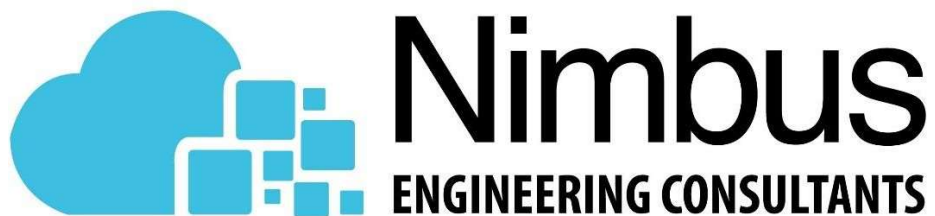


**DRAINAGE STRATEGY REPORT FOR BOORLEY
GREEN NURSERY, NAIRN ROAD, SOUTHAMPTON,
SO32 2SH**

DOCUMENT NUMBER.: C2741-R1-REV-A

PREPARED BY



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1. INTRODUCTION

1.1 Appointment

Nimbus Engineering have been appointed by NHDH Ltd, to provide solution on the management of Surface Water and Foul Water run-off and to ensure that there is no risk of flooding caused by the proposed development at Boorley Green Nursery, Nairn Road, Southampton, SO32 2SH. The proposals involve the erection of 81 place nursery together with associated access, car parking and landscaping.

1.2 Objectives

This report will address the concerns raised by the Council and provide details on a suitable Sustainable Urban Drainage System (SuDS).

1.3 Limitations

The general limitations of this report are:

- A number of data and information sources have been used to prepare this report. Whilst Nimbus Engineering believes them to be trustworthy, Nimbus Engineering is unable to guarantee the accuracy of data and information that has been provided by others;

- This report has been prepared using the best data and information that was available at the time of writing. There is the potential for further information or data to become available, leading to changes in the conclusions drawn by this report, for which Nimbus Engineering cannot be held responsible.

2.0 GEOLOGY OF THE AREA

According to the British Geological Survey, there is no superficial deposit information available at the site, as shown in Figure 1 below. The bedrock at the site is made up of the Lambeth Group, consisting of clay, silt, and sand, as shown on Figure 2 below.

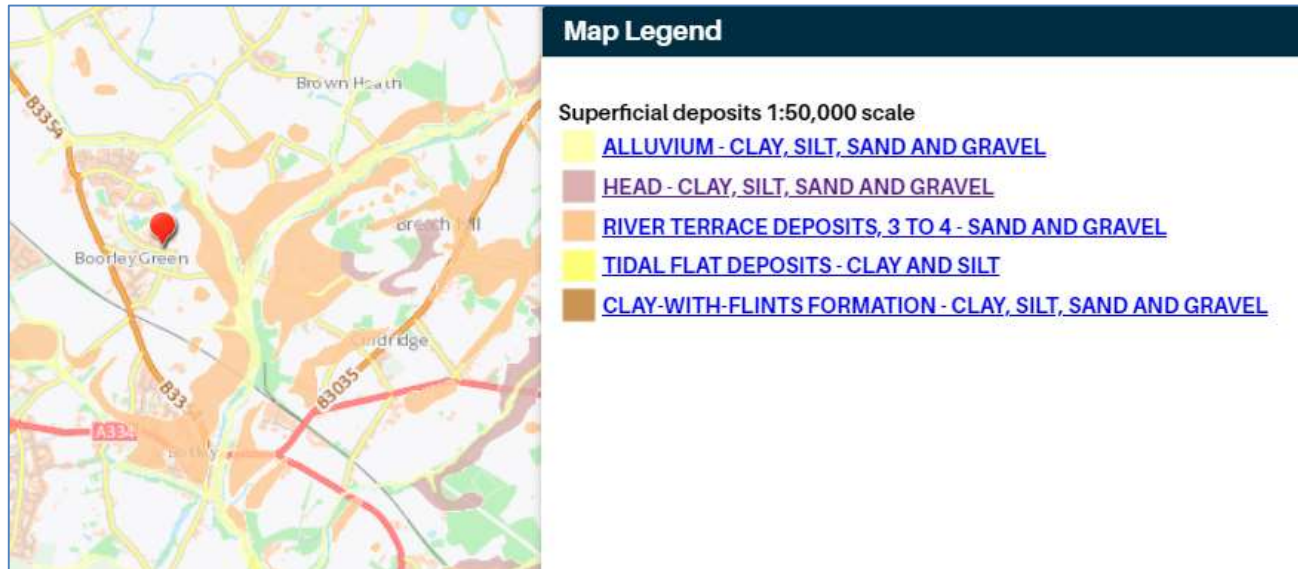


Figure 1- Superficial deposits at the site. (Source: British Geological Society Website (contains British Geological Survey) [2022])

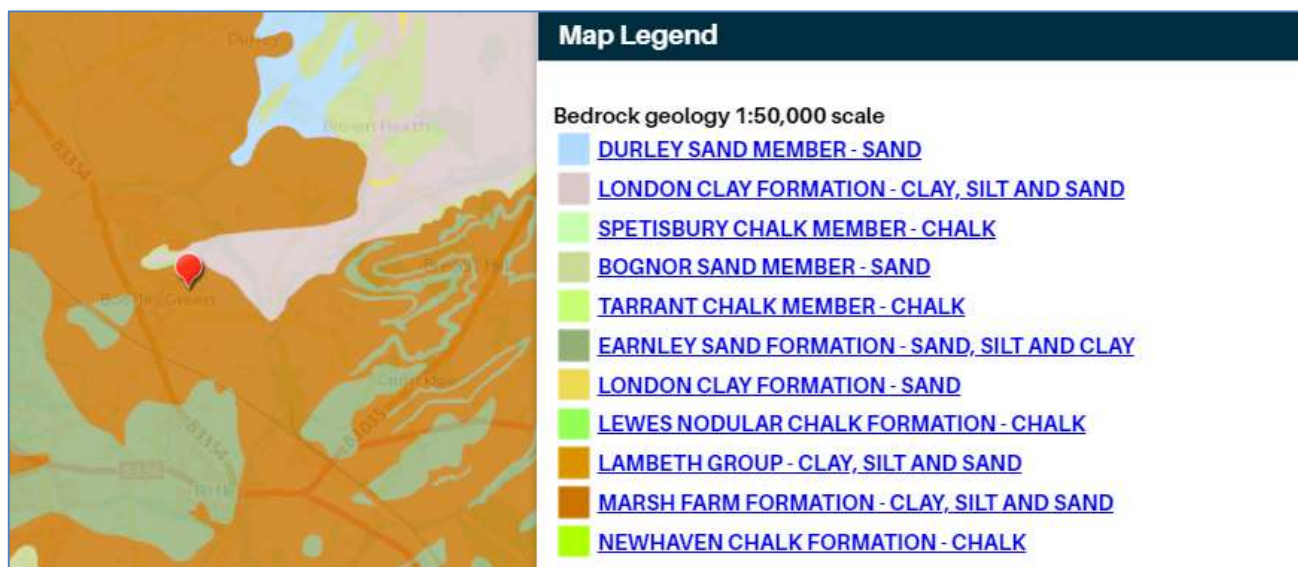


Figure 2- Bedrock at the site. (Source: British Geological Society Website (contains British Geological Survey) [2022])

Furthermore, we consulted the historic boreholes in the vicinity of the site, one of which has been provided in Appendix A, and this shows that the underlying geology consists of clay, and therefore is unsuitable for infiltration.

3.0 SUSTAINABLE URBAN DRAINAGE SYSTEMS

Surface water arising from a developed site should, as far as is practicable, be managed in a sustainable manner to mimic the surface water flows arising from the site prior to the proposed development, while reducing the flood risk to the site itself and elsewhere, taking climate change into account.

Reducing the rate of surface water discharge from urban sites is one of the most effective ways of reducing and managing flood risk.

Traditional piped surface water systems work by removing surface water from our developments as quickly as possible, however this can cause various adverse impacts:

- Increased downstream flooding, and sudden rises in flow rates and water levels in local water courses.
- Reduction in groundwater levels and dry weather flows in watercourses.
- Reduce amenity and adversely affect biodiversity due to the surface water run-off containing contaminants such as oil, organic matter and toxic materials.

SuDS are defined as a sequence of management principles and control structures designed to drain surface water in a more sustainable fashion than conventional piped drainage techniques. SuDS should utilise the natural landscape of an area which as well as slowing down the rate of runoff provides a number of environmental, ecological and social benefits.

These include:

- Protection and enhancement of water quality. As well as providing on-site attenuation, SuDS treat the water, resulting in an improved quality of water leaving the site. This is achieved when the water passes through fine soils and the roots of specially selected plants. Pollutants washed off the hard landscaping by rainfall will be safely removed before the water reaches the natural receiving water course.
- A sympathetic approach to the environmental setting by providing opportunities to create habitats for flora and fauna in urban watercourses and open spaces.
- Meeting the amenity and social needs of the local community and residents in the creation of attractive green spaces.

The various types of SuDS include:

Permeable paving	
Soakaways;	
Swales and basins;	
Bioretention/ rain gardens;	
Green roofs and rainwater re-use;	

Preferably a combination of these techniques should be used as part of the surface water management train, and it is important for all stakeholders, such as developers, architects, landscape architects and engineers to work in order to determine a feasible solution.

The SuDS management train is shown below, and this has been followed when proposing the proposed Sustainable Urban Drainage Systems for this site.

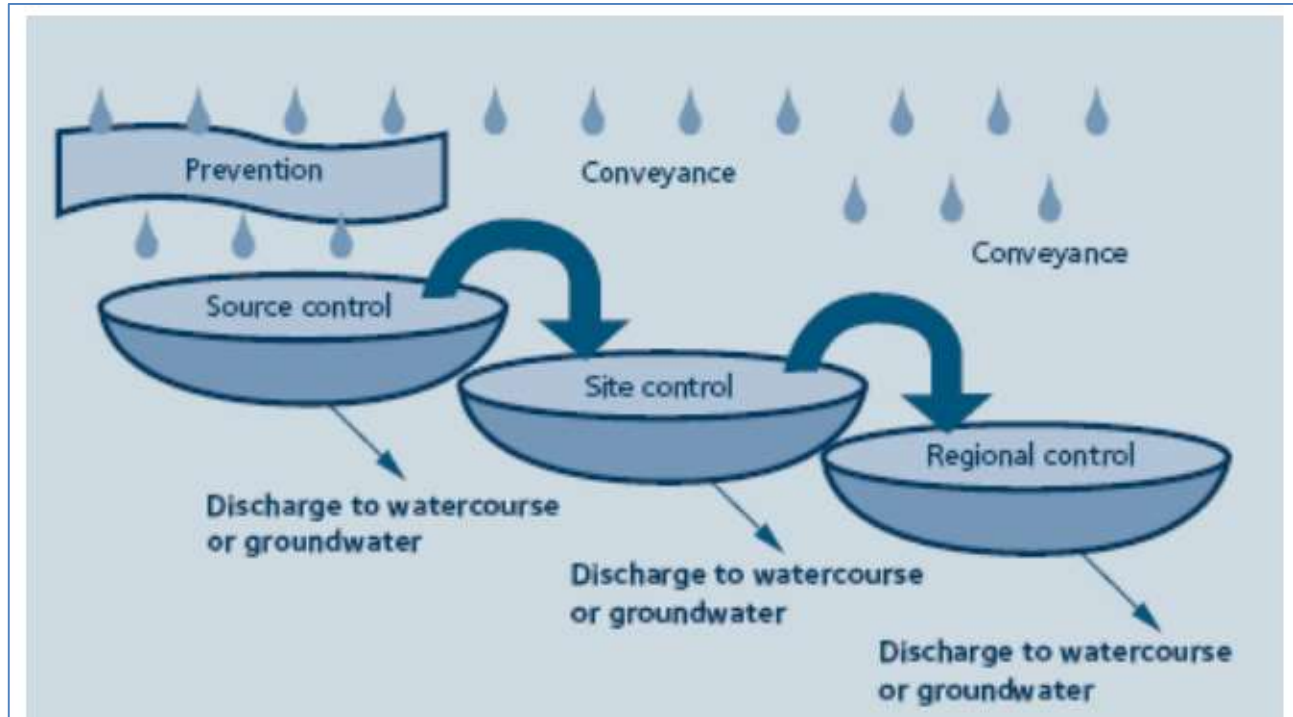


Figure 3 – SuDS Management Train

4.0 SuDS PROPOSALS FOR DEVELOPMENT

In accordance with the CIRIA SuDS Manual C753, the SuDS hierarchy has been considered in relation to the site-specific constraints and its surroundings. Table 1 below outlines the hierarchical approach considered for the development at Boorley Green Nursery.

Sustainable Drainage Proposal	Description	Constraints/Comments	Appropriate
Rainwater Use as a Resource	Use of rainwater runoff for reuse, e.g. Rainwater harvesting tanks, Blue Roofs for irrigation	One wall mounted rainwater harvesting tank, has been proposed for rainwater reuse.	Yes
Rainwater Full Infiltration to Ground (Source Control)	Infiltration devices and/or soakaways. Surface water runoff stored on site and gradually percolating into receiving ground	Due to underlying geology, full infiltration not suitable for the site.	No
Rainwater Partial Infiltration to Ground (Source Control)	Installation of permeable/porous surfacing	Permeable paving is proposed on all hardstanding areas to allow for partial infiltration in low-intensity storm events	Yes
Rainwater attenuation in green infrastructure features for gradual release	The onsite storage of all surface water runoff which can then be gradually conveyed to a nearby watercourse, sewer or infiltration into the ground. Forms of green infrastructure features: Green Roofs, Raingardens, Ponds, Swales, Detention basins, Infiltration Trenches and Raingarden Planters	As stipulated by the client, green roofing not suitable for this development. To provide some green infrastructure, 3 raingarden planters have been provided to provide a level of treatment to runoff from the roof, whilst also slowing the rate of runoff onsite. Furthermore, two swales, and one raingarden, have been provided to provide a further level of treatment for surface water runoff.	Yes

Rainwater discharge direct to a watercourse	All surface water runoff on site discharged at a restricted rate to a nearby watercourse	There is a culverted watercourse close to the site. However, the existing surface water sewer close to the site is assumed to go into this ditch further downstream.	No
Controlled rainwater discharge to a surface water sewer or drain	All surface water runoff on site is discharged at a restricted rate to a nearby surface water sewer or drain, all rainwater runoff stored in below ground attenuation features. E.g. oversized pipes or geo-cellular tanks	All surface water runoff from the site is to be conveyed into a surface water sewer within Nairn Road, and a reduced rate of 0.4l/s. This existing manhole is to be surveyed, or drainage strategy reports for the adjacent developments found, to determine the suitability of this connection.	Yes
Controlled rainwater discharge to a combined sewer	All surface water runoff on site discharged at a restricted rate to a nearby surface water sewer all rainwater runoff stored in below ground attenuation features. E.g. oversized pipes or geo-cellular tanks	N/A due to the above.	No

Table 1: SuDS hierarchy

5.0 PROPOSED SUDS SOLUTION

The total site area is 2090m², with the impermeable areas at the existing site being 0m². Following the development at this site, the impermeable areas will have increased to 1492m².

A detailed hydraulic model was built to ensure a feasible solution was proposed using Infodrainage, to simulate rainfall events for a 1 in 100 year storm event, with a 40% allowance for climate change, with a restricted discharge rate of 0.4 l/s, which is the greenfield runoff for the site. The results of the hydraulic model can be found in Appendix B.

In order to ensure that the SuDS management train has been considered fully, all hardstanding areas will be formed of permeable surfacing underlain by a hydrocarbon removing geotextile membrane at the front and back of the building, in order to deal with as much of the surface water run off at source, with the surface water runoff from all sloped areas at both entrances to the development to be caught by channel drains, this will provide a level of treatment from the surface water runoff produced by all proposed trafficked hardstanding.

One wall mounted rainwater harvesting tank has been proposed to promote rainwater reuse.

Three raingarden planters, one raingarden and two swales are proposed to provide a level

of treatment to as much surface water runoff as feasible, slow the rate of surface water runoff onsite, as well as providing ecological benefits to the site.

The surface water runoff from the site will then be conveyed into a crate system attenuation tank, which has been sized for a 1 in 100 year plus 40% climate change storm event, with a flow restriction set to 0.4 l/s, the total net storage required within the tank was 54.720m³.

This restricted surface water runoff will be conveyed by gravity into the combined sewer diverted chamber as shown in drawing C2741-01 in Appendix C.

6.0 TIMESCALE AND MAINTENANCE OF WORKS

All drainage works will be completed prior to first occupation and there will be no adoption of any of the drainage works within the site, and a management company will be formed to oversee the short and long term maintenance of the drains and shared attenuation tank. The following outline maintenance strategy sets out recommended timescales for maintenance of the proposed drainage works, in line with CIRIA SuDS Design Guide: Refer to management and maintenance plan drawing number: C2741-02 in Appendix B.

