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PROPOSED SWS OPERATIONS & MAINTENANCE ITINERARY FOR THE DEVELOPMENT OFF MANOR STREET, NEWSOME

Introduction

This report has been initially prepared for the Client only and sets out the responsibilities for management and maintenance of the proposed drainage systems at the above development and outlines a recommended maintenance regime to be implemented by the responsible party.

The maintenance plan should be reviewed periodically to confirm it is meeting the objective of ensuing all effective drainage is maintained and should be reviewed if necessary to keep the system working effectively.

Holda Limited will be responsible for maintaining all underground drainage and attenuation during construction.

As a housing association development, Holda Limited will also be contractually obligated to provide 24 hour maintenance for the entire development following completion. The future maintenance obligations will include all underground drainage, attenuation & SuDS features, including drainage within private garden areas.

Surface Water System

Surface water run off from roofs, roads and other hardstanding areas is drained via gullys and underground carrier pipes to an attenuation tank located beneath a P.O.S. area on the western boundary of the site.

On site attenuation will be sized to provide adequate storage to cater for extreme rainfall of up to 1 in 100yr storm events including the allowance for a 40% increase due to future impacts of climate change.

Any surface water leaving the site is restricted to a maximum rate of 3.0lit/sec, with the flow rate controlled by a Hyrdobrake flow control device fitted to the manhole located on the western boundary of the site. It is anticipated that surface water flows from the development will discharge to the culverted watercourse running under the western side of the site.

Foul Water System

All domestic foul wastewater is drained via underground carrier pipes to the existing public sewer to the North of the site.

Maintenance & Management Itinerary

It is recommended that the itinerary set out below is referred to for the inspection, upkeep, and maintenance of the full drainage system during the interim period before the adoption process is complete. Further advice on inspection and maintenance is set out in CIRIA C753 The SuDS Manual (2015).

Proposed SWS Operations & Maintenance Itinerary

Activity	Risks Identified	Design Steps to Eliminate/Control Risk	Further Action Required
1. Existing / New Drainage on Site	i) Silt build up within new highway / private gullies constructed on site. ii) Flow control device installed.	i) Use terram with newly installed gullies to reduce silt run-off into new system. ii) Install flow control device at an early stage to control run-off flows into existing watercourse. iii) Inspections & maintenance of new system to be carried out by the developer / manage company annually and after major rainfall events for a minimum 5 year period.	i) Weekly inspections recommended and /or following heavy rainfall during construction period then annually and after major rainfall events once development is complete. ii) Jet vac to be used to remove any silt build up and ensure the new drainage system is always silt free and operating correctly. iii) Flow control device to be inspected annually and accessed by 'confined space' trained personnel using winch access. iv) Release valves to be greased when necessary to ensure flow control device is operating correctly at all times. v) Neoprene seals fitted to flow control device to be checked and replaced when necessary.

2. New SWS Attenuation Tank Installed on Site.	i) Silt build up within attenuation tank installed on site.	i) Install attenuation tank at an early stage to provide SWS storage for new development and prevent potential flood risk during and after the development is constructed. iii) Inspections & maintenance of new attenuation tank to be carried out by the developer / management company annually and after major rainfall events for a minimum 5 year period.	i) Weekly inspections recommended and /or following heavy rainfall during construction period then annually and after major rainfall events once development is complete. ii) Inlets, outlets and overflows within tank to be inspected/checked to ensure all are operating as designed. ii) Jet vac to be used to remove any silt build up and ensure the attenuation tank is always silt free and operating correctly. iii) Attenuation tank to be entered via access shafts as per manufactures design by 'confined space' trained personnel using winch access.
3. Land Drainage on Site	i) Poor maintenance following Plot sale. ii) Maintenance during and after construction on site.	i) Land drainage to be constructed within easy to access areas and kept as shallow as possible for maintenance purposes. ii) Silt traps / inverted soakaways included within land drainage design to intercept silt and provide location for regular maintenance.	i) Developer to highlight presence of any land drainage to new purchaser and notify of their responsibility in the future. ii) Developer to protect land drain once constructed on site to avoid construction damage. iii) Developer to provide CCTV of completed land drainage system prior to handover to ensure operating effectively