SDP

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SuDS MAINTENANCE PLAN

For

Proposed New Residential Development

At

Hook Norton Road,
Sibford Ferris, Banbury

Project: E21-077
Author: Aaron Vaughan
Status: Planning
Issue: First (May 2022)

INDEX

SuDS Maintenance Plan
For
Land West of Hook Norton Road, Sibford Ferris

1.0 Introduction

1.1 SDP have been appointed by Gade Homes to provide a SuDS Maintenance Plan (SMP) for Land West of Hook Norton Road, Sibford Ferris to enable the storm water drainage system to be maintained and operated as intended within the design for the life of the development.

2.0 Proposed Storm Water Drainage System

2.1 The proposed storm water drainage system is as shown on the following drawings.

- E21-077-152: Site Drainage Plan (Appendix 1)

2.2 The storm water drainage system within the site has been designed to cater for a 100 year storm return period with a 40% allowance for climate change and 10% allowance for urban creep.

2.3 The SuDS system aims to manage rainfall and use landscape features where possible to deal with surface water.

2.3.1 Control the flow and volume of water leaving the development.

2.3.2 Prevent pollution by intercepting silt and cleaning runoff from hard surfaces.

2.4 The flood risks to the site have been checked by using the Environment Agency Flood Maps.

3.0 SuDS at Hook Norton Road, Sibford Ferris

3.1 During rainfall events storm water runoff enters the below ground drainage system via rainwater downpipes (roof areas) and gullies / drainage channels for vehicular areas. Private parking bays / driveways are formed using permeable paving for treatment prior to discharge to ground. Road / vehicular area runoff is conveyed via drains and sewers to an infiltration basin for discharge to ground. Severn Trent Water were contacted during the preliminary design stage regarding the infiltration basin principles, their response was “Severn Trent will adopt SuDS as per the principles of the DCG should they be designed in line with the DCG and CIRIA design manual. Severn Trent will only adopt the ‘sewer’ function of any SuDS feature and any other aspects of the SuDS feature will need to be adopted and maintained by another party “. Refer to Appendix 4 / 5 for Severn Trent Water SuDS Correspondence / Severn Trent Water SuDS Adoption Position Statement).

4.0 Managing SuDS

4.1 The SuDS have been designed for easy maintenance to comprise:

- Regular day to day care – litter collection, regular gardening to control vegetation growth and checking inlets where water enters the SuDS feature.
- Occasional tasks – checking the SuDS feature and removing any silt that builds up in the SuDS features.
- Remedial Work – repairing damage where necessary.

5.0 SuDS Scheme Checklist

5.2 The following lists the SuDS components:

Refer to drawings ref:

- E21.077-152: Site Drainage Plan (Appendix 1).
- E21-077-152.1: Surface Water Drainage Maintenance Identification Plan (Appendix 2).
- E21-077-152.2: Surface Water Drainage Exceedance Plan (Appendix 3).

- **Item Ref 01 - Private Inlet Structures (House Owner maintained unless within communal areas – residence management company)** such as rain water down pipes and trapped gullies / drainage channels. They should be free from obstruction at all times to allow free flow through to the SuDS features.
- **Item Ref 02 - Private Inspection Chambers (House owner maintained unless within communal areas – residence management company) -** used on bends or where pipes come together. They allow access and cleaning of the system if necessary. They should be free from obstruction at all times to allow free flow.
- **Item Ref 03 - Private Free Draining Permeable Paved Parking Bays / Driveways (House Owner maintained unless within communal areas – residence management company)** will collect surface water runoff from roof areas for treatment prior to discharge to ground.
- **Item Ref 04 - Private Below Ground Drainage Pipes (House owner maintained unless within communal areas – residence management company)** – used to convey water to the SuDS systems. They should be free from obstruction at all times to allow free flow.
- **Item Ref 05 – Private Soakaways (House owner maintained) -** used to infiltrate surface water drainage into the ground.
- **Item Ref 06 - Adoptable Road Gullies and Gully Outlet Pipework (S38 Oxfordshire County Council maintained) -** used to convey water from road / shared surface areas into adoptable surface water network. They should be free from obstruction at all times to allow free flow.
- **Item Ref 07 - Adoptable Pipelines and Manholes (S104 Severn Trent Water maintained) -** used to convey surface water run-off. They should be free from obstruction at all times to allow free flow.
- **Item Ref 08 - Adoptable Headwall (S104 Severn Trent Water maintained)** used to discharge water into infiltration swale / basin. It should be free from obstruction at all times to allow free flow.

- **Item Ref 09 - Adoptable Infiltration / Treatment Swales (S104 Severn Trent Water maintained – to be confirmed upon S104 submission – See Appendix 5 / 6) -** used to convey and treat surface water run-off prior to discharge to ground via infiltration basin. They should be free from obstruction at all times to allow free flow.
- **Item Ref 10 - Adoptable Infiltration Basin (S104 Severn Trent Water maintained - to be confirmed upon S104 submission – See Appendix 5 / 6) -** used to treat and attenuate surface water run-off prior to discharge to ground. It should be free from obstruction at all times to allow free flow.

The adoptable storm drainage will be maintained by the developer and/or management company up until the point that Severn Trent / LA Highways undertake a final inspection and issue a formal certificate of completion to be taken off the 12 months defects/maintenance period for vesting.

The SuDS Maintenance Checklist found in Appendix 6 is to be kept by the residence management company and be accessible for inspections when required.

6.0 Sustainable Drainage Maintenance Specification

General Requirements

General Requirements	
Maintenance activities comprise • Regular Maintenance • Occasional tasks • Remedial work	**Frequency**
Generally Litter Collect all litter or other debris and remove it from site.	Monthly

- **Avoid use of weed-killers and pesticides to prevent chemical pollution**
- **Avoid de-icing agents wherever possible**
- **Protect all below ground drainage through careful selection and placement of hard and soft landscaping.**

Item Ref 01 - Private Inlet Structures

- Private Inlet Structures such as rain water down pipes will be maintained by the home owners. They should be free from obstruction at all times to allow free flow through to the SuDS features.
- Private Trapped Gullies / drainage channels are used to collect surface water from external vehicular and hard surfaced areas. They should be free from obstruction at all times to allow free flow through to the SuDS features.
- Private Trapped Gullies / drainage channels within home owner conveyed areas will be maintained by the home owners.
- Private Trapped gullies / drainage channels within communal areas will be maintained by a residence management company.

Private Inlet Structures and Inspection Chambers	
Regular Maintenance	**Frequency**
Inlet Structures Inspect rainwater down pipes, removing obstructions and silt as necessary. Check there is no physical damage.	Monthly
Inspection Chambers Remove cover and inspect, ensuring that the water is flowing freely and that the exit route for water is unobstructed. Remove debris and silt. Undertake inspection after leaf fall in Autumn	Annually
Trapped Gullies / Drainage Channels Remove grating and clean out silt / debris found within trap.	Annually
Occasional maintenance Check topsoil levels are 20mm above edges of chambers to avoid mower damage	As necessary
Remedial work Repair physical damage if necessary	As required

Item Ref 02 - Private Inspection Chambers

- Private Inspection Chambers are used on bends or where pipes come together. They allow access and cleaning to the system if necessary. They should be free from obstruction at all times to allow free flow through to the SuDS features.
- Private inspection chambers within home owner conveyed areas will be maintained by the home owners.
- Private inspection chambers within communal areas will be maintained by a residence management company.

