



Evans & Langford LLP

- ♦ Structural & Civil Engineers
- ♦ Land & Building Surveyors
- ♦ Geo-Environmental Engineers
- ♦ Project Managers
- ♦ CDM Consultants
- ♦ Contract Administrators

GTR Fontwell

SUDs Maintenance Schedule

15104
April 2021



ISO 9001
Cert No GB01604

ISO 14001
Cert No GB01604

ISO 45001
Cert No GB01604



www.evanslangford.co.uk

Partners: S G Robertson / C P Shackleford
Associate: D P McLeish

Evans & Langford LLP, 91 King Street, Maidstone, Kent ME14 1BG

Evans & Langford LLP is a limited liability partnership, registered in England and Wales, partnership number OC306132

15104 GTR Fontwell SUDs Maintenance Schedule

<u>CONTENTS</u>	<u>PAGE No.</u>
Title page	(i)
Contents page	(ii)
References	(iii)
Strategy	1
Design Criteria	1
Maintenance	
Catchpits/Soakaway Chambers	1
Soakaway Crates	1
Swales, French Drains & Attenuation Basins	2
Maintenance Schedule	2
Conclusion	2

APPENDICES

1. Maintenance Schedules

REFERENCES

Ref.	Title
A	Non Statutory Technical Standards for Sustainable Drainage Systems, LASOO
B	The SUDS Manual (C753), CIRIA publication
C	Sustainable Drainage System (C609), CIRIA publication
	HR Wallingford, UK Sustainable Drainage Guidance & Tools [Online] Available at: www.uksuds.com

STRATEGY

The site contains a single drainage catchment. This takes roof water, carparking and access roads from this site, which is attenuated in a basin and then discharges to a crate soakaway. All drives are constructed using permeable paving with a piped outfall from the permeable sub-base. The water is cleansed within the attenuation basin as the discharge will flow through the vegetation between the inlet and outlet headwalls which will trap pollutants.

The drainage system has been designed to accommodate the 100yr + 40% climate change storm.

The site is occupied by one tenant who will be responsible for the operation and maintenance of the SUDs drainage system.

DESIGN CRITERIA

1. The approved design has been based upon the following publications and computer software.
 - a) Non Statutory Technical Standards for Sustainable Drainage Systems (Ref A)
 - b) The SUDS Manual C753 by CIRIA (Ref B)
 - c) Sustainable Drainage Systems C609 by CIRIA (Ref C)
 - d) MicroDrainage WinDes software

MAINTENANCE

2. Maintenance needs will be dependent on the frequency of inspections. Regular inspections will identify problems at an early stage and enable minor defects to be rectified before any major deterioration occurs. Maintenance can fall into two categories:

Routine Maintenance

Periodic Maintenance

Catchpits/Soakaway Chambers

3. The cleaning out/removal of silt and debris from the catchpit and/or soakaway chambers on a monthly basis during the construction phase, and annually, after large storms or as required thereafter.
4. Inspection and monitoring of inlets, outlets and overflows for blockages on a monthly basis during the construction phase, and annually, after large storms or as required thereafter.

Soakaway Crates

5. The cleaning out/removal of silt and debris from the catchpit and/or silt chambers on a monthly basis during the construction phase, and annually, after large storms or as required thereafter.
6. Inspection and monitoring of inlets, outlets and overflows for blockages on a monthly basis during the construction phase, and annually, after large storms or as required thereafter.

Swales, French Drains & Attenuation Basin

7. The cleaning out/removal of litter & debris on a monthly basis or as required. Wild flower/grass cutting is required annually where required and the removal of cuttings is essential as if the soil becomes too rich all that will grow is grass.
8. Re-seeding & planting of areas of poor vegetation growth on an annual basis. Remedial action to be taken of erosion or build-up of sediment as required.
9. Where shingle/gravel surfacing is present, raking and/or topping up is required quarterly.
10. Inspection/monitoring of inlets, outlets, overflows for blockages on a monthly basis.

