HARBOURSTONE DESIGN

MANAGEMENT & MAINTENANCE SCHEDULE

RYEFIELDS FARMHOUSE, OAK TREE LANE

Residential Development

2026-C160-MMS03

August 2026

Prepared on Behalf of Chichester Carpentry & Building Ltd

1 MAINTENANCE

1.1 General Maintenance & Responsibilities

1.1.1 In accordance with National Standards for SuDS (Standard 7), a Maintenance Plan, within an Operation and Maintenance Manual, is required to ensure that the proposed drainage system can be maintained safely. Chapter 32 of the SuDS Manual details good practice for operation and maintenance activities, and the below sets out the basis of measures to be incorporated in a detailed management plan as part of the detailed drainage design.

1.1.2 Maintenance of shared drainage features are the responsibility of Chichester Carpentry & Building Ltd, or their appointed management company. Chichester Carpentry & Building Ltd will be responsible for funding maintenance, either through self-funding or agreement with residents on ongoing property maintenance, for the lifetime of the development. They are responsible for costing long term maintenance budgets into their overall delivery of the development, but the engineer estimates that overall maintenance cost for this combined sustainable drainage system is £800/yr (approx. £200 per household).

1.1.3 Maintenance access to shared drainage features will be across shared land only, that will remain in the ownership of Chichester Carpentry & Building Ltd. Maintenance access is therefore expected to pose no significant issues, with visitor parking on-site available for maintenance workers.

1.1.4 Maintenance of private features serving only one residential dwelling are the responsibility of the resident. Maintenance of box planters and living roof by an external contractor is expected to cost another £800/yr (approx. £200 per household).

1.1.5 A maintenance regime should include tasks to be taken at regular intervals to keep the system in good working order (see SuDS Manual Table 32.1). This should be done in accordance with the proposed document to ensure continued effective operation and to prevent flooding.

1.1.6 General measures should include:

Drainage System feature	**Proposed maintenance / remedial works**	**Required frequency of works**
Catch pits, gully sumps and drains, flap valves	Inspection and additional cleansing as required.	Every 6 months
	Desilting	Year 1, Year 3, then every 5 years
Pipework	Jetting to clear blockages	As required

1.1.7 Chapters 11-23 of the CIRIA SuDS Manual set out specific maintenance for differing SuDS features, and this is detailed below for the proposed SuDS features.

1.2 Permeable Pavements & Diffuser Units

1.2.1 Tanked permeable pavement operates by letting rainwater filter through porous blocks into an underlying, gravel-filled sub-base wrapped in an impermeable geomembrane liner to form a watertight underground tank. Its purpose is to physically trap pollutants and attenuate stormwater before discharging it at a controlled rate. The primary performance risks include sediment or debris clogging the surface pores, and sub-base structural collapse from heavy vehicle overloading. If the tanked system malfunctions, it loses its drainage capacity, causing surface water ponding.

1.2.2 As part of the permeable paving system, diffuser units are used to discharge surface water run-off from roof areas into the sub-base, as well as conveying runoff to the outfall from the permeable paving. These diffuser units are small heavy-duty cellular units which allow more efficient discharge of surface water into the sub-base base of the permeable paved areas.

1.2.3 The areas of permeable paving will require additional maintenance measures to ensure they operate as designed. Failure in carrying out this maintenance could increase the risk of flooding, as if the surface material becomes clogged it will provide a slower surface infiltration rate. The additional measures are as follows:

Drainage System feature	Proposed maintenance / remedial works	Required frequency of works
Permeable Pavement	Surface sweeping to reduce silt and debris accumulation.	Every 8 to 12 weeks
	Replace broken slabs/blocks	As required
	Removal / management of weed growth	At least once a year
	Silt removal from permeable surfaces, possibly involving raking out of joints, redressing, removal and remedial works.	As required / to be specified by manufacturer
Diffuser units	Inspection and additional cleansing as required.	Annual
	Desilting.	Year 1, Year 3, then every 5 years

1.3 Orifice Chamber

1.3.1 Orifice chambers operate by forcing stormwater a metal barrier with a precisely sized, fixed opening. Their purpose is to restrict water discharge at a controlled rate. The primary performance risk is the narrow opening getting clogged by leaves and sediment. If the chamber blocks completely, upstream storage will overwhelm.

1.3.2 The orifice chamber includes a guard against blockages, and a weir overflow. A plate is situated in the front of the unit which can be slid out for clearance via the chamber cover. The chamber also provides access of rodding of the upstream pipework.

1.3.3 The flow control chamber will require the following maintenance:

- The sump within the flow control chamber should be monitored for build-up of silts and should be emptied as a minimum on the same regime as specified for catchpits previously within this document.
- The guard located on the centre of the unit will require inspection for blockages, to ensure it is operating as intended.

