

Kirklees Council

To whom it may concern,

Re: Construction Phase Drainage Strategy – Discharge of condition 8 of 2024/62/92553/W for the erection of a mixed industrial development (use classes E(G)(II,III), B2 and B8); including demolition of existing structures, new yard, parking, landscaping, drainage features and ancillary structures at the Wappy Springs Inn, Lindley Moor Road, Lindley Moor, Huddersfield, HD3 3TD

This document has been produced to provide a strategy for managing surface water during the construction phase of the above-named development, and hence discharge condition 8 of planning reference 2024/62/92553/W.

Condition 8 states:

“Prior to development commencing, a temporary surface water drainage strategy for the construction phase (after soil and vegetation strip) shall be submitted to and approved in writing by the Local Planning Authority. The scheme shall detail:

- phasing of the development and phasing of temporary drainage provision,*
- include methods of preventing silt, debris and contaminants entering existing drainage systems and watercourses and how flooding of adjacent land is prevented.*

The temporary works shall be implemented in accordance with the approved scheme and phasing. No phase of the development shall be commenced until the temporary works approved for that phase have been completed. The approved temporary drainage scheme shall be retained until the approved permanent surface water drainage system is in place and functioning in accordance with written notification to the Local Planning Authority.”

The construction phase can essentially be split into two phases, regarding temporary surface water management:

1. Pre-construction of permanent surface water drainage
2. Post-construction of permanent surface water drainage

During the pre-construction of the permanent surface water drainage phase, there is potential for uncontrolled surface run-off from a large catchment area. To address this there will be a temporary detention basin, a temporary orifice plate flow control and silt trap fencing to restrict uncontrolled run-off. This arrangement is shown on the attached Construction Phase Drainage Strategy drawing.

The temporary orifice plate has been sized to restrict the discharge rate to 3.5l/s, the approved discharge rate for the site. Please see attached hand calculations to confirm the orifice size.



The temporary detention basin has been designed to accommodate a 1 in 2 year critical return period event, as shown in the attached hydraulic calculations. The basin is 1m deep, with 1:3 side slopes, and provides a storage volume of 109.6m³.

Along the northern boundary, silt trap fencing will be used to prevent the buildup of siltation, to direct surface water to the temporary basin, and to maintain the water quality of the surface water runoff.

An example of the type of silt trap fencing to be used is attached to this letter. The silt trap fencing will be inspected on a weekly basis, and following a high rainfall event, and will be cleaned/repaired/replaced as required, in line with the manufacturer's requirements.

If a storm in excess of the 1 in 2 year critical event were to occur, a temporary pump would be required to pump surface water runoff from the basin to the existing watercourse. Pumping equipment will need to be readily available on site in the event of a storm in excess of the 1 in 2 year critical event.

As construction progresses the temporary basin will need to be removed to allow the construction of the proposed units. The basin must only be removed once the permanent drainage system has been constructed, including the permanent storage system (in this case, an attenuation tank), the permanent flow control device, and connections to the drainage system to allow overland flow to enter the system.

As the final proposed discharge rate from the site is 3.5l/s, it is anticipated that this discharge rate will also be acceptable during the construction phase, once the permanent surface water drainage system, including the permanent flow control device has been constructed.

Therefore, we believe we have provided sufficient details as part of the Construction Phase Drainage Strategy, to show the works will not increase the risk of pollution or flooding during the Construction Phase, in line with the information requested as part of the grant of planning permission. Therefore, we request condition 8 of planning permission 2024/62/92553/W is discharged accordingly.

Yours faithfully,

Jonathan Allchin IEng MICE
Principal Engineer
For Dudleys Consulting Engineers Ltd



DO NOT SCALE

DESIGNERS HAZARD IDENTIFICATION

IT IS ASSUMED THAT ALL WORKS WILL BE UNDERTAKEN BY A COMPETENT CONTRACTOR WORKING, WHERE APPROPRIATE, TO AN APPROVED METHOD STATEMENT. IN ADDITION TO THE HAZARDS TYPICALLY ASSOCIATED WITH THE TYPES OF CONSTRUCTION DETAILED ON THIS DRAWING, ANY KNOWN ABNORMAL HAZARDS SPECIFIC TO THIS SCHEME HAVE BEEN IDENTIFIED.



