



Construction Surface Water Management Plan

22/00648/OUT. Land South of Markfield Road, Ratby, Leicestershire

Revision 0
June 2024

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1. Site Layout



2. Introduction

This Construction Surface Water Management Plan (CSWMP) has been prepared by Lagan Homes Ltd to enable the discharge of Condition 8 of Outline Planning Approval 22/00648/OUT which following the approval of the Reserved Matters Application will see the proposed development of 75 residential dwellings and associated access and landscaping, amenity areas and SuDS attenuation basin.

The purpose of this Surface Water Management Plan is to prevent an increase flood risk during the various construction stages of development and to reduce the risk of contamination of controlled waters caused by construction working activities.

Surface water will drain via adoptable surface water drainage pipework across the development and will flow into the proposed SuDS attenuation basin.

See Pell Frischmann drawings:

100032-PEF-ZZ-XX-DR-C-0500 for Main Adoptable Drainage (Storm water & Foul water)

100032-PEF-ZZ-XX-DR-C-0505 for Wetland / Attenuation Basin

From the attenuation basin, via a vortex flow control chamber water flows will be restricted to 9.9l/s and will connect via a new inspection chamber (SW41) onto the existing Phase 1 offsite storm water route at approximately 32m South of vortex flow chamber S18.

From the new chamber (SW41), surface water will flow through the existing storm water pipework into an existing inspection chamber, located adjacent to Burroughs Road.

From this inspection chamber the surface water is piped beneath Burroughs Road and up to / into an existing field ditch that ultimately feeds to Rothley Brook via the watercourse South of Ratby.

See BSP Consulting drawing:

MRRD-BSP-ZZ-XX-DR-C-0141 for the existing offsite storm route

3. Surface Water Management Plan

Primary Storm Water Drainage (Adoptable)

Construction of the primary storm water drainage, which includes the installation of the SuDS Wetland Attenuation Basin (including Headwalls HW01, HW02 + HW03 and adjoining pipe runs) and vortex flow control chamber to the South of the development area (S51) and the connection to existing storm water drainage at chamber SW41 will take place as a priority before any other drainage works.

Following the construction of the above all onsite adoptable storm water drainage (and adoptable foul drainage) will be constructed as the road construction progresses. (Note: lateral chambers to the private networks and necessary road gullies will also be constructed during this phase)

The system should be constructed from the outfall working backwards to the more distant chambers. Constructing the system by this method means that any rain that falls on the active part(s) of the site can make its way into the system as intended.

Details of the drainage proposals can be found within the appendices.

On completion of the above adoptable drainage silt mitigation measures such as straw/straw bales & silt screens will be placed within all road gullies and to chambers (SW30, SW49 + SW41) and head-walls (HW01, HW02 + HW03) inlet/outlet pipes to prevent spread of any sediment.

Further downstream as an additional measure at the outlet to the existing field ditch South of Burroughs Road straw bales and silt fencing will be placed to act as further filtration.

Secondary Storm Water Drainage (Private)

Once the construction of the primary drainage runs has been completed work can begin on the wider private drainage network.

As with the primary network, an approach of working backwards from the outfall should be taken where practicable with trenches being pre-dug to provide a route for any potential storm water to take – towards completed sections before pipes and inspection chambers are installed.

Foul Water Drainage (Private)

Private foul water drainage will be installed in tandem with the secondary stage of (private) storm water drainage (to avoid bringing heavy plant back over completed sections).

However, once any changes are made to existing site levels, the section of the site must have drainage installed to manage storm water run-off (undisturbed areas may be left to drain as they would naturally until work begins in those areas).

System Completion

Once all aspects of the proposed site drainage are completed, the storm and foul water drainage connections may be formally connected to the Severn Trent Water network (foul water connection subject to S106 approval).

A CCTV survey of the drainage system will be required post construction to ensure the network is undamaged, clear of debris and has been constructed as designed.

Once work on site has been concluded and the storm water leaving the system is free of sediment and/or debris then the silt mitigation measures may be removed from all road gullies, inspection chambers and head walls.

A final inspection of the sewer should be conducted at this stage to ensure it is clear and free flowing.

Further maintenance (post-occupation) will become the responsibility of the Adopting Water Network for the adoptable storm (and foul) water sewers. The Attenuation Basin will be maintained and managed by a Management Company, following the SuDS Management Plan.

Individual homeowners will be responsible for the drainage being maintained within their curtilage.

For additional maintenance information please refer to: Pell Frischmann Drainage Statement – Table 4.1 under section 4.1.1.

4. Construction Surface Water Management Plan

Construction Schedule

A Construction Programme provided by the Roads & Sewers Contractor will set out the staged approach to the construction of the roads and the drainage contained within their construction.

A Construction Management Plan will be prepared prior to construction commencement, and it will set out a build route that mitigates the risk of construction and green field surface water run off negatively impacting any occupied properties.

Considerations must be taken towards the protection of the existing drains and sewers, which it is proposed the site will drain to and to prevent the mobilisation of pollutants such as sediments and hydrocarbons.

Managing Water Quality and Pollution

As the site is proposed to connect via existing piped drainage into an existing field ditch and ultimately to Rothley Brook, it is important that measures are taken to ensure that, for the duration of the works on site, water quality and pollution are both managed on site.

Water pumping on site should, where possible be discharged through silt filtering controls such as silt bags, sediment mats and straw bales before discharging onto lower lying grassland to naturally filter out the silt.

Should it be necessary to pump water into gullies, then gully bags must be installed. As a best practice solution all gullies will have bags installed where the potential for silty surface water run-off from roads exists.