Drainage System feature	Proposed maintenance / remedial works	Required frequency of works
Flow Control Chambers	Clean out chamber/sump	Monthly for first 3 months then twice annually
	Inspect flow control unit and remove debris	

1.4 Non-Return Valve

1.4.1 Drainage non-return valves use a one-way flap that opens for outgoing wastewater but seals shut under reverse pressure to prevent sewage from backing up into a building during heavy rain or sewer overloads. The primary performance risks include the flap getting jammed open by grease or debris, or the mechanical seals wearing out over time. If the valve fails, this can lead to flooding on-site.

1.4.2 The non-return chamber will require the following maintenance:

- The chamber should be monitored for build-up of silts and should be emptied as a minimum on the same regime as specified for catchpits previously within this document.
- The component will require inspection, greasing and opening annually, to ensure it is operating as intended.

Drainage System feature	Proposed maintenance / remedial works	Required frequency of works
Non-Return Valve	Inspection, clearance, and maintenance of components	As required, minimum annually

1.5 Rainwater Harvesting (Box Planters)

1.5.1 Rainwater harvesting box-planters capture gutter runoff into a planter soil bed, filtering it into a lower reservoir that self-waters plants via capillary action to reduce mains water use and slow down stormwater. The main performance risks include soil or leaf debris clogging the internal overflow pipes and roots invading the storage tank. If the system fails, it can waterlog the soil, killing the plants, or overflow unpredictably against the building, causing structural damp and foundation erosion.

Drainage System feature	Proposed maintenance / remedial works	Required frequency of works
Attenuation Tank	Inspection for and cleaning of debris, sediment build up, blockages of inlet/outlet devices or overflow areas	Annually (and if performing poorly)
Filtration System:	Cleaning and/or replacement of any filters	Three monthly (or as required)

Planting surface	Repair of overflow erosion damage	As required
	Planting, weed clearance, soil replacement	As required

1.6 Living Roof

1.6.1 Living roofs operate as multi-layered, engineered ecosystems that manage stormwater and filter rain through vegetation and specialized soil. While they offer significant biodiversity benefits, performance risks like plant failure and clogged drainage can lead to malfunctions. If the system fails, it can cause interior leaks or structural rot.

Drainage System feature	Proposed maintenance / remedial works	Required frequency of works
Entire system	Inspection to ensure proper operation, integrity of waterproofing and structural stability, including underside of roof	Annually and after severe storms
Soil substrate	Inspect for evidence of erosion channels	Annually and after severe storms
	Stabilise any erosion channels with extra soil and control	As required
Drain inlets	Inspect to ensure no blockages	Annually and after severe storms
	Repair any cracks, blockages or settlement	As required
Surface	Remove weeds, debris and litter to prevent clogging or poor growth	Six monthly or as required
	Replace dead plants at establishment (i.e. year one)	Responsibility of manufacturer
	Replace dead plants post-establishment	Annually in autumn
	Prune, mow, trim as required	Six monthly or as required

1.7 Remedial Maintenance

1.7.1 As well as the frequencies set out in the above tables, inspections should be undertaken after significant storm events to establish any remedial maintenance may be required, as there may be damage to the drainage system that could cause adverse impacts in a future storm event if not identified.

1.8 Accidental Spillages

1.8.1 In the event of a serious spillage, either by volume or of unknown or toxic compounds, the spillage should be isolated with the use of soil, turf or fabric with outlet pipes from chambers downstream of the spillage blocked with a bung/bungs.

1.8.2 Minor spillages of fuels and oils from motor vehicles will be dealt with by the permachannel, filter gully & catchpits collecting the hydrocarbons.

1.8.3 In the event of a spillage, the responsibility lies with the private resident to clear up any spillage before it enters the drainage network. The primary method of dealing with any spillage of hydrocarbons should be using sand (or equivalent) to soak up the leak and mitigate pollution migration. Any contaminated waste shall be disposed of by a licensed contractor, & SmartSponge replacement (inserted within filter gully) should be made in accordance with the manufacturer's instructions.

1.8.4 The Environment Agency should then be contacted immediately on their incident hotline; 0800 807060.

2 MANAGEMENT

2.1 Construction & Operation (Maintenance) Considerations

2.1.1 In addition to the regular, occasional and remedial maintenance measures set out above, the following considerations are to be taken:

i. The Construction Management Plan needs to include management of surface water runoff during construction to prevent pollution. In addition, it is recommended that construction phasing ensures SuDs are completed prior to the construction of buildings and hardstanding areas where possible to provide treatment during construction. These features will need a complete inspection upon completion with necessary remedial maintenance taken.

   a. It is recommended that permeable pavement is constructed at commencement of construction to provide treatment and attenuation during construction.

