

Surface Water Drainage Maintenance & Management Plan

Former Bartons Infant School, North Bersted
Bognor Regis PO22 9BD

Client

Gravity Consulting Engineers
Capitol Building
Olbury
Berkshire RG12 8FZ
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Consulting Engineers

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1.0 INTRODUCTION

This Plan contains full details of the maintenance and management of the surface water drainage system serving the proposed development at the former Bartons Infant School, North Bersted, Bognor Regis PO22 9BD. The proposal is to build 20No. new dwelling houses and associated car parking, cycle parking and landscaping.

This Plan assists in the discharge of Planning Condition #14 of Adur District Council Planning Permission Ref. BE/40/22/PL, which read as follows:

14. Drainage Maintenance and Management

Development shall not commence until full details of the maintenance and management of the surface water drainage system is set out in a site-specific maintenance manual and submitted to, and approved in writing, by the Local Planning Authority. The manual is to include details of financial management and arrangements for the replacement of major components at the end of the manufacturer's recommended design life. Upon completed construction of the surface water drainage system, the owner or management company shall strictly adhere to and implement the recommendations contained within the manual.

Reason: Reason: To ensure that the proposed development is satisfactorily drained in accordance with policies W DM1, W DM2 and W DM3 of the Arun Local Plan. It is considered necessary for this to be a pre-commencement condition to ensure that the future maintenance and funding arrangements for the surface water disposal scheme are agreed before construction commences.

No responsibility is accepted to any third party for all or part of this study in connection with this or any other development.

2.0 MAINTENANCE RESPONSIBILITIES

It is the responsibility of ICOSA and WSCC Highways to ensure the Surface Water Drainage infrastructure is maintained in accordance with this Surface Water Drainage Maintenance & Management Plan.

3.0 MANAGEMENT OF SPILLAGE

The Environment Agency would prefer all spillages on any highway to be contained to prevent any downstream contamination. However, this cannot always be achieved, depending on the nature of the spillage. In all circumstances involving the spillage of substances on the highway it is important that the Environment Agency are notified as soon as possible so that they can provide advice and take appropriate action.

Prompt action following a spillage can prevent or reduce its effects, whilst inappropriate action may cause or worsen the pollution effects. In the design of the drainage on this site, measures have been put in place to prevent any pollution entering the groundwater. These comprise permeable paving, swales with filter strips and proprietary treatment systems.

In the event of a spillage on site it is the responsibility of the adopters of the drainage system to clear up any spillage before it enters the drainage system. The primary method of dealing with any spillage of Hydrocarbons should be to use sand to soak up the leak and prevent any Hydrocarbons entering the drainage

system. Once sand has been contaminated it should not be washed into the drainage system but disposed of by a Licensed Contractor.

In the event of a spillage the Environment Agency should be contacted to notify the event and seek advice. The Environment Agency Incident Hotline is **0800 80 70 60 (Freephone 24hrs)**.

4.0 SURFACE WATER DRAINAGE GENERAL

Pipes, Chambers, Sewers, Gullies and Silt Pits

Inspection Frequency: Annually.

Maintenance Requirements: Carry out visual check of all inspection chambers, manholes and the outfall to ensure all pipes are clear and free flowing. If not, clean out by rodding or jetting. Check outfalls and inlets of infiltration blankets to ensure pipes are clear and free flowing.

The following maintenance requirements for all SUDS features below are taken from CIRIA C753 (The SuDS Manual).

Regular inspection and maintenance is required to ensure the effective long-term operation of private drains, manholes, gullies & silt pits.

Prior to construction: a CCTV survey to be carried out on all existing sewer systems (not being demolished as part of the scheme) and any downstream receiving systems, prior to connection with adopted sewers.

Post Completion: a CCTV survey to be carried out on all new and retained existing drainage systems and any downstream receiving systems, prior to connection with adopted sewers.

The report will be used to prove the integrity of the as-built drainage system prior to issue of practical completion certificate and will be handed over to the adopters of the system for future reference.

Maintenance Schedule	Action	Frequency
Regular Maintenance	Inspect and identify any areas that are not operating correctly. If required, take remedial action. Especially outfall manhole to pond with hydrobrake.	6 Monthly intervals.
	Common yard & car park & other hard standing areas to be swept clear of debris, to prevent possibility of blockages to the receiving drainage systems.	Weekly.
	Debris removal from gullies & silt pits, channel drains (where may	6 Monthly intervals, after autumn leaf fall, or as required based on specific

	cause risks to performance). Lift and inspect receiving manholes to check for any blockages.	observations. Monthly.
Remedial Actions	Repair any damaged gully gratings or silt pit covers. Replace / fix any loose channel drain covers.	As required. As required.
Monitoring	Carry out full CCTV survey to confirm ongoing integrity of all drains. Inspect all gullies and silt pits & drainage channels during the survey.	10-yearly intervals.

In all instances, inspection and cleaning should be carried out only by a specialist contractor and in accordance with the guidelines given in 'Safe Working in Sewers and at Sewage Works' published by National Joint Health and Safety Committee for the Water Services.

5.0 SDS ATTENUATION TANK

Maintenance Schedule	Action	Frequency
Regular Maintenance	Inspect and identify any areas that are not operating correctly. If required, take remedial action Remove sediment from pre-treatment structures and/or internal forebays	Monthly for 3 months, then annually 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. Survey inside of tank for sediment build-up and remove if necessary	Annually Every 5 years or as required

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To be inspected & checked for blockage **6 monthly** and jetted/cleared if necessary.

A CCTV Drainage Survey of the perforated pipe should be carried out every **5 Years** and any of blockage/silt build up should be jet washed or removed.

6.0 PERMEABLE PAVING

Schedule	Action	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 glyphosate applied directly into the weeds by an applicator rather than spraying	As required – once per year on less frequently used pavements
Remedial Actions	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.	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.	Every 10 to 15 years or as required (if infiltration performance is reduced due to significant clogging).
Monitoring	Initial Inspection	Monthly for 3 months after Installation.
	Inspect for evidence of poor operation and / or weed growth – if required, take remedial action.	Three-monthly, 48hrs. after large storm in first six months.
	Inspect silt accumulation rates and establish appropriate brushing frequencies	Annually
	Monitor inspection chambers	Annually

7.0 SWALES

Schedule	Action	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.
	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.
	Inspect inlets and facility surface for silt accumulation. Establish appropriate silt removal frequencies.	Half yearly.
Occasional Maintenance	Reseed areas of poor vegetation growth. Alter plant types to better suit 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 reseed.	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.
	Remove and dispose of oils or petrol residues using safe standard practices.	As required.

8.0 SMART SPONGE BY NAYLOR DRAINAGE (PROPRIETARY SYSTEM)

The filter should be serviced as per the manufacturer's instructions to remove sediment and debris, according to expected debris accumulation. Replacement frequency of the filter is as per guidance from the manufacturer.

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APPENDIX A – SURFACE WATER DRAINAGE PLAN



Civil Engineering - Transport Planning - Flood Risk

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