
## CIVIL / STRUCTURAL DESIGN RISK MANAGEMENT

Abnormal or unusual residual risks associated with the design outcomes shown on this drawing are:-

RSK LDE LTD has followed its Design Risk Management process for Hazard Elimination and Risk reduction in developing the designs shown on this drawing.
Abnormal or unusual residual risks may be shown above where it is considered that such risk may not normally be expected by competent persons engaged on work of this nature or type.

### Notes:

1. This drawing presents the Surface Water Drainage Strategy for the proposed development at LVS Hassocks, Sayers Common.
2. This drawing is to be read in conjunction with all relevant Engineer's and Architect's drawings and specifications.
3. This drawing is to be printed in COLOUR.
4. Figures quoted next to manholes are the chamber reference numbers, cover levels and invert levels. All levels are in m (AOD).
5. Topographical survey information taken from CD Surveys Ltd, drawing number WD/2402063, revision B, dated 10.10.2025.
6. Site Layout information taken from OSP Architecture, drawing number 24125, revision K, dated 09.12.2025.

| Rev. | Date | Amendment | Drawn | Chkd. | Appd. |
|---|---|---|---|---|---|
| P02 | 09.01.2026 | Layout updated to SK101 Rev N | LN | KM | RD |
| P01 | 16.12.2025 | Issued for Planning. | LN | KM | RD |

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Client
WATES DEVELOPMENTS LIMITED AND THE LICENSED TRADE CHARITY

Project Title
LVS HASSOCKS
SAYERS COMMON
WEST SUSSEX

Status
PLANNING

Drawing Title
SURFACE WATER DRAINAGE STRATEGY

| Drawn | Date | Checked | Date | Approved | Date |
|---|---|---|---|---|---|
| LN | 16.12.2025 | KM | 16.12.2025 | RD | 16.12.2025 |

| Scale | Orig Size | Dimensions |
|---|---|---|
| 1:1000 | A1 | m |

Project No.
890780

Drawing File
890780-RSK-ZZ-XX-DR-C-0001 - Surface Water Drainage Strategy.dwg

Drawing No.

| Project | Orig. | Vol./Sys. | Lev./Loc. | Type | Role | Draw. No. | Rev. |
|---|---|---|---|---|---|---|---|
| 890780 | RSK | ZZ | XX | DR | C | 0001 | P02 |

Scale 1:1000
0 10 20 30 40 50m

# APPENDIX J
# SUDS PRO-FORMA

# Surface Water Drainage Proforma

West Sussex County Council (WSCC) as Lead Local Flood Authority recommends this proforma is completed and submitted to support any planning application for a major development. The information contained in this form will be used by WSCC officers in their role as 'statutory consultee' on surface water drainage. The proforma should accompany the site-specific Flood Risk Assessment and Drainage Strategy submitted as part of the planning application.

## 1. Site Details

| No. | Requirement | Answer | Application Type |
|---|---|---|---|
| 1.1 | Address including postcode | LVS Hassocks, Sayers Common | Outline & Full |
| 1.2 | OS grid reference (easting and northing) | 526636, 118663 | Outline & Full |
| 1.3 | Planning application reference | TBC | Outline & Full |
| 1.4 | Total site area (hectares) | 14.48 | Outline & Full |
| 1.5 | Pre-development use | School & Greenfield | Outline & Full |
| 1.6 | Proposed design life | 100 years | Outline & Full |
| 1.7 | Have agreements in principle for discharge been provided (where applicable)? (YES/NO) | No | Outline & Full |
| 1.8 | Topographic Survey Plan showing existing site layout, site levels and drainage system | Yes, included in supporting docs | Outline & Full |

## 2. Discharge Hierarchy/Methods of Discharge[1]

| No. | Requirement | Answer | Application Type |
|---|---|---|---|
| 2.1 | Store rainwater for later use (reuse) (YES/NO) | No | Full |
| 2.2 | Infiltration techniques such as soakaways, permeable paving, etc (YES/NO) | No | Outline & Full |
| 2.3 | Hybrid (YES/NO) | No | Outline & Full |

[1] Runoff may be discharged via one or multiple methods.

