

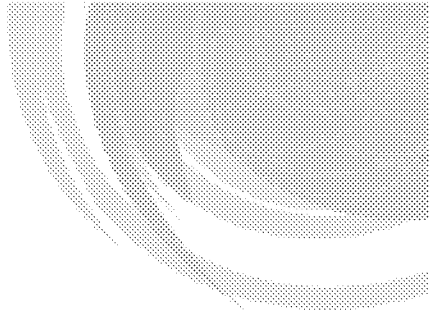
Discharge of Conditions The Steddles, Yapton

Condition: 11

Planning ref Y/158/21/PL

Date: 9 March 2022





Introduction

Condition 11 under planning ref Y/158/21/PL requires;

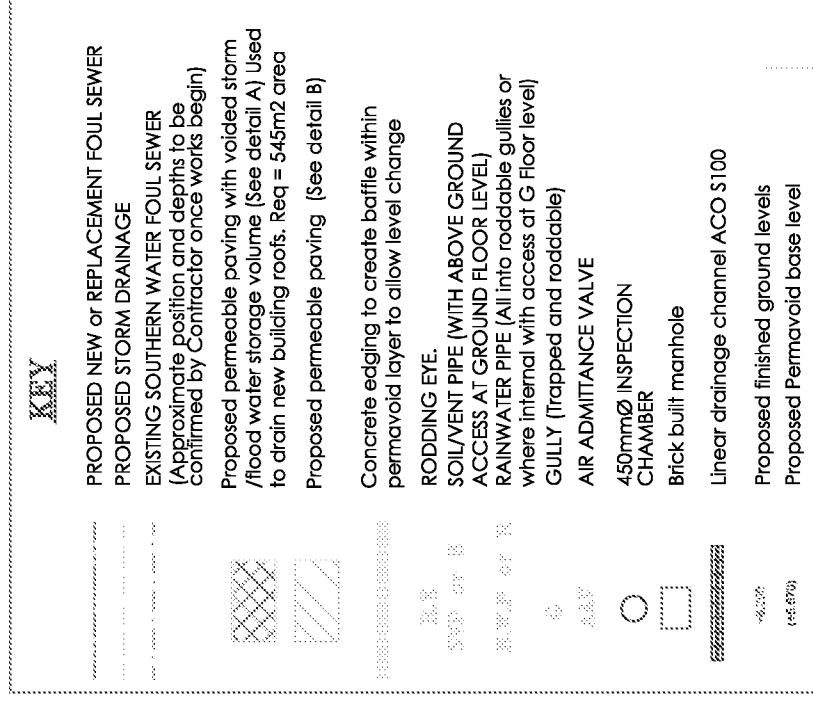
‘prior to the commencement of construction works, details of a proposed foul drainage system shall be submitted to and approved in writing by the Local Planning Authority in consultation with Southern Water (including details of its siting, design and subsequent management / maintenance) and no dwelling shall be occupied until works for the disposal of sewage have been fully implemented in accordance with the approved details’.

Attached are construction drawings that detail the developments surface water and foul water design.

The foul drainage system has been designed to connect into the adoptable foul sewer located in the public highway directly opposite site in North End Road. The applicant has been in dialogue with Southern Water with respect to the proposed connection.

SWFON

1. This drawing is to be read in conjunction with all relevant drawings and Addenda, Drawings, and the Specification. See drawing 353199-401 for relevant drawings details.
2. All dimensions are in millimetres unless noted otherwise. All levels are in Metres Above an arbitrary datum and not to Ordinance Datum.
3. In accordance with CDM 2015 the Contractor is to:
 - Notify HSE of works.
 - Comply with the requirements of Health and Safety Plan (if applicable)
 - Provide risk assessments and method statements for all potential hazards relevant to this project.
4. The main contractor shall be responsible for the setting out and accuracy of all dimensions. He shall satisfy himself that the information given is correct and any discrepancies should be noted to the Engineer immediately.
5. DO NOT SCALE. If discrepancy or query arises on dimensions consult Engineer.
6. The Contractor is responsible for specifying product and codes and ordering of drainage materials.
7. All drainage to be installed to BS5955 Pt6 and in strict accordance with the manufacturers instructions.
8. All PVCu drainage products to conform to BS EN1401 & Kite mark certified in accordance with specification.
9. All drainage pipes on this dwg to be 100mm unless shown otherwise. Min. falls 1/80 for foul and 1/100 for storm drainage.
10. Cover grades and gully gratings are in accordance with BS497 Pt 1
 - Cover Grades :— D400 – carriageways.
 - B125 – carriageways for slow traffic.
 - A15 – inaccessible to vehicles
11. Sewer runs and manholes to be adopted are to be in accordance with Sewers for Adoption, 6th Edition.
12. Any drainage laid less than 600mm below FGL to be covered with minimum 150mm Gen 3 grade concrete to half diameter.
13. No foul drainage sewer connection works to be undertaken until correct licence has been granted by the Environment Agency.
14. Stormwater soakaways to be a minimum of 5.0m from new buildings. Treatment plant to be min. 15m from new and existing houses. New treatment plant drainage field to be min. 10m from existing or new houses.
15. Provide 100x100 PCC lintel max span 650mm where s/w exit the building.
16. ACO channels installed and bedded to manufacturers requirements.
17. Treatment plant not to be installed until proper EA licence is in place.



