

Construction Method Statement

Construction of River Bank Retaining Wall Land off Commercial Road, Rhydyfro

Nov 2021

PHONE

MOB PHONE

EMAIL

1.0 Scope of the Report

- 1.1 This Construction Method Statement has been prepared to support the planning application.

2.0 Details

- 2.1 The application site is located adjacent to the River Egel within the boundary of an existing commercial vehicle repair garage.
- 2.2 The applicant has owned the site for over 20 years during which time the area from the edge of the existing car park to the base of the bank has been over ground.
- 2.3 Recently the applicant, who rents the site to a third part, noted that the edge of the car park adjacent to the river was collapsing **Figure 1**.
- 2.4 Further investigations have revealed that the original wall has been eroded away exposing the bank and remaining foundations. **Figure 2**.

Figure 1



Figure 2



- 2.3 The development involves the construction of a river back retaining wall to a height of approximately 3m. The wall will be constructed of gabion baskets, details of which are set out in the application. The purpose of the development is to protect the river bank and application site from further erosion.
- 2.4 The construction of the wall involves three distinct phases of operation. These are
- **Construction Phase 1** - Excavation of bank and removal of old foundation for placing of gabion baskets.
 - **Construction Phase 2** - Placing and filling of gabion baskets.
 - **Construction Phase 3** - Back filling of wall.
- 2.5 The possible effects to the river are likely to occur during the construction and operational phases and are set out below.

Potential Impact Considered	Sourced of Potential Impact	Potential Impact	Mitigating Measures
Pollution (Construction)	Spillages of oil and fuel from plant and machinery. Soil, stone and dust entering the water course	Effect on water quality and ecology	An appropriate CMS can adequately prevent and control spillages of oil and fuel and prevent soil, stone and dust entering the water course
Pollution (Operational)	Spillages of oil and fuel from vehicles in car park	Effect on water quality and ecology	The site is currently used for parking with no mitigating measures in place. The continued use of the site its current lawful purse will not result in any increased risks. However, spill kits may be of assistance

2.6 Construction Phase 1

- 2.7 The first phase of construction will involve the removal of the existing foundation at the base of the bank and the removal of a section of the base of the bank to receive the first foundation basket. This first basket will have its base 500mm below the adjacent ground level.
- 2.8 In order to protect ecology works will only be undertaken between **15th April and 15th October**
- 2.9 Prior to any works being undertaken in or near the watercourse a dry work area will be constructed by hand. This will consist of a sand bag wall to a maximum height of 400mm **Figure 4**. It will be lined with a plastic membrane and will be placed 1m beyond the base of the existing foundation and extend north and south beyond the work area as shown in yellow in **Figure 5**. A filtration system such as *SedimatTM* (Appendix 1) will be installed in accordance with the manufactures instructions at the around the perimeter of the exaction to the western and southern (downstream) side of the works to filter sediment out of water that permeates into the work area either through the dry wall or up through the river bed.

2.10 No materials will be stock piled on site after excavation.

2.11 Construction Phase 2

2.12 Following the excavation of the site the gabion baskets will be place in situ and filled with stone to the engineer's specification.

2.13 Construction Phase 3

2.14 Following the completion of the wall the void area behind the wall will be filled with stone to the engineer's specification.

2.15 Once the development is complete the materials in the watercourse used to form the dry work area will be removed by hand. This will be undertaken when the water level in the river is at its lowest. The sediment bales will be removed first then the dry wall.

2.16 The main areas of potential risk during the construction process relate to materials such as soil and stone, chemicals, fuels or oil within the site entering the water course

2.17 The CMS will therefore seek to mitigate against those risks with the following measures.

- **All works shall be in accordance with *Guidance for Pollution Prevention Works and Maintenance in or near water: GPP 5*¹**
- **No works will be undertaken on site other than between 15th April and 15th October**
- **Prior to works on site a dry work area will be constructed as set out in *Figure 4 & 5* above**

¹ http://www.netregs.org.uk/media/1418/gpp-5-works-and-maintenance-in-or-near-water.pdf?utm_source=website&utm_medium=social&utm_campaign=GPP5%2027112017