Head wall protection measures are to be installed to where the site drainage system enters the SuDS Attenuation basin at head walls HW01 & HW02. Measures will include the placement of straw bales on the head wall beds and silt fences placed across its mouth to prevent silty water from exiting the basin at HW03.

The attenuation pond and its head walls will be inspected at weekly intervals or after heavy rain by the site management and maintained by removing any settled silt as necessary. Visual water quality inspections will also take place at this location.

Straw bales and silt fencing will be installed at the point where the drainage system meets the field ditch South of Burroughs Road. Visual water quality inspections will also take place at this location as will weekly inspections by site management.

Throughout the construction of the SuDS attenuation basin provision will be made for any pumping of water arising from the excavation works. An area of the existing grassland South-West of the basin location and away from the existing (Phase 1) attenuation pond / drainage. This area will incorporate silt fencing, straw bales or straw wattles to filter any silt and to prevent any erosion of the ground caused from any pumping. The use of pump pipe sock filters could also be used.

Pumped water will naturally flow Southwards infiltrating into the subsoils beneath the existing grassland where sediment will be naturally filtered.

Visual inspections of the ground conditions and the mitigation measures will take place weekly and / or during any pumping works to ensure any waters being discharged over the measures are free from sediment. Should any sediment be visible additional measures such as further silt fences and straw bales, etc be installed.

During the construction of chamber SW41 to the existing offsite stormwater route it would be recommended that the stopping-off of the pipework from vortex flow control chamber S51 be completed to prevent any run-off from the basin into the pipework.

Any over-pumping of water from chamber S51 could be discharged in the above-mentioned strategy to allow sediment to be naturally filtered through the subsoils.

Chamber S18 of the Phase 1 vortex control chamber will also need to be stopped-off and over-pumping utilised during the construction of chamber SW41. A sacrificial pipe junction would be connected to the downstream channel with an orifice plate also fitted to control flow of stormwater from Phase 1 attenuation basin to 14.8l/s.

Furthermore, all plant refuelling is to take place within specified areas located away from the live (or under construction) drainage to prevent any spills making their way into the system.

5. Methodology

Construction

All construction of drainage will take place working backwards from the points of outfall. This is to avoid damage to the newly laid system and reduce the risk of storm water runoff from excavations making its way offsite.

Wherever possible, designated pathways (such as completed driveways) should be used for moving heavy plant to avoid previously laid pipework (risking damage).

Any cut and fill excavation works should only be undertaken in the current active section of the site where drainage is in the process of being installed. This is to ensure that any storm water runoff is either draining naturally as it would be pre-development or is draining into the new system.

By the end of Stage 4 of the surface water management plan, proposed site levels will have been achieved and the site will be ready for further construction works.

Monitoring

All water management structures should be monitored daily by the Main Contractor and after each rainfall event for maintenance purposes.

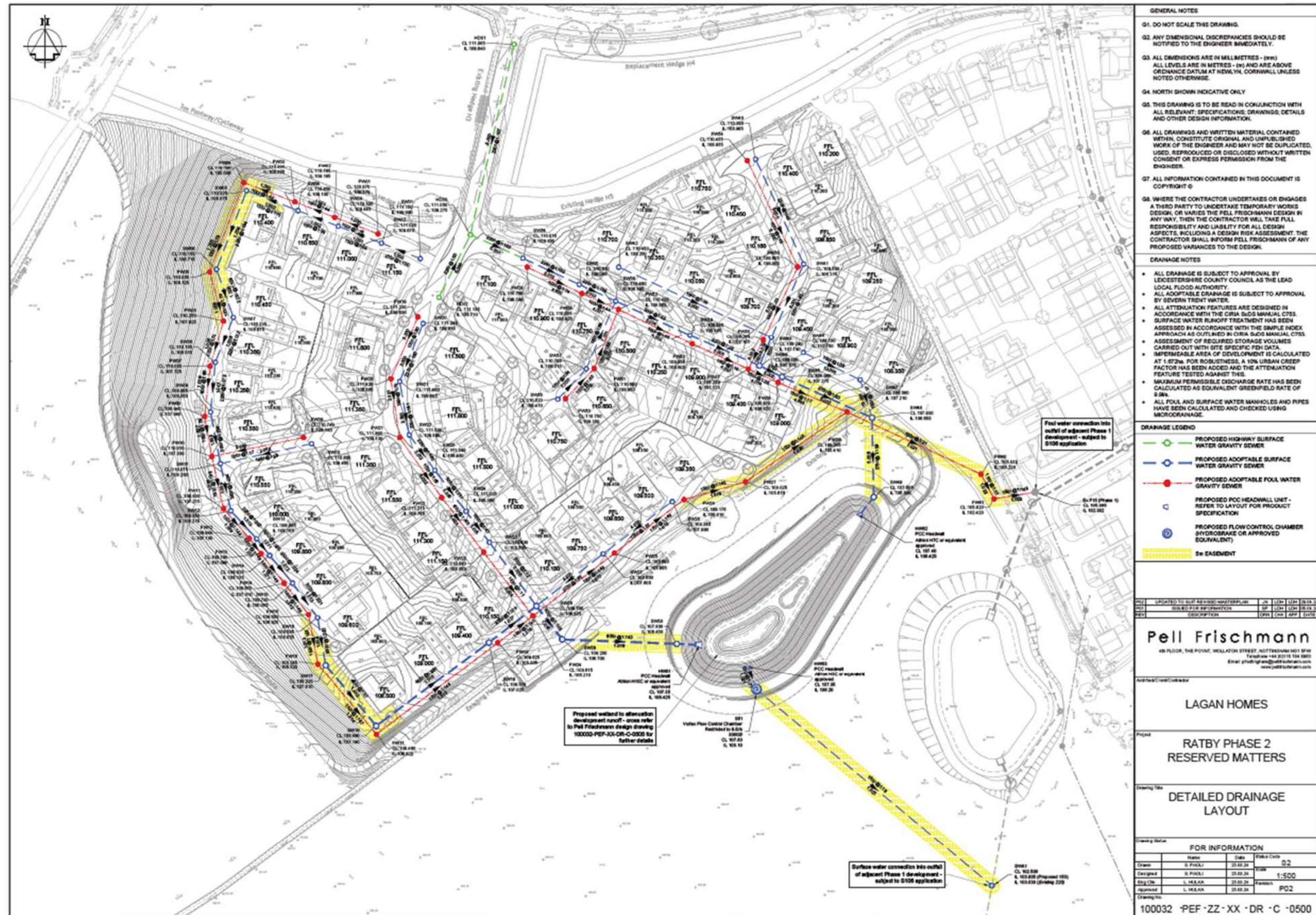
Any accumulation of sediment or debris should be cleaned out and taken from any storm water flow routes.