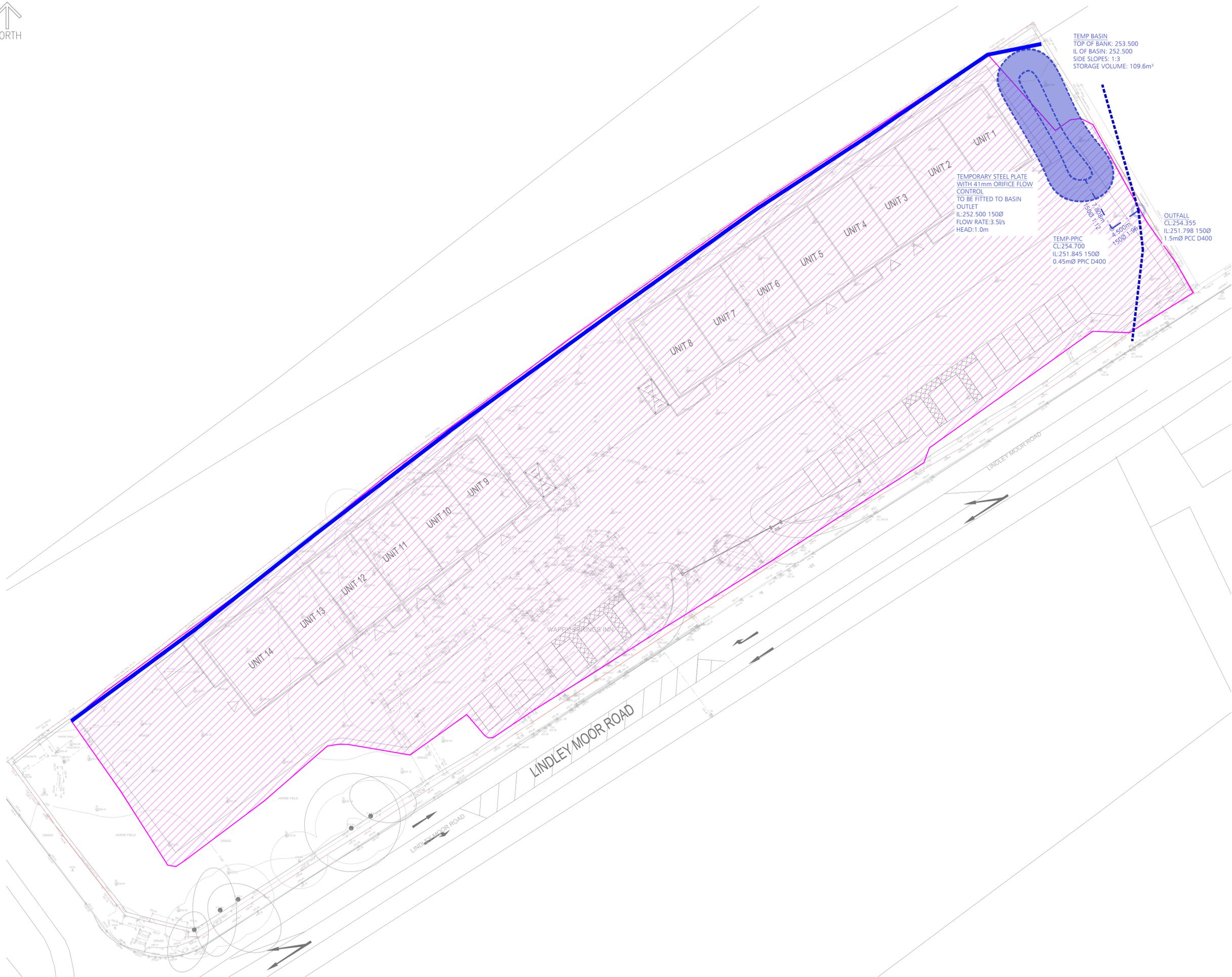
ABNORMAL HAZARD REFERENCE

NOTES

- DO NOT SCALE FROM THIS DRAWING.
- THIS DRAWING IS TO BE REPRODUCED IN COLOUR.
- IF ANY DISCREPANCIES ARE FOUND IN THIS DRAWING, PLEASE REPORT TO DUDLEYS CONSULTING ENGINEERS.
- THIS DRAWING HAS BEEN ORIENTATED TO OS BRITISH NATIONAL GRID (EPSG:27700 OSGB36). EXISTING SURVEY STATIONS ARE SHOWN ON THE TOPOGRAPHICAL SURVEY.
- THIS DRAWING IS BASED ON THE FOLLOWING INFORMATION:
 - P20-01094-MET-EXT-XX-TOP-M2-G-001 - TOPOGRAPHICAL SURVEY BY MET GEO ENVIRONMENTAL DATED OCT 2020.
 - 3002 - SITE LAYOUT PLAN BY KPP DATED SEP 2025.
- ALL WORK TO BE UNDERTAKEN IN ACCORDANCE WITH THE CURRENT EDITION OF THE BUILDING REGULATIONS, SEWERAGE SECTOR CODES OF PRACTICE, AND THE RELEVANT LOCAL HIGHWAY AUTHORITY STANDARDS.