   b. Full maintenance and remediation of system is required at completion

   c. If contractor is to undertake a different construction phasing methodology, the Construction & Environmental Management Plan (CEMP) will need to detail adequate control and treatment of surface water runoff during the construction phase.

ii. Maintenance of private (individual) living roofs and box planters will require green waste and organic sediments arising from the maintenance activities to be disposed of in a Council green waste bin or an alternative legal manner (e.g. compost bin, recycling centre).

iii. Chichester Carpentry & Building Ltd, or their appointed management company, are responsible for responsible disposal of any other waste from maintenance activities, however nothing significant is expected during regular maintenance activities.

iv. Key Safety Risks for consideration by those undertaking activities:

   a. Living Roof: Falls from heights, slipping on wet surfaces, and roof structural overload.

   b. Permeable Pavement: Physical strain from heavy cleaning machinery and slip hazards from surface ponding.

   c. Box Planters: Heavy lifting injuries, skin irritation from chemical fertilizers, and pest breeding in stagnant water.

   d. Piped Drainage: Toxic gas buildup in confined spaces, exposure to harmful bacteria, and trench collapse during digging.

2.2 Inspections

2.2.1 The following stipulations are to be adhered to:

i. A pre-handover inspection of all shared and private drainage features is required.

ii. Chichester Carpentry & Building Ltd, or their appointed management company, must utilise a checklist based on the principles of this document to facilitate consistent inspection of the condition of the system, in accordance with the manner and frequency of works set out in this document.

iii. Chichester Carpentry & Building Ltd, or their appointed management company, must provide contact details of who to contact if the surface water drainage system is not functioning correctly.

2.2.2 Contact details for Chichester Carpentry & Building Ltd are as follows: *Unit 72, Enterprise Centre, Terminus Rd, Chichester PO19 8FY, 01243 537601, https://chichestercarpentry.co.uk/*

2.2.3 Method Statement: Drainage Maintenance Safety

2.2.4 Pre-Work Planning

i. Risk assessment: Inspect all areas for immediate hazards like unstable ground or high winds before starting.

ii. PPE required: Wear safety boots, heavy-duty gloves, safety glasses, and a hi-vis vest.

iii. Utility check: Locate and mark underground utility lines before any digging.

2.2.5 Living Roof Maintenance

i. Fall protection: Use installed guardrails or wear a certified safety harness attached to a secure anchor point.

ii. Access safety: Use secured, stable ladders or structural stairs; never carry heavy tools up a ladder by hand.

iii. Weight limits: Distribute tools and materials evenly to avoid overloading the roof structure.

2.2.6 Permeable Pavement Care

i. Ergonomics: Use mechanical sweepers or proper lifting techniques to prevent muscle strain.

ii. Spill response: Keep a spill kit nearby to clean oil or chemical leaks immediately, preventing pavement contamination.

2.2.7 Box Planter Management

i. Safe lifting: Use team lifting or wheelbarrows for heavy soil and pots.

ii. Hygiene: Wear gloves when handling soil or fertilizer, and wash hands immediately afterward to avoid bacteria.

2.2.8 Piped Drainage & Confined Spaces

i. No entry: Never enter a manhole, deep trench, or tank without specialist confined-space training and gas detectors.

ii. Biohazard control: Wear fluid-resistant gloves and a mask when handling pipes to protect against wastewater bacteria.

iii. Trench shoring: Support trench walls with shoring equipment if digging deeper than 1.2 metres.

2.3 Evaluation and Modification

2.3.1 Any future changes to the proposed development will need assessment by the designer to determine impacts on and/or changes required to the proposed drainage system. Advice can then be provided as to how alterations or works carried out may affect the surface water drainage system.

2.3.2 Periodic evaluation of the maintenance regime is to be undertaken by Chichester Carpentry & Building Ltd, or their appointed management company, 1 year after completion and subsequently every 5 years.

3 HANDOVER & INSPECTION CHECKLIST

3.1 Document Ownership

3.1.1 The below management & maintenance schedule is to be adhered to by Chichester Carpentry & Building Ltd until such time that it is handed over to an alternative maintenance provider.

3.2 Handover

3.2.1 The below is to be signed and completed whereby any handover is formalised to transfer responsibility for drainage management & maintenance:

Management & Maintenance Handover 1

Handover	From	To	Date
1			
2			

3.3 Inspection Checklist

3.3.1 Inspections are to be undertaken in accordance with the maintenance schedule set out in Section 1. The inspection checklist within the appendices is to be completed accordingly at each maintenance schedule and records kept for verification purposes.

Appendix A – Approved Drainage Design

Appendix B – Maintenance Checklist

Inspection / Maintenance Record Proforma

Date of Inspection / Maintenance: _____

Completed by: _____

Signed: _____

Drainage Component	Inspection / Maintenance Task	Comments	Further Action



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