07.01.22	CMW	Position of SW outlets within road revised.	P8
01.11.21	CMW	Drawing Number Revised	P7



Also at:
Landguard Manor
Landguard Manor Road
Shanklin
Isle of Wight
PO37 7JB

Drainage GA (No topo)



SUDS MAINTENANCE MANUAL FOR PROPOSED DEVELOPMENT AT THE STEDDLES YAPTON

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Appendix B - Steddles Yapton Drainage Details

1. Introduction

- 1.1. This document has been prepared by Cowan Consultancy Limited (CCL) on behalf of Pallant Homes Limited for the proposed development to the land at The Steddles in Yapton.
- 1.2. This document sets out the principles for the long term management and maintenance of the proposed surface water Sustainable Drainage Systems (SuDS) installed at the residential development.
- 1.3. The purpose of this document is to ensure that the Management Company and managing agent entrusted with the inspection and maintenance of the SuDS will adopt the measures and programme set out in this document to ensure the optimum operation of the surface water drainage network and as such will form part of the brief provided to the managing agents. The SuDS are to be continuously maintained over the lifetime of the development to prevent the increased risk of flooding both on and off site.
- 1.4. On completion of the development, a Management Company will be formed, with residents of the development making up the board of directors. The Management Company will appoint a managing agent who will be responsible for maintaining SuDS and all other communal aspects of the development. The Management Company will be funded by an annual contribution from the residents of the development the amount of which will be calculated by the managing agent. Components of the SuDS system will be replaced in line with manufacture's recommendations at the Management Company's expense to the satisfaction of the Planning Authority.
- 1.5. The guidance notes here provided have been comprised of and are directly referenced from the latest technical SuDS guidance within the CIRIA C753 Report *The SuDS Manual* (2015) and other applicable guidance. This document sets out specific sections applicable to the relevant SuDS type itemising:
1. A description of the SuDS component and its use;
 2. The maintenance requirements and frequencies; and
 3. The inspection requirements and frequencies.

1.6. The activities listed are generic to the relative SuDS types and represent the minimum maintenance and inspection requirements, however additional tasks or varied maintenance frequency may be instructed by the maintenance company as required. Rubbish and debris removal is also an integral part of SuDS maintenance, especially with regards to surface features and the reduction of the risks of inlet and outlet blockages.

1.7. Specific maintenance needs of the SuDS elements should be monitored and maintenance schedules adjusted to suit requirements.

1.8. All those responsible for maintenance should follow relevant health and safety legislation for all activities listed within this report (including lone working, if relevant) and risk assessments should always be undertaken.

1.9. This report is to read in conjunction with CCL drawings 435409/01 & 02: Drainage GA & Drainage Details, for the location of all SuDS on this site.

1.10. There are three categories of maintenance activities referred to in this report:

- **Regular maintenance** (including inspections and monitoring) – consisting of basic tasks done on a frequent and predictable schedule, including inspections and monitoring, silt or oil removal if required more frequently than once per year, vegetation management, rubbish and debris removal, and sweeping of surfaces. Regular maintenance/inspections of SuDS will help to:

- determine optimum future maintenance;
- establish ongoing hydraulic, water quality, amenity and biodiversity performance of the system; and
- allow for the identification of potential performance failures, such as blockage, reduced infiltration and poor water quality resulting from lack of maintenance.