| No. | Requirement | Answer | Application Type |
|---|---|---|---|
| 2.4 | Attenuation with restricted discharge to watercourse (YES/NO) | Yes | Outline & Full |
| 2.5 | Attenuation with restricted discharge to surface water sewer (YES/NO) | No | Outline & Full |
| 2.6 | Attenuation with restricted discharge to combined sewer (YES/NO) | No | Outline & Full |

## 3. Calculation Inputs

| No. | Requirement | Answer | Application Type |
|---|---|---|---|
| 3.1 | Area within site which is drained by SuDS[2] (hectares) | 4.3 | Outline & Full |
| 3.2 | Impermeable area drained pre-development[3] (hectares) | 0.65 | Outline & Full |
| 3.3 | Impermeable area drained post-development[3] (hectares) | 4.3 | Outline & Full |
| 3.4 | Urban Creep (hectares) | TBC | Outline & Full |
| 3.5 | Climate change factor applied (1 in 30 and 1 in 100) (percentage) | 40% & 45% | Outline & Full |

## 4. Infiltration Feasibility/Ground Investigations

| No. | Requirement | Answer | Application Type |
|---|---|---|---|
| 4.1 | Has winter groundwater monitoring and infiltration been undertaken? (YES/NO) | No infiltration testing undertaken | Outline & Full |
| 4.2 | Period of winter groundwater monitoring (from/to) | Groundwater monitoring undertaken | Outline & Full |
| 4.3 | Depth to highest recorded groundwater level (mAOD) | 0.25m | Full |
| 4.4 | Infiltration rate | No testing undertaken | Outline & Full |

[2] Impermeable area should be measured pre and post development. Impermeable surfaces include roofs, pavements, driveways and paths, where runoff is conveyed to the drainage system.

[3] 10% Urban Creep should be added to the volumes required for storage and not increase discharge rates.

| No. | Requirement | Answer | Application Type |
|---|---|---|---|
| 4.5 | Depth of infiltration structure (mAOD) | N/A | Full |
| 4.6 | Safety factor used for sizing infiltration storage | N/A | Outline & Full |

## 5. Calculation Outputs: Greenfield Runoff Rates[4]

| No. | Requirement | Answer | Application Type |
|---|---|---|---|
| 5.1 | Qbar (l/s) | 38.7 | Outline & Full |
| 5.2 | 1 in 1 year rainfall (l/s) | TBC | Outline & Full |
| 5.3 | 1 in 30 year rainfall (l/s) | TBC | Outline & Full |
| 5.4 | 1 in 100 year rainfall (l/s) | TBC | Outline & Full |

## 6. Calculation Outputs: Brownfield Runoff Rates (including Urban Creep) (if applicable)

| No. | Requirement | Answer | Application Type |
|---|---|---|---|
| 6.1 | 1 in 1 year rainfall (l/s) | TBC | Outline & Full |
| 6.2 | 1 in 30 year rainfall (l/s) | TBC | Outline & Full |
| 6.3 | 1 in 100 year rainfall (l/s) | TBC | Outline & Full |

## 7. Calculation Outputs: Volume Control/Infiltration Provision

| No. | Requirement | Answer | Application Type |
|---|---|---|---|
| 7.1 | Infiltration ($m^3$) | 0 | Outline & Full |
| 7.2 | Attenuation ($m^3$) | TBC | Outline & Full |
| 7.3 | Separate volume designated as long-term storage[5] ($m^3$) | TBC | Full |
| 7.4 | Total volume control (sum of inputs for 7.1 to 7.3) ($m^3$) | TBC | Full |

[4] Flows within long term storage areas should be infiltrated to the ground or discharged at low flow rate of maximum 2 litres per second per hectare (l/s/ha).

[5] In calculations and for the avoidance of doubt FEH shall be used FSR is not acceptable, and CV values must equal 1.