KEY

- SITE BOUNDARY
- TEMPORARY IMPERMEABLE AREA, TOTAL: 0.604ha
- PROPOSED TEMPORARY SILT TRAP FENCING
- PROPOSED TEMPORARY DETENTION BASIN
- PROPOSED TEMPORARY SURFACE WATER DRAIN
- PROPOSED TEMPORARY SURFACE WATER PPIC
- EXISTING CULVERTED WATERCOURSE
- PROPOSED MANHOLE ON WATERCOURSE



17.10.25	PRELIMINARY ISSUE	JA	PD	POT
DATE	REVISION DESCRIPTION	BY	CHK.	REV.

DUDLEYS CONSULTING ENGINEERS
 Title House
 35 Town Street
 Leeds, LS18 5JL
 0113 258 3611
 info@dudleys.co.uk

PROJECT
**WAPPY SPRINGS
 HUDDERSFIELD, HD3 3TD**

TITLE
**CONSTRUCTION PHASE
 DRAINAGE STRATEGY**

SCALE	PAPER	STAGE	STATUS
1:250	A1	PRELIMINARY	

DRAWING NO.	REV.
20392-DCE-XX-XX-D-C-102	P01

Orifice Size Calculation

$$Q = C_d A_o \sqrt{2gh} \quad \Rightarrow \quad A_o = \frac{Q}{C_d \sqrt{2gh}}$$

Equation 28.1 from CIRIA C753 SUDS Manual

$$Q = 0.0035 \text{ m}^3/\text{s}$$

$$C_d = 0.6$$

$$h = 1 \text{ m}$$

$$g = 9.81 \text{ m/s}^2$$

$$A_o = \frac{0.0035}{0.6 \times \sqrt{2 \times 9.81 \times 1}} = 1.317 \times 10^{-3} \text{ m}^2 \\ = 1,317 \text{ mm}^2$$

$$A = \pi r^2 \quad (\Rightarrow) \quad r = \sqrt{\frac{A}{\pi}}$$

$$r = \sqrt{\frac{1,317}{\pi}} = 20.5 \text{ mm}$$

$$d = r \times 2 = 20.5 \times 2 = 41 \text{ mm}$$

Diameter of orifice is 41 mm.

Design Settings

Rainfall Methodology	FEH-22	Minimum Velocity (m/s)	1.00
Return Period (years)	2	Connection Type	Level Soffits
Additional Flow (%)	0	Minimum Backdrop Height (m)	0.750
CV	1.000	Preferred Cover Depth (m)	1.200
Time of Entry (mins)	4.00	Include Intermediate Ground	✓
Maximum Time of Concentration (mins)	30.00	Enforce best practice design rules	✓
Maximum Rainfall (mm/hr)	50.0		

Nodes

Name	Area (ha)	T of E (mins)	Cover Level (m)	Diameter (mm)	Easting (m)	Northing (m)	Depth (m)
TEMP BASIN	0.604	4.00	253.500		410437.814	418824.013	1.000
TEMP-PPIC			254.700	450	410441.558	418817.161	2.855
OUTFALL			254.550	1500	410445.276	418819.696	2.752

Links

Name	US Node	DS Node	Length (m)	ks (mm) / n	US IL (m)	DS IL (m)	Fall (m)	Slope (1:X)	Dia (mm)	T of C (mins)	Rain (mm/hr)
1.000	TEMP BASIN	TEMP-PPIC	7.808	0.600	252.500	251.845	0.655	11.9	150	4.04	47.5
1.001	TEMP-PPIC	OUTFALL	4.500	0.600	251.845	251.798	0.047	95.7	150	4.12	47.5

Name	Vel (m/s)	Cap (l/s)	Flow (l/s)	US Depth (m)	DS Depth (m)	Σ Area (ha)	Σ Add Inflow (l/s)
1.000	2.934	51.8	103.8	0.850	2.705	0.604	0.0
1.001	1.027	18.1	103.8	2.705	2.602	0.604	0.0

Pipeline Schedule

Link	Length (m)	Slope (1:X)	Dia (mm)	Link Type	US CL (m)	US IL (m)	US Depth (m)	DS CL (m)	DS IL (m)	DS Depth (m)
1.000	7.808	11.9	150	Circular	253.500	252.500	0.850	254.700	251.845	2.705
1.001	4.500	95.7	150	Circular	254.700	251.845	2.705	254.550	251.798	2.602

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
1.000	TEMP BASIN		Manhole	Adoptable	TEMP-PPIC	450	Manhole	Adoptable
1.001	TEMP-PPIC	450	Manhole	Adoptable	OUTFALL	1500	Manhole	Adoptable