- Prior to use in the site all vehicles shall be inspected for fluid leaks. Any leaks will be rectified before use within the site.
- No vehicles, plant or machinery shall be fuelled or repaired within the site
- No materials will be stock piled on the site
- No concrete foundations are proposed however, if concrete is to be poured within or in close proximity to watercourse then sufficient capacity within the dry bund to capture whatever quantity of concrete being poured will be provided.
- If any concrete is used in the site it will be an underwater (anti-leaching additive) concrete.
- Bagged, dry, fast setting cement shall be used on the site and no plant, machinery or equipment shall be washed within the site
- All contactors must have fuel spill kits and appropriately trained operatives
- All spills must be dealt with in accordance with *Guidance for Pollution Prevention Dealing with Spills GPP 22*²

2.18 **Construction Phase** - During the construction phase all work shall be undertaken in accordance with ***Guidance for Pollution Prevention Works and Maintenance in or near water: GPP5***. The contractor will be responsible for the control and reporting of all spills in accordance with ***Guidance for Pollution Prevention Dealing with spills GPP 22***. Contact details for the Contractor, Owner and NRW will be placed on site.

2.19 **Operational Phase** - During the operational phase oil spill kits will be kept on the premises and made available at all times. In the event of an oil/fuel spill the matter

² <http://www.netregs.org.uk/media/1643/gpp-22-dealing-with-spills.pdf>

should be reported to the Owner /Occupier or NRW the telephone numbers will be displayed within the site.

2.20 In the event of a spill the following steps should be followed

2.21 **Stop at Source** - The source of the leak or spillage should be identified and where possible repaired or stopped. This may include closing valves, clamping pipes or temporarily filling holes

2.22 **Contain close to the Source** – Spillages should be contained close to the source by using absorbent materials such as granules, pads, pillows or booms.

2.23 **Contain on the surface** - To prevent spills reaching drains, watercourses and unsurfaced ground the following measures can be applied:

- Socks - can be used to divert or contain spills on hard surfaces. These absorbent booms can soak up a spill and stop it flowing any further.
- Drain mats - seal a drain by covering the surface of a manhole cover or drainage gully. They stop liquid flowing into the drainage system and help contain it. There are different types, including clay mats (single use) and polyurethane (reusable). Drain mats should generally be kept close to where they might be used.
- Sandbags, sandbanks or soil banks - can also be used for larger spills but depending upon the nature of the spill may cause contamination of the material, better this than the water course though.

2.24 **Notify** - Reporting of spills should be undertaken as set out above

2.25 **Disposal** – All contaminated spill kit materials must be properly disposed of in a licensed facility

Photos

View South showing existing foundation



View North showing existing block wall and foundation



Appendix 1



Sedimat™

Sedimats™ are used in waterways during in-stream construction activities (such as pipe laying or dredging) to trap disturbed sediment that may pollute aquatic habitats downstream.

They are a simple, yet effective, biodegradable matting, which are fixed to the stream bed, and do not impede water flow.

Our Sedimat™ is an effective tool for the protection of streams from sedimentation damage during in stream construction activities such as utility installation, culvert replacements, ditch maintenance, and bridge work. It is a flat 1.20 x 3.00m pad which is laid singly or in multiples on the streambed immediately downstream of the worksite.

Our Sedimat™ is packaged individually and is easy to store, handle and transport. It can be installed on a streambed using either stones or stakes and can be placed in any configuration or number to provide desired coverage. It may be used alone or in conjunction with other methods of stream protection such as coffer dams, culverts or silt screen. Since it's UK launch in 1996 by Hy-Tex (UK) Limited, our Sedimat™ has been used extensively throughout the country on a diverse range of projects.

Features/Benefits:

- Over 25 years of proven performance
- Traps sediment before it can pollute the watercourse
- Fully biodegradable
- Made from natural materials
- Easy to handle
- Secondary application - can be used to stabilise banks
- Extensive field trials in America by The New York State Electric and Gas Corporation
- Can trap up to 250kg of sediment
- Manufactured in the UK

Guidance

- Keep Sedimat™ weighted down to prevent washing away

Feature	Sedimat™
Function	Designed to trap harmful disturbed sediment by promoting settlement
Applications	Reservoirs, lakes, canals, rivers, streams and wetlands
Material	Hessian backed, encapsulating wood wool using a jute mesh and support by timber posts.
Size & Weight	1.20m x 3.00m & 11Kg each in weight