- Regular inspection will comprise the inspection and cleaning of catchment, gutters, filters and tanks to reduce the likelihood of contamination, this is recommended to be carried out every 3 to 6 months.
- Regular jet-washing of permeable block paving can be used to keep joints and voids clear, this should be carried out every 6 months.
- The catch pit chamber to and flow control chamber from the attenuation tank should be emptied every 3 months, and after every large storm event to ensure that there are no blockages.
- Periodic inspections & removal of debris of rainwater harvesting tanks, raingarden planters, raingardens and swales that represent blockage risks

The following table outlines the maintenance requirements for the porous surfacing:

Maintenance schedule	Required action	Typical frequency
Regular maintenance	Brushing and vacuuming (standard cosmetic sweep over whole surface	Once a year, after autumn leaf fall, or reduced frequency as required, based on site-specific observations or clogging or manufacturer's recommendations – pay particular attention to areas where water runs onto pervious surface from adjacent impermeable areas as this is the most likely to collect the most sediment
Occasional maintenance	Stabilise and mow contributing and adjacent areas	As required
	Removal of weeds or management using glyphosate applied directly into the weeds by an applicator rather than spraying	As required
Remedial Actions	Remediate any landscaping which, through vegetation maintenance or soil slip, has been raised to within 50 mm of the level of the paving.	As required
	Remedial work to any depressions, rutting and cracked or broken blocks considered detrimental to the structural performance or a hazard to users, and replace lost jointing material.	As required
	Rehabilitation of surface and upper substructure by remedial sweeping	Every 10 to 15 years or as required (if infiltration performance is reduced due to significant clogging)
Monitoring	Initial inspection	Monthly for three months after installation
	Inspect for evidence of poor operation and/or weed growth – if required, take remedial action	Three-monthly, 48hr after large storms in six months
	Inspect slit accumulation rates and establish appropriate brushing frequencies	Annually
	Monitor inspection chambers	Annually

Table 2: Operation and maintenance requirements for permeable paving.

The following table outlines the maintenance requirements for the attenuation storage tanks:

Maintenance schedule	Required action	Typical frequency
Regular maintenance	Inspect and identify any areas that are not operating correctly. If required, take remedial action.	Monthly for 3 months, then annually
	Remove debris from the catchment surface (where it may cause risks to performance).	Monthly
	For systems where rainfall infiltrates into the tank from above, check surface of filter for blockage by sediment, algae or other matter; remove and replace surface infiltration medium as necessary.	Annually
	Remove sediment pre-treatment structures and/or internal forebays.	Annually, or as required
Remedial actions	Repair/rehabilitate inlets, outlet, overflows and vents.	As required
Monitoring	Inspect/check all inlets, outlets, vents and overflows to ensure that they are in good condition and operating as designed	Annually
	Survey inside of tank for sediment build-up and remove if necessary	Every 5 years or as required
	Inspect slit accumulation rates and establish appropriate brushing frequencies	Annually
	Monitor inspection chambers	Annually

Table 3: Operation and maintenance requirements for attenuation storage tanks

The following table outlines the maintenance requirements for rainwater harvesting tanks:

Maintenance schedule	Required action	Typical Frequency
Regular maintenance	Inspection of the tank for debris and sediment build-up, inlets/outlets/withdraw devices, overflow areas, pumps, filters	Annually (and following poor performance)
	Cleaning of tank, inlets, outlets, gutters. Withdrawal devices and roof drain filters of silts and other debris	Annually (and following poor performance)
Occasional maintenance	Cleaning and/ or replacement of any filters	Three monthly (or as required)
Remedial actions	Repair of overflow erosion damage or damage to tank	As required
	Pump repairs	As required

Table 4: Operation and maintenance requirement for rainwater harvesting systems

The following table outlines the maintenance requirements for the raingarden planters and raingardens:

Maintenance schedule	Required action	Typical Frequency
Regular maintenance	Pipe inlets to the raingarden planters should be checked every month and especially after an extreme rainstorm to ensure that there are no blockages.	Monthly
	Periodic inspections & removal of debris or other items that represent blockage risks particularly in vicinity of the inlet to the raingarden planters	Monthly
	Weeding, cutting of plants and removal of any dead plants to ensure that the system works effectively	Every three months
	For systems where rainfall infiltrates into the tank from above, check surface of filter for blockages by sediment, algae or other matter: remove and replace surface infiltration medium as necessary.	Annually
Remedial actions	Repair inlets, outlets, overflows	As required
Monitoring	Inspect/check all inlets, outlets, vents and overflows to ensure that the are in good condition and operating as designed	Annually

Table 5: Operation and maintenance requirement for raingarden planters

The table below outlines the maintenance requirements for the swales:

Maintenance schedule	Required action	Typical frequencies
Regular maintenance	Remove litter and debris	Monthly, or as required
	Cut grass- to retain grass height within specified design range	Monthly (during growing season), or as required
	Manage other vegetation and remove nuisance plants	Monthly at start, then as required
	Inspect inlets and outlet for blockages, and clear if required	Monthly
	Inspect infiltration surfaces for ponding, compaction, silt accumulation, record areas where water is ponding > 48 hours	Monthly, or when required
	Inspect vegetation coverage	Monthly for 6 months, quarterly for 2 years, then half yearly
	Inspect inlets and facility surface for silt accumulation, establish appropriate silt removal frequencies	Half yearly
Occasional maintenance	Reseed areas of poor vegetation growth, alter plant types to better suit condition, if required	As required or if bare soil is exposed over 10% or more of the swale treatment area
Remedial actions	Repair erosion or other damage by re-turfing or reseeded	As required
	Relevel uneven surfaces and reinstate design levels	As required
	Scarify and spike topsoil layer to improve infiltration performance, break up slit deposits and prevent compaction of the soil surface	As required
	Remove build-up of sediment on upstream gravel trench, flow spreader or at top of filter strip	As required
	Remove and dispose of oils or petrol residues using safe standard practises	As required

Table 6: Operation and maintenance requirements for swales.

The following table outlines the maintenance requirements for the flow control chambers:

Maintenance schedule	Required action	Typical frequency
Regular maintenance	Inspect from surface and identify any areas that are not operating correctly. If required, take remedial action	Monthly for 3 months, then 6 monthly intervals
	Remove debris from the catchment surface (where it may cause risks to performance)	Monthly
	Orifice plates within plastic chambers or vortex controls to be jetted from the surface after heavy rainfall events to remove any debris or silt	As required
	Empty catchpits upstream of SuDS features to ensure no debris is passed downstream	3 months or as required
Remedial actions	In the event of a blockage, a vortex flow control can be removed from the chamber via the lifting cabled located at the access, this will be cleaned at surface level and reinstalled into its original location	As required
	In the event of a blockage, the orifice plate should be jetted from surface, and if blockage is not cleared the orifice plate can be removed by removing fixing bolts. These fixing bolts should be checked and replaced if needed.	As required
Monitoring	Following installation it is important that any extraneous materials i.e. building materials: granular backfill, in-situ pour concrete etc are removed from the unit and the new flow control chamber is fully jetted down	Upon installation
	Inspect/check chamber channel for any debris or silt build-up. Upstream chambers should be checked at the same time as these monitoring works to ensure network is operating at full capacity.	Annually

Table 7: Operation and maintenance requirement for flow control chambers

*All Remedial Works should be carried out by a competent and certified contractor, with no entry or removal of parts to be undertaken by landowner.

If upstream network of flow control chamber is regularly maintained, little maintenance is required within the chamber as there are no moving parts

7.0 CONCLUSIONS

The purpose of this report is to provide a suitable SuDS strategy to surface water flows arising due to the proposed nursery development.

As requested, SuDS have been incorporated into this design, in the form of the following:

1. All new uncovered hardstanding surfaces being formed of porous surfacing
2. The installation of 1 wall mounted rainwater harvesting tank for rainwater reuse
3. Three raingarden planters to provide a level of treatment for roof runoff.
4. One raingarden to provide a level of treatment to trafficked areas.
5. Two swales to provide a level of treatment for trafficked, roof and pedestrian runoff.
6. All surface water runoff being conveyed into an attenuation tank with a restricted discharge of 0.4 l/s into the diverted combined sewer chamber onsite as shown on drawing number C2741-01

APPENDIX A – BOREHOLE SCANS

B. H. 6 on site of Depth Probe No. 31

0'0" - 1'0" Topsoil.
1'0" - 6'0" Hard brown clay.
6'0" - 10'0" Soft sandy clay.
10'0" - 20'0" " " " and slurry.

Standing water level 9'0"

SUSISW 109
5135 1461

B. H. 7 on site of Depth Probe No. 81

0'0" - 1'0" Topsoil.
1'0" - 4'6" Brown clay.
4'0" - 18'6" Soft sandy clay.
18'6" - 20'0" Clay.

SUSISW 110
5112 1469

B. H. 8 on site of Depth Probe No. 38

0'0" - 1'6" Topsoil.
1'6" - 5'0" Ballast with clay.
5'0" - 8'0" " " "
8'0" - 11'0" " " "
11'0" - 15'0" Clay.

Standing water level 5'0"

SUSISW 111
5154 1472

B. H. 9 on site of Depth Probe No. 55

0'0" - 1'0" Topsoil.
1'0" - 5'0" Brown clay (solid).
5'0" - 10'0" Grey solid clay.
10'0" - 12'0" " " "
12'0" - 20'0" " soft sandy clay.

Standing water level 15'0"

SUSISW 112
5140 1482

APPENDIX B – HYDRAULIC MODELLING REPORTS

Boorley Green Nursery, Nairn Road, Southampton, SO32 2SH: Boorley Green Nursery, Nairn Road, Infodrainage Runoff Calculations Infodrainage Runoff Calculations	Date: 19/10/2022		
	Designed by: FG	Checked by: SL	Approved By: SL
Report Title: UK and Ireland Rural Runoff Calculator	Kemp House: 124 City Road EC1V 2NX London		


Nimbus
 ENGINEERING CONSULTANTS

ICP SUDS / IH 124

Details

Method	ICP SUDS
Area (ha)	0.209
SAAR (mm)	800.0
Soil	0.3
Region	Region 1
Urban	0
Return Period (years)	0

Results

Region	QBAR Rural (L/s)	QBAR Urban (L/s)	Q 1 (years) (L/s)	Q 30 (years) (L/s)	Q 100 (years) (L/s)
Region 1	0.4	0.4	0.4	0.8	1.1

Boorley Green Nursery, Nairn Road, Southampton, SO32 2SH: Boorley Green Nursery, Nairn Road, Southampton, SO32 2SH 1 in 100 Year + 40% CC Storm Event - FSR Data 0.4l/s Discharge Rate		Date: 19/10/2022	
Report Details: Type: Inflow Summary Storm Phase: Phase		Designed by: FG	Checked by: SL
		Approved By: SL	
		Kemp House: 124 City Road EC1V 2NX London	



Inflow Label	Connected To	Flow (L/s)	Runoff Method	Area (ha)	Percentage Impervious (%)	Urban Creep (%)	Adjusted Percentage Impervious (%)	Area Analysed (ha)
Catchment Area	Raingarden planter 1		Time of Concentration	0.013	100	0	100	0.013
Catchment Area (1)	Raingarden Planter 2		Time of Concentration	0.005	100	0	100	0.005
Catchment Area (2)	Raingarden Planter 3		Time of Concentration	0.013	100	0	100	0.013
Catchment Area (3)	S6		Time of Concentration	0.005	100	0	100	0.005
Catchment Area (4)	S8-Catchpit		Time of Concentration	0.015	100	0	100	0.015
Catchment Area (5)	Slot Drain 13 (1)		Time of Concentration	0.001	100	0	100	0.001
Catchment Area (6)	Raingarden		Time of Concentration	0.004	100	0	100	0.004
Catchment Area (7)	Slot Drain 13		Time of Concentration	0.002	100	0	100	0.002
Catchment Area (8)	Slot Drain 13		Time of Concentration	0.004	100	0	100	0.004
Catchment Area (9)	Slot Drain 15		Time of Concentration	0.003	100	0	100	0.003
Catchment Area (10)	Slot Drain 15		Time of Concentration	0.002	100	0	100	0.002
Catchment Area (11)	Slot Drain 13 (1)		Time of Concentration	0.002	100	0	100	0.002
Catchment Area (12)	Slot Drain 14		Time of Concentration	0.003	100	0	100	0.003
Catchment Area (13)	Slot Drain 14		Time of Concentration	0.003	100	0	100	0.003
Catchment Area (14)	Slot Drain 10		Time of Concentration	0.003	100	0	100	0.003
Catchment Area (15)	Slot drain 8		Time of Concentration	0.004	100	0	100	0.004
Catchment Area (16)	Slot drain 7		Time of Concentration	0.005	100	0	100	0.005
Catchment Area (17)	Slot Drain 12		Time of Concentration	0.011	100	0	100	0.011
Catchment Area (18)	Slot drain 4		Time of Concentration	0.006	100	0	100	0.006
Catchment Area (19)	Slot drain 3		Time of Concentration	0.006	100	0	100	0.006
Catchment Area (20)	Slot Drain 11		Time of Concentration	0.007	100	0	100	0.007
Catchment Area (21)	Slot Drain 2		Time of Concentration	0.003	100	0	100	0.003
Catchment Area (22)	Slot Drain 1		Time of Concentration	0.003	100	0	100	0.003
Catchment Area (23)	Slot drain 5		Time of Concentration	0.002	100	0	100	0.002
Catchment Area (24)	Slot drain 6		Time of Concentration	0.004	100	0	100	0.004
Catchment Area (25)	Swale		Time of Concentration	0.002	100	0	100	0.002
Catchment Area (26)	Slot Drain 15		Time of Concentration	0.001	100	0	100	0.001
Catchment Area (27)	S7		Time of Concentration	0.001	100	0	100	0.001
TOTAL		0.0		0.134				0.134

Boorley Green Nursery, Nairn Road, Southampton, SO32 2SH: Boorley Green Nursery, Nairn Road, Southampton, SO32 2SH 1 in 100 Year + 40% CC Storm Event - FSR Data 0.4l/s Discharge Rate	Date: 19/10/2022		
	Designed by: FG	Checked by: SL	Approved By: SL
	Report Title: Rainfall Analysis Criteria		
Kemp House: 124 City Road EC1V 2NX London			

Runoff Type	Dynamic
Output Interval (mins)	5
Time Step	Default
Urban Creep	Apply Global Value
Urban Creep Global Value (%)	0
Junction Flood Risk Margin (mm)	200
Perform No Discharge Analysis	☐

Rainfall	
FSR	Type: FSR

Region	England And Wales
M5-60 (mm)	19.9
Ratio R	0.350
Summer	☐
Winter	☒

Return Period	
---------------	--

Return Period (years)	Increase Rainfall (%)
100.0	40.000

Storm Durations	
-----------------	--

Duration (mins)	Run Time (mins)
15	30
30	60
60	120
120	240
180	360
240	480
360	720
480	960
600	1200

Boorley Green Nursery, Nairn Road, Southampton, SO32 2SH 1 in 100 Year + 40% CC Storm Event - FSR Data 0.4l/s Discharge Rate Report Details: Type: Junctions Summary Storm Phase: Phase	Date: 19/10/2022		
	Designed by: FG	Checked by: SL	Approved By: SL
	Kemp House: 124 City Road EC1V 2NX London		



Summary Results for S1: Rank By: Max. Depth

Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
FSR: 100 years: +40 %: 15 mins: Winter	25.580	25.230	25.307	0.077	7.8	0.022	0.000	7.7	3.459	OK
FSR: 100 years: +40 %: 30 mins: Winter	25.580	25.230	25.291	0.061	5.3	0.017	0.000	5.3	4.708	OK
FSR: 100 years: +40 %: 60 mins: Winter	25.580	25.230	25.282	0.052	4.0	0.015	0.000	4.0	6.095	OK
FSR: 100 years: +40 %: 120 mins: Winter	25.580	25.230	25.272	0.042	2.6	0.012	0.000	2.7	7.559	OK
FSR: 100 years: +40 %: 180 mins: Winter	25.580	25.230	25.266	0.036	2.0	0.010	0.000	2.0	8.448	OK
FSR: 100 years: +40 %: 240 mins: Winter	25.580	25.230	25.262	0.032	1.6	0.009	0.000	1.6	9.066	OK
FSR: 100 years: +40 %: 360 mins: Winter	25.580	25.230	25.258	0.028	1.2	0.008	0.000	1.2	10.026	OK
FSR: 100 years: +40 %: 480 mins: Winter	25.580	25.230	25.255	0.025	1.0	0.007	0.000	1.0	10.741	OK
FSR: 100 years: +40 %: 600 mins: Winter	25.580	25.230	25.253	0.023	0.8	0.007	0.000	0.8	11.323	OK

Boorley Green Nursery, Nairn Road, Southampton, SO32 2SH 1 in 100 Year + 40% CC Storm Event - FSR Data 0.4l/s Discharge Rate Report Details: Type: Junctions Summary Storm Phase: Phase	Date: 19/10/2022		
	Designed by: FG	Checked by: SL	Approved By: SL
	Kemp House: 124 City Road EC1V 2NX London		



Summary Results for S2: Rank By: Max. Depth

Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
FSR: 100 years: +40 %: 15 mins: Winter	25.570	25.110	25.202	0.092	9.7	0.026	0.000	9.3	4.868	OK
FSR: 100 years: +40 %: 30 mins: Winter	25.570	25.110	25.189	0.079	7.3	0.022	0.000	7.3	6.773	OK
FSR: 100 years: +40 %: 60 mins: Winter	25.570	25.110	25.178	0.068	5.6	0.019	0.000	5.6	8.807	OK
FSR: 100 years: +40 %: 120 mins: Winter	25.570	25.110	25.164	0.054	3.8	0.015	0.000	3.7	10.958	OK
FSR: 100 years: +40 %: 180 mins: Winter	25.570	25.110	25.157	0.047	2.8	0.013	0.000	2.8	12.218	OK
FSR: 100 years: +40 %: 240 mins: Winter	25.570	25.110	25.152	0.042	2.3	0.012	0.000	2.3	13.138	OK
FSR: 100 years: +40 %: 360 mins: Winter	25.570	25.110	25.146	0.036	1.7	0.010	0.000	1.7	14.519	OK
FSR: 100 years: +40 %: 480 mins: Winter	25.570	25.110	25.142	0.032	1.4	0.009	0.000	1.4	15.527	OK
FSR: 100 years: +40 %: 600 mins: Winter	25.570	25.110	25.139	0.029	1.2	0.008	0.000	1.2	16.367	OK