## 8. Calculation Outputs: Attenuation/Restricted Discharge

| No. | Requirement | | Answer | Application Type |
|---|---|---|---|---|
| 8.1 | Proposed discharge rate (critical storm) | 1 in 1 (100%) AEP (m/s) | TBC | Outline & Full |
| | | 1 in 30 (3.33%) AEP (m/s) | TBC | Outline & Full |
| | | 1 in 30 (3.33%) AEP plus climate change (m/s) | TBC | Outline & Full |
| | | 1 in 100 (1%) AEP (m/s) | TBC | Outline & Full |
| | | 1 in 100 (1%) AEP plus climate change (m/s) | TBC | Outline & Full |
| 8.2 | Calculations show critical storm durations (both by max height and max discharge) for 1 in 1, 1 in 30, 1 in 30 plus climate change, 1 in 100 and 1 in 100 year plus climate change allowance can be accommodated on site (YES/NO) | | TBC | Outline & Full |
| 8.3 | Has treatment of potential contaminants been considered? (YES/NO) | | Yes | Outline & Full |
| 8.4 | Demonstration of source control features with substantive evidence why these cannot be used if not (YES/NO) | | Yes, school detention basin | Full |
| 8.5 | If discharging into a watercourse, piped system or the sea, has the proposed drainage network been modelled against predicted top water levels for the 1 in 100 year storm event plus climate change allowance, within the existing system? (YES/NO) | | Yes | Full |

## 9. Other Supporting Details

| No. | Requirement | Answer | Application Type |
|---|---|---|---|
| 9.1 | Plan detailing location of groundwater monitoring and infiltration testing | TBC | Outline & Full |
| 9.2 | Detailed drainage design layout | 890780-RSK-ZZ-XX-DR-C-0001-P01 - Surface Water Drainage Strategy | Full |
| 9.3 | Maintenance strategy | 890780-R1(00) - Sayers Common SuDS Management Strategy | Full |

| No. | Requirement | Answer | Application Type |
|---|---|---|---|
| 9.4 | Detailed development layout | TBC | Full |
| 9.5 | Impermeable area plan | TBC | Full |
| 9.6 | Phasing plan? | TBC | Full |
| 9.7 | If ground levels are being raised over 300mm above existing levels and is unavoidable, have detailed plans been provided, together with drainage proposals, to address any potential drainage related issues? | TBC | Full |

The above form should be completed using evidence from information which should be appended to this form. The information being submitted should be proportionate to the site conditions, flood risks and magnitude of development. It should serve as a summary of the drainage proposals and should clearly show that the proposed discharge rate and volume as a result of development will not be increasing. Where there is an increase in discharge rate or volume, then the relevant section of this form must be completed with clear evidence demonstrating how the requirements will be met.

This form is completed using factual information and can be used as a summary of the surface water drainage strategy on this site.

| | |
|---|---|
| **Form completed by** | Kevin McEvaddy |
| **Qualification of person responsible for signing off this proforma** | B Eng Civil Engineering |
| **Company** | RSK Land & Development Engineering Ltd |
| **On behalf of (client's details)** | WATES DEVELOPMENTS LIMITED ANDTHE LICENSED TRADE CHARITY |
| **Date** | 16.12.2025 |

# APPENDIX K
# SUDS MAINTENANCE PLAN

## Wates Developments Limited and The Licensed Trade Charity (LTC)

# Sayers Common, West Sussex

## Sustainable Drainage System (SuDS) Management Strategy

Project No. 890780

890780-R1(00)

THE QUEEN'S AWARDS FOR ENTERPRISE: INTERNATIONAL TRADE 2016

MANAGEMENT SYSTEM CERTIFICATION DNV·GL ISO 9001 = ISO 14001 OHSAS 18001

INVESTORS IN PEOPLE

LDE CIVILS | STRUCTURES | HYDROLOGY an RSK company

**JANUARY 2026**

# RSK GENERAL NOTES

**Project No.:** 890780-R1(00)]
**Title:** SuDS Management Strategy
**Client:** Wates Developments Limited and The Licensed Trade Charity (LTC)
**Date:** 14th January 2026
**Office:** RSK Land and Development Ltd, 18 Frogmore Road, Hemel Hempstead, Herts, HP3 9RT Contact: Kevin McEvaddy
**Status:** Draft

| | | | |
|---|---|---|---|
| **Author** | [redacted] | [redacted] | [redacted] |
| | | | |
| [redacted] | | | |
| **Project manager** | | | |
| | | | |
| Date: | January 2026 | | |

| Issue No | Version/Details | Date issued | Author | Reviewed by | Approved by |
|---|---|---|---|---|---|
| | | | | | |
| | | | | | |
| | | | | | |

# CONTENTS

# 1 INTRODUCTION

This management strategy has been prepared by RSK Land and Development Engineering Ltd on behalf of Wates Developments Limited and The Licensed Trade Charity (LTC), to satisfy planning conditions related to Sayers Common, West Sussex (The Development).