**International
Erosion Control
Association
Award Winner**



Application Categories: Sediment Pollution Control

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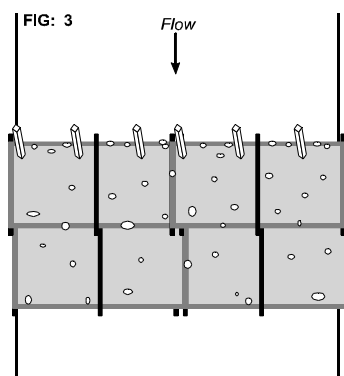
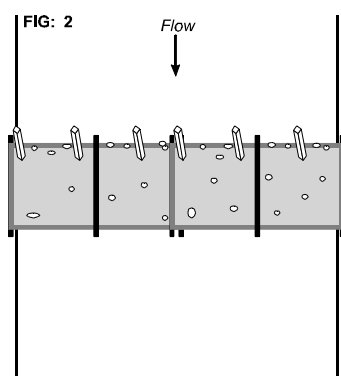
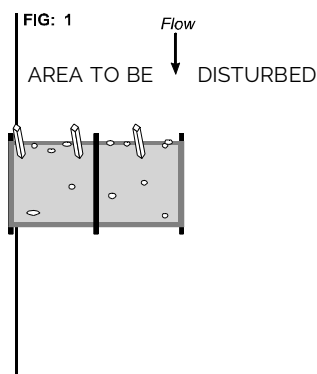
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Sedimat™ Coverage Guidelines (1.20m x 3.00m)

Sedimats™ are easy to apply in a variety of situations in both natural & artificial channels once the guidelines are understood.

Minimum Length of Down Stream Coverage Suggested

Water Velocity	0-0.3m/s	0.3-0.6m/s	0.6-0.9m/s	>0.9m/s
Fines mostly sand	1.20m	2.40m	3.60m	>5.00m
Fines mostly silt and clay	2.40m	4.80m	7.20m	>10.00m



	Guidelines	Comments
LOCATION	a). The mats must be installed downstream of the area to be disturbed, and should be placed as close as possible to the works area without causing disruption.	<i>The mats are at their most effective when encountering sediment directly after it is disturbed - as the sediment travels downstream it becomes more dispersed in the water. However, if the current immediately below the work area is so fast and turbulent that sediment may be transported right over the mats then they can be positioned downstream at the first slow spot.</i>
INSTALLATION	a). Before works begin, and starting at the position furthest up-stream, unroll and stretch out the mats then submerge them in the water at right angles to the flow.	<i>The mats can be unrolled across or down the channel to provide any length/width of coverage.</i>
	b). Secure up-stream edges with sufficient stones/stakes to prevent lift by the current. If required, add further stones/stakes to ensure the mats lay flat on the stream bed and will not be displaced (Fig: 1)	<i>Where currents are/may be strong, or if the mats will be installed for a long time, it is advisable to use stakes. It is important the current is not allowed to flow under the mats. Avoid covering too much of the mat with stones (accumulating silt will act as an anchor).</i>
	c). Where several mats are required to cover the channel width, lap the sides (Fig: 2)	<i>The full width of the channel should be protected unless there is a specific reason.</i>
	d). Where more than one row is required, tuck the up-stream edges under the preceding mats (Fig:3)	<i>Refer to coverage guidelines</i>
REMOVAL	a). It is important to regularly check if the mats are full. Feel/Look for the presence of sediment lying on top of the downstream edge of the mat.	<i>When the mats are full they must be replaced or more added to the downstream end of the existing mats.</i>
	b). When construction activities are complete, or the mats full, they can easily be removed either by rolling them into a machinery bucket or dragging them onto the bank.	<i>The mats are capable of trapping in excess of 250kg of sediment so will require machinery removal when heavily laden. When being removed there is often slight leakage, if this is not acceptable then mats should be temporarily installed downstream to trap this.</i>
	c). If required, the mats can then be unrolled, secured to the bank (with fixing	<i>The sediment laden biodegradable mats provide instant surface stabilisation and a rich seedbed for vegetation restoration, thereby avoiding disposal problems. If desired the support stays can easily be cut free for re-use or disposal.</i>

WARNING - ENSURE YOU PLAN AHEAD FOR REMOVAL OF MATS AS THEY WILL BE HEAVILY LADEN WITH SILT

Application Categories: Sediment Pollution Control