Boorley Green Nursery, Nairn Road, Southampton, SO32 2SH 1 in 100 Year + 40% CC Storm Event - FSR Data 0.4l/s Discharge Rate Report Details: Type: Junctions Summary Storm Phase: Phase	Date: 19/10/2022		
	Designed by: FG	Checked by: SL	Approved By: SL
	Kemp House: 124 City Road EC1V 2NX London		



Summary Results for S3: Rank By: Max. Depth

Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
FSR: 100 years: +40 %: 15 mins: Winter	24.800	24.080	24.208	0.128	17.2	0.020	0.000	16.4	9.619	OK
FSR: 100 years: +40 %: 30 mins: Winter	24.800	24.080	24.196	0.116	14.9	0.018	0.000	14.9	13.206	OK
FSR: 100 years: +40 %: 60 mins: Winter	24.800	24.080	24.176	0.096	11.4	0.015	0.000	11.4	16.961	OK
FSR: 100 years: +40 %: 120 mins: Winter	24.800	24.080	24.154	0.074	7.5	0.012	0.000	7.5	20.726	OK
FSR: 100 years: +40 %: 180 mins: Winter	24.800	24.080	24.143	0.063	5.6	0.010	0.000	5.6	22.697	OK
FSR: 100 years: +40 %: 240 mins: Winter	24.800	24.080	24.136	0.056	4.5	0.009	0.000	4.5	23.945	OK
FSR: 100 years: +40 %: 360 mins: Winter	24.800	24.080	24.128	0.048	3.3	0.008	0.000	3.3	25.621	OK
FSR: 100 years: +40 %: 480 mins: Winter	24.800	24.080	24.122	0.042	2.6	0.007	0.000	2.6	26.526	OK
FSR: 100 years: +40 %: 600 mins: Winter	24.800	24.080	24.119	0.039	2.2	0.006	0.000	2.2	27.154	OK

Boorley Green Nursery, Nairn Road, Southampton, SO32 2SH 1 in 100 Year + 40% CC Storm Event - FSR Data 0.4l/s Discharge Rate Report Details: Type: Junctions Summary Storm Phase: Phase	Date: 19/10/2022		
	Designed by: FG	Checked by: SL	Approved By: SL
	Kemp House: 124 City Road EC1V 2NX London		



Summary Results for S4: Rank By: Max. Depth

Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
FSR: 100 years: +40 %: 15 mins: Winter	24.320	23.830	23.882	0.052	18.0	0.008	0.000	17.6	10.833	OK
FSR: 100 years: +40 %: 30 mins: Winter	24.320	23.830	23.880	0.050	16.4	0.008	0.000	16.4	15.218	OK
FSR: 100 years: +40 %: 60 mins: Winter	24.320	23.830	23.875	0.045	12.7	0.007	0.000	12.7	19.782	OK
FSR: 100 years: +40 %: 120 mins: Winter	24.320	23.830	23.867	0.037	8.5	0.006	0.000	8.5	24.322	OK
FSR: 100 years: +40 %: 180 mins: Winter	24.320	23.830	23.862	0.032	6.4	0.005	0.000	6.4	26.719	OK
FSR: 100 years: +40 %: 240 mins: Winter	24.320	23.830	23.859	0.029	5.2	0.005	0.000	5.2	28.264	OK
FSR: 100 years: +40 %: 360 mins: Winter	24.320	23.830	23.855	0.025	3.8	0.004	0.000	3.8	30.389	OK
FSR: 100 years: +40 %: 480 mins: Winter	24.320	23.830	23.852	0.022	3.0	0.004	0.000	3.0	31.636	OK
FSR: 100 years: +40 %: 600 mins: Winter	24.320	23.830	23.850	0.020	2.5	0.003	0.000	2.5	32.541	OK

Boorley Green Nursery, Nairn Road, Southampton, SO32 2SH 1 in 100 Year + 40% CC Storm Event - FSR Data 0.4l/s Discharge Rate Report Details: Type: Junctions Summary Storm Phase: Phase	Date: 19/10/2022		
	Designed by: FG	Checked by: SL	Approved By: SL
	Kemp House: 124 City Road EC1V 2NX London		



Summary Results for S5: Rank By: Max. Depth

Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
FSR: 100 years: +40 %: 15 mins: Winter	24.500	24.100	24.125	0.025	2.6	0.004	0.000	2.5	1.623	OK
FSR: 100 years: +40 %: 30 mins: Winter	24.500	24.100	24.124	0.024	2.3	0.004	0.000	2.3	2.327	OK
FSR: 100 years: +40 %: 60 mins: Winter	24.500	24.100	24.121	0.021	1.9	0.003	0.000	1.9	3.052	OK
FSR: 100 years: +40 %: 120 mins: Winter	24.500	24.100	24.118	0.018	1.2	0.003	0.000	1.2	3.792	OK
FSR: 100 years: +40 %: 180 mins: Winter	24.500	24.100	24.116	0.016	0.9	0.002	0.000	0.9	4.216	OK
FSR: 100 years: +40 %: 240 mins: Winter	24.500	24.100	24.114	0.014	0.8	0.002	0.000	0.8	4.523	OK
FSR: 100 years: +40 %: 360 mins: Winter	24.500	24.100	24.112	0.012	0.6	0.002	0.000	0.6	5.021	OK
FSR: 100 years: +40 %: 480 mins: Winter	24.500	24.100	24.111	0.011	0.5	0.002	0.000	0.5	5.345	OK
FSR: 100 years: +40 %: 600 mins: Winter	24.500	24.100	24.110	0.010	0.4	0.002	0.000	0.4	5.663	OK

Boorley Green Nursery, Nairn Road, Southampton, SO32 2SH 1 in 100 Year + 40% CC Storm Event - FSR Data 0.4l/s Discharge Rate Report Details: Type: Junctions Summary Storm Phase: Phase	Date: 19/10/2022		
	Designed by: FG	Checked by: SL	Approved By: SL
	Kemp House: 124 City Road EC1V 2NX London		



Summary Results for S6: Rank By: Max. Depth

Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
FSR: 100 years: +40 %: 15 mins: Winter	24.350	23.900	23.938	0.038	5.4	0.006	0.000	5.3	2.937	OK
FSR: 100 years: +40 %: 30 mins: Winter	24.350	23.900	23.934	0.034	4.3	0.005	0.000	4.2	4.098	OK
FSR: 100 years: +40 %: 60 mins: Winter	24.350	23.900	23.930	0.030	3.3	0.005	0.000	3.3	5.324	OK
FSR: 100 years: +40 %: 120 mins: Winter	24.350	23.900	23.924	0.024	2.2	0.004	0.000	2.2	6.610	OK
FSR: 100 years: +40 %: 180 mins: Winter	24.350	23.900	23.921	0.021	1.7	0.003	0.000	1.7	7.347	OK
FSR: 100 years: +40 %: 240 mins: Winter	24.350	23.900	23.919	0.019	1.4	0.003	0.000	1.4	7.894	OK
FSR: 100 years: +40 %: 360 mins: Winter	24.350	23.900	23.917	0.017	1.0	0.003	0.000	1.0	8.734	OK
FSR: 100 years: +40 %: 480 mins: Winter	24.350	23.900	23.915	0.015	0.8	0.002	0.000	0.8	9.316	OK
FSR: 100 years: +40 %: 600 mins: Winter	24.350	23.900	23.914	0.014	0.7	0.002	0.000	0.7	9.838	OK

Boorley Green Nursery, Nairn Road, Southampton, SO32 2SH 1 in 100 Year + 40% CC Storm Event - FSR Data 0.4l/s Discharge Rate Report Details: Type: Junctions Summary Storm Phase: Phase	Date: 19/10/2022		
	Designed by: FG	Checked by: SL	Approved By: SL
	Kemp House: 124 City Road EC1V 2NX London		



Summary Results for S7: Rank By: Max. Depth

Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
FSR: 100 years: +40 %: 15 mins: Winter	24.000	23.210	23.253	0.043	8.2	0.007	0.000	8.1	4.509	OK
FSR: 100 years: +40 %: 30 mins: Winter	24.000	23.210	23.248	0.038	6.6	0.006	0.000	6.5	6.292	OK
FSR: 100 years: +40 %: 60 mins: Winter	24.000	23.210	23.244	0.034	5.1	0.005	0.000	5.1	8.146	OK
FSR: 100 years: +40 %: 120 mins: Winter	24.000	23.210	23.238	0.028	3.4	0.004	0.000	3.4	9.981	OK
FSR: 100 years: +40 %: 180 mins: Winter	24.000	23.210	23.234	0.024	2.6	0.004	0.000	2.6	10.974	OK
FSR: 100 years: +40 %: 240 mins: Winter	24.000	23.210	23.232	0.022	2.1	0.004	0.000	2.1	11.655	OK
FSR: 100 years: +40 %: 360 mins: Winter	24.000	23.210	23.229	0.019	1.5	0.003	0.000	1.5	12.713	OK
FSR: 100 years: +40 %: 480 mins: Winter	24.000	23.210	23.227	0.017	1.2	0.003	0.000	1.2	13.444	OK
FSR: 100 years: +40 %: 600 mins: Winter	24.000	23.210	23.226	0.016	1.0	0.003	0.000	1.0	14.102	OK

Boorley Green Nursery, Nairn Road, Southampton, SO32 2SH 1 in 100 Year + 40% CC Storm Event - FSR Data 0.4l/s Discharge Rate Report Details: Type: Junctions Summary Storm Phase: Phase	Date: 19/10/2022		
	Designed by: FG	Checked by: SL	Approved By: SL
	Kemp House: 124 City Road EC1V 2NX London		



Summary Results for S8-Catchpit: Rank By: Max. Depth

Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
FSR: 100 years: +40 %: 15 mins: Winter	23.900	22.820	23.101	0.281	39.5	0.080	0.000	38.1	22.841	Surcharged
FSR: 100 years: +40 %: 30 mins: Winter	23.900	22.820	23.072	0.252	33.6	0.071	0.000	33.5	32.167	Surcharged
FSR: 100 years: +40 %: 60 mins: Winter	23.900	22.820	22.950	0.130	26.2	0.037	0.000	26.2	41.827	OK
FSR: 100 years: +40 %: 120 mins: Winter	23.900	22.820	23.042	0.222	17.5	0.063	0.000	17.5	51.322	Surcharged
FSR: 100 years: +40 %: 180 mins: Winter	23.900	22.820	23.101	0.281	13.3	0.080	0.000	13.3	56.691	Surcharged
FSR: 100 years: +40 %: 240 mins: Winter	23.900	22.820	23.126	0.306	10.8	0.087	0.000	10.8	60.391	Surcharged
FSR: 100 years: +40 %: 360 mins: Winter	23.900	22.820	23.159	0.339	7.9	0.096	0.000	7.9	65.979	Surcharged
FSR: 100 years: +40 %: 480 mins: Winter	23.900	22.820	23.136	0.316	6.4	0.090	0.000	6.4	69.701	Surcharged
FSR: 100 years: +40 %: 600 mins: Winter	23.900	22.820	23.120	0.300	5.4	0.085	0.000	5.3	72.563	Surcharged

Boorley Green Nursery, Nairn Road, Southampton, SO32 2SH 1 in 100 Year + 40% CC Storm Event - FSR Data 0.4l/s Discharge Rate Report Details: Type: Junctions Summary Storm Phase: Phase	Date: 19/10/2022		
	Designed by: FG	Checked by: SL	Approved By: SL
	Kemp House: 124 City Road EC1V 2NX London		



Summary Results for S9: Rank By: Max. Depth

Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
FSR: 100 years: +40 %: 15 mins: Winter	24.800	23.900	23.935	0.035	2.6	0.005	0.000	2.5	1.548	OK
FSR: 100 years: +40 %: 30 mins: Winter	24.800	23.900	23.933	0.033	2.3	0.005	0.000	2.3	2.154	OK
FSR: 100 years: +40 %: 60 mins: Winter	24.800	23.900	23.929	0.029	1.8	0.005	0.000	1.8	2.747	OK
FSR: 100 years: +40 %: 120 mins: Winter	24.800	23.900	23.924	0.024	1.2	0.004	0.000	1.2	3.256	OK
FSR: 100 years: +40 %: 180 mins: Winter	24.800	23.900	23.921	0.021	0.9	0.003	0.000	0.9	3.495	OK
FSR: 100 years: +40 %: 240 mins: Winter	24.800	23.900	23.919	0.019	0.7	0.003	0.000	0.7	3.620	OK
FSR: 100 years: +40 %: 360 mins: Winter	24.800	23.900	23.916	0.016	0.5	0.003	0.000	0.5	3.730	OK
FSR: 100 years: +40 %: 480 mins: Winter	24.800	23.900	23.914	0.014	0.4	0.002	0.000	0.4	3.760	OK
FSR: 100 years: +40 %: 600 mins: Winter	24.800	23.900	23.913	0.013	0.3	0.002	0.000	0.3	3.719	OK

Boorley Green Nursery, Nairn Road, Southampton, SO32 2SH 1 in 100 Year + 40% CC Storm Event - FSR Data 0.4l/s Discharge Rate Report Details: Type: Junctions Summary Storm Phase: Phase	Date: 19/10/2022		
	Designed by: FG	Checked by: SL	Approved By: SL
	Kemp House: 124 City Road EC1V 2NX London		



Summary Results for S10: Rank By: Max. Depth

Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
FSR: 100 years: +40 %: 15 mins: Winter	24.300	23.700	23.762	0.062	5.5	0.010	0.000	5.1	3.711	OK
FSR: 100 years: +40 %: 30 mins: Winter	24.300	23.700	23.763	0.063	5.4	0.010	0.000	5.3	5.324	OK
FSR: 100 years: +40 %: 60 mins: Winter	24.300	23.700	23.756	0.056	4.3	0.009	0.000	4.3	6.806	OK
FSR: 100 years: +40 %: 120 mins: Winter	24.300	23.700	23.745	0.045	2.9	0.007	0.000	2.9	8.071	OK
FSR: 100 years: +40 %: 180 mins: Winter	24.300	23.700	23.739	0.039	2.2	0.006	0.000	2.2	8.651	OK
FSR: 100 years: +40 %: 240 mins: Winter	24.300	23.700	23.734	0.034	1.7	0.005	0.000	1.7	8.921	OK
FSR: 100 years: +40 %: 360 mins: Winter	24.300	23.700	23.729	0.029	1.2	0.005	0.000	1.2	9.180	OK
FSR: 100 years: +40 %: 480 mins: Winter	24.300	23.700	23.726	0.026	1.0	0.004	0.000	1.0	9.207	OK
FSR: 100 years: +40 %: 600 mins: Winter	24.300	23.700	23.723	0.023	0.8	0.004	0.000	0.8	9.111	OK

Boorley Green Nursery, Nairn Road, Southampton, SO32 2SH: Boorley Green Nursery, Nairn Road, Southampton, SO32 2SH 1 in 100 Year + 40% CC Storm Event - FSR Data 0.4l/s Discharge Rate Report Details: Type: Junctions Summary Storm Phase: Phase	Date: 19/10/2022		
	Designed by: FG	Checked by: SL	Approved By: SL
	Kemp House: 124 City Road EC1V 2NX London		



Summary Results for S11-Catchpit: Rank By: Max. Depth

Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
FSR: 100 years: +40 %: 15 mins: Winter	23.800	22.970	23.013	0.043	7.7	0.007	0.000	7.5	5.535	OK
FSR: 100 years: +40 %: 30 mins: Winter	23.800	22.970	23.014	0.044	8.0	0.007	0.000	8.0	7.864	OK
FSR: 100 years: +40 %: 60 mins: Winter	23.800	22.970	23.009	0.039	6.6	0.006	0.000	6.6	9.944	OK
FSR: 100 years: +40 %: 120 mins: Winter	23.800	22.970	23.042	0.072	4.4	0.011	0.000	4.4	11.281	OK
FSR: 100 years: +40 %: 180 mins: Winter	23.800	22.970	23.101	0.131	3.2	0.021	0.000	3.2	11.371	OK
FSR: 100 years: +40 %: 240 mins: Winter	23.800	22.970	23.126	0.156	2.6	0.025	0.000	2.6	11.288	Surcharged
FSR: 100 years: +40 %: 360 mins: Winter	23.800	22.970	23.159	0.189	1.8	0.030	0.000	1.8	11.322	Surcharged
FSR: 100 years: +40 %: 480 mins: Winter	23.800	22.970	23.136	0.166	1.4	0.026	0.000	1.4	10.700	Surcharged
FSR: 100 years: +40 %: 600 mins: Winter	23.800	22.970	23.120	0.150	1.1	0.024	0.000	1.1	10.314	Surcharged

Boorley Green Nursery, Nairn Road, Southampton, SO32 2SH 1 in 100 Year + 40% CC Storm Event - FSR Data 0.4l/s Discharge Rate Report Details: Type: Junctions Summary Storm Phase: Phase	Date: 19/10/2022		
	Designed by: FG	Checked by: SL	Approved By: SL
	Kemp House: 124 City Road EC1V 2NX London		