The SUDS considered for the purposes of this statement, include drainage features that will be employed to reduce and manage surface water runoff from the development to a design return period of One hundred years plus climate change. This is required so that The Development will not increase the risk of flooding to the site and its environs. Such features include the following:

- Permeable paving;
- Infiltration/Detention Basins and Swales
- Filter strips and drains
- Rain Gardens

This document outlines the long-term maintenance of the proposed surface water system and will refer to the following documents, some of which provide further detail on the maintenance operations required:

- CIRIA Report C753, *'The SUDS Manual'*, 2015
- CIRIA Report C625, *'Model Agreements for Sustainable Water Management Systems'*, 2004; and
- Interpave, *'Permeable pavements: Guide to the Design, Construction and Maintenance of Concrete Block Permeable Pavements'*, ed. 4, 2006.

# 2 MAINTENANCE RESPONSIBILITIES

Responsibility for drainage within England and Wales rests with various bodies. For the Development, the drainage responsibilities will be divided between the following:

- **Private Landowner** – each Householder will be responsible for the maintenance of drainage features within individual property curtilages.
- **Communal Areas** - A Management company will be set up for the Development to maintain all permeable paving, stormwater attenuation tanks, detention basins, outfalls and any associated flow controls within communal areas. However, it should be noted that if, the Flood and Water Management Act 2010 is ever fully implemented this allows a surface water drainage system to be vested to the SuDS approving body (SAB) in this case West Sussex County Council. This would be reviewed at the time of any implementation of the act.
- **Adoptable Drainage –** All drainage within the adoptable areas will be offered for Section 104 Agreement adoption with the proposed Water Authority or NAV. All drainage will be designed and constructed to adoptable standards in accordance with Design and Construction Guidance (App C Sewerage Sector Guidance) and Water Authority or NAV requirements.
- **During Construction –** Until the drainage is approved and adopted by the adopting authorities, it is the responsibility of the groundworks contractor to protect the drainage system from construction run-off and effluent during the construction process. It will also be their responsibility to ensure that the drainage network is maintained, and functions as intended.

# 3 MAINTENANCE REGIME

As the maintenance of the communal SuDS features will be carried out via a Management Company, the form of agreement should include the required maintenance listed below. Should the maintenance be transferred at a later date to a public body, then the model agreement SuDS MA1 should be used, details of which can be found in the CIRIA guidance C625.

The following section describes the required maintenance for each feature in turn. The SuDS maintenance requirements listed below should be reviewed after the first 5 years, with a view to agreeing a new regime for the ongoing maintenance.

Notwithstanding the routine inspections and maintenance requirements, after severe storm events all features shall be inspected to clear debris and repair damaged structures or features. Records of the maintenance carried out shall be prepared by the Management Company.

### 3.2 Permeable Paving

| 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 of clogging or manufacturer's recommendations – pay particular attention to areas where water runs onto pervious surface from adjacent impermeable areas as this area is most likely to collect the most sediment |
| Occasional maintenance | Stabilise and mow contributing and adjacent areas | As required |
| | Removal of weeds or management using glyphospate applied directly into the weeds by an applicator rather than spraying | As required – once per year on less frequently used pavements |
| Remedial Actions | Remediate any landscaping which, through vegetation maintenance or soil slip, has been raised to within 50mm 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 48h after large storms in first six months |
| | Inspect silt accumulation rates and establish appropriate brushing frequencies | Annually |
| | Monitor inspection chambers | Annually |