Private Inspection Chambers	
Regular Maintenance	**Frequency**
Inspection Chambers Remove cover and inspect, ensuring that the water is flowing freely and that the exit route for water is unobstructed. Remove debris and silt. Undertake inspection after leaf fall in Autumn	Annually
Occasional maintenance Check topsoil levels are 20mm above edges of chambers to avoid mower damage	As necessary
Remedial work Repair physical damage if necessary	As required

Item Ref 03 - Private Free Draining Permeable Paved Parking Bays / Driveways

- Permeable block paving is porous to allow run-off to percolate through the surface into underlying drainage layers for storage and treatment prior to discharge to ground. It must be protected from silt, sand, compost, mulch, etc.

Private Free Draining Permeable Paved Parking Bays / Driveways	
Regular Maintenance	**Frequency**
Cleaning Manually brush regularly and remove sweepings from all hard surfaces	Monthly
Occasional Tasks	**Frequency**
Permeable Pavements. Mechanically brush and vacuum surface once a year to prevent silt blockage and enhance design life.	Annually
Remedial Work	**Frequency**
Monitor effectiveness of permeable pavement and when water does not infiltrate immediately assess need for reinstatement of top layers or specialist cleaning. Recent experience suggests jet washing and suction cleaning will substantially reinstate pavement to 90% efficiency.	As required

Item Ref 04 - Private Below Ground Drainage Pipes

- Private Below ground drainage pipes convey water to the SuDS systems. They should be free from obstruction at all times to allow free flow.
- Private below ground drainage pipes within communal areas will be maintained by a residence management company.
- Private below ground drainage pipes within home owner conveyed areas will be maintained by the home owners

Private Below Ground Drainage Pipes	
Regular Maintenance	**Frequency**
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
Remove sediment from inspection chambers.	Annually or as required
Maintain vegetation to designed limits within the vicinity of below ground drainage pipes.	Monthly or as required
Remedial work	
Repair physical damage if necessary	As required
Monitoring	
Inspect all inlets and outlets to ensure that they are in good condition and operating as designed.	Annually
Survey inside of pipe runs for sediment build up and remove if necessary.	Every 5 years or as required

Item Ref 05 – Private Cellular Soakaway Crates

- Cellular surface water soakaway crates are designed to provide below ground surface water storage prior to infiltration to ground.

Private Cellular Soakaway Crates	
Regular Maintenance	**Frequency**
Inspect and identify any areas that are not operating correctly. Remove debris from the catchment surface (where it may cause risk to performance) Remove sediment from inlet structures and inspection chambers.	Every 6 months or as required
Remedial work	**Frequency**
Repair physical damage if necessary	As required
Monitoring	**Frequency**
Inspect all inlets, outlets and vents to ensure that they are in good condition and operating as designed.	Annually

Item Ref 06 - Adoptable Road Gullies and Gully Outlet Pipework (S38 Oxfordshire County Council maintained)

- The adoptable road gullies and gully outlet pipework are used to convey water from S38 road / shared surface areas into S104 adoptable surface water network.

Adoptable Road Gullies and Gully Outlet Pipework (Post 12 months defects maintenance period for vesting).	
Regular Maintenance	**Frequency**
Road Gullies and outlet pipework will be adopted by Oxfordshire County Council and maintained in accordance with their regime.	-
Remedial work	**Frequency**
-	-
Monitoring	**Frequency**
-	-

Adoptable Road Gullies and Gully Outlet Pipework (during 12 months defects maintenance period for vesting).	
Regular Maintenance	**Frequency**
Inspect and identify any areas that are not operating correctly. Remove debris from the catchment surface (where it may cause risk to performance) Remove sediment from silt trap.	Every 6 months or as required
Remedial work	**Frequency**

Repair physical damage if necessary.	As required
Monitoring	**Frequency**
Inspect all outlets to ensure that they are in good condition and operating as designed. Survey inside of pipe runs for sediment build up and remove if necessary.	Every 6 months

Item Ref 07 - Adoptable Pipelines and Manholes (S104 Severn Trent Water maintained)

- The adoptable pipelines and manholes are used to convey surface water run-off.

Adoptable Pipelines and Manholes (Post 12 months defects maintenance period for vesting).	
Regular Maintenance	**Frequency**
S104 pipelines and manholes will be adopted by Severn Trent Water and maintained in accordance with their regime.	-
Remedial work	**Frequency**
-	-
Monitoring	**Frequency**
-	-

Adoptable Pipelines and Manholes (during 12 months defects maintenance period for vesting).	
Regular Maintenance	**Frequency**
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
Remove sediment from pipelines and manholes.	Annually or as required
Maintain vegetation to designed limits within the vicinity of below ground drainage pipes.	Monthly or as required
Remedial work	**Frequency**
Repair physical damage if necessary	As required
Monitoring	**Frequency**
Inspect all inlets and outlets to ensure that they are in good condition and operating as designed. Survey inside of pipe runs for sediment build up and remove if necessary.	Every 6 months

Item Ref 08 - Adoptable Headwall (S104 Severn Trent Water maintained)

- The adoptable headwall is used to discharge water into Infiltration swale / basin.

Adoptable Headwalls (Post 12 months defects maintenance period for vesting).	
Regular Maintenance	**Frequency**
Adopted by Severn Trent Water and maintained in accordance with their regime.	-
Remedial work	**Frequency**
-	-
Monitoring	**Frequency**
-	-

Adoptable Headwalls (during 12 months defects maintenance period for vesting).	
Regular Maintenance	**Frequency**
Inspect and identify any areas that are not operating correctly. If required take remedial action.	Monthly for 3 months then annually.
Remedial work	**Frequency**
Repair physical damage if necessary	As required.
Monitoring	**Frequency**
Inspect outlet to ensure its in good condition and operating as designed.	Every 6 months.

Item Ref 09 - Adoptable Treatment Swales (S104 Severn Trent Water maintained - to be confirmed upon S104 submission – See Appendix 5 / 6)

- The adoptable treatment swales are used to convey and treat surface water drainage prior to discharge into infiltration basin.

Adoptable Treatment Swales (post 12 months defects maintenance period for vesting).	
Regular Maintenance	**Frequency**
If adopted by Severn Trent Water will be maintained in accordance with their regime.	-
Remedial work	**Frequency**
-	-
Monitoring	**Frequency**
-	-

Adoptable Treatment Swales (during 12 months defects maintenance period for vesting).	
Regular Maintenance	**Frequency**

Inspect and identify any areas that are not operating correctly. Remove debris from the infiltration surface (where it may cause risk to performance) Remove sediment from inlet structures.	Every 6 months or as required.
Remedial work	**Frequency**
Repair physical damage if necessary.	As required.
Monitoring	**Frequency**
Inspect infiltration surface to ensure it's in good condition and operating as designed.	Annually

Item Ref 10 - Adoptable Infiltration Basin (S104 Severn Trent Water maintained - to be confirmed upon S104 submission – See Appendix 5 / 6)

- The adoptable infiltration basin is designed to provide surface water treatment and attenuation prior to discharge to ground.