If contamination occurs, the affected area is to be excavated and set aside on an impermeable liner to prevent any leaching into the ground.

Determination of the disposal of contamination is to be made by an appropriately qualified Specialist / Engineer during construction and it is expected that this can either be treated locally or removed to an accredited disposal site dependant on the contamination type.

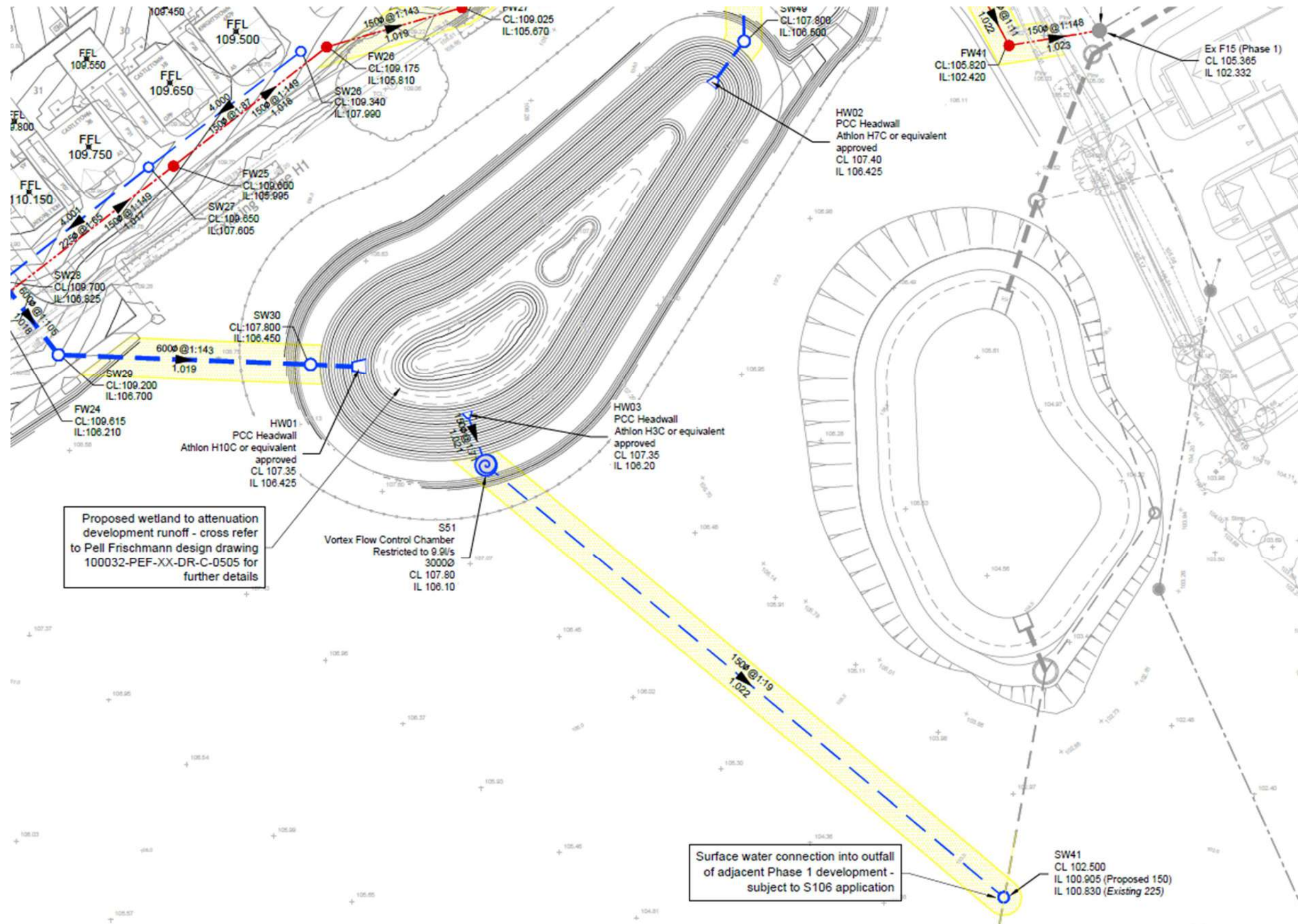
Appendix A

Pell Frischmann Drawing No: 100032-PEF-ZZ-XX-DR-C-0500. Detailed Drainage Layout

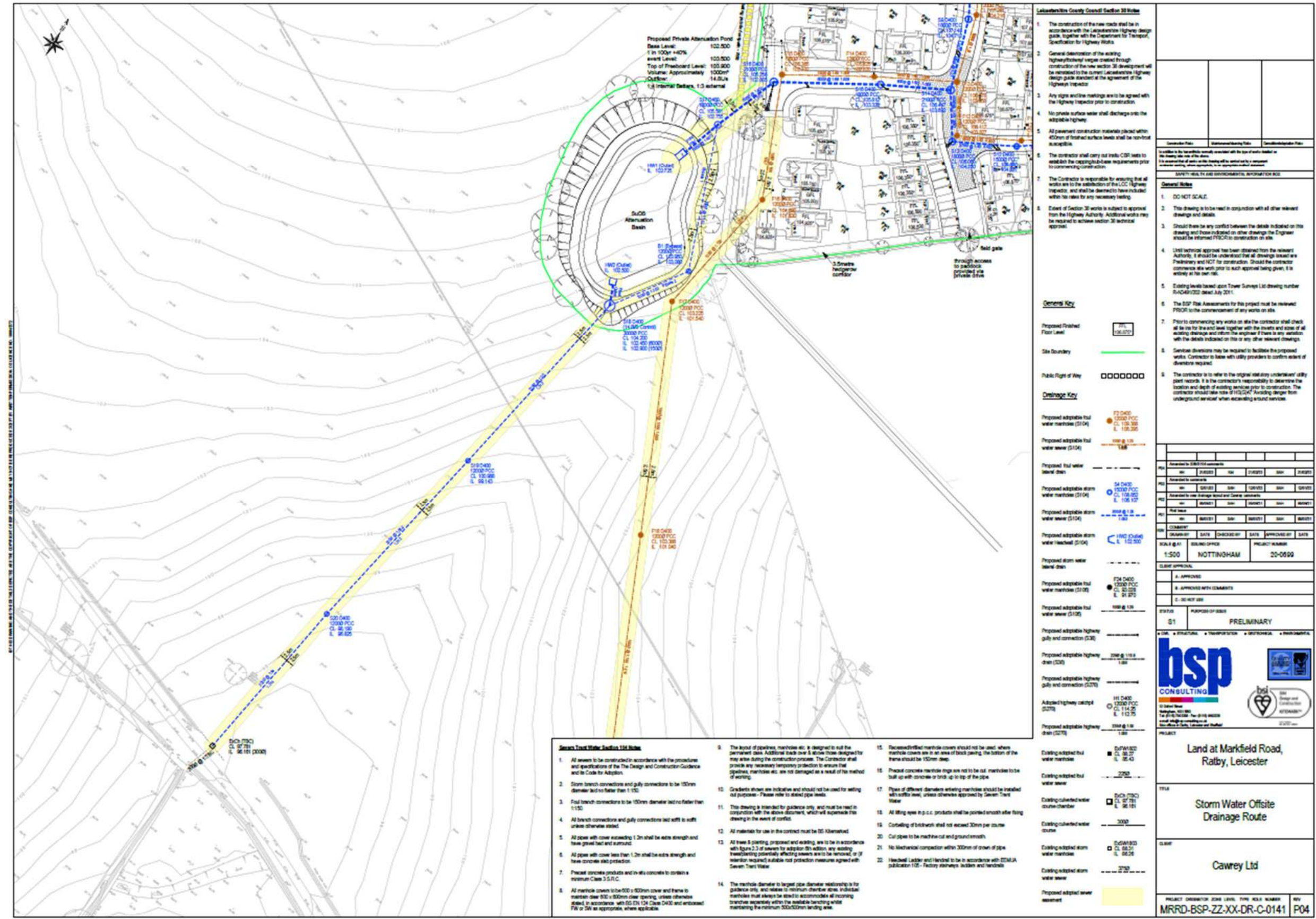


Appendix B

Enlargement of Pell Frischmann Drawing No: 100032-PEF-ZZ-XX-DR-C-0500. Detailed Drainage Layout – to show proposed offsite SW41 connection point