## 3.2 Detention Basins

| Maintenance schedule | Required action | Typical frequency |
|---|---|---|
| Regular maintenance | Remove litter and debris | Monthly |
| | Cut grass – for spillways and access routes | Monthly (during growing season), as or required |
| | Cut grass – meadow grass in and around basin | Half yearly (spring – before nesting season, and autumn) |
| | Manage other vegetation and remove nuisance plants | Monthly (at start, then as required) |
| | Inspect inlets, outlets and overflows for blockages, and clear if required | Monthly |
| | Inspect banksides, structures, pipework etc for evidence of physical damage | Monthly |
| | Inspect inlets and facility surface for silt accumulation. Establish appropriate silt removal frequencies. | Monthly (for first year), the annually or as required |
| | Check any penstocks and other mechanical devices | Annually |
| | Tidy all dead growth before start of growing season | Annually |
| | Remove sediment from inlets, outlet and forebay | Annually (or as required) |
| | Manage wetland plants in outlet pool – where provided | Annually |
| Occasional Maintenance | Reseed areas of poor vegetation growth | As required |
| | Prune and trim any trees and remove cuttings | Every 2 years, or as required |
| | Remove sediment from inlets, outlets, forebay and main basin when required | Every 5 years, or as required (likely to be minimal requirements where effective upstream source control is provided) |
| Remedial actions | Repair erosion or other damage by reseeding or re turfing | As required |
| | Realignment of rip-rap | As required |
| | Repair/rehabilitation of inlets, outlets and overflows | As required |
| | Relevel uneven surfaces and reinstate design levels | As required |

## 3.3 Swales

| Maintenance schedule | Required action | Typical frequency |
|---|---|---|
| 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, outlets and overflows for blockages, and clear if required | Monthly |
| | Inspect infiltration surfaces for ponding, compaction, silt accumulation, record areas where water is ponding for >48 hours | Monthly or when required |
| | Inspect vegetation coverage | Monthly for 6 months, quarterly for 2 years, then half yearly |

| Maintenance schedule | Required action | Typical frequency |
|---|---|---|
| | Inspection 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 conditions, 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 reseeding | As required |
| | Relevel uneven surfaces and reinstate design level | As required |
| | Scarify and spike topsoil layer to improve infiltration performance, break up silt deposits and prevent compaction of 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 practices | As required |

## 3.4 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, the 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 from 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 |

## 3.5 Green Roof

| Maintenance schedule | Required action | Typical frequency |
|---|---|---|
| Regular inspections | Inspect all components including soil substrate, vegetation, drains, irrigation systems (if applicable), membranes and roof structure for proper operation, integrity of waterproofing and structural stability | Annually and after severe storms |
| | Inspect soil substrate for evidence of erosion channels and identify any sediment sources | Annually and after severe storms |
| | Inspect drain inlets to ensure unrestricted runoff from the drainage layer to the conveyance or roof drain system | Annually and after severe storms |

| Maintenance schedule | Required action | Typical frequency |
|---|---|---|
| | Inspect underside of roof for evidence of leakage | Annually and after severe storms |
| Regular maintenance | Remove debris and litter to prevent clogging of inlet drains and interference with plant growth | Six monthly and annually or as required |
| | During establishment (i.e. year one), replace dead plants as required | Monthly (but usually responsibility of manufacturer) |
| | Post establishment, replace dead plants as required (where > 5% of coverage) | Annually (in autumn) |
| | Remove fallen leaves and debris from deciduous plant foliage | Six monthly or as required |
| | Remove nuisance and invasive vegetation, including weeds | Six monthly or as required |
| | Mow grasses, prune shrubs and manage other planting as required- clippings should be removed and not allowed to accumulate | Six monthly or as required |
| Remedial actions | If erosion channels are evident, these should be stabilised with extra soil substrate similar to the original material, and sources of erosion damage should be identified and controlled | As required |
| | If drain inlet has settled, cracked or moved, investigate and repair as appropriate | As required |

## 3.6 Filter Strips

| Maintenance schedule | Required action | Typical frequency |
|---|---|---|
| Regular maintenance | Remove litter and debris | Monthly (or as required) |
| | Cut the 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 filter strip surface to identify evidence of erosion, poor vegetation growth, compaction, ponding, sedimentation and contamination (e.g. oils) | Monthly (at start then half yearly) |
| | Check flow spreader and filter strip surface for even gradients | Monthly (at start then half yearly) |
| | Inspect gravel flow spreader upstream of filter strip for clogging | Monthly (at start then half yearly) |
| | Inspect silt accumulation rates and establish appropriate removal frequencies | Monthly (at start then half yearly) |
| Occasional maintenance | Reseed areas of poor vegetation growth; alter plant types to better suit conditions, if required | As required or if bare soil is exposed over > 10 of the filter strip area. |
| Remedial actions | Repair erosion or other damage by re-turfing or reseeding | As required |
| | Relevel uneven surfaces and reinstate design levels | As required |
| | Scarify and spike topsoil layer to improve infiltration performance, break up silt 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 |

| Maintenance schedule | Required action | Typical frequency |
|---|---|---|
| | Remove and dispose of oils or petrol residues using safe standard practices | As required |