Adoptable Infiltration Basin (post 12 months defects maintenance period for vesting).	
Regular Maintenance	**Frequency**
If adopted by Severn Trent Water will be maintained in accordance with their regime.	-
Remedial work	**Frequency**
-	-
Monitoring	**Frequency**
-	-

Adoptable Infiltration Basin (during 12 months defects maintenance period for vesting).	
Regular Maintenance	**Frequency**
Inspect and identify any areas that are not operating correctly. Remove debris from the infiltration surface (where it may cause risk to performance).	Every 6 months or as required.
Remedial work	**Frequency**
Repair physical damage if necessary.	As required.
Monitoring	**Frequency**
Inspect infiltration surface to ensure it's in good condition and operating as designed.	Annually.

Maintenance Inspection Checklist

Following each visit, a record is to be kept on file using forms enclosed in the appendix at the back of this document

Flooding – Emergency Action

In the event of flooding due to blockage of any SuDS items call the residence management company in the first instance.

Spillage – Emergency Action

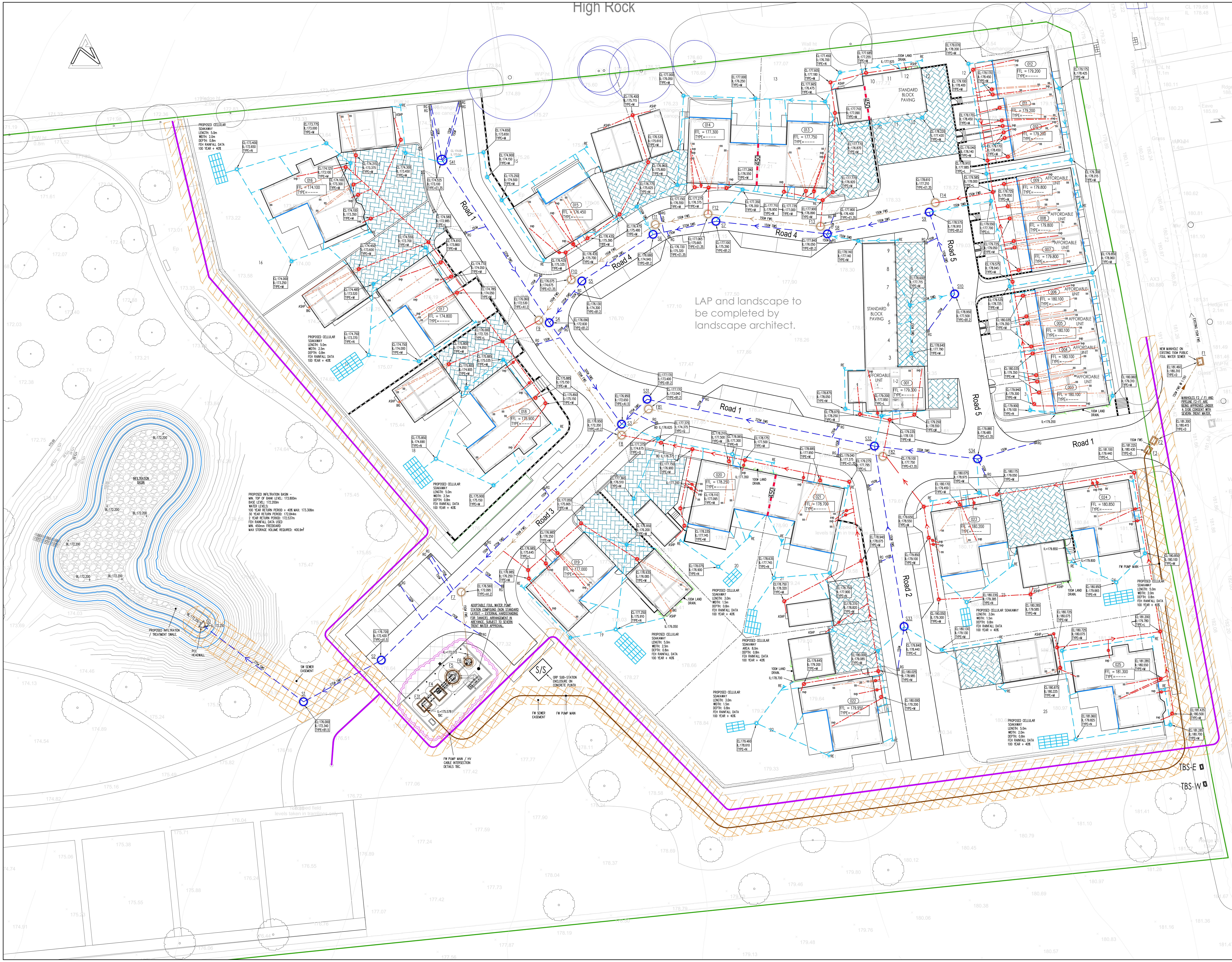
Most spillages on development are of compounds that do not pose a serious risk to the environment if they enter the drainage in a slow and controlled manner with time available for natural breakdown in a treatment system. Therefore, small spillages of oil, milk or other known organic substances should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

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

Contact the Environment Agency immediately. Tel: 03708 506 506.

Appendix 1

Site Drainage Plan



NOTES

SDP NO. E21-077

1. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH ALL RELEVANT ENGINEER'S DRAWINGS. ANY DISCREPANCIES FOUND BETWEEN INFORMATION SHOWN ON THIS OR ANY OTHER DRAWING SHALL BE REPORTED TO THE ENGINEER IMMEDIATELY AND PRIOR TO ANY WORKS COMMENCING ON SITE.

2. ALL CONCRETE AT OR BELOW GROUND LEVEL ON SITE SHALL BE ABLE TO WITHSTAND SULPHATE CONCENTRATIONS IN ACCORDANCE WITH BRE SPECIAL DIGEST 1.

3. IT IS THE CONTRACTORS RESPONSIBILITY TO ENSURE THAT ALL SERVICES THAT ARE LIKELY TO BE AFFECTED BY THE PROPOSED WORKS ARE LOCATED PRIOR TO WORKS COMMENCING. TRIAL HOLES ARE TO BE DUG IF NECESSARY.

4. INVERT LEVELS GIVEN AT MANHOLES ON DRAWING ARE THAT OF THE LARGEST DIAMETER PIPE UNLESS OTHERWISE STATED.

5. MANHOLE COVER LEVELS IDENTIFIED ON DRAWINGS ARE APPROXIMATE ONLY. ACTUAL LEVELS SHALL BE SET ON SITE TO SUIT THE LEVEL OF ADJACENT HARD FINISHES OR SOFT LANDSCAPING.

6. ALL PIPEWORK SHALL JOIN AT SOFFIT TO SOFFIT UNLESS OTHERWISE STATED.

7. ALL PIPEWORK SHALL BE 100mmø UNLESS OTHERWISE STATED.

8. ALL GULLIES SHALL BE TRAPPED AND RODDABLE.

9. MANHOLE COVERS SHALL BE INSTALLED PARALLEL TO KERB LINES.

10. ALL SEWERS SHALL BE LAID FROM THE OUTFALL UPSTREAM. IT IS THE CONTRACTORS RESPONSIBILITY TO CHECK AND CONFIRM THE PRECISE SIZE AND DEPTH OF OUTFALLS PRIOR TO WORKS COMMENCING ON SITE.