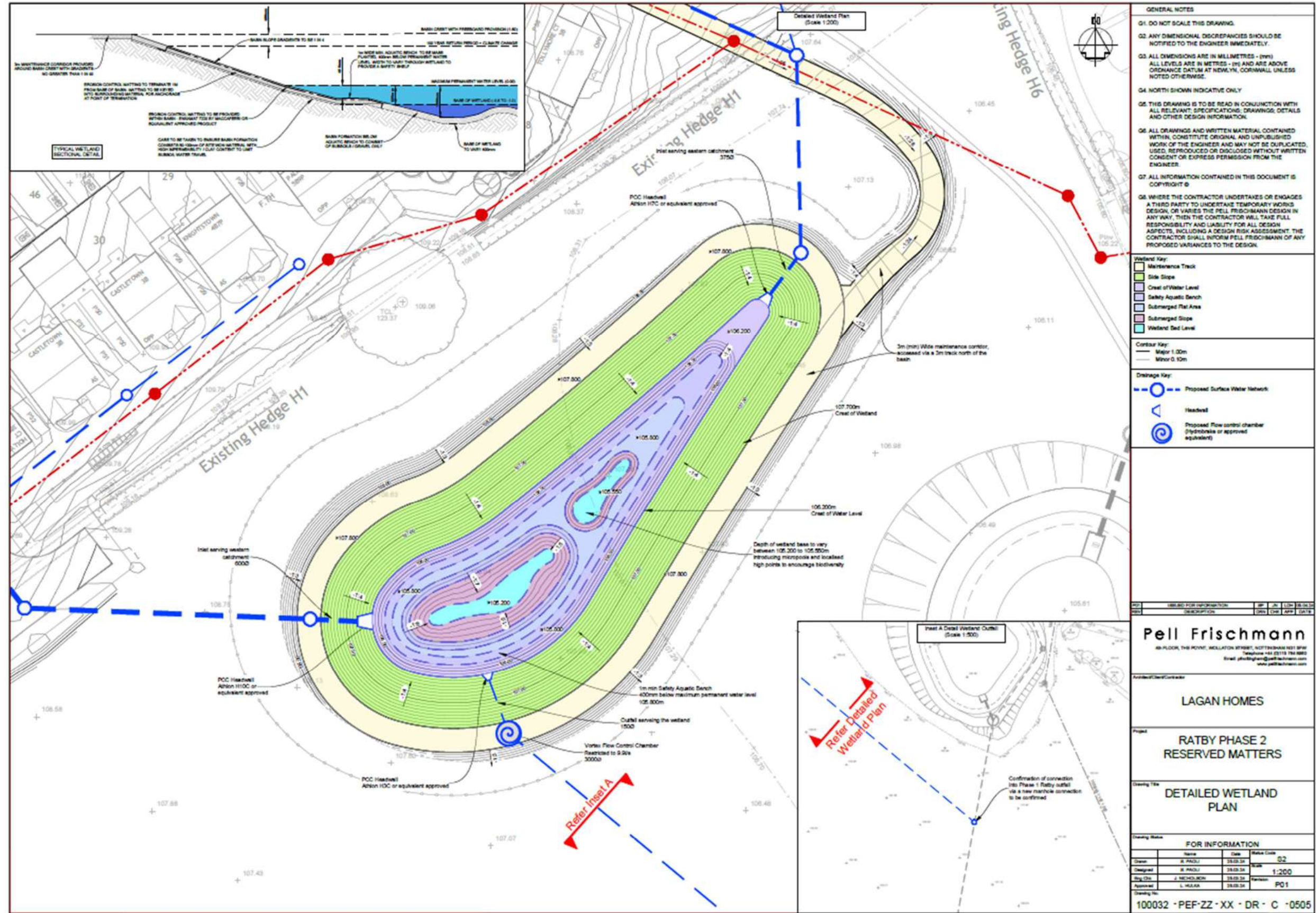


BSP Consulting Drawing No: MRRD-BSP-ZZ-XX-DR-C-0141. Storm Water Offsite Drainage Route (Phase 1 Existing Drainage)



Appendix D

Pell Frischmann Drawing No: 100032-PEF-ZZ-XX-DR-C-0505. Detailed Wetland Plan



Appendix E

Typical Silt mitigation measures



Terrastop™ Silt Fences

Hy-Tex Terrastop™ Silt Fences are specialised silt fence fabric used as an entrenched interceptor fence to control pollution caused by silt laden construction site stormwater run-off.

The Problem

Many construction, forestry and farming activities result in disturbed or bare ground that is vulnerable to weather erosion. The silt laden run-off, plus site debris and other pollutants, often contaminates surrounding land, rivers, streams, lakes and drains - resulting in significant environmental diffuse pollution and potentially costly fines.

However, due to the on-going nature of such work, it is generally not possible to protect exposed surfaces until the project is complete. So stormwater from such sites represents a major non-point source of diffuse water pollution in the UK.

The Solution

Terrastop™ Premium is a special, high quality, permeable, technical filter fabric for stormwater surface runoff pollution management. Terrastop™ can be installed as an entrenched vertical entrapment fence, and is designed to intercept and detain stormwater run-off, trapping harmful silt through settlement and filtration before it leaves the site.

Hy-Tex Terrastop™ Premium, and HighFlow silt fences, offer a proven, practical, economic and effective method to reduce stormwater run-off pollution from such locations. While Terrastop™ Basic offers a budget option for low risk, small scale projects, with less stringent environmental requirements such as domestic use.

The benefits of the silt fence are increasingly becoming recognised in Britain: The Environment Agency/SEPA Pollution Prevention Guidelines (PPG5) now recommend the use of silt fences to reduce silt transport from exposed ground and stock piles; and research at The James Hutton Institute, using Terrastop silt fencing, demonstrated that even after post-harvest contour grubbing of potato fields an estimated 80 tonnes of soil containing 60-70 kg phosphate-P contaminants was trapped from a 17ha field (Dr Andy Vinten).

Silt fences have also been used extensively in other countries for many years, and their proven performance (Intercepting up to 86% of suspended solids (Horner et al. 1990)) has made them a standard Best Management Practice on a diverse range construction projects, while in-depth research and practical experience has identified the most important characteristics for effective results.

Kirsty Liddon's Edinburgh University Dissertation "Prevention of Diffuse Pollution from Active Forestry Harvesting Sites" concluded "the Hy-Tex (Terrastop Premium) material appears to be the most suitable material for use as sediment retention as it has the most consistent performance between differing soil types retaining the highest volumes of sediment for both gley and peat solutions."