## 3.7 Filter Drains

| Maintenance schedule | Required action | Typical frequency |
|---|---|---|
| Regular maintenance | Remove litter (including leaf litter) and debris from filter drain surface, access chambers and pre-treatment devices | Monthly or as required |
| | Inspect filter drain surface, inlet/outlet pipework and control systems for blockages, clogging, standing water and structural damage | Monthly |
| | Inspect pre-treatment systems, inlets and perforated pipework for silt accumulation, and establish appropriate silt removal frequencies | Six monthly |
| | Remove sediment from pre-treatment devices | Six monthly or as required |
| Occasional maintenance | Remove or control tree roots where they are encroaching the sides of the filter drain, using recommended methods (e.g. NJUG, 2007 or BS 398:2010 | As required |
| | At locations with high pollution loads, remove surface geotextile and replace, and wash or replace overlying filter medium | Five yearly or as required |
| | Clear, perforated pipework of blockages | As required |

## 3.8 Bioretention Systems / Rain Gardens

| Maintenance schedule | Required action | Typical frequency |
|---|---|---|
| Regular inspections | Inspect infiltration surfaces for silting and ponding, record de-watering time of the facility and assess standing water levels in underdrain (if appropriate) to determine if maintenance is necessary | Quarterly |
| | Check operation of underdrains by inspection of flows are rain | Annually |
| | Assess plants for disease infection, poor growth, invasive species etc and replace as necessary | Quarterly |
| | Inspect inlets and outlets for blockage | Quarterly |
| Regular maintenance | Remove litter and surface debris and weeds | Quarterly |
| | Replace any plants, to maintain planting density | As required |
| | Remove sediment, litter and debris build up from around inlets or from forebays | Quarterly to biannually |
| Occasional maintenance | Infill any holes or scour in the filter medium, improve erosion protection if required | As required |
| | Repair minor accumulations of silt by raking away surface mulch, scarifying surface of medium and replacing mulch | As required |
| Remedial actions | Remove and replace filter medium and vegetation above | As required but likely to be >20 years |

## 3.9 Operation and Maintenance Requirements for Trees

| Maintenance schedule | Required action | Typical frequency |
|---|---|---|
| Regular maintenance | Remove litter and debris | Monthly or as required |
| | Manage other vegetation and remove nuisance plants | Monthly |
| | Inspect inlets and outlets | Monthly |
| Occasional maintenance | Check tree health and manage tree appropriately | Annually |
| | Remove silt build-up from inlets and surface and replace mulch as necessary | Annually |
| | Water | As required |
| Monitoring | Inspect silt accumulation rates and establish appropriate removal frequencies | Half yearly |

## 3.10 Operation and Maintenance requirements for Rainwater Harvesting Systems

| Maintenance schedule | Required action | Typical frequency |
|---|---|---|
| Regular maintenance | Inspection of the tank for debris and sediment build-up, inlets/outlets/withdrawal 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 |

## 3.11 Operation and maintenance requirements for ponds and wetlands

| Maintenance schedule | Required action | Typical frequency |
|---|---|---|
| Regular Maintenance | Remove litter and debris | Monthly (or as required) |
| | Cut the grass – public areas | Monthly (during growing season) |
| | Cut the meadow grass | Half yearly (spring, before nesting season, autumn) |
| | Inspect marginal and bankside vegetation and remove nuisance plants (for first 3 years) | Monthly (at start, then as required) |
| | Inspect inlets, outlets, banksides, structures, pipework etc for evidence of blockage and/or physical damage | Monthly |
| | Inspect water body for signs of poor water quality | Monthly (May-October) |
| | Inspect silt accumulation rates in any forebay and in main body of the pond and establish appropriate removal frequencies; undertake contamination testing once build-up has occurred to inform management and disposal options | Half yearly |
| | Check any mechanical devices, e.g. penstocks | Half yearly |