Maintenance Schedule

11. A suggested Maintenance Schedule has been prepared for the future Stakeholders and it will be their responsibility to implement a suitable maintenance regime. A copy of this Maintenance Schedule is provided at Appendix 1.

CONCLUSION

8. The array of on-site storage facilities have been designed to accommodate the run-off from the proposed development for all storms up to and including the 1 in 100 year + 40% climate change event.

By using a combination of the 'Best Management Practices' for this development it is believed that the design approach meets the objective of the SUDS concept and the requirements of the EA. The benefits can be listed as:-

- Reduction in the quantity of run-off to, and the protection of groundwater.
- Protection of existing and proposed properties from flooding.
- Improved ecological environment.

GTR FONTWELL

APPENDIX 1

MAINTENANCE SCHEDULE

GTR FONTWELL**SUSTAINABLE URBAN DRAINAGE SYSTEMS MAINTENANCE SCHEDULE****AIM**

1. The aim of the Maintenance Schedule is to set out the minimum requirements to maintain the Sustainable Urban Drainage System (SUDS) provided on this development for the treatment / retention of surface water run-off.

OBJECTIVE

2. The objective is to ensure that through planned maintenance and regular inspections the SUDS management train will continue to function for the purpose it was intended.

INSPECTIONS

3. Maintenance needs will be dependent on the frequency of inspections. Regular inspections will identify problems at an early stage and enable minor defects to be rectified before any major deterioration occurs.

MAINTENANCE

4. Initial Maintenance Schedules have been prepared and should be developed during the design phase and adjustments made thereafter to suit specific site requirements.
 - Table 1 – Catchpits/Soakaway Chambers
 - Table 2 - Soakaway Crates
 - Table 3 - Swales, French Drains & Attenuation Basin

Table 1 – Catchpits/Soakaway Chambers Maintenance Schedule

Maintenance Schedule	Required Action	Frequency
Regular Maintenance	Silt, litter and debris removal from catchpits and soakaway chambers.	Three monthly initially and then as required.
	Silt and debris removal from gullies.	Three monthly initially and then as required.
	Oils removed from catchpits and gullies.	Immediately following spillages or as required.
Monitoring	Open and inspect catchpits and soakaway chambers.	Monthly/after large storms.

Table 2 – Soakaway Crate Maintenance Schedule

Maintenance Schedule	Required Action	Frequency
Regular Maintenance	Inspect and identify any areas that are not operating correctly. If required, take remedial action.	Three monthly initially, then as required.
	Debris removal from catchment surface (where this may cause risk to performance).	Monthly.
	Remove sediment from pre-treatment structures (catchpit/silt traps)	Quarterly or as required.
Remedial Action	Repair of inlets, outlet, overflows and vents.	As required.
Monitoring	Inspect and check all inlets, outlet, overflows and vents to ensure they are in good condition and operating as designed.	Annually.
	Survey inside of tank for sediment build-up, and remove if necessary.	Annually, after large storms or as required.

Table 3 – Swales, French Drains & Attenuation Basin Management Schedule

Maintenance Schedule	Required Action	Frequency
Regular Maintenance	Litter and debris removal. Free movement of flap valves.	Monthly (or as required)
	Meadow grass mixture in basins and swales	Twice a year
	Manage other vegetation and remove nuisance plants.	Monthly (at start, then as required)
Occasional maintenance	Check for poor vegetation growth due to lack of sunlight or dropping of leaf litter, and cut back adjacent vegetation where possible.	Annually
	Re-seed areas of poor vegetation growth.	Annually
Remedial Actions	Repair erosion or other damage by re-turfing / reseeding, or raking and/or topping up of shingle/gravel surfacing if present.	As required
	Re-level uneven surfaces and reinstate design levels.	As required
	Remove build-up of silt/sediment.	As required
	Remove and dispose of oils or petrol residues using safe standard practices.	As required
Monitoring	Inspect inlets, outlets, control chambers and overflows for blockages, and clear if required.	Monthly
	Inspect surfaces for ponding, silt accumulation. Record areas where water is ponding for >48 hrs.	Monthly, or when required, Half yearly
	Establish appropriate silt removal frequencies	