- **Occasional maintenance** – comprising tasks that are likely to be required periodically, but on a much less frequent and predictable basis than the routine tasks such as sediment management/removal; and

- **Remedial maintenance** – comprising of intermittent tasks that may be required to rectify faults associated with the system, although the likelihood of faults can be minimised by regular and adequate maintenance activities. Remedial maintenance is likely to comprise of activities such as:

- erosion repairs which can include inlets and outlets;
- reinstatement or realignment of edgings, barriers, rip-rap or other erosion control;
- infiltration surface rehabilitation;
- replacement of blocked filter materials/fabrics;
- construction stage sediment removal (although this activity should have been undertaken before the start of the maintenance contract); and
- system rehabilitation (although unlikely) immediately following a pollution event.

Remedial activities are not expected to be required for all systems, however, for the purpose of estimating whole life maintenance costs, a contingency sum of 15–20% should be added to the annual regular and occasional maintenance costs to cover the risk of these activities being required. Where remedial work is found to be necessary, it is likely to be due to site-specific characteristics or unforeseen events, and as such timings are difficult to predict.

- 1.11. During the first year of operation inspections should usually be carried out at least monthly to all types of SuDS, and after significant storm events, to ensure that the system is functioning as designed and that no damage is evident.

2. SuDS Layout and Design

SuDS are an environmentally friendly approach to managing rainfall through the use of landscape features to conceal the surface water and its surroundings. The use of SuDS aims to: control the flow, volume and frequency of water leaving a development area; prevent pollution by intercepting silt and cleaning runoff from hard surfaces; provide attractive surroundings for the community, and; create, whenever possible, opportunities for wildlife.

The SuDS at The Steddles were designed to prevent flooding of Land on the site itself and adjacent areas and control discharge via underground drainage systems. There are four main SuDS components incorporated within the surface water drainage strategy:

1. Permavoid Stormwater units (Soakaway)
2. Permeable parking areas

2.1. The Permavoid soakaway *tanking*, positioned within the driveway area will be used as the main SuDS system catering for the surface water of the building roof and the road hard standing. Stormwater systems do not provide direct treatment of surface water runoff, therefore, the system will be combined in a Management Train with other methods to provide suitable treatment.

- Drainage will be carried via drain pipe connected to manholes and subsequently to the soakaways;
- Storage will be provided by Permavoid units (or similar approved voided units);
- Surface water treatment will be carried out on the sump manhole preceding the soakaway;
- All manholes preceding the soakaway will incorporate a silt trap;
- The system has been designed for the 1 in 100 years, including extra 40% allowance for climate change, design storm as required by current regulations.

2.2. The permeable surfacing on the site will be constructed using a permeable block system incorporating permeable concrete Aquaflo blocks. These permeable areas will be utilised to drainage the access roads into the site and between the permeable gravel surfaced parking bays. The attenuation of this system including the calculated depth of voided storage will provide adequate surface water treatment levels as detailed within the drainage assessment report.

3. SuDS Maintenance and Management

3.1. SUDS items

3.1.1. Rubbish, debris and gravel removal should be undertaken as part of general pavement maintenance for the site.

3.1.2. Replacement of the aggregate or Permavoid units will be necessary if the system becomes blocked with silt, monitoring will give information on possible changes.

3.1.3. Table 3.2 provides guidance on the type of operational and maintenance requirements. The list of actions is not exhaustive and some actions may not always be required.

3.1.4. Specific maintenance needs of the SUDS should be monitored, and maintenance schedules adjusted to best suit site requirements.

3.1.5. Maintenance responsibility for systems should be placed with either a responsible organisation such as a management company or property owners served by the so

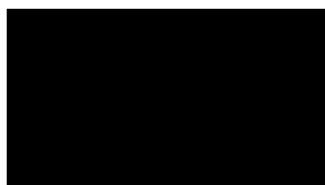
Soakaway tanking operation and Maintenance Requirements

<i>Maintenance Schedule</i>	<i>Required action</i>	<i>Typical frequency</i>
Regular maintenance	Inspect for sediment and debris in pre-treatment components and floor of inspection tube, sump or chamber and inside of crate units	Annually
	Cleaning of gutters and any filters on downpipes	Annually or as required
	Trimming any roots that may be causing blockages	Annually or as required
Occasional maintenance	Remove sediment and debris from pre-treatment components and floor of inspection tube, sump or chamber and inside of crate units	As required, based on inspections
Remedial actions	Reconstruct attenuation unit / soakaway and/or replace or clean void fill, if performance deteriorates or failure occurs	As required
Monitoring	Inspect silt traps and note rate of sediment accumulation	Monthly in the first year and then annually
	Check Attenuation tank to ensure emptying is occurring	Annually