Summary Results for S13-Flow Control Chamber: Rank By: Max. Depth

Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
FSR: 100 years: +40 %: 15 mins: Winter	23.880	21.885	22.472	0.587	1.1	0.093	0.000	0.3	0.323	Surcharged
FSR: 100 years: +40 %: 30 mins: Winter	23.880	21.885	22.676	0.791	1.1	0.126	0.000	0.3	0.822	Surcharged
FSR: 100 years: +40 %: 60 mins: Winter	23.880	21.885	22.874	0.989	1.0	0.157	0.000	0.3	1.934	Surcharged
FSR: 100 years: +40 %: 120 mins: Winter	23.880	21.885	23.042	1.157	0.7	0.184	0.000	0.4	4.280	Surcharged
FSR: 100 years: +40 %: 180 mins: Winter	23.880	21.885	23.101	1.216	0.6	0.193	0.000	0.4	6.620	Surcharged
FSR: 100 years: +40 %: 240 mins: Winter	23.880	21.885	23.126	1.241	0.6	0.197	0.000	0.4	8.920	Surcharged
FSR: 100 years: +40 %: 360 mins: Winter	23.880	21.885	23.159	1.274	0.5	0.202	0.000	0.4	13.420	Surcharged
FSR: 100 years: +40 %: 480 mins: Winter	23.880	21.885	23.136	1.251	0.5	0.199	0.000	0.4	17.690	Surcharged
FSR: 100 years: +40 %: 600 mins: Winter	23.880	21.885	23.120	1.235	0.4	0.196	0.000	0.4	21.746	Surcharged

Boorley Green Nursery, Nairn Road, Southampton, SO32 2SH 1 in 100 Year + 40% CC Storm Event - FSR Data 0.4l/s Discharge Rate Report Details: Type: Junctions Summary Storm Phase: Phase	Date: 19/10/2022		
	Designed by: FG	Checked by: SL	Approved By: SL
	Kemp House: 124 City Road EC1V 2NX London		



Summary Results for S14: Rank By: Max. Depth

Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
FSR: 100 years: +40 %: 15 mins: Winter	22.350	21.650	21.661	0.011	0.3	0.000	0.000	0.3	0.309	OK
FSR: 100 years: +40 %: 30 mins: Winter	22.350	21.650	21.662	0.012	0.3	0.000	0.000	0.3	0.807	OK
FSR: 100 years: +40 %: 60 mins: Winter	22.350	21.650	21.663	0.013	0.3	0.000	0.000	0.3	1.919	OK
FSR: 100 years: +40 %: 120 mins: Winter	22.350	21.650	21.663	0.013	0.4	0.000	0.000	0.4	4.265	OK
FSR: 100 years: +40 %: 180 mins: Winter	22.350	21.650	21.663	0.013	0.4	0.000	0.000	0.4	6.604	OK
FSR: 100 years: +40 %: 240 mins: Winter	22.350	21.650	21.663	0.013	0.4	0.000	0.000	0.4	8.905	OK
FSR: 100 years: +40 %: 360 mins: Winter	22.350	21.650	21.664	0.014	0.4	0.000	0.000	0.4	13.405	OK
FSR: 100 years: +40 %: 480 mins: Winter	22.350	21.650	21.663	0.013	0.4	0.000	0.000	0.4	17.675	OK
FSR: 100 years: +40 %: 600 mins: Winter	22.350	21.650	21.663	0.013	0.4	0.000	0.000	0.4	21.732	OK

Boorley Green Nursery, Nairn Road, Southampton, SO32 2SH 1 in 100 Year + 40% CC Storm Event - FSR Data 0.4l/s Discharge Rate Report Details: Type: Junctions Summary Storm Phase: Phase	Date: 19/10/2022		
	Designed by: FG	Checked by: SL	Approved By: SL
	Kemp House: 124 City Road EC1V 2NX London		



Summary Results for S12-Catchpit: Rank By: Max. Depth

Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
FSR: 100 years: +40 %: 15 mins: Winter	23.550	21.940	22.472	0.532	4.9	0.085	0.000	0.0	2.210	Surcharged
FSR: 100 years: +40 %: 30 mins: Winter	23.550	21.940	22.676	0.736	5.2	0.117	0.000	0.0	3.582	Surcharged
FSR: 100 years: +40 %: 60 mins: Winter	23.550	21.940	22.874	0.934	4.1	0.149	0.000	0.2	5.461	Surcharged
FSR: 100 years: +40 %: 120 mins: Winter	23.550	21.940	23.042	1.102	2.8	0.175	0.000	0.0	8.080	Surcharged
FSR: 100 years: +40 %: 180 mins: Winter	23.550	21.940	23.101	1.161	2.2	0.185	0.000	0.0	10.113	Surcharged
FSR: 100 years: +40 %: 240 mins: Winter	23.550	21.940	23.126	1.186	1.8	0.189	0.000	0.0	11.967	Surcharged
FSR: 100 years: +40 %: 360 mins: Winter	23.550	21.940	23.159	1.219	1.4	0.194	0.000	0.0	15.421	Surcharged
FSR: 100 years: +40 %: 480 mins: Winter	23.550	21.940	23.136	1.196	1.1	0.190	0.000	0.0	18.586	Surcharged
FSR: 100 years: +40 %: 600 mins: Winter	23.550	21.940	23.120	1.180	1.0	0.188	0.000	0.0	21.405	Surcharged

Boorley Green Nursery, Nairn Road, Southampton, SO32 2SH: Boorley Green Nursery, Nairn Road, Southampton, SO32 2SH 1 in 100 Year + 40% CC Storm Event - FSR Data 0.4l/s Discharge Rate		Date: 19/10/2022	
Report Details: Type: Stormwater Controls Summary Storm Phase: Phase		Designed by: FG	Checked by: SL
		Approved By: SL	
		Kemp House: 124 City Road EC1V 2NX London	



Summary Results for Raingarden Planter 2: Rank By: Max. Avg. Depth

Storm Event	Max. US Level (m)	Max. DS Level (m)	Max. US Depth (m)	Max. DS Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Total Lost Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Half Drain Down Time (mins)	Percentage Available (%)	Status
FSR: 100 years: +40 %: 15 mins: Winter	25.616	25.608	0.626	0.618	2.9	0.174	0.000	0.000	2.9	1.166	2	60.185	OK
FSR: 100 years: +40 %: 30 mins: Winter	25.612	25.605	0.622	0.615	1.9	0.172	0.000	0.000	1.9	1.619	1	60.574	OK
FSR: 100 years: +40 %: 60 mins: Winter	25.610	25.603	0.620	0.613	1.5	0.171	0.000	0.000	1.5	2.118	3	60.802	OK
FSR: 100 years: +40 %: 120 mins: Winter	25.606	25.600	0.616	0.610	1.0	0.170	0.000	0.000	1.0	2.664	4	61.108	OK
FSR: 100 years: +40 %: 180 mins: Winter	25.604	25.599	0.614	0.609	0.7	0.169	0.000	0.000	0.7	2.976	4	61.280	OK
FSR: 100 years: +40 %: 240 mins: Winter	25.603	25.598	0.613	0.608	0.6	0.169	0.000	0.000	0.6	3.204	5	61.390	OK
FSR: 100 years: +40 %: 360 mins: Winter	25.601	25.597	0.611	0.607	0.4	0.168	0.000	0.000	0.4	3.558	8	61.548	OK
FSR: 100 years: +40 %: 480 mins: Winter	25.600	25.596	0.610	0.606	0.3	0.168	0.000	0.000	0.3	3.810	8	61.638	OK
FSR: 100 years: +40 %: 600 mins: Winter	25.599	25.596	0.609	0.606	0.3	0.167	0.000	0.000	0.3	4.014	10	61.712	OK

Boorley Green Nursery, Nairn Road, Southampton, SO32 2SH: Boorley Green Nursery, Nairn Road, Southampton, SO32 2SH 1 in 100 Year + 40% CC Storm Event - FSR Data 0.4l/s Discharge Rate		Date: 19/10/2022	
Report Details: Type: Stormwater Controls Summary Storm Phase: Phase		Designed by: FG	Checked by: SL
		Approved By: SL	
		Kemp House: 124 City Road EC1V 2NX London	



Summary Results for Raingarden Planter 3: Rank By: Max. Avg. Depth

Storm Event	Max. US Level (m)	Max. DS Level (m)	Max. US Depth (m)	Max. DS Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Total Lost Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Half Drain Down Time (mins)	Percentage Available (%)	Status
FSR: 100 years: +40 %: 15 mins: Winter	25.300	25.173	0.800	0.673	7.5	0.085	0.000	0.000	7.5	3.422	0	48.261	OK
FSR: 100 years: +40 %: 30 mins: Winter	25.260	25.158	0.760	0.658	5.1	0.081	0.000	0.000	5.1	4.620	0	51.128	OK
FSR: 100 years: +40 %: 60 mins: Winter	25.237	25.150	0.737	0.650	3.9	0.078	0.000	0.000	3.9	5.940	0	52.735	OK
FSR: 100 years: +40 %: 120 mins: Winter	25.209	25.140	0.709	0.640	2.5	0.075	0.000	0.000	2.5	7.350	0	54.753	OK
FSR: 100 years: +40 %: 180 mins: Winter	25.193	25.134	0.693	0.634	1.9	0.073	0.000	0.000	1.9	8.191	0	55.859	OK
FSR: 100 years: +40 %: 240 mins: Winter	25.183	25.130	0.683	0.630	1.5	0.072	0.000	0.000	1.5	8.767	1	56.560	OK
FSR: 100 years: +40 %: 360 mins: Winter	25.171	25.126	0.671	0.626	1.1	0.070	0.000	0.000	1.1	9.697	1	57.427	OK
FSR: 100 years: +40 %: 480 mins: Winter	25.163	25.123	0.663	0.623	0.9	0.069	0.000	0.000	0.9	10.363	1	57.961	OK
FSR: 100 years: +40 %: 600 mins: Winter	25.158	25.121	0.658	0.621	0.8	0.069	0.000	0.000	0.8	10.939	2	58.357	OK

Boorley Green Nursery, Nairn Road, Southampton, SO32 2SH: Boorley Green Nursery, Nairn Road, Southampton, SO32 2SH 1 in 100 Year + 40% CC Storm Event - FSR Data 0.4l/s Discharge Rate		Date: 19/10/2022	
Report Details: Type: Stormwater Controls Summary Storm Phase: Phase		Designed by: FG	Checked by: SL
		Approved By: SL	
		Kemp House: 124 City Road EC1V 2NX London	



Summary Results for Raingarden planter 1: Rank By: Max. Avg. Depth

Storm Event	Max. US Level (m)	Max. DS Level (m)	Max. US Depth (m)	Max. DS Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Total Lost Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Half Drain Down Time (mins)	Percentage Available (%)	Status
FSR: 100 years: +40 %: 15 mins: Winter	25.555	25.470	0.825	0.740	7.9	0.237	0.000	0.000	7.8	3.460	1	56.962	OK
FSR: 100 years: +40 %: 30 mins: Winter	25.532	25.461	0.802	0.731	5.3	0.229	0.000	0.000	5.3	4.709	1	58.399	OK
FSR: 100 years: +40 %: 60 mins: Winter	25.519	25.456	0.789	0.726	4.0	0.224	0.000	0.000	4.0	6.096	1	59.221	OK
FSR: 100 years: +40 %: 120 mins: Winter	25.503	25.450	0.773	0.720	2.6	0.219	0.000	0.000	2.6	7.560	2	60.260	OK
FSR: 100 years: +40 %: 180 mins: Winter	25.493	25.447	0.763	0.717	2.0	0.215	0.000	0.000	2.0	8.448	2	60.839	OK
FSR: 100 years: +40 %: 240 mins: Winter	25.487	25.445	0.757	0.715	1.6	0.213	0.000	0.000	1.6	9.066	3	61.211	OK
FSR: 100 years: +40 %: 360 mins: Winter	25.479	25.443	0.749	0.713	1.2	0.211	0.000	0.000	1.2	10.027	4	61.665	OK
FSR: 100 years: +40 %: 480 mins: Winter	25.474	25.442	0.744	0.712	1.0	0.209	0.000	0.000	1.0	10.741	3	61.946	OK
FSR: 100 years: +40 %: 600 mins: Winter	25.471	25.441	0.741	0.711	0.8	0.208	0.000	0.000	0.8	11.323	4	62.148	OK

Boorley Green Nursery, Nairn Road, Southampton, SO32 2SH: Boorley Green Nursery, Nairn Road, Southampton, SO32 2SH 1 in 100 Year + 40% CC Storm Event - FSR Data 0.4l/s Discharge Rate		Date: 19/10/2022			
Report Details: Type: Stormwater Controls Summary Storm Phase: Phase		Designed by: FG	Checked by: SL		Approved By: SL
		Kemp House: 124 City Road EC1V 2NX London			



Summary Results for Swale: Rank By: Max. Avg. Depth

Storm Event	Max. US Level (m)	Max. DS Level (m)	Max. US Depth (m)	Max. DS Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Total Lost Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Half Drain Down Time (mins)	Percentage Available (%)	Status
FSR: 100 years: +40 %: 15 mins: Winter	24.669	24.371	0.784	0.671	21.2	1.765	0.000	0.384	17.2	9.631	2	87.893	OK
FSR: 100 years: +40 %: 30 mins: Winter	24.641	24.363	0.756	0.663	15.3	1.547	0.000	0.698	14.9	13.207	1	89.383	OK
FSR: 100 years: +40 %: 60 mins: Winter	24.615	24.352	0.730	0.652	11.7	1.304	0.000	1.061	11.4	16.961	1	91.053	OK
FSR: 100 years: +40 %: 120 mins: Winter	24.583	24.339	0.698	0.639	7.7	1.003	0.000	1.679	7.5	20.726	1	93.119	OK
FSR: 100 years: +40 %: 180 mins: Winter	24.566	24.333	0.681	0.633	5.8	0.842	0.000	2.277	5.6	22.697	1	94.221	OK
FSR: 100 years: +40 %: 240 mins: Winter	24.556	24.329	0.671	0.629	4.7	0.740	0.000	2.867	4.5	23.946	2	94.923	OK
FSR: 100 years: +40 %: 360 mins: Winter	24.543	24.324	0.658	0.624	3.5	0.614	0.000	4.049	3.3	25.621	2	95.784	OK
FSR: 100 years: +40 %: 480 mins: Winter	24.536	24.321	0.651	0.621	2.8	0.539	0.000	5.191	2.6	26.526	2	96.302	OK
FSR: 100 years: +40 %: 600 mins: Winter	24.530	24.319	0.645	0.619	2.4	0.483	0.000	6.327	2.2	27.154	2	96.683	OK

Boorley Green Nursery, Nairn Road, Southampton, SO32 2SH: Boorley Green Nursery, Nairn Road, Southampton, SO32 2SH 1 in 100 Year + 40% CC Storm Event - FSR Data 0.4l/s Discharge Rate Report Details: Type: Stormwater Controls Summary Storm Phase: Phase	Date: 19/10/2022		
	Designed by: FG	Checked by: SL	Approved By: SL
	Kemp House: 124 City Road EC1V 2NX London		



Summary Results for Slot Drain 1: Rank By: Max. Avg. Depth

Storm Event	Max. US Level (m)	Max. DS Level (m)	Max. US Depth (m)	Max. DS Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Total Lost Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Half Drain Down Time (mins)	Percentage Available (%)	Status
FSR: 100 years: +40 %: 15 mins: Winter	25.606	25.218	0.346	0.028	1.9	0.257	0.000	0.000	1.2	0.774	4	51.634	OK
FSR: 100 years: +40 %: 30 mins: Winter	25.614	25.217	0.354	0.027	1.3	0.266	0.000	0.000	1.1	1.124	4	49.892	OK
FSR: 100 years: +40 %: 60 mins: Winter	25.588	25.214	0.329	0.024	1.0	0.246	0.000	0.000	0.9	1.471	4	53.658	OK
FSR: 100 years: +40 %: 120 mins: Winter	25.537	25.210	0.277	0.020	0.6	0.208	0.000	0.000	0.6	1.838	4	60.914	OK
FSR: 100 years: +40 %: 180 mins: Winter	25.502	25.208	0.242	0.018	0.5	0.181	0.000	0.000	0.5	2.045	5	65.874	OK
FSR: 100 years: +40 %: 240 mins: Winter	25.474	25.206	0.214	0.016	0.4	0.161	0.000	0.000	0.4	2.208	6	69.713	OK
FSR: 100 years: +40 %: 360 mins: Winter	25.441	25.204	0.181	0.014	0.3	0.136	0.000	0.000	0.3	2.436	6	74.334	OK
FSR: 100 years: +40 %: 480 mins: Winter	25.421	25.203	0.161	0.013	0.2	0.122	0.000	0.000	0.2	2.610	6	77.109	OK
FSR: 100 years: +40 %: 600 mins: Winter	25.405	25.202	0.145	0.012	0.2	0.109	0.000	0.000	0.2	2.730	7	79.402	OK

Boorley Green Nursery, Nairn Road, Southampton, SO32 2SH: Boorley Green Nursery, Nairn Road, Southampton, SO32 2SH 1 in 100 Year + 40% CC Storm Event - FSR Data 0.4l/s Discharge Rate		Date: 19/10/2022		
Report Details: Type: Stormwater Controls Summary Storm Phase: Phase		Designed by: FG	Checked by: SL	
		Approved By: SL		
		Kemp House: 124 City Road EC1V 2NX London		