LEGEND

21 PLOT NUMBER.
FFL 178.70 PROPOSED FINISHED FLOOR LEVELS
DEVELOPMENT BOUNDARY
HV ELECTRIC CABLE AND EASEMENT
PROPOSED ADOPTABLE SURFACE WATER SEWER EASEMENT
PROPOSED ADOPTABLE FOUL WATER SEWER EASEMENT
PROPOSED ADOPTABLE FOUL WATER SEWER AND MANHOLE
PROPOSED ADOPTABLE SURFACE WATER SEWER AND MANHOLE
PROPOSED PRIVATE FOUL WATER DRAIN AND MANHOLE
svp SOIL VENT PIPE.
- SVP TO INSPECTION CHAMBER CONNECTION PRINCIPLES - SVP'S SHALL ALWAYS CONNECT TO MAIN CHANNEL OR 45° INLET (NEVER TO 90° INLET)
- SVP TO ACCESS CHAMBER CONNECTION PRINCIPLES - SVP'S SHALL ALWAYS CONNECT TO MAIN CHANNEL (NEVER TO 45° INLET)
ss STUB STACK
BIG BACK INLET GULLY
PROPOSED PRIVATE SURFACE WATER DRAIN AND MANHOLE
PROPOSED PRIVATE SURFACE WATER RODDING EYE
RG ROAD GULLY (150ø OUTLET PIPE)
YG YARD GULLY (100ø OUTLET PIPE)
SU ACO 'M150D' HEAVY DUTY DRAINAGE CHANNEL WITH IN BUILT FALLS AND SUMP UNIT OUTFALL TO BS EN 124 D400 BOLT DOWN GRATING.
THRESHOLD DRAIN
PERMEABLE BLOCK PAVING - FREE DRAINING
PROPOSED CELLULAR SOAKAWAY

ADOPTABLE MANHOLE TYPE KEY

A PRECAST CONCRETE RING SECTION MANHOLE
B PRECAST CONCRETE RING SECTION MANHOLE
D ENGINEERING BRICKWORK MANHOLE
E PRECAST CONCRETE RING SECTION MANHOLE

PRIVATE MANHOLE TYPE KEY

L 450mmø POLYPROPYLENE NON ENTRY DEEP INSPECTION CHAMBER
M 450mmø POLYPROPYLENE INSPECTION CHAMBER
N 450mmø POLYPROPYLENE CATCHPIT. 500mm SUMP.
Q 450mmø POLYPROPYLENE BACKDROP CHAMBER.

NOTE:
MANHOLE COVER LEVELS GIVEN ON DRAWING ARE APPROXIMATE ONLY. MANHOLE COVERS SHALL BE SET TO SUIT THE LEVEL OF ADJACENT HARD FINISHED OR SOFT LANDSCAPE AREAS.

DRAINAGE NOTES

ACCESS CHAMBERS SHOWN THUS BUT NOT IDENTIFIED ON DRAWING ARE AS FOLLOWS:-

HOUSES - MINI ACCESS CHAMBERS (300ø) SET AT 750mm Min. BELOW FINISHED FLOOR LEVEL ON ADJACENT BUILDING.

IN INSTANCES WHERE THE ABOVE REQUIREMENTS RESULT IN CHAMBER DEPTH BEING IN EXCESS OF 750mm BELOW ADJACENT GROUND (i.e. ADJACENT TO RAISED Dpc) POLYPROPYLENE INSPECTION CHAMBER (TYPE M) SHALL BE SUBSTITUTED.

WHERE CHAMBERS ARE LOCATED WITHIN VEHICULAR AREAS THEN POLYPROPYLENE INSPECTION CHAMBER (TYPE M) SHALL BE USED.

PROPOSED S104 ADOPTABLE DRAINAGE PROPOSALS SHOWN ON THIS DRAWING ARE SUBJECT TO SEVERN TRENT WATER APPROVAL

PLOT SCALE = 1:200
0m 10m 20m

REV	DATE	DESCRIPTION	BY	CHK
T3	May 22	PARKING SPACES 1 AND 2 CHANGED FROM STANDARD TO FREE DRAINING PERMEABLE BLOCK PAVING. LAND DRAINAGE ADDED FOR SECTIONS OF HOUSES / GARAGES THAT RETAIN.	AJV	-
T2	Apr 22	FOUL WATER PUMP STATION AND ASSOCIATED DRAINAGE UPDATED TO WILLOWS DESIGNS (SUBJECT TO APPROVAL).	AJV	-
T1	Apr 22	SITE LAYOUT UPDATED TO ARCHITECTS SITE PLAN Drg Ref 3699.101 Rev V. DRAINAGE ENHANCED. DRAWING STATUS AMENDED.	-	-
P1	Jan 22	PLANNING ISSUE.	-	-

STATUS
TENDER

GADE HOMES

SITE
SIBFORD FERRIS
BANBURY

TITLE
Proposed Site Drainage Plan

SDP CONSULTING ENGINEERS
Head Office, Suite 3, Salar House, Campfield Road, St.Albans, Hertfordshire. AL1 5HT
Tel. 01727 844606. Fax. 01727 830771
Email. mail@sdpce.co.uk
Southern Office, 21a Bargates, Christchurch, Dorset. BH23 1QD.
Tel. 01727 844606. Fax. 01202 490601
Email. sdpsouth@sdpce.co.uk

SCALE AT A0	DRAWN	DATE
1:200	NJ	Jan 22
	CHECKED	PASSED

DRAWING NO.	REV.
E21-077-152	T3

Appendix 2
Surface Water Drainage Maintenance Identification Plan

High Rock

LAP and landscape to be completed by landscape architect.

STANDARD BLOCK PAVING

AFFORDABLE UNIT

TBS-E

TBS-W

S/S

NOTES

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SDP NO. E21-077

PLOT SCALE = 1:200

0m 10m 20m

REV	DATE	DESCRIPTION	BY	CHK
P1	May 22	PLANNING ISSUE.	–	–

STATUS: TENDER

GADE HOMES

SITE: SIBFORD FERRIS BANBURY

TITLE: Surface Water Drainage Maintenance Identification Plan

SDP CONSULTING ENGINEERS

Head Office, Suite 3, Salar House, Campfield Road, St Albans, Hertfordshire, AL1 5HT
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Email. mail@sdpce.co.uk

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Tel. 01727 844606. Fax. 01202 490601
Email. sdpsouth@sdpce.co.uk

SCALE AT A0	DRAWN	DATE
1:200	AJV	May 22
	CHECKED	PAGED

DRAWING NO. E21-077-152.1 REV. P1

Appendix 3
Surface Water Drainage Exceedance Plan

High Rock

LAP and landscape to be completed by landscape architect.