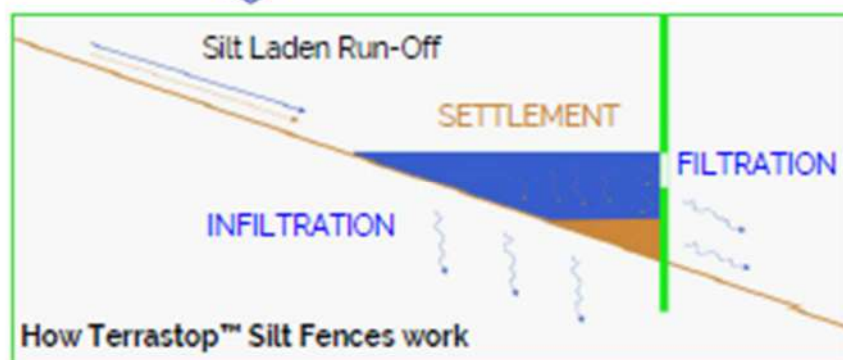
Application Categories: Sediment Pollution Control

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Terrastop™ Premium (GR180)

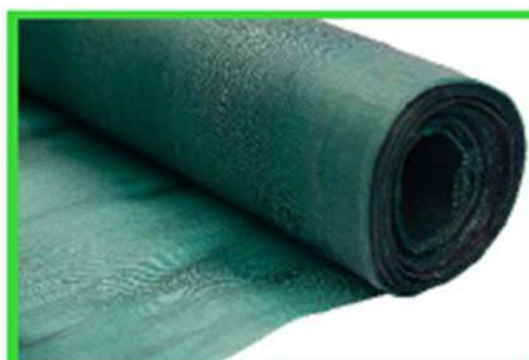
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Features/Benefits:

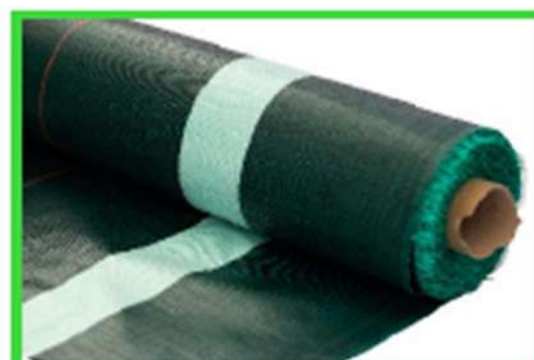
- Burial depth and max silt height marker lines
- Top tying-off + tensioning ribbon
- Fibrous weft yarn provides excellent filtration (Premium)
- Proven performance
- Traps harmful silt via settlement and filtration
- Purpose designed for application
- High tensile strength
- UV Stabilised
- Non fraying reinforced edges
- High quality weave
- Exceptional balance of permeability vs filtration



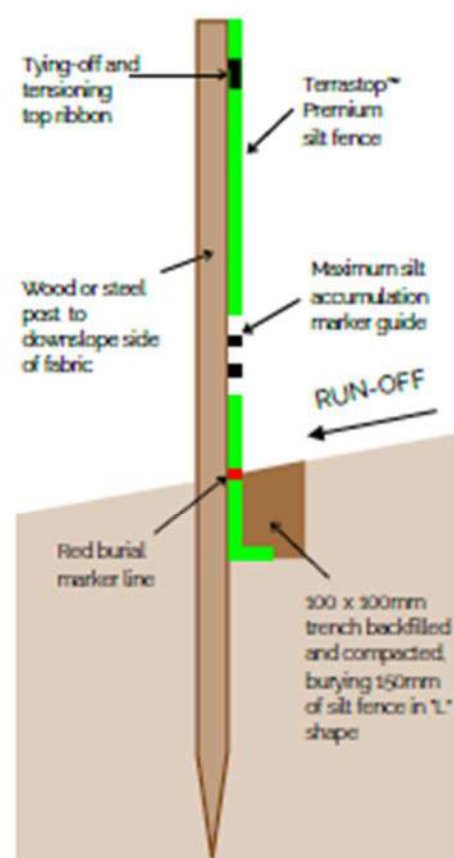
Terrastop™ Premium



Terrastop™ HighFlow



Terrastop™ Basic



Feature	Terrastop™ Premium (Terrasilt GR180)	Terrastop™ HighFlow	Terrastop™ Basic (Terrasilt GR90)
Tensile Strength	22kN/m	32kN/m	21kN/m
Puncture Resistance (CBR)	3,500N	3,700N	1,600N
Permeability (ISO 11058)	21 l/m ² .s (45 l/m ² .s to AS 3706.9)	190 l/m ² .s	21 l/m ² .s
Opening Size (ISO 11058)	180µm	320µm	310µm
Weight	200g/m ²	145g/m ²	88g/m ²
Material	1000µ thick, green/black, 400kLy UV stabilised, polypropylene, tear resistant non-fraying edges.	500µ thick, green/black, 450kLy UV stabilised, polyethylene, tear resistant non-fraying edges.	500µ thick, green/black, 400kLy UV stabilised, polypropylene, tear resistant non-fraying edges.
Roll Size	0.75 x 100m	1.00 x 100m	0.75 x 100m
Other Key Features:	Fibrous weft yarn, burial depth and max silt height marker lines, top tying-off + tensioning ribbon.		Burial depth and max silt height marker lines, top tying-off + tensioning ribbon.

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Straw Wattles

Straw Wattles are an innovative product suitable for multiple applications, primarily silt prevention and erosion control. They are manufactured from weed free agricultural straw contained within a bespoke, fine gauge, woven net tube - making the wattles, light, strong and extremely flexible.

As an agricultural by-product, wheat straw only has two main potential uses, animal bedding and more recently, as a fuel for power stations.