Summary Results for Slot Drain 2: Rank By: Max. Avg. Depth

Storm Event	Max. US Level (m)	Max. DS Level (m)	Max. US Depth (m)	Max. DS Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Total Lost Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Half Drain Down Time (mins)	Percentage Available (%)	Status
FSR: 100 years: +40 %: 15 mins: Winter	25.544	25.204	0.307	0.034	1.6	0.216	0.000	0.000	0.9	0.650	5	59.787	OK
FSR: 100 years: +40 %: 30 mins: Winter	25.552	25.192	0.314	0.022	1.1	0.226	0.000	0.000	0.9	0.950	4	57.998	OK
FSR: 100 years: +40 %: 60 mins: Winter	25.530	25.186	0.293	0.016	0.8	0.208	0.000	0.000	0.7	1.245	4	61.438	OK
FSR: 100 years: +40 %: 120 mins: Winter	25.485	25.184	0.248	0.014	0.5	0.176	0.000	0.000	0.5	1.563	4	67.388	OK
FSR: 100 years: +40 %: 180 mins: Winter	25.453	25.182	0.215	0.012	0.4	0.153	0.000	0.000	0.4	1.727	5	71.588	OK
FSR: 100 years: +40 %: 240 mins: Winter	25.428	25.181	0.191	0.011	0.3	0.136	0.000	0.000	0.3	1.866	5	74.787	OK
FSR: 100 years: +40 %: 360 mins: Winter	25.399	25.180	0.162	0.010	0.2	0.115	0.000	0.000	0.2	2.058	6	78.611	OK
FSR: 100 years: +40 %: 480 mins: Winter	25.380	25.179	0.143	0.009	0.2	0.102	0.000	0.000	0.2	2.178	6	81.065	OK
FSR: 100 years: +40 %: 600 mins: Winter	25.366	25.178	0.129	0.008	0.2	0.092	0.000	0.000	0.2	2.316	7	82.877	OK

Boorley Green Nursery, Nairn Road, Southampton, SO32 2SH: Boorley Green Nursery, Nairn Road, Southampton, SO32 2SH 1 in 100 Year + 40% CC Storm Event - FSR Data 0.4l/s Discharge Rate		Date: 19/10/2022		
Report Details: Type: Stormwater Controls Summary Storm Phase: Phase		Designed by: FG	Checked by: SL	
		Approved By: SL		
		Kemp House: 124 City Road EC1V 2NX London		



Summary Results for Slot drain 3: Rank By: Max. Avg. Depth

Storm Event	Max. US Level (m)	Max. DS Level (m)	Max. US Depth (m)	Max. DS Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Total Lost Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Half Drain Down Time (mins)	Percentage Available (%)	Status
FSR: 100 years: +40 %: 15 mins: Winter	24.651	24.236	0.310	0.026	3.7	0.825	0.000	0.000	1.5	1.233	12	65.209	OK
FSR: 100 years: +40 %: 30 mins: Winter	24.686	24.237	0.344	0.027	2.5	0.903	0.000	0.000	1.6	2.020	12	61.932	OK
FSR: 100 years: +40 %: 60 mins: Winter	24.682	24.235	0.340	0.025	1.9	0.896	0.000	0.000	1.4	2.824	8	62.216	OK
FSR: 100 years: +40 %: 120 mins: Winter	24.634	24.232	0.292	0.022	1.2	0.776	0.000	0.000	1.0	3.597	9	67.280	OK
FSR: 100 years: +40 %: 180 mins: Winter	24.597	24.230	0.256	0.020	0.9	0.686	0.000	0.000	0.8	4.023	10	71.100	OK
FSR: 100 years: +40 %: 240 mins: Winter	24.569	24.228	0.227	0.018	0.8	0.616	0.000	0.000	0.7	4.319	11	74.036	OK
FSR: 100 years: +40 %: 360 mins: Winter	24.532	24.226	0.190	0.016	0.6	0.522	0.000	0.000	0.5	4.769	12	77.992	OK
FSR: 100 years: +40 %: 480 mins: Winter	24.506	24.225	0.164	0.015	0.5	0.459	0.000	0.000	0.4	5.111	13	80.667	OK
FSR: 100 years: +40 %: 600 mins: Winter	24.488	24.223	0.146	0.013	0.4	0.413	0.000	0.000	0.4	5.387	14	82.576	OK

Boorley Green Nursery, Nairn Road, Southampton, SO32 2SH: Boorley Green Nursery, Nairn Road, Southampton, SO32 2SH 1 in 100 Year + 40% CC Storm Event - FSR Data 0.4l/s Discharge Rate		Date: 19/10/2022			
Report Details: Type: Stormwater Controls Summary Storm Phase: Phase		Designed by: FG	Checked by: SL		Approved By: SL
		Kemp House: 124 City Road EC1V 2NX London			



Summary Results for Slot Drain 11: Rank By: Max. Avg. Depth

Storm Event	Max. US Level (m)	Max. DS Level (m)	Max. US Depth (m)	Max. DS Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Total Lost Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Half Drain Down Time (mins)	Percentage Available (%)	Status
FSR: 100 years: +40 %: 15 mins: Winter	24.586	23.983	0.551	0.033	4.2	0.489	0.000	0.221	2.6	1.556	4	61.676	OK
FSR: 100 years: +40 %: 30 mins: Winter	24.605	23.981	0.570	0.031	2.8	0.511	0.000	0.383	2.3	2.156	4	59.941	OK
FSR: 100 years: +40 %: 60 mins: Winter	24.552	23.977	0.517	0.027	2.1	0.462	0.000	0.569	1.8	2.748	3	63.757	OK
FSR: 100 years: +40 %: 120 mins: Winter	24.455	23.972	0.420	0.022	1.4	0.375	0.000	0.823	1.2	3.257	4	70.619	OK
FSR: 100 years: +40 %: 180 mins: Winter	24.393	23.968	0.358	0.018	1.0	0.320	0.000	1.052	0.9	3.496	4	74.900	OK
FSR: 100 years: +40 %: 240 mins: Winter	24.350	23.966	0.315	0.016	0.8	0.282	0.000	1.264	0.7	3.620	4	77.897	OK
FSR: 100 years: +40 %: 360 mins: Winter	24.295	23.964	0.260	0.014	0.6	0.233	0.000	1.658	0.5	3.730	4	81.747	OK
FSR: 100 years: +40 %: 480 mins: Winter	24.259	23.962	0.224	0.012	0.5	0.201	0.000	2.036	0.4	3.760	4	84.231	OK
FSR: 100 years: +40 %: 600 mins: Winter	24.233	23.961	0.198	0.011	0.4	0.178	0.000	2.388	0.3	3.720	4	86.057	OK

Boorley Green Nursery, Nairn Road, Southampton, SO32 2SH: Boorley Green Nursery, Nairn Road, Southampton, SO32 2SH 1 in 100 Year + 40% CC Storm Event - FSR Data 0.4l/s Discharge Rate Report Details: Type: Stormwater Controls Summary Storm Phase: Phase	Date: 19/10/2022		
	Designed by: FG	Checked by: SL	Approved By: SL
	Kemp House: 124 City Road EC1V 2NX London		



Summary Results for Slot drain 4: Rank By: Max. Avg. Depth

Storm Event	Max. US Level (m)	Max. DS Level (m)	Max. US Depth (m)	Max. DS Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Total Lost Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Half Drain Down Time (mins)	Percentage Available (%)	Status
FSR: 100 years: +40 %: 15 mins: Winter	24.042	23.611	0.321	0.016	3.6	0.804	0.000	0.000	1.5	1.221	12	69.684	OK
FSR: 100 years: +40 %: 30 mins: Winter	24.078	23.611	0.357	0.016	2.5	0.881	0.000	0.000	1.5	1.994	12	66.785	OK
FSR: 100 years: +40 %: 60 mins: Winter	24.074	23.610	0.352	0.015	1.9	0.873	0.000	0.000	1.3	2.786	8	67.088	OK
FSR: 100 years: +40 %: 120 mins: Winter	24.025	23.608	0.304	0.013	1.2	0.758	0.000	0.000	1.0	3.552	9	71.416	OK
FSR: 100 years: +40 %: 180 mins: Winter	23.988	23.607	0.267	0.012	0.9	0.671	0.000	0.000	0.8	3.962	10	74.704	OK
FSR: 100 years: +40 %: 240 mins: Winter	23.959	23.606	0.238	0.011	0.7	0.603	0.000	0.000	0.7	4.253	11	77.276	OK
FSR: 100 years: +40 %: 360 mins: Winter	23.921	23.604	0.199	0.009	0.6	0.513	0.000	0.000	0.5	4.716	12	80.658	OK
FSR: 100 years: +40 %: 480 mins: Winter	23.895	23.604	0.174	0.009	0.4	0.453	0.000	0.000	0.4	5.046	13	82.927	OK
FSR: 100 years: +40 %: 600 mins: Winter	23.875	23.603	0.154	0.008	0.4	0.407	0.000	0.000	0.4	5.322	13	84.671	OK

Boorley Green Nursery, Nairn Road, Southampton, SO32 2SH: Boorley Green Nursery, Nairn Road, Southampton, SO32 2SH 1 in 100 Year + 40% CC Storm Event - FSR Data 0.4l/s Discharge Rate		Date: 19/10/2022		
Report Details: Type: Stormwater Controls Summary Storm Phase: Phase		Designed by: FG	Checked by: SL	
		Approved By: SL		
		Kemp House: 124 City Road EC1V 2NX London		



Summary Results for Slot Drain 12: Rank By: Max. Avg. Depth

Storm Event	Max. US Level (m)	Max. DS Level (m)	Max. US Depth (m)	Max. DS Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Total Lost Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Half Drain Down Time (mins)	Percentage Available (%)	Status
FSR: 100 years: +40 %: 15 mins: Winter	24.511	23.790	0.669	0.080	6.6	1.161	0.000	0.458	3.0	2.188	7	36.065	OK
FSR: 100 years: +40 %: 30 mins: Winter	24.517	23.790	0.676	0.080	4.5	1.188	0.000	0.794	3.1	3.178	7	34.534	OK
FSR: 100 years: +40 %: 60 mins: Winter	24.479	23.782	0.638	0.072	3.4	1.109	0.000	1.206	2.5	4.061	6	38.905	OK
FSR: 100 years: +40 %: 120 mins: Winter	24.365	23.770	0.523	0.060	2.2	0.919	0.000	1.681	1.7	4.817	5	49.369	OK
FSR: 100 years: +40 %: 180 mins: Winter	24.284	23.762	0.442	0.052	1.7	0.784	0.000	2.091	1.3	5.157	6	56.791	OK
FSR: 100 years: +40 %: 240 mins: Winter	24.227	23.757	0.385	0.047	1.4	0.689	0.000	2.456	1.0	5.302	6	62.049	OK
FSR: 100 years: +40 %: 360 mins: Winter	24.154	23.751	0.313	0.041	1.0	0.567	0.000	3.123	0.7	5.451	7	68.791	OK
FSR: 100 years: +40 %: 480 mins: Winter	24.107	23.747	0.266	0.037	0.8	0.488	0.000	3.720	0.6	5.448	7	73.141	OK
FSR: 100 years: +40 %: 600 mins: Winter	24.073	23.743	0.231	0.033	0.7	0.430	0.000	4.285	0.5	5.392	7	76.327	OK

Boorley Green Nursery, Nairn Road, Southampton, SO32 2SH: Boorley Green Nursery, Nairn Road, Southampton, SO32 2SH 1 in 100 Year + 40% CC Storm Event - FSR Data 0.4l/s Discharge Rate		Date: 19/10/2022	
Report Details: Type: Stormwater Controls Summary Storm Phase: Phase		Designed by: FG	Checked by: SL
		Approved By: SL	
		Kemp House: 124 City Road EC1V 2NX London	



Summary Results for Slot drain 7: Rank By: Max. Avg. Depth

Storm Event	Max. US Level (m)	Max. DS Level (m)	Max. US Depth (m)	Max. DS Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Total Lost Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Half Drain Down Time (mins)	Percentage Available (%)	Status
FSR: 100 years: +40 %: 15 mins: Winter	23.564	23.193	0.329	0.023	3.2	0.338	0.000	0.000	2.2	1.390	3	75.300	OK
FSR: 100 years: +40 %: 30 mins: Winter	23.583	23.191	0.348	0.021	2.2	0.361	0.000	0.000	2.0	1.958	3	73.612	OK
FSR: 100 years: +40 %: 60 mins: Winter	23.547	23.189	0.311	0.019	1.6	0.323	0.000	0.000	1.6	2.537	3	76.414	OK
FSR: 100 years: +40 %: 120 mins: Winter	23.487	23.185	0.252	0.015	1.1	0.261	0.000	0.000	1.1	3.154	3	80.915	OK
FSR: 100 years: +40 %: 180 mins: Winter	23.451	23.184	0.216	0.014	0.8	0.224	0.000	0.000	0.8	3.515	3	83.619	OK
FSR: 100 years: +40 %: 240 mins: Winter	23.428	23.182	0.193	0.012	0.7	0.200	0.000	0.000	0.7	3.774	4	85.368	OK
FSR: 100 years: +40 %: 360 mins: Winter	23.398	23.181	0.163	0.011	0.5	0.170	0.000	0.000	0.5	4.176	4	87.590	OK
FSR: 100 years: +40 %: 480 mins: Winter	23.378	23.180	0.143	0.010	0.4	0.150	0.000	0.000	0.4	4.470	4	89.077	OK
FSR: 100 years: +40 %: 600 mins: Winter	23.365	23.179	0.129	0.009	0.3	0.135	0.000	0.000	0.3	4.680	5	90.109	OK

Boorley Green Nursery, Nairn Road, Southampton, SO32 2SH: Boorley Green Nursery, Nairn Road, Southampton, SO32 2SH 1 in 100 Year + 40% CC Storm Event - FSR Data 0.4l/s Discharge Rate		Date: 19/10/2022		
Report Details: Type: Stormwater Controls Summary Storm Phase: Phase		Designed by: FG	Checked by: SL	
		Approved By: SL		
		Kemp House: 124 City Road EC1V 2NX London		



Summary Results for Slot drain 8: Rank By: Max. Avg. Depth

Storm Event	Max. US Level (m)	Max. DS Level (m)	Max. US Depth (m)	Max. DS Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Total Lost Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Half Drain Down Time (mins)	Percentage Available (%)	Status
FSR: 100 years: +40 %: 15 mins: Winter	23.502	23.187	0.258	0.017	2.2	0.302	0.000	0.000	1.3	0.896	5	80.596	OK
FSR: 100 years: +40 %: 30 mins: Winter	23.508	23.186	0.264	0.016	1.5	0.311	0.000	0.000	1.2	1.309	5	79.988	OK
FSR: 100 years: +40 %: 60 mins: Winter	23.492	23.185	0.248	0.015	1.1	0.291	0.000	0.000	1.0	1.722	4	81.306	OK
FSR: 100 years: +40 %: 120 mins: Winter	23.453	23.182	0.209	0.012	0.7	0.246	0.000	0.000	0.7	2.151	5	84.211	OK
FSR: 100 years: +40 %: 180 mins: Winter	23.424	23.181	0.180	0.011	0.6	0.212	0.000	0.000	0.5	2.399	5	86.397	OK
FSR: 100 years: +40 %: 240 mins: Winter	23.404	23.180	0.160	0.010	0.5	0.189	0.000	0.000	0.4	2.568	5	87.846	OK
FSR: 100 years: +40 %: 360 mins: Winter	23.378	23.179	0.134	0.009	0.3	0.158	0.000	0.000	0.3	2.844	6	89.821	OK
FSR: 100 years: +40 %: 480 mins: Winter	23.362	23.178	0.118	0.008	0.3	0.140	0.000	0.000	0.3	3.030	6	90.998	OK
FSR: 100 years: +40 %: 600 mins: Winter	23.351	23.177	0.107	0.007	0.2	0.127	0.000	0.000	0.2	3.210	6	91.852	OK

Boorley Green Nursery, Nairn Road, Southampton, SO32 2SH: Boorley Green Nursery, Nairn Road, Southampton, SO32 2SH 1 in 100 Year + 40% CC Storm Event - FSR Data 0.4l/s Discharge Rate		Date: 19/10/2022		
Report Details: Type: Stormwater Controls Summary Storm Phase: Phase		Designed by: FG	Checked by: SL	
		Approved By: SL		
		Kemp House: 124 City Road EC1V 2NX London		



Summary Results for Slot Drain 10: Rank By: Max. Avg. Depth

Storm Event	Max. US Level (m)	Max. DS Level (m)	Max. US Depth (m)	Max. DS Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Total Lost Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Half Drain Down Time (mins)	Percentage Available (%)	Status
FSR: 100 years: +40 %: 15 mins: Winter	23.540	23.297	0.205	0.017	1.6	0.181	0.000	0.000	1.1	0.687	3	81.804	OK
FSR: 100 years: +40 %: 30 mins: Winter	23.551	23.297	0.215	0.017	1.1	0.193	0.000	0.000	1.0	0.975	3	80.659	OK
FSR: 100 years: +40 %: 60 mins: Winter	23.529	23.295	0.193	0.015	0.8	0.172	0.000	0.000	0.8	1.272	3	82.681	OK
FSR: 100 years: +40 %: 120 mins: Winter	23.492	23.292	0.157	0.012	0.5	0.140	0.000	0.000	0.5	1.577	3	85.938	OK
FSR: 100 years: +40 %: 180 mins: Winter	23.470	23.290	0.135	0.010	0.4	0.121	0.000	0.000	0.4	1.752	3	87.894	OK
FSR: 100 years: +40 %: 240 mins: Winter	23.455	23.290	0.120	0.010	0.3	0.107	0.000	0.000	0.3	1.890	4	89.217	OK
FSR: 100 years: +40 %: 360 mins: Winter	23.435	23.288	0.100	0.008	0.2	0.090	0.000	0.000	0.2	2.082	4	91.006	OK
FSR: 100 years: +40 %: 480 mins: Winter	23.423	23.288	0.088	0.008	0.2	0.079	0.000	0.000	0.2	2.214	4	92.054	OK
FSR: 100 years: +40 %: 600 mins: Winter	23.414	23.287	0.079	0.007	0.2	0.072	0.000	0.000	0.2	2.370	5	92.817	OK

