

SR12A & TOP MEADOWS

Cleator

Construction Surface Water Management Plan

Issue Date:

25 July 2023

Report Number:

1842-SWMP-02

Client:

Lakeland Associates (Cleator) Ltd

Revision:

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1. Introduction

Coast Consulting Engineers have been commissioned by Lakeland Associates (Cleator) Ltd to provide a Construction Surface Water Management Plan to support a planning application for a proposed residential development.

The purpose of this report is to ensure that any surface water leaving the site is sufficiently treated as to be acceptable for disposal into controlled waters. This will be achieved by:-

- identifying potential entry points of surface water onto or within the site,
- the implementation of specific measures for capture
- final treatment within our boundaries, prior to being discharged off site.
- Implementation of Emergency Measures/Arrangements

Additionally, the plan will identify the requirements to ensure that any implemented measures are adequate and effective, through monitoring, sample collection or other means.

A site-specific Flood Risk Assessment (FRA) & Drainage Strategy has been undertaken to determine the risk of flooding to the proposed development from all sources in accordance with the National Planning Policy Framework (NPPF) and to assess the flood risk to other as a result of the development.

2. Site Description, Location and Topographical Features

2.1 Site location

The site is located off A5086, Cleator, CA23 3EP (nearest) at NGR 301752E 514082N. The entire development footprint measures approximately 3.30 Ha, entirely greenfield.

The site location is indicated in Figure 2.11.



Figure 2.11 – Site Location

The planning applications are for a residential scheme consisting of approximately 26 units which have been submitted as a detailed application. The site entrance will be taken from Flosh Meadows at the southern boundary.

A combined sewer is located within the development land, adjacent to the southern boundary line . Adopted foul and surface water sewers are located within Flosh Meadows, adjacent to the proposed site entrance. All sewers are owned and maintained by United Utilities Ltd (UU). Figure 2.12 below shows the location of the existing public sewers within the vicinity of the site.

Within the overall development site, an historic man-made culverted mill race flows from north to south and outfalls via a culvert below the public highway located to the south of the site. The mill race conveys flows from agricultural land located to the north.



Figure 2.12 – sewers.

3. Temporary Drainage & Control Measures

During the construction process, surface water run-off from the site will be controlled to mitigate against flooding of adjacent properties and prevent siltation of contamination of the downstream drainage network/watercourses. The following measures will be considered by the contractor and installed where necessary.

3.1 Interception Channels and Silt Fences

Silt laden run-off can be expected from any areas of exposed soil, aggregate or rock. This run-off must be intercepted and treated to prevent it leaving the site or entering the drainage network. Temporary V-shaped interception channels with a silt fence located on the inner side, where appropriate, will be installed within the vicinity of existing watercourses to remove suspended silts and solids. The interception channels will discharge to the existing drains (refer to the enclosed plan).

The channels should have a longitudinal gradient of no less than 1:100 towards the outlet, be vegetated as soon a practical to assist with a reduction in flow velocity and sediment removal, and discharge into a silt trap prior to a connection to the downstream surface water network.

Weekly inspections of the silt fence and channel will be undertaken and removal of collected silts.

3.2 Offsite watercourses

The developer will undertake a daily visual inspection of the existing surface water drains to ensure the protection of adjacent and downstream watercourses.

3.3 Topsoil Removal

Topsoil will remain in place as long as possible and will be stripped using a phased approach to reduce surface water run-off and allow natural infiltration. Topsoil will be placed in proposed garden and landscaped areas at the earliest opportunity to reduce surface water run-off.

3.4 Stockpiles

Stockpiles of materials will not be located in close proximity to the existing drainage ditches or proposed surface water attenuation features and will be bunded.

Subsoils will be covered with topsoil to prevent wash off of fine sediments.

Topsoil will be allowed to establish vegetation to minimize surface water run-off.

3.5 Foundations & Excavations

Surface water which has collected in local low spots such as excavations or plot foundations will be allowed to infiltrate to ground naturally if possible. If pumping is required, surface water will be pumped and spread onto an adjacent area of topsoiled landscaping and be allowed to infiltrate of run-off naturally.

3.6 Road Gully's

Gully bags will be installed in every road gully on the development to capture suspended solids to prevent them from entering the surface water drainage system.

Road gullies will be monitored on a weekly basis to ensure that any silt build up is stored in the trapped area of the gully and is not overflowing into the drainage system.

3.7 Sewer Cleaning

New sewers will be jetted clean prior to connection to the surface water outfall to prevent silt and construction debris from entering the surface water network.

3.8 Road Cleaning

The site manager will ensure that a mechanical road sweeping machine is used to clean all new and existing roads both on the development and in the area of the access to the site to ensure that material and sediment is not deposited onto roads and washed into gullies on and in the vicinity of the site.

3.9 Foul Water

Foul water from WC's and welfare facilities at temporary site compounds is to drain to a suitable storage tank and removed from site at regular intervals by a suitably licensed operator. Alternatively, foul water could be disposed of by connection to the foul sewer network.

3.10 Maintenance

Inspections of the surface water drainage system are to be undertaken by site representatives which includes but is not limited to the following;

- Daily inspection of the on-site watercourses to ensure any contaminants draining into it are prevented from being discharged further downstream.
- In the event of a spillage or contaminated water entering the network, surface
 water should be contained within system immediately and prevented from leaving
 the site. Contaminated water should be disposed of in a controlled manor to either
 a foul sewer (with UU's agreement) or via tankered disposal.
- Weekly inspections and maintenance of the new and existing surface water drainage system to ensure it is free of silt and construction debris.
- Weekly inspections and maintenance of all road gullies including gully bags to check silt levels and ensure no silt or debris is entering the outlet.
- Weekly inspection and maintenance of discharge points, outfall structures, flow controls, silt trap manholes and any temporary features such as interception ditches and silt fences.

A record of inspection and maintenance regimes shall be kept at all times and made available at the request of the LLFA.

Please refer to Coast Consulting Engineers drawing "1842 – 502 Temporary Drainage Works" for details of temporary drainage measures. Permanent drainage works will follow the route of proposed build.

4. Emergency Contact Information

In the event of untreated or contaminated water leaving the site and discharging onto third party land or into existing surface water networks the following contact information should be used.

Lakeland Associates (site manager)	Number TBC
Environment Agency	0370 850 6506
LLFA (Cumberland)	01228 221331

Report prepared by:Coast Consulting EngineersDate: 25/07/2023

Appendix A



b Title		
MR R.W. MULHOLLAND FLOSH MEADOWS CUMBRIA	HYTEX SILT FENCE SURFACE WATER RUN-OFF	T ALL POSTS SHOULD BE A MINIMUM OF 1.20M (TOTAL POST HEIGHT) WOOD OR STEEL POST TO DOWNSLOPE SIDE OF FABRIC RED BURIAL MARKER LINE BURY AT LEAST SOMM INTO GROUND WITH POST SPACINGS 1.0-1.50M
Scale at A0 Scale at A0 1:250 Drawing Status PLANNING Job No 1842 Drawing No 1842 Drawing No 502 P	The subscription of the second	Tring-OFF AND TENSIONING TOP RIBBON MAXIMUM SILT ACCUMULATION MARKER GUIDE SURFACE WATER RUN-OFF SILT FENCE IN 'L' SHAPE



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