| Maintenance schedule | Required action | Typical frequency |
|---|---|---|
| | Hand cut submerged and emergent aquatic plants (at minimum of 0.1m above pond base; include max 25% of pond surface) | Annually |
| | Remove 25% of bank vegetation from water's edge to minimum of 1m above water level | Annually |
| | Tidy all dead growth (scrub clearance) before start of growing season (Note: tree maintenance is usually part of overall landscape management contract) | Annually |
| | Remove sediment from any forebay | Every 1-5 years, or as required |
| | Remove sediment and planting from one quadrant of the main body of ponds without sediment forebays | Every 5 years, or as required |
| Occasional maintenance | Remove sediment from the main body of big ponds when pool volume is reduced by 20% | With effective pre-treatment, this will only be required rarely, e.g. every 25-50 years |
| Remedial actions | Repair erosion or other damage | As required |
| | Replant where necessary | As required |
| | Aerate pond when signs of eutrophication are detected | As required |
| | Realign rip-rap or repair other damage | As required |
| | Repair/rehabilitate inlets, outlets and overflows | As required |

## 3.12 Operation and maintenance requirements for watercourse

| Maintenance schedule | Required action | Typical frequency |
|---|---|---|
| Regular Maintenance | Remove litter and debris | Monthly (or as required) |
| | Cut the grass – public areas | Monthly (during growing season) |
| | Cut the meadow grass | Half yearly (spring, before nesting season, autumn) |
| | Inspect marginal and bankside vegetation and remove nuisance plants (for first 3 years) | Monthly (at start, then as required) |
| | Inspect inlets, outlets, banksides, structures, pipework etc for evidence of blockage and/or physical damage | Monthly |
| | Inspect water body for signs of poor water quality | Monthly (May-October) |
| | Inspect silt accumulation rates in any forebay and in main body of the watercourse and establish appropriate removal frequencies; undertake contamination testing once build-up has occurred to inform management and disposal options | Half yearly |

| Maintenance schedule | Required action | Typical frequency |
|---|---|---|
| | Clear and maintain GRIPS to watercourse to maintain overland flow routes | Annually |
| | Hand cut submerged and emergent aquatic plants (at minimum of 0.1m above pond base; include max 25% of pond surface) | Annually |
| | Remove 25% of bank vegetation from water's edge to minimum of 1m above water level | Annually |
| | Tidy all dead growth (scrub clearance) before start of growing season (Note: tree maintenance is usually part of overall landscape management contract) | Annually |
| | Remove sediment from any forebay | Every 1-5 years, or as required |
| | Remove sediment and planting from one quadrant of the main body of ponds without sediment forebays | Every 5 years, or as required |
| Occasional maintenance | Remove sediment from the main body of big ponds when pool volume is reduced by 20% | With effective pre-treatment, this will only be required rarely, e.g. every 25-50 years |
| Remedial actions | Repair erosion or other damage | As required |
| | Replant where necessary | As required |
| | Aerate watercourse when signs of eutrophication are detected | As required |
| | Realign rip-rap or repair other damage | As required |
| | Repair/rehabilitate inlets, outlets and overflows | As required |

## 3.13 Catchpit Manhole

| Maintenance schedule | Required action | Typical frequency |
|---|---|---|
| Occasional maintenance | Remove litter, debris, and detritus that enters the drainage system | Annually, or as required |
| | Inspect inlets, outlets and overflows for blockages, and clear if required | Annually, or as required |
| | Inspection inlets and sump for silt accumulation, establish appropriate silt removal frequencies | Annually, or as required |
| Remedial actions | Remove and dispose of silt | Annually, or as required |
| | Remove and dispose of oils or petrol residues using safe standard practices | Annually, or as required |

## 3.14 Sewer Mains

| Maintenance schedule | Required action | Typical frequency |
|---|---|---|
| Monitoring & Occasional maintenance | CCTV Survey pipe network to check system is functioning correctly and that there are no cracks in the pipework. | Every 5 years |
| | Removal of blockages reported in the pipe network will also require a full CCTV | As required |

| Maintenance schedule | Required action | Typical frequency |
|---|---|---|
| | Survey of the pipe network afterwards to confirm there are not any other blockages. | |