Boorley Green Nursery, Nairn Road, Southampton, SO32 2SH: Boorley Green Nursery, Nairn Road, Southampton, SO32 2SH 1 in 100 Year + 40% CC Storm Event - FSR Data 0.4l/s Discharge Rate		Date: 19/10/2022	
Report Details: Type: Stormwater Controls Summary Storm Phase: Phase		Designed by: FG	Checked by: SL
		Approved By: SL	
		Kemp House: 124 City Road EC1V 2NX London	



Summary Results for Slot drain 5: Rank By: Max. Avg. Depth

Storm Event	Max. US Level (m)	Max. DS Level (m)	Max. US Depth (m)	Max. DS Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Total Lost Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Half Drain Down Time (mins)	Percentage Available (%)	Status
FSR: 100 years: +40 %: 15 mins: Winter	24.569	24.240	0.287	0.020	1.4	0.189	0.000	0.000	0.9	0.596	4	78.420	OK
FSR: 100 years: +40 %: 30 mins: Winter	24.578	24.239	0.295	0.019	1.0	0.196	0.000	0.000	0.8	0.862	4	77.592	OK
FSR: 100 years: +40 %: 60 mins: Winter	24.556	24.237	0.273	0.017	0.7	0.182	0.000	0.000	0.7	1.135	4	79.288	OK
FSR: 100 years: +40 %: 120 mins: Winter	24.510	24.234	0.228	0.014	0.5	0.151	0.000	0.000	0.5	1.408	4	82.740	OK
FSR: 100 years: +40 %: 180 mins: Winter	24.479	24.233	0.197	0.013	0.4	0.131	0.000	0.000	0.3	1.565	4	85.075	OK
FSR: 100 years: +40 %: 240 mins: Winter	24.457	24.231	0.175	0.011	0.3	0.116	0.000	0.000	0.3	1.674	5	86.719	OK
FSR: 100 years: +40 %: 360 mins: Winter	24.431	24.230	0.149	0.010	0.2	0.099	0.000	0.000	0.2	1.878	5	88.669	OK
FSR: 100 years: +40 %: 480 mins: Winter	24.412	24.229	0.129	0.009	0.2	0.087	0.000	0.000	0.2	1.986	6	90.114	OK
FSR: 100 years: +40 %: 600 mins: Winter	24.402	24.228	0.119	0.008	0.1	0.080	0.000	0.000	0.1	2.136	6	90.883	OK

Boorley Green Nursery, Nairn Road, Southampton, SO32 2SH: Boorley Green Nursery, Nairn Road, Southampton, SO32 2SH 1 in 100 Year + 40% CC Storm Event - FSR Data 0.4l/s Discharge Rate		Date: 19/10/2022	
Report Details: Type: Stormwater Controls Summary Storm Phase: Phase		Designed by: FG	Checked by: SL
		Approved By: SL	
		Kemp House: 124 City Road EC1V 2NX London	



Summary Results for Slot drain 6: Rank By: Max. Avg. Depth

Storm Event	Max. US Level (m)	Max. DS Level (m)	Max. US Depth (m)	Max. DS Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Total Lost Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Half Drain Down Time (mins)	Percentage Available (%)	Status
FSR: 100 years: +40 %: 15 mins: Winter	24.585	24.151	0.402	0.031	2.4	0.270	0.000	0.000	1.6	1.035	3	73.378	OK
FSR: 100 years: +40 %: 30 mins: Winter	24.608	24.150	0.424	0.030	1.6	0.288	0.000	0.000	1.5	1.469	3	71.640	OK
FSR: 100 years: +40 %: 60 mins: Winter	24.565	24.146	0.382	0.026	1.2	0.259	0.000	0.000	1.2	1.919	3	74.507	OK
FSR: 100 years: +40 %: 120 mins: Winter	24.494	24.141	0.310	0.021	0.8	0.211	0.000	0.000	0.8	2.385	3	79.260	OK
FSR: 100 years: +40 %: 180 mins: Winter	24.452	24.139	0.268	0.019	0.6	0.182	0.000	0.000	0.6	2.651	4	82.060	OK
FSR: 100 years: +40 %: 240 mins: Winter	24.424	24.137	0.241	0.017	0.5	0.164	0.000	0.000	0.5	2.850	4	83.889	OK
FSR: 100 years: +40 %: 360 mins: Winter	24.387	24.135	0.204	0.015	0.4	0.139	0.000	0.000	0.4	3.144	4	86.342	OK
FSR: 100 years: +40 %: 480 mins: Winter	24.364	24.133	0.181	0.013	0.3	0.123	0.000	0.000	0.3	3.360	5	87.889	OK
FSR: 100 years: +40 %: 600 mins: Winter	24.347	24.132	0.163	0.012	0.3	0.112	0.000	0.000	0.2	3.528	5	89.017	OK

Boorley Green Nursery, Nairn Road, Southampton, SO32 2SH: Boorley Green Nursery, Nairn Road, Southampton, SO32 2SH 1 in 100 Year + 40% CC Storm Event - FSR Data 0.4l/s Discharge Rate Report Details: Type: Stormwater Controls Summary Storm Phase: Phase	Date: 19/10/2022		
	Designed by: FG	Checked by: SL	Approved By: SL
	Kemp House: 124 City Road EC1V 2NX London		



Summary Results for Slot Drain 13: Rank By: Max. Avg. Depth

Storm Event	Max. US Level (m)	Max. DS Level (m)	Max. US Depth (m)	Max. DS Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Total Lost Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Half Drain Down Time (mins)	Percentage Available (%)	Status
FSR: 100 years: +40 %: 15 mins: Winter	23.513	23.141	0.310	0.041	3.6	0.645	0.000	0.274	1.6	1.162	8	70.028	OK
FSR: 100 years: +40 %: 30 mins: Winter	23.515	23.141	0.312	0.041	2.4	0.654	0.000	0.500	1.6	1.680	7	69.608	OK
FSR: 100 years: +40 %: 60 mins: Winter	23.501	23.137	0.298	0.037	1.8	0.622	0.000	0.731	1.3	2.124	4	71.115	OK
FSR: 100 years: +40 %: 120 mins: Winter	23.444	23.131	0.241	0.031	1.2	0.510	0.000	1.058	0.9	2.475	6	76.303	OK
FSR: 100 years: +40 %: 180 mins: Winter	23.403	23.127	0.200	0.027	0.9	0.430	0.000	1.355	0.7	2.569	5	80.016	OK
FSR: 100 years: +40 %: 240 mins: Winter	23.375	23.125	0.172	0.025	0.7	0.375	0.000	1.670	0.5	2.542	6	82.597	OK
FSR: 100 years: +40 %: 360 mins: Winter	23.337	23.141	0.134	0.041	0.5	0.299	0.000	2.250	0.4	2.412	6	86.117	OK
FSR: 100 years: +40 %: 480 mins: Winter	23.313	23.128	0.110	0.028	0.4	0.252	0.000	2.674	0.3	2.288	7	88.297	OK
FSR: 100 years: +40 %: 600 mins: Winter	23.295	23.118	0.093	0.018	0.4	0.217	0.000	3.042	0.2	2.178	6	89.939	OK

Boorley Green Nursery, Nairn Road, Southampton, SO32 2SH: Boorley Green Nursery, Nairn Road, Southampton, SO32 2SH 1 in 100 Year + 40% CC Storm Event - FSR Data 0.4l/s Discharge Rate		Date: 19/10/2022	
Report Details: Type: Stormwater Controls Summary Storm Phase: Phase		Designed by: FG	Checked by: SL
		Approved By: SL	
		Kemp House: 124 City Road EC1V 2NX London	



Summary Results for Raingarden: Rank By: Max. Avg. Depth

Storm Event	Max. US Level (m)	Max. DS Level (m)	Max. US Depth (m)	Max. DS Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Total Lost Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Half Drain Down Time (mins)	Percentage Available (%)	Status
FSR: 100 years: +40 %: 15 mins: Winter	23.070	23.070	0.819	0.880	9.3	0.953	0.000	0.065	7.7	5.547	2	95.180	OK
FSR: 100 years: +40 %: 30 mins: Winter	23.072	23.072	0.821	0.882	8.7	1.079	0.000	0.436	8.0	7.865	3	94.544	OK
FSR: 100 years: +40 %: 60 mins: Winter	23.069	23.064	0.818	0.874	6.9	1.091	0.000	0.746	6.6	9.945	2	94.480	OK
FSR: 100 years: +40 %: 120 mins: Winter	23.067	23.052	0.816	0.862	4.7	0.982	0.000	1.809	4.4	11.161	3	95.033	OK
FSR: 100 years: +40 %: 180 mins: Winter	23.101	23.101	0.850	0.911	3.5	1.620	0.000	3.481	3.2	10.871	5	91.809	OK
FSR: 100 years: +40 %: 240 mins: Winter	23.126	23.126	0.875	0.936	2.8	2.001	0.000	4.689	2.6	10.443	10	89.878	OK
FSR: 100 years: +40 %: 360 mins: Winter	23.158	23.159	0.908	0.969	2.0	2.508	0.000	6.403	1.8	9.836	23	87.318	OK
FSR: 100 years: +40 %: 480 mins: Winter	23.136	23.136	0.885	0.946	1.6	2.162	0.000	7.342	1.4	9.142	19	89.064	OK
FSR: 100 years: +40 %: 600 mins: Winter	23.120	23.120	0.869	0.930	1.3	1.917	0.000	7.998	1.1	8.607	19	90.304	OK

Boorley Green Nursery, Nairn Road, Southampton, SO32 2SH: Boorley Green Nursery, Nairn Road, Southampton, SO32 2SH 1 in 100 Year + 40% CC Storm Event - FSR Data 0.4l/s Discharge Rate		Date: 19/10/2022	
Report Details: Type: Stormwater Controls Summary Storm Phase: Phase		Designed by: FG	Checked by: SL
		Approved By: SL	
		Kemp House: 124 City Road EC1V 2NX London	



Summary Results for Slot Drain 13 (1): Rank By: Max. Avg. Depth

Storm Event	Max. US Level (m)	Max. DS Level (m)	Max. US Depth (m)	Max. DS Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Total Lost Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Half Drain Down Time (mins)	Percentage Available (%)	Status
FSR: 100 years: +40 %: 15 mins: Winter	23.901	23.293	0.551	0.023	1.9	0.272	0.000	0.250	1.0	0.514	5	52.732	OK
FSR: 100 years: +40 %: 30 mins: Winter	23.928	23.291	0.578	0.021	1.3	0.285	0.000	0.436	0.8	0.709	6	50.517	OK
FSR: 100 years: +40 %: 60 mins: Winter	23.907	23.289	0.557	0.019	1.0	0.275	0.000	0.619	0.6	0.893	4	52.174	OK
FSR: 100 years: +40 %: 120 mins: Winter	23.799	23.285	0.449	0.015	0.6	0.223	0.000	0.875	0.4	0.979	4	61.351	OK
FSR: 100 years: +40 %: 180 mins: Winter	23.724	23.283	0.374	0.013	0.5	0.185	0.000	1.100	0.3	0.958	5	67.806	OK
FSR: 100 years: +40 %: 240 mins: Winter	23.670	23.281	0.321	0.011	0.4	0.159	0.000	1.314	0.2	0.900	5	72.355	OK
FSR: 100 years: +40 %: 360 mins: Winter	23.598	23.280	0.248	0.010	0.3	0.124	0.000	1.619	0.1	0.823	4	78.527	OK
FSR: 100 years: +40 %: 480 mins: Winter	23.552	23.278	0.202	0.008	0.2	0.101	0.000	1.884	0.1	0.738	4	82.495	OK
FSR: 100 years: +40 %: 600 mins: Winter	23.516	23.277	0.166	0.007	0.2	0.083	0.000	2.078	0.1	0.658	4	85.558	OK

Boorley Green Nursery, Nairn Road, Southampton, SO32 2SH: Boorley Green Nursery, Nairn Road, Southampton, SO32 2SH 1 in 100 Year + 40% CC Storm Event - FSR Data 0.4l/s Discharge Rate		Date: 19/10/2022	
Report Details: Type: Stormwater Controls Summary Storm Phase: Phase		Designed by: FG	Checked by: SL
		Approved By: SL	
		Kemp House: 124 City Road EC1V 2NX London	



Summary Results for Slot Drain 14: Rank By: Max. Avg. Depth

Storm Event	Max. US Level (m)	Max. DS Level (m)	Max. US Depth (m)	Max. DS Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Total Lost Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Half Drain Down Time (mins)	Percentage Available (%)	Status
FSR: 100 years: +40 %: 15 mins: Winter	23.887	23.462	0.378	0.022	3.5	0.408	0.000	0.180	2.2	1.340	3	50.708	OK
FSR: 100 years: +40 %: 30 mins: Winter	23.901	23.461	0.392	0.021	2.4	0.427	0.000	0.322	2.0	1.847	4	48.491	OK
FSR: 100 years: +40 %: 60 mins: Winter	23.863	23.458	0.353	0.018	1.8	0.385	0.000	0.474	1.6	2.339	3	53.538	OK
FSR: 100 years: +40 %: 120 mins: Winter	23.796	23.455	0.287	0.015	1.2	0.312	0.000	0.709	1.0	2.771	4	62.330	OK
FSR: 100 years: +40 %: 180 mins: Winter	23.752	23.453	0.243	0.013	0.9	0.265	0.000	0.930	0.8	2.928	3	68.019	OK
FSR: 100 years: +40 %: 240 mins: Winter	23.723	23.451	0.214	0.011	0.7	0.233	0.000	1.144	0.6	3.008	3	71.866	OK
FSR: 100 years: +40 %: 360 mins: Winter	23.685	23.450	0.176	0.010	0.5	0.193	0.000	1.565	0.4	3.031	4	76.743	OK
FSR: 100 years: +40 %: 480 mins: Winter	23.659	23.449	0.150	0.009	0.4	0.165	0.000	1.943	0.3	2.911	4	80.123	OK
FSR: 100 years: +40 %: 600 mins: Winter	23.642	23.448	0.133	0.008	0.4	0.146	0.000	2.323	0.3	2.879	4	82.405	OK

Boorley Green Nursery, Nairn Road, Southampton, SO32 2SH: Boorley Green Nursery, Nairn Road, Southampton, SO32 2SH 1 in 100 Year + 40% CC Storm Event - FSR Data 0.4l/s Discharge Rate		Date: 19/10/2022			
Report Details: Type: Stormwater Controls Summary Storm Phase: Phase		Designed by: FG	Checked by: SL		Approved By: SL
		Kemp House: 124 City Road EC1V 2NX London			



Summary Results for Slot Drain 15: Rank By: Max. Avg. Depth

Storm Event	Max. US Level (m)	Max. DS Level (m)	Max. US Depth (m)	Max. DS Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Total Lost Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Half Drain Down Time (mins)	Percentage Available (%)	Status
FSR: 100 years: +40 %: 15 mins: Winter	23.878	23.459	0.314	0.019	3.5	0.776	0.000	0.172	1.4	0.997	12	47.667	OK
FSR: 100 years: +40 %: 30 mins: Winter	23.917	23.459	0.354	0.019	2.4	0.860	0.000	0.337	1.3	1.589	5	42.005	OK
FSR: 100 years: +40 %: 60 mins: Winter	23.913	23.457	0.350	0.017	1.8	0.852	0.000	0.600	1.1	2.142	9	42.535	OK
FSR: 100 years: +40 %: 120 mins: Winter	23.868	23.455	0.304	0.015	1.2	0.745	0.000	0.852	0.8	2.592	11	49.786	OK
FSR: 100 years: +40 %: 180 mins: Winter	23.828	23.453	0.264	0.013	0.9	0.652	0.000	1.041	0.6	2.793	10	56.029	OK
FSR: 100 years: +40 %: 240 mins: Winter	23.795	23.452	0.231	0.012	0.7	0.575	0.000	1.221	0.5	2.883	11	61.198	OK
FSR: 100 years: +40 %: 360 mins: Winter	23.754	23.450	0.191	0.010	0.5	0.483	0.000	1.581	0.4	2.985	12	67.413	OK
FSR: 100 years: +40 %: 480 mins: Winter	23.725	23.449	0.161	0.009	0.4	0.415	0.000	1.896	0.3	2.922	11	72.008	OK
FSR: 100 years: +40 %: 600 mins: Winter	23.704	23.448	0.140	0.008	0.4	0.366	0.000	2.225	0.3	2.833	11	75.317	OK

Boorley Green Nursery, Nairn Road, Southampton, SO32 2SH: Boorley Green Nursery, Nairn Road, Southampton, SO32 2SH 1 in 100 Year + 40% CC Storm Event - FSR Data 0.4l/s Discharge Rate		Date: 19/10/2022		
Report Details: Type: Stormwater Controls Summary Storm Phase: Phase		Designed by: FG	Checked by: SL	
		Approved By: SL		
		Kemp House: 124 City Road EC1V 2NX London		



Summary Results for Proposed Attenuation Tank: Rank By: Max. Avg. Depth

Storm Event	Max. US Level (m)	Max. DS Level (m)	Max. US Depth (m)	Max. DS Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Total Lost Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Half Drain Down Time (mins)	Percentage Available (%)	Status
FSR: 100 years: +40 %: 15 mins: Winter	22.472	22.472	0.542	0.542	45.6	24.718	0.000	0.000	1.1	3.708	266	54.869	OK
FSR: 100 years: +40 %: 30 mins: Winter	22.676	22.676	0.746	0.746	41.5	34.014	0.000	0.000	1.1	6.071	254	37.896	OK
FSR: 100 years: +40 %: 60 mins: Winter	22.874	22.874	0.944	0.944	32.8	43.057	0.000	0.000	1.0	9.511	393	21.386	OK
FSR: 100 years: +40 %: 120 mins: Winter	23.042	23.042	1.112	1.112	21.9	50.687	0.000	0.000	0.7	14.925	592	7.454	OK
FSR: 100 years: +40 %: 180 mins: Winter	23.101	23.101	1.171	1.171	16.5	53.394	0.000	0.000	0.6	19.735	706	2.512	OK
FSR: 100 years: +40 %: 240 mins: Winter	23.126	23.126	1.196	1.196	13.3	54.526	0.000	0.000	0.6	24.153	897	0.446	OK
FSR: 100 years: +40 %: 360 mins: Winter	23.159	23.159	1.229	1.229	9.7	54.764	0.000	0.000	0.5	32.660	942	0.011	OK
FSR: 100 years: +40 %: 480 mins: Winter	23.136	23.136	1.206	1.206	7.8	54.743	0.000	0.000	0.5	40.015	1054	0.050	OK
FSR: 100 years: +40 %: 600 mins: Winter	23.120	23.120	1.190	1.190	6.4	54.276	0.000	0.000	0.4	46.810	1121	0.902	OK

