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QA HOSPITAL MSCP PORTSMOUTH, COSHAM, PORTSMOUTH, PO6 3LY

DRAINAGE MAINTENANCE REPORT

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1.0 Introduction

- 1.1.1 Noviniti Parking is planning a proposed development on the site at QA Hospital MSCP Portsmouth, Cosham, Portsmouth, PO6 3LY.
- 1.1.2 Stripe Consulting has been instructed by Noviniti Parking, to produce a Drainage Maintenance Plan to assist with the scheme.
- 1.1.3 This report aims to demonstrate the schedule of maintenance for the proposed development and any ownership responsibilities.
- 1.1.4 The general limitations of this assessment are that:
- Several data sources have been used in compiling this report. Whilst Stripe Consulting believe them to be trustworthy; it is unable to guarantee the accuracy of the information that has been provided by others.
 - This report is based on information available at the time of preparation. There is potential for further information to become available, which may create a need to modify conclusions drawn in this report.

2.0 Location of Site

- 2.1.1 The site is off Harvey Road in Portsmouth. A location plan is enclosed in **Appendix A**.
- 2.1.2 The Local Authority is Portsmouth City Council.

3.0 Proposed Development

- 3.1.1 The proposal is for a new multi-storey car park (MSCP) on the site. A site layout can be found at **Appendix B**.

4.0 Drainage Proposal

4.1 Surface Water Drainage

4.1.1 Surface water drainage at the site will follow the Sustainable Drainage Systems (SuDS) management train. The surface water from the site will discharge into the existing sewer on site at a restricted rate.

4.1.2 Details of the proposed surface water drainage system can be found in the accompanying Drainage Strategy submission.

4.2 Foul Water Drainage

4.2.1 The foul water from the site will discharge into the existing sewer on site..

4.2.2 Details of the proposed foul water drainage system can be found in the accompanying Drainage submission.

5.0 Ownership Responsibility

5.1.1 The drainage has been separated by ownership as part of this maintenance strategy. The separation is as follows:

Drainage Element	Ownership	Adopted
Private Surface Water system *	Maintenance company appointed by Noviniti	Private
Private / Residential Foul Water System *	Maintenance company appointed by Noviniti	Private
Public / Road Surface Water system	N/A	Public
Public / Road Foul Water system	N/A	Public
Sustainable drainage features	Maintenance company appointed by Noviniti	Private
Riparian Foul Plot Drainage	N/A	Private
Riparian Surface Water Plot Drainage	N/A	Private

***Note*:** Predominately two units or more.

6.0 Adoptable Drainage

- 6.1.1 Sewers for Adoption (7th and 6th Edition) are guidance documents used by the water companies to approve and review drainage designs that are offered to them (or vested) for adoption. This is usually via a S104 or similar agreement.
- 6.1.2 As of 1st April 2020, the Design and Construction Guidance documentation will replace both the previous versions and will be mandatory as part of the Code for Adoption agreements.
- 6.1.3 Appendix C of the Design and Construction Guidance (DCG) is in effect the replacement for Sewers for Adoption (SfA) 6th and 7th edition.

6.2 Adoptable Systems

- 6.2.1 The table below indicates the type of drainage element that is currently allowed to be offered for adoption under DCG 2020, with the previous allowances shown for reference.

	SfA6 / 7	DCG	LA	PRIVATE
Rainwater Harvesting	X	X	X	✓
Green Roofs	X	X	X	✓
Infiltration Systems	X	✓	✓	✓
Proprietary Treatment Systems	✓	✓	✓	✓
Filter Strips	X	X	✓	✓
Filter Drains	X	✓	✓	✓
Swales	X	✓	✓	✓
Bioretention Systems	X	✓	X	✓
Trees	X	X	✓	✓
Pervious Pavements	X	X	✓	✓
Attenuation Storage Tanks	✓	✓	✓	✓
Detention Basins	X	✓	✓	✓
Ponds and Wetlands	X	✓	✓	✓

- 6.2.2 The drainage elements on this system are not intended to be offered for adoption.

7.0 Drainage Maintenance

7.1.1 Regular inspection and maintenance is particularly important to ensure the effective long-term operation of surface water drainage, sewers and sustainable drainage systems (SuDS).

7.1.2 When designing, we have considered the required maintenance over the design life of the project, ensuring sufficient and permanent access to all areas of the system.