## 3.15 Gullies & Linear Drainage Channels

| Maintenance schedule | Required action | Typical frequency |
|---|---|---|
| Regular inspections | Remove litter, debris, and detritus that enters the gullies or linear drainage channels | Six monthly, or as required |
| | Inspect inlets and outlets for blockages, and clear if required | Six monthly, or as required |
| | Inspection of sump for silt accumulation, establish appropriate silt removal frequencies | Six monthly, or as required |
| Remedial actions | Remove and dispose of silt | Six monthly or as required |
| | Remove and dispose of oils or petrol residues using safe standard practices | Six monthly or as required |

## 3.16 Headwall

| Maintenance schedule | Required action | Typical frequency |
|---|---|---|
| Occasional Monitoring & Maintenance | Check for cracking or other damage to headwall structure | Annually or as required |
| | Check for erosion of the spillway | Annually or as required |
| Remedial actions | Repair cracking or other damage to headwall structure | As required |
| | Repair excessive erosion of spillway if it detrimentally affects | As required |

## 3.17 Hydrobrake Manhole

| Maintenance schedule | Required action | Typical frequency |
|---|---|---|
| Occasional maintenance | Remove litter, debris, and detritus that enters the drainage system | Six monthly, or as required |
| | Inspect inlets, outlets and overflows for blockages, and clear if required | Six monthly, or as required |
| | Inspection Hydrobrake bypass door, open and close door, greasing of door to prevent mechanism from seizing | Six monthly, or as required |
| Remedial actions | Replace components of Hydrobrake if faulty in line with manufacturers guidance. | As required |
| | Replace entire Hydrobrake if components cannot be replaced in accordance with manufacturers guidance. | As required |

# APPENDIX A
# INSPECTION CHECKLIST

| General information | | | |
|---|---|---|---|
| Site ID | | | |
| Site location and co-ordinates (GIS if appropriate) | | | |
| Elements forming the SuDS scheme | | Approved drawing reference | |
| Inspection frequency | | Approved specification reference | |
| Type of development | | Specific purpose of any parts of the scheme (e.g. biodiversity, wildlife and visual aspects) | |

| 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? | | | | | | | | |
| Is there any evidence of accidental spillages, oils, poor water quality, odours or nuisance insects? | | | | | | | | |
| Have any health and safety risks been identified to either the public or maintenance operatives? | | | | | | | | |
| **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)?<br>If yes, state depth (mm) and extent.<br>Is removal required?<br>If yes, state waste disposal requirements and confirm that all waste management requirements have been complied with (consult environmental regulator) | | | | | | | | |
| Is surface clogging visible potentially problematic where water has to soak into the underlying construction or ground (e.g. underdrained swale or infiltration basin)? | | | | | | | | |

| Inspection Date | Details | Y/ N | Action required | Date completed | Details | Y/ N | Action required | Date completed |
|---|---|---|---|---|---|---|---|---|
| Does permeable or porous surfacing require sweeping to remove silt? | | | | | | | | |
| Is there evidence of litter accumulation in the system? If yes, is this a blockage risk? | | | | | | | | |
| Is there any evidence of any other clogging or blockage of outlets or drainage paths? | | | | | | | | |
| Is the vegetation condition satisfactory (density, weed growth, coverage etc)? (check against approved planting regime) | | | | | | | | |
| Does any part of the system require weeding, pruning or mowing? (check against maintenance frequency state in approved design). | | | | | | | | |
| Is there any evidence of invasive species becoming established? If yes, state action required | | | | | | | | |
| Are any check dams or weirs in good condition? | | | | | | | | |
| Is there any evidence of any accidental damage to the system (e.g. wheel ruts?) | | | | | | | | |
| Is there any evidence of cross connections or other unauthorised inflows? | | | | | | | | |
| Is there any evidence of tampering with the flow control? | | | | | | | | |
| Are there any other matters that could affect the performance of the | | | | | | | | |

| Inspection Date | Details | Y/ N | Action required | Date completed | Details | Y/ N | Action required | Date completed |
|---|---|---|---|---|---|---|---|---|
| system in relation to the design objectives for hydraulic, water quality, biodiversity and visual aspects? | | | | | | | | |
| **Other observations** | | | | | | | | |
| Information appended (e.g. photos) | | | | | | | | |
| Continue as current<br>Increase maintenance<br>Decrease maintenance | | | | | | | | |
| Proposed date for next inspection | | | | | | | | |