Boorley Green Nursery, Nairn Road, Southampton, SO32 2SH: Boorley Green Nursery, Nairn Road, Southampton, SO32 2SH 1 in 100 Year + 40% CC Storm Event - FSR Data 0.4l/s Discharge Rate		Date: 19/10/2022			
Report Details: Type: Stormwater Controls Summary Storm Phase: Phase		Designed by: FG	Checked by: SL		Approved By: SL
		Kemp House: 124 City Road EC1V 2NX London			



Summary Results for Swale 2: Rank By: Max. Avg. Depth

Storm Event	Max. US Level (m)	Max. DS Level (m)	Max. US Depth (m)	Max. DS Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Total Lost Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Half Drain Down Time (mins)	Percentage Available (%)	Status
FSR: 100 years: +40 %: 15 mins: Winter	22.472	22.472	1.479	1.572	6.4	4.050	0.000	0.318	0.0	0.132		79.070	OK
FSR: 100 years: +40 %: 30 mins: Winter	22.676	22.676	1.683	1.776	7.5	6.069	0.000	0.798	0.1	0.115		68.635	OK
FSR: 100 years: +40 %: 60 mins: Winter	22.874	22.874	1.881	1.974	6.1	8.083	0.000	1.915	0.4	0.090		58.230	OK
FSR: 100 years: +40 %: 120 mins: Winter	23.041	23.042	2.049	2.142	4.2	9.819	0.000	4.317	0.1	0.032		49.254	OK
FSR: 100 years: +40 %: 180 mins: Winter	23.100	23.101	2.108	2.201	3.2	10.444	0.000	6.687	0.0	0.000		46.026	OK
FSR: 100 years: +40 %: 240 mins: Winter	23.125	23.126	2.133	2.226	2.6	10.706	0.000	8.966	0.0	0.000		44.671	OK
FSR: 100 years: +40 %: 360 mins: Winter	23.158	23.159	2.166	2.259	2.0	11.055	0.000	13.343	0.0	0.000		42.869	OK
FSR: 100 years: +40 %: 480 mins: Winter	23.136	23.136	2.143	2.236	1.6	10.817	0.000	17.307	0.0	0.000		44.099	OK
FSR: 100 years: +40 %: 600 mins: Winter	23.120	23.120	2.127	2.220	1.4	10.648	0.000	20.995	0.0	0.000		44.970	OK

Boorley Green Nursery, Nairn Road, Southampton, SO32 2SH: Boorley Green Nursery, Nairn Road, Southampton, SO32 2SH 1 in 30 Year + 40% CC Storm Event - FSR Data 0.4l/s Discharge Rate		Date: 19/10/2022	
Report Details: Type: Inflow Summary Storm Phase: Phase		Designed by: FG	Checked by: SL
		Approved By: SL	
		Kemp House: 124 City Road EC1V 2NX London	



Inflow Label	Connected To	Flow (L/s)	Runoff Method	Area (ha)	Percentage Impervious (%)	Urban Creep (%)	Adjusted Percentage Impervious (%)	Area Analysed (ha)
Catchment Area	Raingarden planter 1		Time of Concentration	0.013	100	0	100	0.013
Catchment Area (1)	Raingarden Planter 2		Time of Concentration	0.005	100	0	100	0.005
Catchment Area (2)	Raingarden Planter 3		Time of Concentration	0.013	100	0	100	0.013
Catchment Area (3)	S6		Time of Concentration	0.005	100	0	100	0.005
Catchment Area (4)	S8-Catchpit		Time of Concentration	0.015	100	0	100	0.015
Catchment Area (5)	Slot Drain 13 (1)		Time of Concentration	0.001	100	0	100	0.001
Catchment Area (6)	Raingarden		Time of Concentration	0.004	100	0	100	0.004
Catchment Area (7)	Slot Drain 13		Time of Concentration	0.002	100	0	100	0.002
Catchment Area (8)	Slot Drain 13		Time of Concentration	0.004	100	0	100	0.004
Catchment Area (9)	Slot Drain 15		Time of Concentration	0.003	100	0	100	0.003
Catchment Area (10)	Slot Drain 15		Time of Concentration	0.002	100	0	100	0.002
Catchment Area (11)	Slot Drain 13 (1)		Time of Concentration	0.002	100	0	100	0.002
Catchment Area (12)	Slot Drain 14		Time of Concentration	0.003	100	0	100	0.003
Catchment Area (13)	Slot Drain 14		Time of Concentration	0.003	100	0	100	0.003
Catchment Area (14)	Slot Drain 10		Time of Concentration	0.003	100	0	100	0.003
Catchment Area (15)	Slot drain 8		Time of Concentration	0.004	100	0	100	0.004
Catchment Area (16)	Slot drain 7		Time of Concentration	0.005	100	0	100	0.005
Catchment Area (17)	Slot Drain 12		Time of Concentration	0.011	100	0	100	0.011
Catchment Area (18)	Slot drain 4		Time of Concentration	0.006	100	0	100	0.006
Catchment Area (19)	Slot drain 3		Time of Concentration	0.006	100	0	100	0.006
Catchment Area (20)	Slot Drain 11		Time of Concentration	0.007	100	0	100	0.007
Catchment Area (21)	Slot Drain 2		Time of Concentration	0.003	100	0	100	0.003
Catchment Area (22)	Slot Drain 1		Time of Concentration	0.003	100	0	100	0.003
Catchment Area (23)	Slot drain 5		Time of Concentration	0.002	100	0	100	0.002
Catchment Area (24)	Slot drain 6		Time of Concentration	0.004	100	0	100	0.004
Catchment Area (25)	Swale		Time of Concentration	0.002	100	0	100	0.002
Catchment Area (26)	Slot Drain 15		Time of Concentration	0.001	100	0	100	0.001
Catchment Area (27)	S7		Time of Concentration	0.001	100	0	100	0.001
TOTAL		0.0		0.134				0.134

Boorley Green Nursery, Nairn Road, Southampton, SO32 2SH: Boorley Green Nursery, Nairn Road, Southampton, SO32 2SH 1 in 30 Year + 40% CC Storm Event - FSR Data 0.4l/s Discharge Rate	Date: 19/10/2022		
	Designed by: FG	Checked by: SL	Approved By: SL
	Report Title: Rainfall Analysis Criteria		
Kemp House: 124 City Road EC1V 2NX London			



Runoff Type	Dynamic
Output Interval (mins)	5
Time Step	Default
Urban Creep	Apply Global Value
Urban Creep Global Value (%)	0
Junction Flood Risk Margin (mm)	200
Perform No Discharge Analysis	☐

Rainfall	
FSR	Type: FSR

Region	England And Wales
M5-60 (mm)	19.9
Ratio R	0.350
Summer	☐
Winter	☒

Return Period	
Return Period (years)	Increase Rainfall (%)
30.0	40.000

Storm Durations	
Duration (mins)	Run Time (mins)
15	30
30	60
60	120
120	240
180	360
240	480
360	720
480	960
600	1200

Boorley Green Nursery, Nairn Road, Southampton, SO32 2SH: Boorley Green Nursery, Nairn Road, Southampton, SO32 2SH 1 in 30 Year + 40% CC Storm Event - FSR Data 0.4l/s Discharge Rate Report Details: Type: Junctions Summary Storm Phase: Phase	Date: 19/10/2022		
	Designed by: FG	Checked by: SL	Approved By: SL
	Kemp House: 124 City Road EC1V 2NX London		



Critical Storm Per Item: Rank By: Max. Depth

Junction	Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
S1	FSR: 30 years: +40 %: 15 mins: Winter	25.580	25.230	25.296	0.066	6.0	0.019	0.000	5.9	2.625	OK
S2	FSR: 30 years: +40 %: 15 mins: Winter	25.570	25.110	25.188	0.078	7.5	0.022	0.000	7.1	3.680	OK
S3	FSR: 30 years: +40 %: 15 mins: Winter	24.800	24.080	24.183	0.103	13.0	0.016	0.000	12.4	7.217	OK
S4	FSR: 30 years: +40 %: 15 mins: Winter	24.320	23.830	23.876	0.046	13.6	0.007	0.000	13.2	8.114	OK
S5	FSR: 30 years: +40 %: 15 mins: Winter	24.500	24.100	24.122	0.022	1.9	0.003	0.000	1.9	1.233	OK
S6	FSR: 30 years: +40 %: 15 mins: Winter	24.350	23.900	23.933	0.033	4.1	0.005	0.000	4.0	2.250	OK
S7	FSR: 30 years: +40 %: 15 mins: Winter	24.000	23.210	23.247	0.037	6.2	0.006	0.000	6.1	3.431	OK
S8-Catchpit	FSR: 30 years: +40 %: 15 mins: Winter	23.900	22.820	22.963	0.143	29.9	0.041	0.000	28.4	17.257	OK
S9	FSR: 30 years: +40 %: 15 mins: Winter	24.800	23.900	23.930	0.030	1.9	0.005	0.000	1.9	1.150	OK
S10	FSR: 30 years: +40 %: 30 mins: Winter	24.300	23.700	23.752	0.052	3.8	0.008	0.000	3.8	3.898	OK
S11-Catchpit	FSR: 30 years: +40 %: 30 mins: Winter	23.800	22.970	23.007	0.037	5.8	0.006	0.000	5.8	5.613	OK
S13-Flow Control Chamber	FSR: 30 years: +40 %: 360 mins: Winter	23.880	21.885	22.852	0.967	0.4	0.154	0.000	0.3	11.690	Surcharged
S14	FSR: 30 years: +40 %: 360 mins: Winter	22.350	21.650	21.663	0.013	0.3	0.000	0.000	0.3	11.676	OK
S12-Catchpit	FSR: 30 years: +40 %: 360 mins: Winter	23.550	21.940	22.852	0.912	1.0	0.145	0.000	0.0	12.210	Surcharged

Boorley Green Nursery, Nairn Road, Southampton, SO32 2SH 1 in 30 Year + 40% CC Storm Event - FSR Data 0.4l/s Discharge Rate Report Details: Type: Stormwater Controls Summary Storm Phase: Phase	Date: 19/10/2022		
	Designed by:	Checked by:	Approved By:
	FG	SL	SL
Kemp House: 124 City Road EC1V 2NX London			



Critical Storm Per Item: Rank By: Max. Avg. Depth

Stormwater Control	Storm Event	Max. US Level (m)	Max. DS Level (m)	Max. US Depth (m)	Max. DS Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Total Lost Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Half Drain Down Time (mins)	Percentage Available (%)
Raingarden Planter 2	FSR: 30 years: +40 %: 15 mins: Winter	25.614	25.606	0.624	0.616	2.2	0.173	0.000	0.000	2.2	0.866	2	60.450
Raingarden Planter 3	FSR: 30 years: +40 %: 15 mins: Winter	25.272	25.163	0.772	0.663	5.8	0.082	0.000	0.000	5.8	2.627	0	50.237
Raingarden planter 1	FSR: 30 years: +40 %: 15 mins: Winter	25.539	25.463	0.809	0.733	6.1	0.231	0.000	0.000	6.0	2.627	1	57.953
Swale	FSR: 30 years: +40 %: 15 mins: Winter	24.638	24.357	0.753	0.657	16.2	1.473	0.000	0.364	13.0	7.228	3	89.891
Slot Drain 1	FSR: 30 years: +40 %: 30 mins: Winter	25.548	25.213	0.288	0.023	1.0	0.218	0.000	0.000	0.8	0.850	5	59.057
Slot Drain 2	FSR: 30 years: +40 %: 30 mins: Winter	25.492	25.185	0.255	0.015	0.8	0.181	0.000	0.000	0.7	0.712	5	66.346
Slot drain 3	FSR: 30 years: +40 %: 30 mins: Winter	24.615	24.233	0.273	0.023	1.9	0.730	0.000	0.000	1.1	1.503	14	69.246
Slot Drain 11	FSR: 30 years: +40 %: 30 mins: Winter	24.498	23.976	0.463	0.026	2.1	0.416	0.000	0.348	1.7	1.589	4	67.411
Slot drain 4	FSR: 30 years: +40 %: 30 mins: Winter	24.005	23.608	0.284	0.013	1.9	0.712	0.000	0.000	1.1	1.481	14	73.144
Slot Drain 12	FSR: 30 years: +40 %: 30 mins: Winter	24.387	23.778	0.546	0.068	3.4	0.954	0.000	0.706	2.2	2.317	7	47.450
Slot drain 7	FSR: 30 years: +40 %: 30 mins: Winter	23.525	23.188	0.290	0.018	1.6	0.301	0.000	0.000	1.5	1.486	3	77.992
Slot drain 8	FSR: 30 years: +40 %: 30 mins: Winter	23.459	23.184	0.215	0.014	1.1	0.253	0.000	0.000	0.9	0.994	5	83.751
Slot Drain 10	FSR: 30 years: +40 %: 30 mins: Winter	23.514	23.294	0.178	0.014	0.8	0.159	0.000	0.000	0.7	0.742	4	83.986
Slot drain 5	FSR: 30 years: +40 %: 30 mins: Winter	24.523	24.236	0.241	0.016	0.7	0.161	0.000	0.000	0.6	0.654	5	81.663
Slot drain 6	FSR: 30 years: +40 %: 30 mins: Winter	24.537	24.145	0.353	0.025	1.3	0.241	0.000	0.000	1.1	1.117	4	76.323
Slot Drain 13	FSR: 30 years: +40 %: 30 mins: Winter	23.453	23.135	0.251	0.035	1.8	0.526	0.000	0.463	1.2	1.202	8	75.571
Raingarden	FSR: 30 years: +40 %: 30 mins: Winter	23.068	23.060	0.818	0.870	6.3	0.958	0.000	0.406	5.8	5.614	3	95.156
Slot Drain 13 (1)	FSR: 30 years: +40 %: 30 mins: Winter	23.806	23.288	0.456	0.018	1.0	0.225	0.000	0.383	0.6	0.500	6	60.948

Boorley Green Nursery, Nairn Road, Southampton, SO32 2SH: Boorley Green Nursery, Nairn Road, Southampton, SO32 2SH 1 in 30 Year + 40% CC Storm Event - FSR Data 0.4l/s Discharge Rate	Date: 19/10/2022		
	Designed by: FG	Checked by: SL	Approved By: SL
	Report Details: Type: Stormwater Controls Summary Storm Phase: Phase		
Kemp House: 124 City Road EC1V 2NX London			

Status
OK
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Boorley Green Nursery, Nairn Road, Southampton, SO32 2SH: Boorley Green Nursery, Nairn Road, Southampton, SO32 2SH 1 in 30 Year + 40% CC Storm Event - FSR Data 0.4l/s Discharge Rate		Date: 19/10/2022	
Report Details: Type: Stormwater Controls Summary Storm Phase: Phase		Designed by: FG	Checked by: SL
		Approved By: SL	
		Kemp House: 124 City Road EC1V 2NX London	



Slot Drain 14	FSR: 30 years: +40 %: 30 mins: Winter	23.827	23.457	0.318	0.017	1.8	0.347	0.000	0.300	1.4	1.356	4	58.083
Slot Drain 15	FSR: 30 years: +40 %: 30 mins: Winter	23.839	23.456	0.276	0.016	1.8	0.683	0.000	0.307	0.9	1.145	6	53.952
Proposed Attenuation Tank	FSR: 30 years: +40 %: 360 mins: Winter	22.852	22.852	0.922	0.922	7.3	42.037	0.000	0.000	0.4	25.693	922	23.249
Swale 2	FSR: 30 years: +40 %: 360 mins: Winter	22.851	22.852	1.859	1.952	1.5	7.853	0.000	10.813	0.0	0.000		59.417

Boorley Green Nursery, Nairn Road, Southampton, SO32 2SH: Boorley Green Nursery, Nairn Road, Southampton, SO32 2SH 1 in 30 Year + 40% CC Storm Event - FSR Data 0.4l/s Discharge Rate	Date: 19/10/2022		
	Designed by: FG	Checked by: SL	Approved By: SL
	Report Details: Type: Stormwater Controls Summary Storm Phase: Phase		
Kemp House: 124 City Road EC1V 2NX London			

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Boorley Green Nursery, Nairn Road, Southampton, SO32 2SH: Boorley Green Nursery, Nairn Road, Southampton, SO32 2SH 1 in 30 Year + 0% CC Storm Event - FSR Data 0.4l/s Discharge Rate		Date: 19/10/2022	
Report Details: Type: Inflow Summary Storm Phase: Phase		Designed by: FG	Checked by: SL
		Approved By: SL	
		Kemp House: 124 City Road EC1V 2NX London	