INFILTRATION BASIN

S/S

STANDARD BLOCK PAVING

AFFORDABLE UNIT

TBS-E

TBS-W

NOTES

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SDP NO. E21-077

KEY

SURFACE WATER OVERLAND FLOW ROUTE

PLOT SCALE = 1:250

0m 5m 10m 15m 20m 25m

REV	DATE	DESCRIPTION	BY	CHK
P1	May 22	PLANNING ISSUE.	--	--

STATUS: TENDER

GADE HOMES

SITE: SIBFORD FERRIS BANBURY

TITLE: Surface Water Drainage Exceedance Plan

SDP CONSULTING ENGINEERS

Head Office, Suite 3, Salar House, Campfield Road, St Albans, Hertfordshire. AL1 5HT
Tel. 01727 844606. Fax. 01727 830771
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Southern Office, 21a Burgates, Christchurch, Dorset. BH23 1QD.
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SCALE AT A0	DRAWN	DATE
1:250	AJV	May 22
	CHECKED	PAGE(S)
DRAWING NO.		REV.
E21-077 -152.2		P1

Appendix 4

Severn Trent Water SuDS Correspondence

Aaron Vaughan

From: Sewer.Adoptions [Sewer.Adoptions@severntrent.co.uk]
Sent: Friday, January 14, 2022 12:44 PM
To: aaronvaughan@sdpce.co.uk
Subject: [Probably Spam] RE: Land West of Hook Norton Road, Sibford Ferris, Oxfordshire - Adoptable Surface Water Drainage Principles
Attachments: Severn Trent SuDS Adoption Position Statement (May 2020).pdf

ST Classification: OFFICIAL PERSONAL

Aaron,

Severn Trent will adopt SUDs as per the principles of the DCG should they be designed inline with the DCG and CIRIA design manual. Severn Trent will only adopt the 'sewer' function of any SUDs feature and any other aspects of the SUDs feature will need to be adopted and maintained by another party.

The position statement here should clarify any questions.

Kind Regards

Richard Starritt
Design Manager
Developer Services
Mobile: 07850602411
richard.starritt@severntrent.co.uk

Postal Address
Developer Services
Severn Trent Centre
PO Box 5311
Coventry
CV3 9FL
Sat Nav CV1 2LZ

www.stwater.co.uk

From: NEW.CONNECTIONS@SEVERNTRENT.CO.UK <NEW.CONNECTIONS@SEVERNTRENT.CO.UK>
Sent: 14 January 2022 12:34
To: Sewer.Adoptions <Sewer.Adoptions@severntrent.co.uk>
Subject: FW: Land West of Hook Norton Road, Sibford Ferris, Oxfordshire - Adoptable Surface Water Drainage Principles

Hi

Please can you advise the customer

Thanks

Leigh

Original Text

From: Aaron Vaughan <aaronvaughan@sdpce.co.uk>
To: new.connections@severntrent.co.uk
CC: nigelgrayer@sdpce.co.uk <nigelgrayer@sdpce.co.uk>;nigeljones@sdpce.co.uk <nigeljones@sdpce.co.uk>
Sent: 14.01.22 12:06:20
Subject: Land West of Hook Norton Road, Sibford Ferris, Oxfordshire - Adoptable Surface Water Drainage Principles

E21.077

Good Morning,

We are in the process of preparing drainage proposals for the above.

Can you advise Severn Trent water would adopt an infiltration basin with no positive outfall in its entirety and undertake all future maintenance.

Regards,

Aaron Vaughan.
Civil Engineering Technician
SDP Consulting Engineers (South)
Address: 21a Bargates, Christchurch, Dorset, BH23 1QD
Office Switchboard: 01727 844606
Direct Dial: 01727 849516

www.sdpce.co.uk

Appendix 5

Severn Trent Water SuDS Adoption Position Statement (May 2020)

Sustainable Drainage (SuDS) Adoption

Position statement relating to the adoption of SuDS as sewers by Severn Trent from 1st April 2020

May 2020

WONDERFUL ON TAP

SEVERN TRENT

Overview

This document explains how recent legislative changes will enable water and sewerage companies to adopt sustainable drainage systems (SuDS) on new developments, as well as Severn Trent's (ST) approach to the adoption of pre-existing SuDS features. The objective being to raise awareness with local planning authorities and Lead Local Flood Authorities that from 1st April 2020 Severn Trent can adopt certain types of SuDS which meet the same function as an adoptable sewer.

Responsibilities

This change in SuDS adoption policy is not envisaged to change roles and responsibilities associated with SuDS provision. As per existing arrangements there are a range of local authorities and other stakeholders who have a key role to play in ensuring the adequacy of surface water drainage arrangements on new developments, namely:

Local Planning Authority (LPA): To ensure surface water drainage arrangements for new developments and redevelopments are in accordance with the National Planning Policy Framework (NPPF), local policies and any supplementary planning documents.

Lead Local Flood Authority (LLFA): Provides guidance to the LPA as a statutory consultee for all major developments. They may provide advice, where resources permit, for other developments. The LLFA will also regulate any work carried out in or in proximity to non-main rivers (ordinary watercourses) except in areas where there is an Internal Drainage Board (IDB).

Environment Agency (EA): A statutory consultee to the LPA in areas designated as critical drainage areas and sites within 20 metres of a main river. The EA also regulates any work carried out in or in proximity to a main river. The EA may also advise on any water quality requirements.

Highway Authority: Will assess, approve and adopt highway drainage features that only serve the highway. This may include SuDS features.

Sewerage Company: Responsible for assessing proposals for drainage systems on new and re-developments where the developer applies to have the sewers adopted. The only change being that from 1st April 2020 Severn Trent can adopt SuDS features that meet the same criteria as an adoptable sewer.

Background

Sewerage legislation restricts what assets a water and sewerage companies can adopt. This has excluded SuDS thus far. The mechanism for new sewerage system adoption is set out under Section 104 of the Water Industry Act 1991 (WIA91), whereby developers can voluntarily offer assets for adoption provided they meet industry approved standards. This approach was based on traditional pipe-based systems, with SuDS (e.g. detention basins, swales, ponds, infiltration systems) viewed as being outside the scope.

This interpretation was supported when the Flood and Water Management Act (FWMA) 2010 proposed that SuDS should be adopted by Sustainable Drainage Approval Bodies (SAB) in unitary/county councils. The relevant part of the FWMA (Schedule 3) was enacted in Wales on 7th January 2019 resulting in the adoption of newly built SuDS by SABs. In England, Schedule 3 was not enacted leaving developers with a requirement to construct SuDS for surface water flood risk mitigation as well as the burden of organising their future maintenance. Although some local councils have adopted SuDS, most are maintained by private management companies. This presents a risk to the long-term operation and maintenance of SuDS should said companies close and cease their SUDS management activities. If the operation of SuDS is compromised it could have an impact on the discharge of the upstream adopted sewers as well as wider flood risk.

Given the impasse regarding Schedule 3 and the desire from developers, Defra and Department for Communities and Local Government (now Housing, Communities and Local Government) to find a way forward with the adoption of SuDS, Water UK (who represent water and sewerage companies across the UK)

set up an industry working group to assess whether water and sewerage companies could play a greater role. This work concluded that while companies can only adopt "sewers", some sustainable drainage assets could be designed as a sewer, and adopted as such, provided they fulfil a sewerage function. However, work to revise sewer adoption guidance (which would have resulted in publication of 'Sewers for Adoption 8') was overtaken by a decision by Ofwat (the water and sewerage company economic regulator), to require water and sewerage companies to commit to a single, mandatory national approach to sewer adoption. Thus, the adoption of SuDS by a water and sewerage companies was included within these 'Code for Adoption Agreements'.

These new Codes were formally accepted by Ofwat in October 2019 with implementation planned from 1st April 2020. This document provides an overview of the policy change to the adoption of SuDS.

What has changed?

From 1st April 2020 Ofwat have agreed that certain types of SuDS features, principally those that meet the same criteria of an adoptable public sewer, can be adopted by a sewerage company under S104 of the WIA91.