7.1.3 Maintenance operations can be divided into the following categories:

- Regular (or routine frequent) - this covers items that are carried out typically with a frequency from monthly to annually. It includes items such as inspection and monitoring, litter removal, grass cutting or other vegetation management, sweeping permeable pavements.
- Infrequent (or routine infrequent) - this covers items that are required typically with a frequency from annually up to 25 years (or possibly greater). It includes items such as wetland vegetation management, silt removal from swales, ponds or wetlands, scarifying and spiking infiltration basins and gravel replacement to filter drains.
- Remedial (or reactive) - this covers maintenance that is not usually required, but may be necessary as a result of vandalism, accidental damage, rainfall that exceeds the design capacity or similar events. Examples include repair of erosion in a swale or repair of permeable surfaces blocked for example by mixing concrete on them.

7.2 Riparian Responsibility

7.2.1 If an occupier owns land adjoining, above or with a portion of the drainage system running through it, they have certain rights and responsibilities. In legal terms they are a 'riparian owner'. If they rent the land, they should agree with the owner who will manage these rights and responsibilities.

7.2.2 It is recommended that the owner's appointed Management Company handle the maintenance of all underground drainage and all SuDS devices, with the following exceptions:

- Inspecting and cleaning out any surface mounted hard drainage systems (such as channel drains);
- Inspecting and cleaning out (or reporting) SuDS systems on a small scale (such as garden ditches and swales).

7.3 Allowing for Replacement

7.3.1 The design life of some SuDS elements and drainage elements of the proposed system is shorter than the predicted design life of the development. Therefore, the design and maintenance regime consider any potential replacement works (such as replacing permeable paving).

7.3.2 Regular inspection of the underground drainage system should be as per the tables below.

Operation and maintenance requirements for Surface Water and Foul Systems		
Maintenance Schedule	Required Action	Typical Frequency
Regular Maintenance	Inspect for sediment and debris in catchpit manholes and gullies. Clean out as required	Twice Annually
	Cleaning of gutters and any filters on downpipes	Annually (or as required based on inspections)
	Trimming any roots that may be causing blockages	Annually (or as required)
Occasional Maintenance	Remove sediment and debris from catchpits, gullies, attenuation devices and inside of concrete manhole rings	As required, based on inspections
Remedial Actions	Reconstruct and/or replace components, if performance deteriorates or failure/blockage occurs	As required
	Replacement of clogged components (flow restriction)	As required
Monitoring	Inspect silt traps/gullies/catchpits and note rate of sediment accumulation	Monthly in the first year and then annually
	Check flow control chamber and attenuation devices	Annually

8.0 Suds Maintenance

- 8.1.1 Like all drainage systems, SuDS components should be inspected and maintained. This ensures efficient operation and prevents failure. Usually SuDS components are on or near the surface and most can be managed using landscape maintenance techniques.
- 8.1.2 For below-ground SuDS such as permeable paving and modular geocellular storage the manufacturer or designer should provide maintenance advice. This should include routine and long-term actions that can be incorporated into a maintenance plan.
- 8.1.3 The design process considers the maintenance of the components (access, waste management etc.) including any corrective maintenance to repair defects or improve performance.
- 8.1.4 In the absence of legislation funding for the adopter to maintain their SuDS may need to be resolved at the start of the development process to ensure that either the local authority, a maintenance company, local residents or the water company have sufficient resources to maintain the system in the long-term.
- 8.1.5 Further information on maintenance can be found in The SUDS Manual (CIRIA publication C697), which has been used as a guide for this report.
- 8.1.6 The SuDS scheme is unlikely to be handed over for maintenance until all parties are confident that the scheme is constructed and performs as designed. An interim maintenance plan can be incorporated on larger or phased schemes.
- 8.1.7 Maintenance of SuDS drainage should be in accordance with the guidance presented in CIRIA Factsheet “Maintenance of SuDS” May 2017. A detailed maintenance plan for the scheme will be generated by the appointed owner/maintainer of the site or a selected maintenance company and this section is for guidance only.
- 8.1.8 A drawing indicating the proposed typical maintenance and ownership for the scheme has been included at **Appendix C**.

8.1.9 Regular inspection of the sustainable drainage system should be as per the tables below.

Operation and maintenance requirements for Attenuation Storage Tanks		
Maintenance Schedule	Required Action	Typical Frequency
Regular Maintenance	Inspect and identify any areas that are not operating correctly. If required, take remedial action	Monthly for 3 months, then annually
	Remove debris from the catchment surface (where it may cause risks to performance)	Monthly
	For systems where rainfall infiltrates into the tank from above, check surface of filter for blockage by sediment, algae or other matter; remove and replace surface infiltration medium as necessary.	Annually
	Remove sediment from pre-treatment structures and/ or internal forebays	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	Annually
	Survey inside of tank for sediment build-up and remove if necessary	Every 5 years or as required

Appendix A

Location Plan

Appendix B

Site Plan

Appendix C

Drainage Maintenance Layout