Inflow Label	Connected To	Flow (L/s)	Runoff Method	Area (ha)	Percentage Impervious (%)	Urban Creep (%)	Adjusted Percentage Impervious (%)	Area Analysed (ha)
Catchment Area	Raingarden planter 1		Time of Concentration	0.013	100	0	100	0.013
Catchment Area (1)	Raingarden Planter 2		Time of Concentration	0.005	100	0	100	0.005
Catchment Area (2)	Raingarden Planter 3		Time of Concentration	0.013	100	0	100	0.013
Catchment Area (3)	S6		Time of Concentration	0.005	100	0	100	0.005
Catchment Area (4)	S8-Catchpit		Time of Concentration	0.015	100	0	100	0.015
Catchment Area (5)	Slot Drain 13 (1)		Time of Concentration	0.001	100	0	100	0.001
Catchment Area (6)	Raingarden		Time of Concentration	0.004	100	0	100	0.004
Catchment Area (7)	Slot Drain 13		Time of Concentration	0.002	100	0	100	0.002
Catchment Area (8)	Slot Drain 13		Time of Concentration	0.004	100	0	100	0.004
Catchment Area (9)	Slot Drain 15		Time of Concentration	0.003	100	0	100	0.003
Catchment Area (10)	Slot Drain 15		Time of Concentration	0.002	100	0	100	0.002
Catchment Area (11)	Slot Drain 13 (1)		Time of Concentration	0.002	100	0	100	0.002
Catchment Area (12)	Slot Drain 14		Time of Concentration	0.003	100	0	100	0.003
Catchment Area (13)	Slot Drain 14		Time of Concentration	0.003	100	0	100	0.003
Catchment Area (14)	Slot Drain 10		Time of Concentration	0.003	100	0	100	0.003
Catchment Area (15)	Slot drain 8		Time of Concentration	0.004	100	0	100	0.004
Catchment Area (16)	Slot drain 7		Time of Concentration	0.005	100	0	100	0.005
Catchment Area (17)	Slot Drain 12		Time of Concentration	0.011	100	0	100	0.011
Catchment Area (18)	Slot drain 4		Time of Concentration	0.006	100	0	100	0.006
Catchment Area (19)	Slot drain 3		Time of Concentration	0.006	100	0	100	0.006
Catchment Area (20)	Slot Drain 11		Time of Concentration	0.007	100	0	100	0.007
Catchment Area (21)	Slot Drain 2		Time of Concentration	0.003	100	0	100	0.003
Catchment Area (22)	Slot Drain 1		Time of Concentration	0.003	100	0	100	0.003
Catchment Area (23)	Slot drain 5		Time of Concentration	0.002	100	0	100	0.002
Catchment Area (24)	Slot drain 6		Time of Concentration	0.004	100	0	100	0.004
Catchment Area (25)	Swale		Time of Concentration	0.002	100	0	100	0.002
Catchment Area (26)	Slot Drain 15		Time of Concentration	0.001	100	0	100	0.001
Catchment Area (27)	S7		Time of Concentration	0.001	100	0	100	0.001
TOTAL		0.0		0.134				0.134

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	Designed by: FG	Checked by: SL	Approved By: SL
	Report Title: Rainfall Analysis Criteria		
Kemp House: 124 City Road EC1V 2NX London			

Runoff Type	Dynamic
Output Interval (mins)	5
Time Step	Default
Urban Creep	Apply Global Value
Urban Creep Global Value (%)	0
Junction Flood Risk Margin (mm)	200
Perform No Discharge Analysis	☐

Rainfall	
FSR	Type: FSR

Region	England And Wales
M5-60 (mm)	19.9
Ratio R	0.350
Summer	☐
Winter	☒

Return Period	
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Return Period (years)	Increase Rainfall (%)
30.0	0.000

Storm Durations	
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Duration (mins)	Run Time (mins)
15	30
30	60
60	120
120	240
180	360
240	480
360	720
480	960
600	1200

Boorley Green Nursery, Nairn Road, Southampton, SO32 2SH: Boorley Green Nursery, Nairn Road, Southampton, SO32 2SH 1 in 30 Year + 0% CC Storm Event - FSR Data 0.4l/s Discharge Rate Report Details: Type: Junctions Summary Storm Phase: Phase	Date: 19/10/2022		
	Designed by: FG	Checked by: SL	Approved By: SL
	Kemp House: 124 City Road EC1V 2NX London		



Critical Storm Per Item: Rank By: Max. Depth

Junction	Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
S1	FSR: 30 years: +0 %: 15 mins: Winter	25.580	25.230	25.284	0.054	4.3	0.015	0.000	4.2	1.821	OK
S2	FSR: 30 years: +0 %: 15 mins: Winter	25.570	25.110	25.174	0.064	5.3	0.018	0.000	5.1	2.549	OK
S3	FSR: 30 years: +0 %: 15 mins: Winter	24.800	24.080	24.160	0.080	8.8	0.013	0.000	8.3	4.921	OK
S4	FSR: 30 years: +0 %: 15 mins: Winter	24.320	23.830	23.867	0.037	9.1	0.006	0.000	8.7	5.523	OK
S5	FSR: 30 years: +0 %: 15 mins: Winter	24.500	24.100	24.118	0.018	1.3	0.003	0.000	1.3	0.848	OK
S6	FSR: 30 years: +0 %: 15 mins: Winter	24.350	23.900	23.927	0.027	2.8	0.004	0.000	2.8	1.572	OK
S7	FSR: 30 years: +0 %: 15 mins: Winter	24.000	23.210	23.241	0.031	4.3	0.005	0.000	4.2	2.374	OK
S8-Catchpit	FSR: 30 years: +0 %: 15 mins: Winter	23.900	22.820	22.922	0.102	20.4	0.029	0.000	19.4	11.905	OK
S9	FSR: 30 years: +0 %: 15 mins: Winter	24.800	23.900	23.925	0.025	1.3	0.004	0.000	1.3	0.771	OK
S10	FSR: 30 years: +0 %: 15 mins: Winter	24.300	23.700	23.742	0.042	2.7	0.007	0.000	2.5	1.799	OK
S11-Catchpit	FSR: 30 years: +0 %: 30 mins: Winter	23.800	22.970	22.999	0.029	3.8	0.005	0.000	3.8	3.581	OK
S13-Flow Control Chamber	FSR: 30 years: +0 %: 240 mins: Winter	23.880	21.885	22.535	0.650	0.4	0.103	0.000	0.3	6.402	Surcharged
S14	FSR: 30 years: +0 %: 240 mins: Winter	22.350	21.650	21.661	0.011	0.3	0.000	0.000	0.3	6.389	OK
S12-Catchpit	FSR: 30 years: +0 %: 240 mins: Winter	23.550	21.940	22.535	0.595	0.9	0.095	0.000	0.0	6.506	Surcharged

Boorley Green Nursery, Nairn Road, Southampton, SO32 2SH 1 in 30 Year + 0% CC Storm Event - FSR Data 0.4l/s Discharge Rate Report Details: Type: Stormwater Controls Summary Storm Phase: Phase	Date: 19/10/2022		
	Designed by:	Checked by:	Approved By:
	FG	SL	SL
Kemp House: 124 City Road EC1V 2NX London			



Critical Storm Per Item: Rank By: Max. Avg. Depth

Stormwater Control	Storm Event	Max. US Level (m)	Max. DS Level (m)	Max. US Depth (m)	Max. DS Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Total Lost Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Half Drain Down Time (mins)	Percentage Available (%)
Raingarden Planter 2	FSR: 30 years: +0 %: 15 mins: Winter	25.610	25.603	0.620	0.613	1.6	0.171	0.000	0.000	1.6	0.575	2	60.748
Raingarden Planter 3	FSR: 30 years: +0 %: 15 mins: Winter	25.242	25.152	0.742	0.652	4.2	0.079	0.000	0.000	4.1	1.859	0	52.350
Raingarden planter 1	FSR: 30 years: +0 %: 15 mins: Winter	25.523	25.457	0.793	0.727	4.4	0.225	0.000	0.000	4.3	1.823	1	59.030
Swale	FSR: 30 years: +0 %: 15 mins: Winter	24.605	24.344	0.720	0.644	11.6	1.167	0.000	0.341	8.8	4.930	3	91.996
Slot Drain 1	FSR: 30 years: +0 %: 30 mins: Winter	25.489	25.209	0.229	0.019	0.7	0.171	0.000	0.000	0.5	0.602	6	67.762
Slot Drain 2	FSR: 30 years: +0 %: 30 mins: Winter	25.441	25.183	0.203	0.013	0.6	0.144	0.000	0.000	0.4	0.505	6	73.244
Slot drain 3	FSR: 30 years: +0 %: 60 mins: Winter	24.543	24.228	0.201	0.018	1.0	0.554	0.000	0.000	0.7	1.507	11	76.627
Slot Drain 11	FSR: 30 years: +0 %: 30 mins: Winter	24.386	23.971	0.351	0.021	1.5	0.315	0.000	0.308	1.1	1.071	5	75.273
Slot drain 4	FSR: 30 years: +0 %: 60 mins: Winter	23.931	23.605	0.210	0.010	1.0	0.542	0.000	0.000	0.6	1.481	11	79.567
Slot Drain 12	FSR: 30 years: +0 %: 30 mins: Winter	24.259	23.765	0.417	0.055	2.4	0.739	0.000	0.608	1.4	1.536	9	59.295
Slot drain 7	FSR: 30 years: +0 %: 30 mins: Winter	23.463	23.185	0.227	0.015	1.2	0.237	0.000	0.000	1.0	1.056	4	82.668
Slot drain 8	FSR: 30 years: +0 %: 30 mins: Winter	23.415	23.182	0.171	0.012	0.8	0.200	0.000	0.000	0.6	0.705	6	87.120
Slot Drain 10	FSR: 30 years: +0 %: 30 mins: Winter	23.473	23.292	0.138	0.012	0.6	0.124	0.000	0.000	0.5	0.527	4	87.561
Slot drain 5	FSR: 30 years: +0 %: 30 mins: Winter	24.473	24.234	0.190	0.014	0.5	0.126	0.000	0.000	0.4	0.464	6	85.628
Slot drain 6	FSR: 30 years: +0 %: 30 mins: Winter	24.460	24.141	0.276	0.021	0.9	0.189	0.000	0.000	0.8	0.789	4	81.441
Slot Drain 13	FSR: 30 years: +0 %: 30 mins: Winter	23.389	23.128	0.186	0.028	1.3	0.400	0.000	0.421	0.7	0.780	9	81.401
Raingarden	FSR: 30 years: +0 %: 30 mins: Winter	23.067	23.048	0.816	0.858	4.2	0.845	0.000	0.359	3.8	3.582	3	95.725
Slot Drain 13 (1)	FSR: 30 years: +0 %: 30 mins: Winter	23.673	23.285	0.323	0.015	0.7	0.160	0.000	0.318	0.4	0.307	3	72.245

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Report Details: Type: Stormwater Controls Summary Storm Phase: Phase		Designed by: FG	Checked by: SL
		Approved By: SL	
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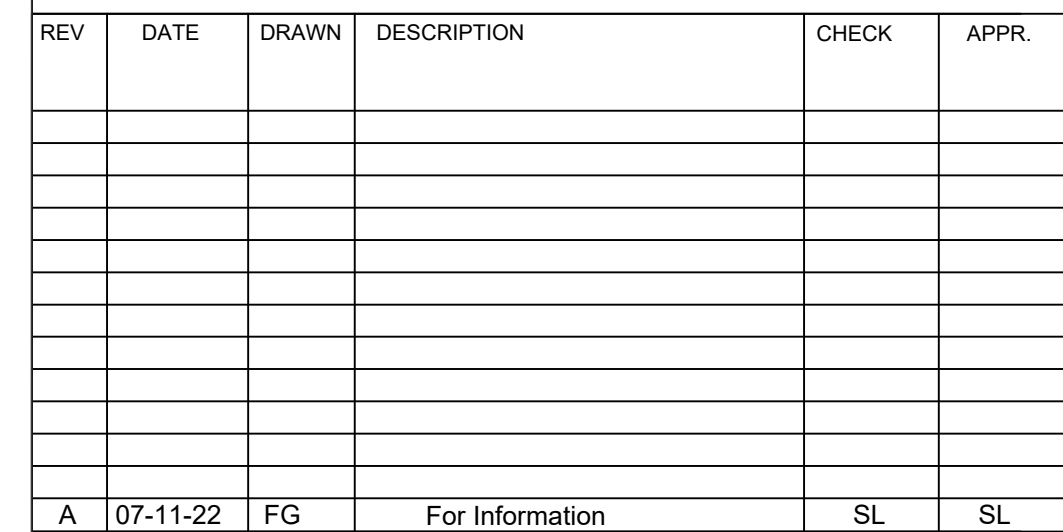
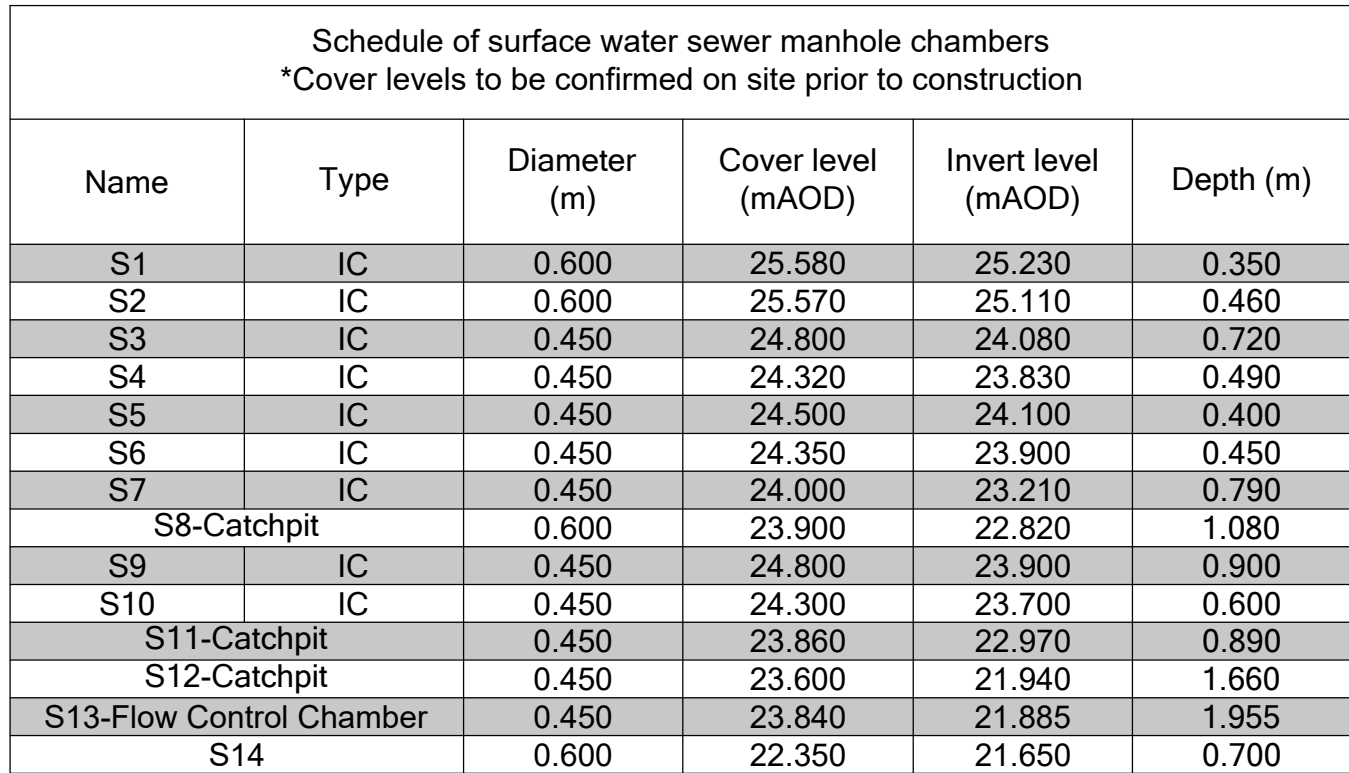
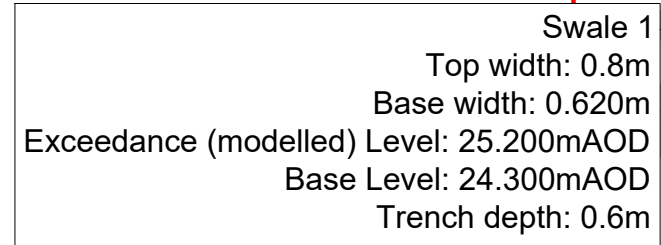


Slot Drain 14	FSR: 30 years: +0 %: 30 mins: Winter	23.749	23.454	0.240	0.014	1.3	0.263	0.000	0.276	1.0	0.912	5	68.212
Slot Drain 15	FSR: 30 years: +0 %: 30 mins: Winter	23.761	23.453	0.197	0.013	1.3	0.502	0.000	0.276	0.6	0.743	7	66.175
Proposed Attenuation Tank	FSR: 30 years: +0 %: 240 mins: Winter	22.535	22.535	0.605	0.605	6.8	27.583	0.000	0.000	0.4	14.138	665	49.638
Swale 2	FSR: 30 years: +0 %: 240 mins: Winter	22.534	22.535	1.542	1.635	1.3	4.667	0.000	5.573	0.0	0.000		75.882

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	Designed by: FG	Checked by: SL	Approved By: SL
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Kemp House: 124 City Road EC1V 2NX London			

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APPENDIX C – DRAWINGS



Nimbus
ENGINEERING CONSULTANTS

www.nimbusengineering.co.uk
info@nimbusengineering.co.uk

CHECKED BY: S.L	DATE: 07-11-22	APPROVED BY: S.L	DATE: 07-11-22
DRN BY: F.G	SCALE: 1:100	DRAWING NUMBER: C2741-01	REV: A
DATE: 07-11-22	SIZE: A1		