Permeable Pavement operation and Maintenance Requirements

<i>Maintenance Schedule</i>	<i>Required action</i>	<i>Typical frequency</i>
Regular maintenance	Remove rubbish and debris	Monthly, or as required
	Remove any vegetation growth	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 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	Biannual
Occasional maintenance	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	Remediate any landscaping which, through vegetation maintenance or soil slip, has been raised to within 50 mm 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	As required
	Remove build-up of sediment on areas running off into permeable areas	As required
	Remove and dispose of oils or petrol residues using safe standard practices	As required

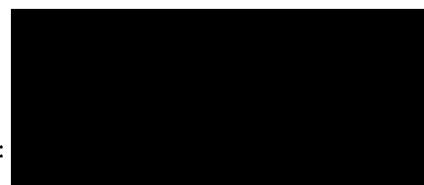
Prepared by:



Elvin Gomery | BEng (Hons)

Senior Structural Engineer

Approved by:



David Button BSc CEng MICE

Principal Engineer

Managing Director

Ref.: 435409

Proposed Development The Steddles, Yapton

SuDS Maintenance & Management Plan

7th January 2022

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APPENDIX A

Steddles Yapton Drainage GA



Steddles Yapton Drainage Details



from
**Southern
Water**

Mr Jason Giles
Peregrine House
Ford Lane
Ford
Arundel
West Sussex
BN18 0DF

Your ref

Our ref
1845

Date
23 February 2022

Dear Mr Giles,

Application to Connect to the Public Sewerage System - Section 106 Water Industry Act 1991.
Location: The Steddles, North End Road, Yapton, Arundel, West Sussex, BN18 0DT.

We refer to your recent application to connect to the public foul sewer at the above location. We are pleased to advise that your proposal, as shown on your drawing 435409/01PG, is approved subject to:

This review is for the purpose of approval to permit communication to be made to the public sewer, under Section 106 of the Water Industry Act 1991. **It is to the means and mode of construction only.**

We reserve the right to immediately disconnect any development under S109 of the WIA 1991 where it has been shown actual connections do not reflect those applied for in the S106 application.

S106 approval does not confirm that public sewer network capacity is available for the proposed development. The availability of capacity may be assessed through the Pre-Planning Enquiry process.

This letter should not be considered as approval by Southern Water to the discharge of any relevant Planning Conditions relating to drainage. This is a separate matter which will be reviewed under a consultation from the Planning Authority.

If connection is to be made through land under the ownership of other Parties, then you are advised to obtain the Landowners consent before carrying out any works.

In approving this application, it is assumed that you have obtained any necessary Building Regulations Approval and/or Highway Authority Road Opening License.

Southern Water, Southern House, Yeoman Road, Worthing, West Sussex BN13 3NX
southernwater.co.uk

Southern Water Services Ltd, Registered Office: Southern House, Yeoman Road, Worthing BN13 3NX Registered in England No. 2366670

This approval is given based on the information provided in support of this application and the assumption of the final discharge point being to the public foul sewer. If this is different, then this approval becomes invalid.

If as noted above, there is any change in the approved connection point, then you must provide us with revised drawings and details and obtain our approval for the changes prior to the connection being made.

Please note that surface water must not communicate with the public foul sewers.

Connection to an existing manhole and the arrangement of pipe junctions within any new manholes should be in accordance with the new Design and Construction Guidance manual ("the Code") and Southern Water's guidance documentation.

water.org.uk/sewerage-sector-guidance-approved-documents/

We refer you to Southern Water Health and Safety Advisory that can be viewed in the Developer and Builders section of the Southern Water website as the link below:

southernwater.co.uk/developing-building/health-and-safety

This approval is given on the basis that you will review this Advisory and take the necessary actions concerning Health and Safety.

To progress booking your site inspection, select the 'Accept' option on the Get Connected customer dashboard. Or, if you have further questions, please select the 'Query' option. If you do not wish to progress with the application the please select the 'Withdraw' option.

Next, please select 'Ready for Inspection' to inform Mick Vince our Assistant Adoption Manager for this area that your site is ready for inspection. Please give at least two full working days' notice in order for a mutually convenient date and time for the inspection of the works to be arranged.

Yours sincerely,



Ashley Marshman
Head of Business Channels
Business Channels