The benefits of wheat straw are that it can be locally sourced, therefore reducing transportation requirements to a minimum and also offering the additional benefits of soil fertilisation from the wattles decomposition.

With a biodegradable figure in excess of 99.5%, straw wattles are considered as highly environmentally friendly.

Straw Wattles are available in various lengths, the standard being 3m & 6m lengths - with custom lengths also an option.

Packed in a coil form, straw wattles are stackable for transportation, and weighing less than 3kg per metre, are easy to handle on site.

Features/Benefits:

- Consists of 100% agricultural grade
- Environmentally friendly
- Suitable for multiple applications
- Light weight and easy to handle
- Simple installation process
- Low carbon footprint
- Can be removed or left in place following establishment of vegetation

Feature	Straw Wattles
Function	Used as a barrier to protect water courses directly alongside rivers, streams and lakes. Also can be used to stabilise slopes.
Applications	Silt Prevention and Erosion Control
Material	100% Agricultural grade, weed seed free straw, compressed and contained in a bespoke fine gauge, net tube.
Sizes	230mm diameter x 3.00m long 230mm diameter x 6.00m long
Weight	9Kg (3.00m long) 18Kg (6.00m long)

Application Categories: Sediment Pollution Control, Surface Erosion Control

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Full details of silt prevention and erosion control installation guidelines for Straw Wattles can be provided upon request.

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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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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

FIG: 1
Flow
AREA TO BE DISTURBED

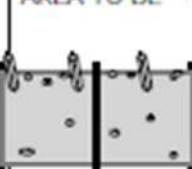


FIG: 2
Flow

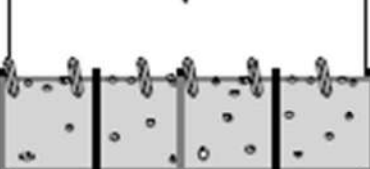
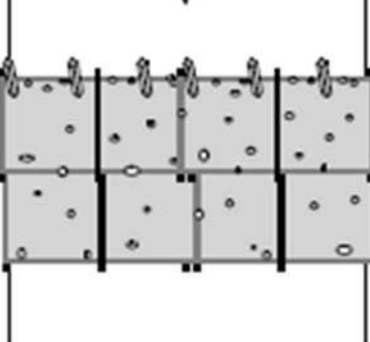


FIG: 3
Flow



	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.	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.
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.	The mats can be unrolled across or down the channel to provide any length/width of coverage.
	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)	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).
	c). Where several mats are required to cover the channel width, lap the sides (Fig: 2)	The full width of the channel should be protected unless there is a specific reason.
	d). Where more than one row is required, tuck the up-stream edges under the preceding mats (Fig:3)	Refer to coverage guidelines
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.	When the mats are full they must be replaced or more added to the downstream end of the existing mats.
	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.	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.
	c). If required, the mats can then be unrolled, secured to the bank (with fixing)	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.

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

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Ultra Drain Guards

Ultra Drain Guards are designed to remove oil and sediment pollution from surface water running into gully drains from surrounding construction sites, farms, industrial estates, or other areas prone to storm water pollution or cleaning operations.

Ultra Drain Guards are made from a high permeability non-woven polypropylene geotextile that trap solids and oils but allow water to drain through and also incorporate bypass ports to further maintain flow into the drain.

They are designed to be easily placed directly into the drain gully pot to filter out materials as they flow into the drain without compromising drainage, and the Oil and Sediment model absorbs up to 3.2g litres of hydrocarbons as well as up to 18 kg of sediment, sand or debris.

Installation

1. Remove catch basin grating
2. Clean dirt and debris from grating ledge
3. Insert Drain Guard.
4. Reinstall grate. To insure maximum effectiveness, Drain Guard skirt should be secured (pinched) between grating and ledge.
5. Cut the excess fabric off with a blade or knife if desired.

Maintenance and disposal

6. The Ultra-Drain Guard filters are designed to be used for 3 to 6 months under normal conditions.
7. Where heavy contamination is present the unit will have a reduced life expectancy. When the unit has collected about 6 inches of sediment it is recommended that it be replaced. The unit should also be replaced if free oil can be seen floating and is not being absorbed. The Ultra-Drain Guards should be inspected on a regular basis.

Guidance

- 25.4cm (diameter) x 45.7cm (depth) catchment area
- Cut the skirt to fit your drain

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Features/Benefits:

- Captures oil and sediment before it enters the drain
- Absorbs up to 3.2g litres of hydrocarbons
- Holds up to 18kg of sediment
- Easy installation and maintenance
- Universal fit
- Compact packaging means storage on site is not taken up
- Designed to be used for 3-6 months under normal conditions

Model	Code	Oil Capture	Sediment Capture	Collection Area	Flow Rate	Size
Oil & Sediment	g217	3.2g l (.87 gal)	18 kg (40 lbs)	25.4 x 45.7cm (10" x 18")	18g3 l/min (500 gpm)	121.9 x 91.4 x 45.7cm (48" x 36" x 18")

Feature	ASTM Test	Value
Material		Non-woven polypropylene geotextile
Grab Tensile Strength	D 4632	979 N (220 lb)
Elongation	D 4632	50%
Trapezoid Tear	D 4533	423 N (95 lb)
Puncture Resistance	D 4833	600 N (135 lbs)
Mullen Burst	D 3786	2,896 kpa (420 psi)
Permittivity	D 4491	1.4 sec ⁻¹
Pore Size	D 4751	180 micron (80 US sieve no)
UV Stability	D 4355	70% strength retained after 500hr
Weight	D 5261	272 g/m ² (8 oz/yd ²)
Flow Rate - Fabric	D 4491	3,660 l/min/m ² (90 gal/min/ft ²)
Flow Rate - Bypass Ports	D 4491	2,914 l/min

All data stated and the recommendations made herein are offered free of charge and are accurate to the best of our knowledge. Hy-Tex (UK) Ltd assumes no liability for the accuracy or completeness of this information or for the ultimate use by the purchaser. Hy-Tex disclaims any and all express, implied, or statutory standards, warranties or guarantees, including without limitation any implied warranty as to merchantability or fitness for a particular purpose or arising from a course of dealing or usage of trade as to any equipment, material, or information furnished herewith. Final determination of the use of any information or material, or how it is useful, and whether the use infringes any patents is the sole responsibility of the user.