It is important to note that developers do not have to offer SuDS for adoption to sewerage companies and can continue to arrange adoption with local authorities or private management companies should they so wish. Should the developer request SuDS adoption as public sewer asset they will need to provide evidence that, as a minimum, the SuDS design criteria meets the requirements set out by the relevant LLFA, Government National Non-statutory standards for SuDS and that the physical assets meet the requirements set out in the 'Design and Construction Guide' (the new name for 'Sewer for Adoption' which has recently been updated to include SuDS adoption). Further details can be found here >>> https://www.water.org.uk/wp-content/uploads/2019/11/SSG-App-C-Des-Con-Guide-v-1.0-251019.docx.

Design and Construction Guidance (formerly 'Sewers for Adoption')

To support the adoption of SuDS a Water UK working group (comprising sewerage companies, developers, Defra, LLFA representatives and others) have updated the "Sewers for Adoption - A Design and Construction Guide for Developers". This document now includes criteria for adopting SuDS and is specifically supported by the "CIRIA SuDS Manual". This document has now been renamed the "Design and Construction Guide" (DCG) and forms an integral part of the new 'Code for Adoption Agreements' agreed with Ofwat. The DCG is included as Appendix C to the full Adoption Code documentation and can be viewed here > https://www.water.org.uk/wp-content/uploads/2019/11/SSG-App-C-Des-Con-Guide-v-1.0-251019.docx

How will this affect the design of SuDS

This change should not significantly affect the design and construction of SuDS on new development. The only element that is changing is that Severn Trent will be able to adopt the maintenance of the sewer aspects of SuDS, should they be offered for adoption.

Since April 2015, the LLFA has undertaken a statutory consultee role to local planning authorities for major development of 10 dwellings or more; or equivalent non-residential and/or mixed development. The LLFAs role is vital to ensure that surface water disposal on new development is adequately assessed to verify sufficiency of drainage proposals and for Local Planning Authorities to make sure, through the use of planning conditions or planning obligations, that there are clear arrangements in place for future maintenance of sustainable drainage systems (SuDS) over the lifetime of the development. Now that a sewerage company can adopt SuDS as sewers this will help support the future maintenance arrangements.

Irrespective of who adopts SuDS on new development the role of the planning authority, supported by the LLFA will remain paramount and will not change. The only difference being that SuDS built in accordance with the 'Design and Construction Guide' will be adoptable by Severn Trent.

Why are only certain types of SuDS adoptable?

When it comes to the types of SuDS that can be adopted, a sewerage company is only permitted (under S104 of the WIA91) to adopt assets where the principle purpose is drainage of buildings and yards appurtenant to buildings in line with legislation. Flows originating from highways can also be considered for adoption but only where not the principle contributor to flows in the adoptable sewer. Sewerage companies will not be able to adopt SuDS associated principally with highways, forming part of a watercourse or forming part of the structure of a building as these fall outside the legal definition of an adoptable sewer. This Water UK publication summarises what SuDS can be adopted by sewerage companies >>> https://www.water.org.uk/wp-content/uploads/2020/01/Water-UK-SuDS-brochure.pdf.

Adoption Criteria

For a SuDS asset to be considered for adoption under Section 104 as a 'sewer', it must meet the same criteria as an adoptable sewer, namely:

- ✓ Be constructed principally for the drainage of buildings and yards appurtenant to buildings
- ✓ Have a defined channel (for example this would usually be top of bank for a SuDS feature comparable to the wall of a pipe in a conventional sewer)
- ✓ Convey and return flows to a sewer or to a surface water body or to groundwater
- ✓ Have an effective point of discharge, which must have lawful authority to discharge into a watercourse, or other water body, or onto/into land
- ✓ May allow for some groundwater infiltration into the system – provided that is not the designed purpose of the system

On the other hand, SuDS cannot be considered for adoption where:

- × They act as a watercourse as defined in law
- × Be built primarily for the drainage of surface water from streets (highway drainage) or for the drainage of land (land drainage)
- × Built to manage groundwater
- × Part of the structure of a building or yard (i.e. building drainage is not a sewer and so green roofs, water butts or rain planters are not adoptable)
- × They form an integral part of the structure of a street (e.g. permeable paving)
- × Forms part of a private curtilage (i.e. adoptable SuDS must be in public land).

Private drainage features such as water-butts, permeable paving, rainwater harvesting systems, and green or blue roofs are classed as building drainage, even where flows from more than one property are conveyed. These cannot qualify as public sewers and will remain the responsibility of the homeowners and/or landowners.

The adoptable parts of SuDS features are similar in most cases but will vary slightly depending on the type of feature being adopted. In most cases adoption will usually include:

- The sides and base of a channel, and any under-drainage including any liner, check dam, flow control or erosion control measure
- The whole area used for temporary ponding of water, the inlet and outlet structures and any engineered soil structures
- The banks of basins or ponds that are designed to retain water, the inlet and outlet structures, any storage below the ground surface, impermeable liners and under drains
- Underground features will usually include the whole structure up to the external face

- NOTE: Vegetation would only be considered for adoption where part of the 'sewer' function of the feature, for example to meet water quality discharge criteria.

Underground geo-cellular storage, under the new Design and Construction Guidance is considered a valid SuDS design. However, given its inability to enhance local biodiversity and amenity value and its tendency to maintenance issues the preference is to adopt above ground SuDS with below ground storage considered only as a last resort. Whilst geo-cellular storage is adoptable under DCG, its use may be discouraged by LLFAs and potentially be overruled by local planning policy due its lack of amenity/biodiversity benefits and the adopting authority's ability to ensure effective maintenance and drainage performance for the lifetime of the development.

Supporting multiple SuDS benefits

The underlying philosophy of SuDS is that they provide multiple benefits, principally

a) sustainable surface water management,
b) protect/enhance water quality,
c) improve biodiversity, and
d) provide amenity value.

For SuDS being considered for adoption as a 'sewer' the principal benefit is surface water management, and in certain circumstances water quality benefits. Severn Trent's sewer adoption responsibilities are therefore restricted to anything that affects a SuDS asset from fulfilling its duty to act as a 'sewer'. This will essentially be inspection/maintenance of inlet/outlets and periodical removal of silt to ensure the surface water management elements of the SuDS feature is maintained. As a good SuDS design will provide multiple benefits, usually located within a public space, it is intended that day to day activities such as grass cutting and litter picking would be the responsibility of the amenity provider (usually the landowner or their maintenance contractor).

It is recognised that many SuDS features will be in multi-use open space areas which deliver amenity and biodiversity benefits in addition to the flood attenuation function. However, as a water and sewerage company can only take on activities relating to a 'sewer', there will be a requirement to set out responsibilities in a formal arrangement. To avoid SuDS land ownership being transferred to sewerage company (which would have a knock on impact on land allocation for public open space and multiple use) it is intended that a developer will be required to enter into a 'Deed of Grant of Easement' should they want the sewerage company to adopt the 'sewer' functionality of a SuDS feature. This easement would set out that the sewerage company would be responsible for maintaining the SuDS functionality as a 'sewer' (for example: desilting, maintenance of flows, headwall maintenance), whilst management of amenity/biodiversity aspects outside the legal remit of the sewerage company would be the responsibility of the landowner (e.g. activities associated with maintaining an open space, such as grass cutting and litter picking, maintenance of landscaping features associated with amenity/biodiversity, such as planting). This approach differs little from the adoption of a traditional sewer, where the sewerage company adopts the physical structure of the pipe and conveyance of flows, whilst the land above it remains with the landowner but with an easement in place for future access.

