Land Adjacent to Daisy Bank Farm, Uttoxeter Road, Upper Tean, Staffordshire

Maintenance Plan

Overview

Surface water drainage comprises a piped conveyance network through the development to attenuation tanks, followed by controlled discharge to the south of the site.

Flow-control chambers limit the outfall flow rate to the existing Severn Trent surface water sewer, such that in times of heavy rain, flow backs up into the attenuation tanks. The tank is modular plastic cellular construction, wrapped and sealed with an impermeable geo-membrane liner. The tank contains in-built inspection tunnels for camera and jetting access.

Regular inspection and maintenance in accordance with the following plan will ensure the capacity and performance of the system during the lifetime of the installation.

Regular Maintenance / Inspections

Required Action	Frequency
Manholes:	
Visual inspection of all chambers and cleaning where required.	6 Months
Outfall:	
Check trash grille, remove any debris.	
Check condition of gabion baskets around outfall	
Check for erosion downstream of outfall	
Flow control chamber:	
Check penstock operational, remove any silt/debris from base of chamber and hydrobrake unit.	
Check overflow outlet for blockages and jet-cleanse	
Attenuation tank:	Annually
CCTV record accessible tunnel lengths to check for any sediment build up and remove if necessary.	
Inspect/check all inlets, outlets and vents to ensure that they are in good condition and operated as designed	
Check surface area above attenuation tanks for free uninhibited accessibility	
Catchpit Chambers:	
Remove debris, jet-cleanse / desilt chambers immediately upstream of attenuation tanks	
Upstream pipe network:	
Jet-cleanse all drainage through property frontage and roads conveying flows.	

Occasional Maintenance / Monitoring

Required Action	Frequency
Attenuation tank: Jet-cleanse and desilt accessible tunnel sections of tanks.	Every 5 years, or as required

Remedial Actions

Required Action	Frequency
Replace attenuation tank: Design characteristics to remain unchanged: tank base / top level and plan area to be maintained when replaced. Excavations to be kept free of groundwater and surface water ingress Base formation to be clean, firm and level. Care to be taken during installation to protect against damage of both the geocells and geomembrane (no sharp materials). Seek advice from membrane manufacturer for any protective fleece requirement. Assemble/stack geocellular units in accordance with manufacturer instructions. Geo Membrane Wrapping: Welded joints not adhesive taped. Airtight testing as installation progresses. Backfill with selected,as-dug material containing no large particles or sharp materials. Compact with a non-vibratory roller of less than 2300kg/m width.	Every 20 years or if required