Application Categories: Sediment Pollution Control

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Agrotiles



Biodegradables



Geotextiles



Specialist



Wildlife

Living Walls &
Roofs

Accessories

The Intelligent Environmental Solution

Biobrane™ Pipe Sock

100% Bio-Based | Fully Compostable | Environmentally Friendly



Feature	Biobrane™ Pipe Sock
Application	Sediment Filter
Effective Pore Size	92 micron
Sediment Capacity	Approx 18kg
Hydrocarbon Absorption	Up to 0.30 litres
Permeability	46 litres/m ² /sec
Tensile Strength	6.5 kN/m
Material	PLA biopolymer non-woven, needle punched fabric. UV stabilised
Bag Size	Approx 1.20 x 0.30m lay flat
Additional Features	Tying cord and hydrocarbon detection strip

OIL DETECTION INDICATOR



If strip turns **DARK BLUE**
OIL PRESENT
 Stop pumping
 Contact your
 Environmental Manager

Biobrane™ Pipe Socks

Biobrane™ Pipe Socks control pollution caused when pumping dirty water from excavations, and offers an economical alternative to traditional dewatering bags or filtration products.

These easy to use and popular sediment filters bags are ideal for small projects and minor pollution problems to control pollution from sediment and oil sheen in pumped dirty water.

Designed to attach directly to the discharge pipe, they quickly filter water to help prevent unwanted sediment, silt, debris or pollutants leaving the site in run-off.

The socks have been designed to control pollution caused by pumping dirty water from excavations, trenches, lift shafts, bunds and the like, by filtering out sediment from contaminated water down to 92 micron.

Biobrane™ Pipe Socks are uniquely made from a special plant based biopolymer, providing an environmentally responsible solution by using sustainable materials that are fully compostable and biodegradable at end of use.

Features/Benefits:

Low cost solution

Simple to set-up and use

Hydrocarbon detection strip

Ideal solution for minor pollution problems involving pumped water to control sediment entering the watercourses.

92 micron pore filter size

Small and compact means little disruption to surrounding people/areas

Made from sustainable plant based bio-polymer, which is compostable and fully biodegradable

Biobrane™ Pipe Socks are designed for a 2 inch pump's maximum flow rate

Guidance

Biobrane™ Pipe Socks are designed for a 2 inch pump's maximum flow rate



Application Categories: Sediment Pollution Control

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4 Monitoring and Maintenance

- 4.1.1 To ensure proposals are adequately maintained by end users the following tables define the maintenance and management regimes for the drainage infrastructure and is to be used as a guide by the management company which will include Lagan Homes until such a that an appropriate management company is appointed. Soft landscaping maintenance and management proposals are to be independently verified by the Landscape Architect: -

Table 4.1 Maintenance Schedule

Type	Maintenance Work	Maintenance Frequency
Manholes / Inspection chambers not adopted by the LHA / Sewerage undertaker	Manholes / Inspection chamber openings are to be checked to ensure covers are removal and have no seized since prior inspection. Visual inspection of the internal chamber shall only be conducted is considered necessary and non-intrusive options are inapplicable, such as CCTV or dye testing. Confined space working permits are to be required before any internal inspections are undertaken	Routine inspection every two years
Gravity pipework not adopted by the LHA / Sewerage undertaker	Jet washing of the system to be carried out in order to reduce any siltation build-up / deposited debris within the surface water sewer. Where blockages are encountered an appropriate CCTV condition survey is to be undertaken to investigate the issue	Route inspection every three years
Road gully pots and channel drainage systems not adopted by the LHA / Sewerage undertaker	Pots are to be cleared of debris / siltation build up	Routine exercise every two years
Headwalls (sandbag/concrete)	Suitably qualified personnel to inspect headwall for defects and identified issues assessed and repaired as necessary	Routine inspection every two years
Headwall Trash Screens	Routine checks to be undertaken to remove any debris build-up and material disposed to licensed tip off-site Maintenance of physical trash screen to be undertaken annually, such as hinges, bolts etc to ensure functionality and corroded elements replaced as identified	Routine inspection four times a year, Routine maintenance every year
Flow Control Chambers	Internal chamber to be cleared of any debris / silt build-up in sump. In the event of blockage, the bypass plate is to be opened by utilising the bypass wire affixed to the chamber soffit for drainage of the chamber prior to access by maintenance team. Blockages / defects to be rectified and bypass plate disengaged following completion of maintenance	Routine maintenance every 6 months

- 4.1.2 For the proposed surface water drainage system to function correctly, it will need to be appropriately maintained. It is proposed that a large proportion of the site's drainage (e.g. spine sewers, laterals and attenuation basins) will be offered up for adoption by Severn Trent Water, the undertaker for the region.