ha): 0.122

Methodology

Q_{BAR} estimation method: Calculate from SPR and SAAR

SPR estimation method: Calculate from SOIL type

	Default	Edited
Soil characteristics		
SOIL type:	2	2
HOST class:	N/A	N/A
SPR/SPRHOST:	0.3	0.3
Hydrological characteristics		
SAAR (mm):	598	598
Hydrological region:	6	6
Growth curve factor 1 year:	0.85	0.85
Growth curve factor 30 years:	2.3	2.3
	3.19	3.19

Notes

(1) Is Q_{BAR} < 2.0 l/s/ha?

When Q_{BAR} is < 2.0 l/s/ha then limiting discharge rates are set at 2.0 l/s/ha.

(2) Are flow rates < 5.0 l/s?

Where flow rates are less than 5.0 l/s consent for discharge is usually set at 5.0 l/s if blockage from vegetation and other materials is possible. Lower consent flow rates may be set where the blockage risk is addressed by using appropriate drainage elements.

(3) Is SPR/SPRHOST ≤ 0.3?

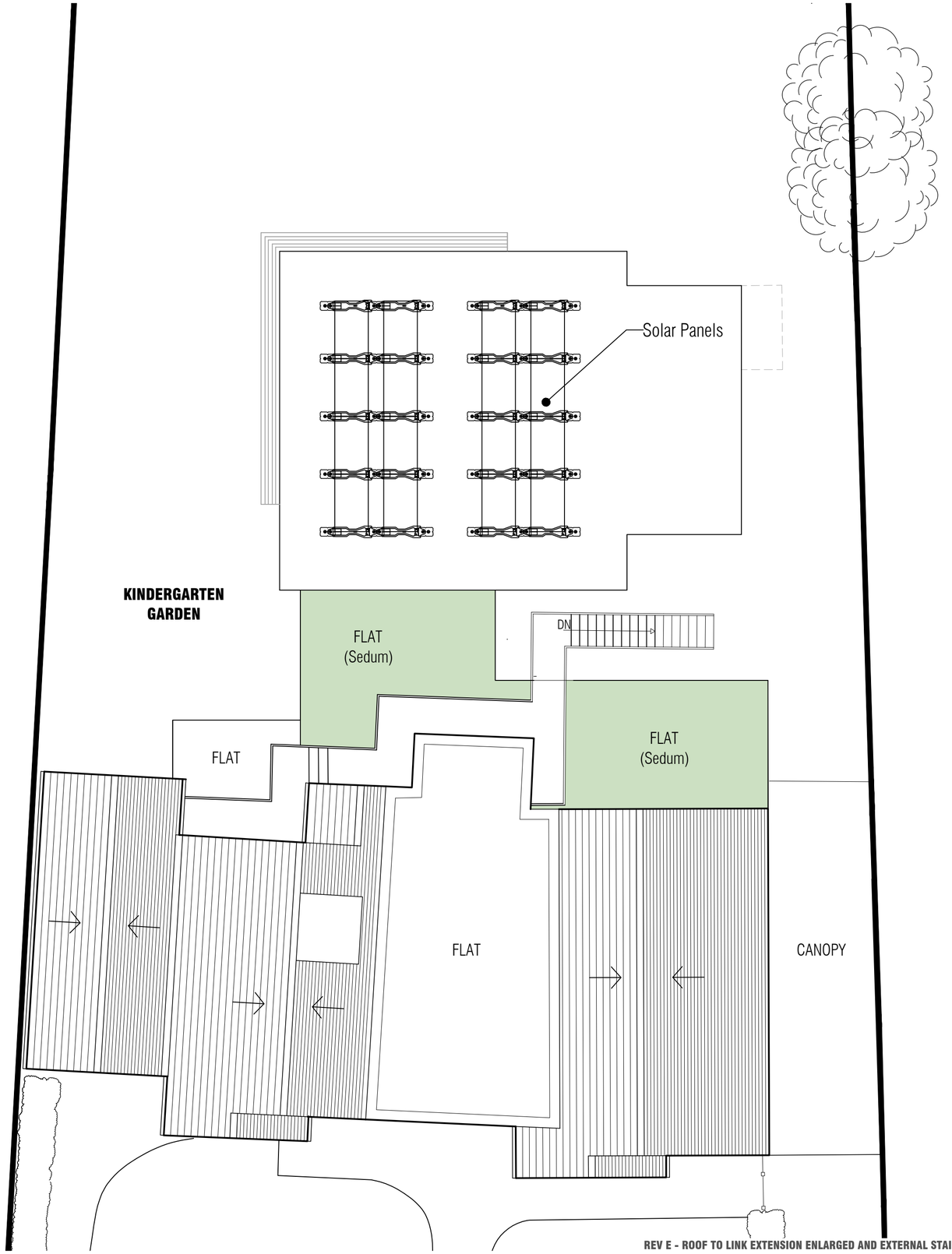
Where groundwater levels are low enough the use of soakaways to avoid discharge offsite would normally be preferred for disposal of surface water runoff.

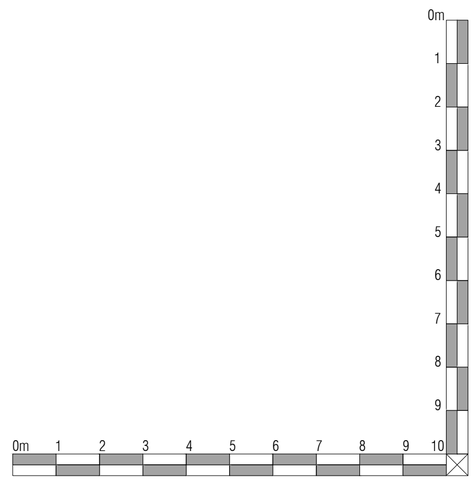
Growth curve factor 100 years:		
Growth curve factor 200 years:	3.74	3.74

Greenfield runoff rates	Default	Edited
Q_{BAR} (l/s):	0.18	0.18
1 in 1 year (l/s):	0.16	0.16
1 in 30 years (l/s):	0.43	0.43
1 in 100 year (l/s):	0.59	0.59
1 in 200 years (l/s):	0.69	0.69

Appendix E: Proposed Roof Plan

NORTH





REV E - ROOF TO LINK EXTENSION ENLARGED AND EXTERNAL STAIRCASE REPOSITIONED - 09.11.23
REV D - AIR HANDLING UNITS MOVED TO GROUND FLOOR, EXTENSION REDUCED BY 2M AND HALL END MODULE REDUCED IN SIZE - 13.03.23
REV C - FOOTPRINT OF NO. 39 AMENDED - 11.01.23

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Hampton Pre-Prep School
Pre-Prep Hall

16 August, 2022 Drawn by MR
1:100 @ A2
Planning Application

PROJECT No.
1829

Proposed Roof Plan
A-112

Rev
E