In accordance with existing adoption process the developer is responsible for ensuring all legal requirements are in place prior to adoption including easement and/or discharge agreements.

Alignment with Planning Policy, Local SuDS Guidance and Right to Connect

As stated above, local planning policy and LLFA requirements will take precedence when determining sufficiency of compliance with SuDS hierarchy, discharge rates, design standards and allowance for climate change. The only requirement for SuDS to be considered for adoption by Severn Trent is that they are

designed and constructed in accordance with the 'Design and Construction Guide' (DCG). As the DCG is built on the principles of the 'CIRIA SuDS Manual (C753)' (www.ciria.org) and provided SuDS proposals align to the criteria of the planning/LLFA policy, we do not envisage conflict between LPA / LLFA requirement and the DCG as planning/LLFA policy takes precedence.

Where a surface water discharge to an existing public sewer is deemed necessary (in line with the SuDS hierarchy), Severn Trent will be able to work with the LLFA to provide advice on potential points of connection and assessment of available sewer capacity. It is worth pointing out that sufficiency of existing sewer capacity does not overrule any tighter discharge rate limitations that may be set by the LLFA. Conversely under Section 106 of the WIA91 a developer has the right to connect surface water to a public sewer, and where no separate foul and surface water sewers are present, a legitimate surface water connection can be made to the foul sewer. There is also no limitation on rates of discharge under Section 106 and whilst Schedule 3 of the FWMA proposed amendments to this right to connect to a foul sewer, a sewerage company has no authority to limit discharge rates. This is where we are reliant on local planning/LLFA policy to ensure surface water is managed sustainably in order to mitigate the risks associated with surface water connections to a foul sewer.

Where sewer capacity upgrades are required to accommodate discharge rates determined by the LLFA, these will be undertaken to align with phasing of a development. Where appropriate a drainage planning condition may be requested where provision of reinforcement work is expected to be more complex or extensive than normal.

Adoption of pre-existing SuDS assets?

It is not intended that pre-existing SuDS features will be retrospectively adopted by Severn Trent. The change in policy outlined in this document is applicable only to adoption of assets under Section 104 of the WIA91 for new development.

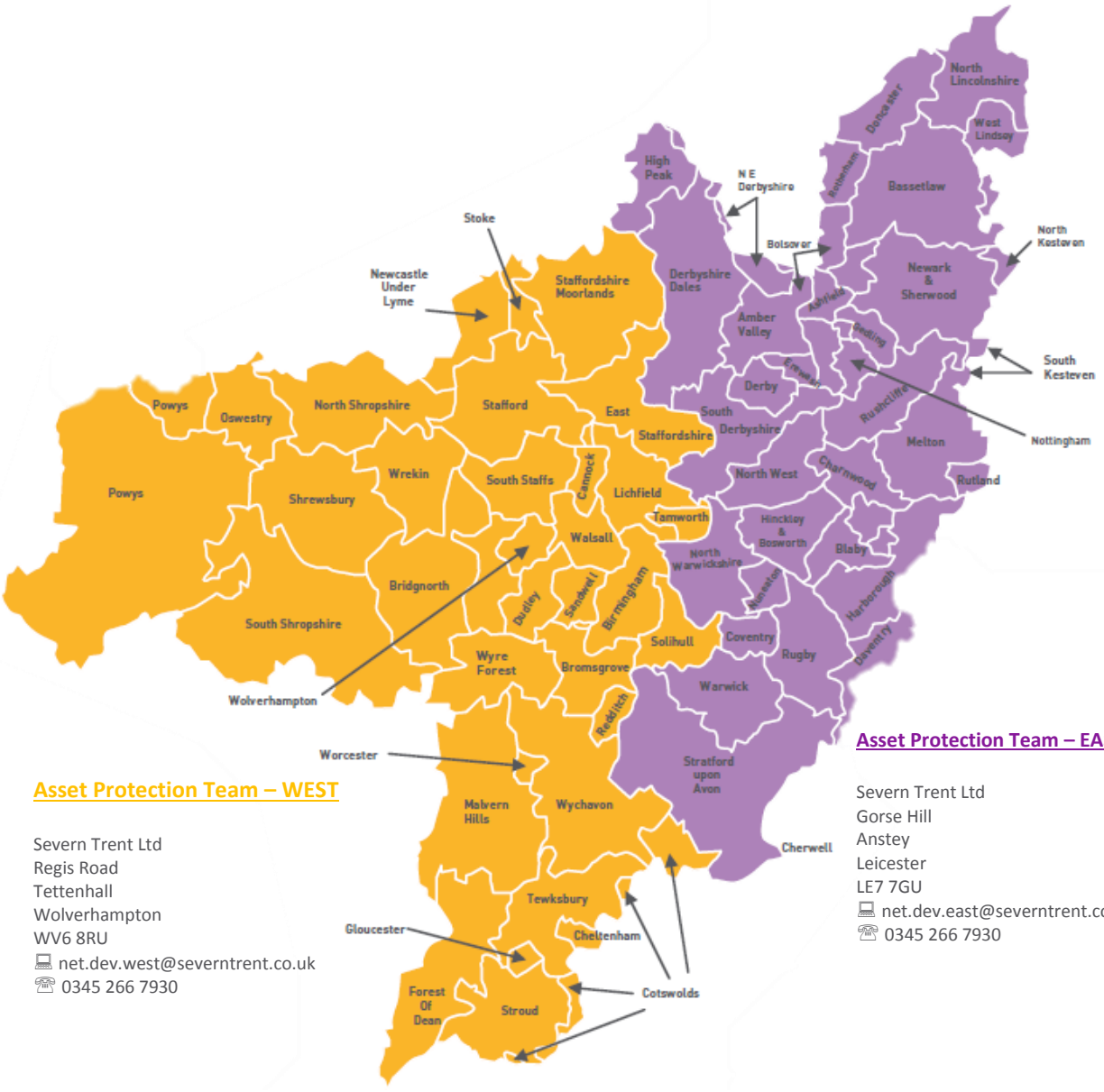
Contact details

If you would like to discuss SuDS adoption in more detail, our Asset Protection teams will be able to provide assistance to discuss specific applications in relation to developer enquiries / pre-planning matters where a SuDS feature will discharge to a public sewer; such as location of public sewers, possible points of connection and capacity within the existing sewerage network. When it comes to specific design details and adoption requirements these queries should be directed to our Developer Services team who agree the specific adoption design details with developers.

Asset Protection

Our Asset Protection teams are split into two regional teams, with our East office in Leicester covering Derbyshire, Leicestershire, Nottinghamshire, Warwickshire & Lincolnshire and our West office in Wolverhampton covering Staffordshire, Gloucestershire, Worcestershire, Birmingham, Black Country, Shropshire & Powys.

A map showing the Severn Trent region and District Council administrative areas is shown on the following page.



