

**LAND AT PROGRESS GARAGE, YAPTON
LANE, WALBERTON BN18 0AS**

**SUDS MAINTENANCE AND
MANAGEMENT SCHEDULE**

Residential Development

Prepared on Behalf of

Knightsgate UK Ltd

D1377

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SuDS Maintenance and Management Schedule

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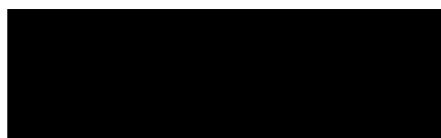
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INTRODUCTION

This statement details the drainage maintenance requirements for the proposed surface and foul water systems at the development referred to as '**Land at Progress Garage, Yapton Lane, Walberton BN18 0AS**'.

A copy of this statement should be provided to the party or parties responsible for maintaining the drainage system and should also be included within the Maintenance Manuals for the development.

The maintenance detailed in this document must be undertaken throughout the lifetime of the development. Failure to undertake this maintenance may result in the drainage system not operating as designed, increasing the risk of flooding.

Drawings detailing the design of the drainage system are referenced 2017-D1377-001 Engineering Layout – Drainage, Levels and Contours.

BRIEF DESCRIPTION OF THE SURFACE WATER DRAINAGE SYSTEM

The below ground surface water drainage system at the site comprises a traditional piped system, connecting the dwellings into the permeable driveways and permeable shared access road, via 7 No. diffuser boxes located within the sub-base layer of the road construction. The permeable paving system then allows rainwater and surface water run-off to percolate into the underlying soils via infiltration. A ring-soakaway will be situated within the permeable paving to ensure that the permeable strata can be penetrated and provide a greater level of infiltration.

The surface water drainage for the site will not be offered for adoption to the statutory sewerage undertaker.

The system operates entirely by gravity and this system does not rely on moving parts to remain operational.

BRIEF DESCRIPTION OF THE FOUL WATER DRAINAGE SYSTEM

The below ground foul water drainage system comprises of a traditional piped system, drained entirely by gravity to a shared domestic sewage treatment plant – whereby one treatment plant serves two neighbouring properties. Once the effluent has been treated, the treated effluent will percolate into the underlying soils via a shared drainage field. A total of three drainage fields are located within the bounds of the site with one field each serving two neighbouring properties.

As the system operates partially by gravity, elements of the system – namely the treatment plants – rely on moving and/or mechanical parts to remain operational. Details specific to this can be found below, in the '**Responsibility for Maintenance**' and '**Maintenance Requirements**' sections.

RESPONSIBILITY FOR MAINTENANCE

The communal road services and landscaped areas, including the SuD's drainage system of permeable carriageway will be the responsibility of a management company.

When a home is purchased on the development the purchaser(s) will be required to enter into a legal agreement to bind all parties to co-operate with the responsibilities of that of the management company.

Each household on the development will be required to financially contribute equally for the upkeep of the shared facilities.

Where surface or foul water drainage benefits only that of the conveyed plot itself, the future maintenance of this drainage will be the responsibility of that household. This would be applicable to the permeable paving of private driveways.

The domestic sewage treatment plants and associated drainage fields will be the responsibility of the individual plots for which they serve, therefore it will be the responsibility of the neighbouring plots to ensure the ongoing maintenance of this elements and not the responsibility of the management company.

MAINTENANCE REQUIREMENTS

Whilst the drainage system has been designed to operate with as little maintenance as possible, there are key operations that must regularly be undertaken to ensure that it remains in optimal condition. Most of these tasks consist of 'general housekeeping' activities that should be undertaken for any drainage system, but with additional attention to the catchpits and permeable paving elements. These operations are summarised below together with recommended frequencies:

- Periodic desilting of catchpits, soakaways gully sumps and channel drains. These should be emptied at least as follows (but with an annual inspection and additional cleansing if required): On completion of drainage works, Year 1, Year 3, then every 5 years. The desilting of these items is required to ensure that the system operates as designed, and reduces the risk of blockages which can impact upon the effectiveness and efficiency of the system
- Periodic jetting or rodding of pipework as required to clear blockages
- Gratings on any gullies and channel drains to be kept clear of debris
- Any manufacturer specific requirements for maintenance (i.e. for domestic sewage treatment plants) should be added to the periodic maintenance

POROUS PAVING / DIFFUSER UNITS

The areas of permeable paving are designed to allow infiltration of surface water run-off through the joints in the block paving surface course and into the sub-base below. The water can then infiltrate into the underlying soils.

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 forming links between areas of 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.

The areas of permeable paving will require additional maintenance measures to ensure they operate as designed. Failure to carry out this maintenance, could increase the risk of flooding. The additional measures are as follow:

- Periodic surface sweeping to reduce silt and debris accumulation. The permeable surfaces should be swept at least every 8 to 12 weeks with additional sweeps in the autumn to clear fallen leaves
- Removal / management of weed growth, as required. Typically, once or twice a year for regularly used areas
- Periodic silt removal from permeable surfaces as described by manufacturer. If any areas are showing signs of ponding, they shall be dealt with by raking out the joints and re-dressing. The entire surface shall be monitored and when there are signs of excessive siltation resulting in poor drainage over the whole area, the blocks shall be taken up and a replacement of bedding layer and geotextile shall be undertaken
- Re-dressing of joints on the block paving as required
- Catchpits upstream of diffuser units should be emptied and inspected on the same regime as all catchpits specified previously set out in this document.

DOMESTIC SEWAGE TREATMENT PLANTS

As referred to previously, the domestic sewage treatment plants rely on moving and/or mechanical parts to remain operational. It is the responsibility of the occupants residing in the properties served by the associated domestic sewage treatment plant to ensure that they remain operational at all times.

The regular and ongoing maintenance of each of the 3 No. domestic sewage treatment plants located on the site should be undertaken strictly in accordance with the manufacturers specification and requirements as detailed within the product manual(s). Manuals relating to the specific domestic sewage treatments plants which are in situ at the site should be made available to the occupants of the properties in order for reference to be made as and when required.

REMEDIAL/REPAIR ACTIONS

Significant storm events may cause considerable damage to SuDS. As such it may be necessary to inspect and carry out essential recovery works to return the feature to full working order.

Resetting of uneven blocks by lifting the block area, removing bedding material and relaying to match original design should be undertaken as required should damage occur.

ACCIDENTAL SPILLAGES

It is not envisaged that any materials which could cause major spills and potential pollution issues within the drainage system are to be stored on-site once the development has been completed.

If this situation alters in the future a specialist will be required to be contacted to confirm if any upgrades to the existing system are required.

Minor spillages of fuels and oils from motor vehicles will be dealt with by the permeable paving and deep trapped gullies, by bio-degrading/collecting the hydrocarbons respectively.

FUTURE ALTERATIONS TO THE DEVELOPMENT

Any future alterations to the porous paving should be confirmed by a specialist. Where possible any future services are to avoid being located through areas of porous paving. If new services are required to run through areas of porous paving, services should be installed below the porous paving level with the porous system reinstalled above.