Asset Protection Team – WEST

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net.dev.west@severntrent.co.uk
0345 266 7930

Asset Protection Team – EAST

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Developer Services

Our Developer Services team can be contacted via the following:

new.connections@severntrent.co.uk

0800 707 6600

LLFA

In addition to contacting our Asset protection and Developer Services Teams, developers are strongly advised to make early contact with the relevant LLFA to discuss initial SuDS concept designs, and to agree surface water discharge points, flows and volumes. This is essential to ensure the LLFA can fulfil its statutory consultee role to local planning authorities to ensure that surface water disposal on new development is adequately assessed. The availability of a public sewerage network does not overrule the requirements of LLFA or compliance with local planning policy/planning conditions.

Frequently Asked Questions

Question	Response
When a SuDS feature has been designed to offer more than just flood attenuation (e.g. water quality), would Severn Trent consider adoption of these design features?	Yes, if the primary purpose is to provide a public sewer. However, some open SuDS features such as ponds may be taken over by a wildlife trust to encourage biodiversity, which is not within the remit of a sewer. It is only envisaged that Severn Trent would take over responsibility for water quality measures in very rare instances as part of a wider drainage strategy, as required to maintain appropriate sewer performance.
If a swale or other highway type SuDS is constructed to drain more than one house will this be adoptable.	The principle purpose of an adoptable SuDS feature is that the majority flow must be associated with the drainage of roofs and appertaining areas. A highway swale draining 2 houses does not qualify as an adoptable public sewer as its primary purpose is to drain the highway.
Will SuDS that rely solely on infiltration be considered for adoption?	This type of SuDS will be considered for adoption on condition that sufficient information demonstrating its ability to act as an effective long-term outlet is provided.
Is 'Sewers for Adoption' still being used?	'Sewers for Adoption' has been updated to include adoption of SuDS but is now called the Design and Construction Guidance. This guidance document is now freely available to view at > ***https://www.water.org.uk/policy-topics/managing-sewage-and-drainage/sustainable-drainage/***
Who is responsible for setting design parameters and discharge rates?	The 'Design and Construction Guidance' (Section C6, page 57) specifies that hydraulic design of SuDS should take account of the requirements set out by the local authority, including design rainfall rates, design flood protection frequencies and allowances, for climate change and urban creep. It goes on to say that the hydraulic design should be carried out in accordance with the CIRIA Report C753 'The SuDS Manual'. Compliance with the SuDS Manual is also a LLFA requirement. Where local policies are more stringent then local policy will take precedence over the DCG. Regarding sewer design, the hydraulic design of pipelines and other conduits should be designed in accordance with BS EN 16933-2. Typically, this will mean the piped sewerage system being designed to accommodate a 1 in 30 year design with SuDS designed to accommodate a 1 in 100 + climate change as required by the Gov'ts National Non-statutory SuDS Standards.
Can other parties still adopt SuDS?	Under Section 104 of WIA91 there is no requirement for a developer to offer SuDS (or sewers) for adoption. Hence a SuDS feature can still be adopted by a local authority or private management company. Provided the developer meets the requirements set out in DCG, SuDS features can be put forward for adoption but offering new assets for adoption is not currently a mandatory requirement.
Can land drainage be incorporated	Land drainage can be incorporated into the design of SuDS provided this is not the principle purpose and legal agreements are in place to ensure inflow is controlled and managed.
If existing SuDS are to be offered for retrospective adoption who is responsible for bringing them up to standard?	Severn Trent will consider existing SuDS for adoption only where they are brought up to the required standards by the existing owner. Where upstream sewers are not already adopted this will result in all upstream properties becoming liable to pay annual surface water disposal charges.

Appendix 6
SuDS Maintenance Inspection Checklist

C753 The SuDS Manual
Appendix B: Maintenance inspection checklist

E21-077- SuDS maintenance inspection checklist (Table B25)			
General information			
Site ID			
Site location and co-ordination (GIS if appropriate)			
Elements forming the SuDS scheme		Approved drawing reference(s)	
Inspection frequency		Approved specification reference	
Type of development		Specific purpose of any parts of the scheme (eg biodiversity, wildlife and visual aspects)	

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Inspection date								
	Details	Y/N	Action required	Date Completed	Details	Y/N	Action required	Date Completed
General inspection items								
Is there any evidence of erosion, channelling, ponding (where not desirable) or other poor hydraulic performance?			Inspect drainage features to ensure there are no blockages, check to ensure regular maintenance has been carried out, notify the developer and report findings.					
Is there any evidence of accidental spillages, oils, poor water quality, odours or nuisance insects?			Small spillages of known organic substances to be removed with soak mats. For serious spillages of unknown or toxic compounds contact the EA immediately					
Have any health and safety risks been identified to either the public or maintenance operatives?			Make area safe, provide developer with details of risks to allow for appropriate action to be taken.					
Is there any deterioration in the surface of permeable or porous surfaces (eg rutting, spreading of blocks or signs of ponding water)?			Check to ensure regular maintenance has been carried out, report findings to the developer for further investigation.					

C753 The SuDS Manual
Appendix B: Maintenance inspection checklist

Silt/sediment accumulation								
Is there any sediment accumulation at inlets (or other defined accumulation zones such as the surface of filter drains or infiltration basins and within proprietary devices)? If yes, state depth (mm) and extent. Is removal required? If yes, state waste disposal requirements and confirm that all waste management requirements have been complied with (consult environment regulator)			If yes remove silt -refer to SuDS maintenance plan for silt /sediment removal method for specific drainage feature					
Is surface clogging visible (potentially problematic where water has to soak into the underlying construction or ground (eg underdrained swale or infiltration basin)?			If yes carry out silt removal and decompaction by scarifying and spiking - refer to SuDS maintenance plan.					
Does permeable or porous surfacing require sweeping to remove silt?			If yes sweep the permeable paving and vacuum if necessary to remove silts.					
System blockages and litter build-up								
Is there evidence of litter accumulation in the system? If yes, is this a blockage risk?			Remove litter and build up and any debris from drainage feature and catchment areas. Ensure pipes are unrestricted and free flowing					
Is there any evidence of any other clogging or blockage of outlets or drainage paths?			If yes, check regular maintenance has been carried out and is up to date. Remove any visible blockages. Arrange for survey to be carried out if required.					
Vegetation								
Is the vegetation condition satisfactory (density, weed growth, coverage etc)? Check against approved planting regime)			Continue with scheduled maintenance					

Does any part of the system require weeding, pruning or mowing? (Check against maintenance frequency stated in approved design.)			If yes check maintenance plan for details and frequency of grass cutting and weeding requirements					
Is there any evidence of invasive species becoming established? If yes, state action required.			If yes inform developer to arrange further assessment					
Infrastructure								
Are any check dams or weirs in good condition?			N/A					
Is there evidence of any accidental damage to the system (eg wheel ruts?)			If yes report findings to the developer for further assessment					
Is there any evidence of cross connections or other unauthorised inflows?			If yes report findings to the developer for further assessment					
Is there any evidence of tampering with the flow controls?			N/A					
Are there any other matters that could affect the performance of the system in relation to the design objectives for hydraulic, water quality, biodiversity and visual aspects? (Specify)			If yes report findings to the developer for further assessment					
Other observations								
Information appended (eg photos)								
Suitability of current maintenance regime								
Continue as current increase maintenance Decrease maintenance.			If current maintenance regime is found unsuitable, provide information to the developer to enable maintenance plan to be reassessed.					
Next Inspection								
Proposed date for next inspection								