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)	
TEMP BASIN	410437.814	418824.013	253.500	1.000						
							0	1.000	252.500	150
TEMP-PPIC	410441.558	418817.161	254.700	2.855	450		1	1.000	251.845	150
							0	1.001	251.845	150

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)
OUTFALL	410445.276	418819.696	254.550	2.752	1500	1	1.001	251.798	150



Simulation Settings

Rainfall Methodology	FEH-22	Analysis Speed	Detailed	Starting Level (m)	
Rainfall Events	Singular	Skip Steady State	✓	Check Discharge Rate(s)	x
Summer CV	1.000	Drain Down Time (mins)	240	Check Discharge Volume	x
Winter CV	1.000	Additional Storage (m ³ /ha)	0.0		

Storm Durations

15 | 30 | 60 | 120 | 180 | 240 | 360 | 480 | 600 | 720 | 960 | 1440

Return Period (years)	Climate Change (CC %)	Additional Area (A %)	Additional Flow (Q %)
2	0	0	0

Node TEMP BASIN Online Orifice Control

Flap Valve	x	Invert Level (m)	252.500	Diameter (m)	0.041
Downstream Link	1.000	Design Depth (m)	1.000	Discharge Coefficient	0.600
Replaces Downstream Link	x	Design Flow (l/s)	3.5		

Node TEMP BASIN Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Safety Factor	2.0	Invert Level (m)	252.500
Side Inf Coefficient (m/hr)	0.00000	Porosity	1.00	Time to half empty (mins)	

Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)
0.000	38.5	38.5	1.000	180.7	184.9

Results for 2 year Critical Storm Duration. Lowest mass balance: 99.97%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m ³)	Flood (m ³)	Status
600 minute summer	TEMP BASIN	420	253.453	0.953	17.6	101.2697	0.0000	FLOOD RISK
600 minute summer	TEMP-PPIC	420	251.892	0.047	3.4	0.0075	0.0000	OK
600 minute summer	OUTFALL	420	251.842	0.044	3.4	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m ³)	Discharge Vol (m ³)
600 minute summer	TEMP BASIN	1.000	TEMP-PPIC	3.4	1.017	0.065	0.0265	
600 minute summer	TEMP-PPIC	1.001	OUTFALL	3.4	0.750	0.186	0.0203	125.9

TECHNICAL DATASHEET

SILTFENCE PREMIUM

PRODUCT DESCRIPTION

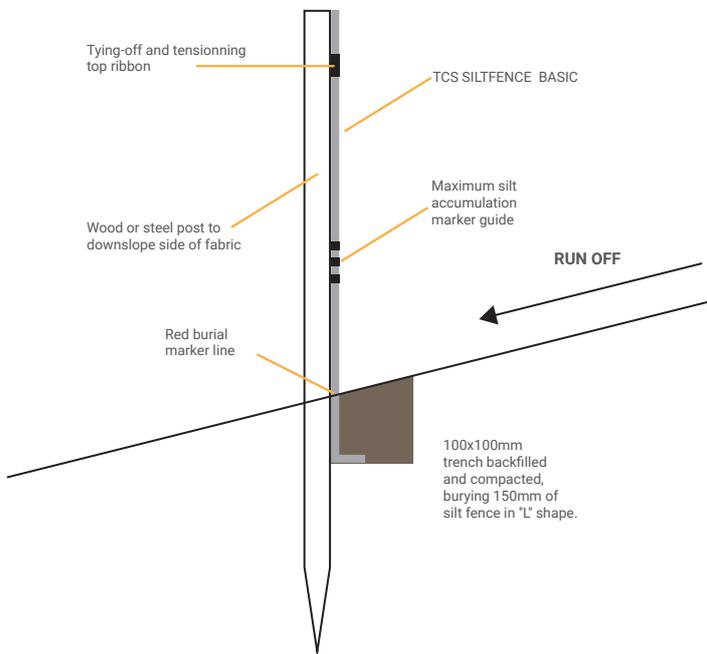
Many construction, forestry and farming activities result in disturbed or bare ground that is vulnerable to weather erosion. The silt laden run-off, plus site debris and other pollutants, often contaminates surrounding land, watercourses, lakes and drains - resulting in significant environmental diffuse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

SOLUTION

TCS Premium, and Highflow silt fences, offer a proven, practical, economic and effective method to reduce stormwater run-off pollution from such locations. They are special, high quality, permeable, technical filter fabrics, that can be installed as a entrenched vertical barrier fence, and are designed to intercept and detain run-off - trapping harmful silt through settlement and filtration before it leaves the site.

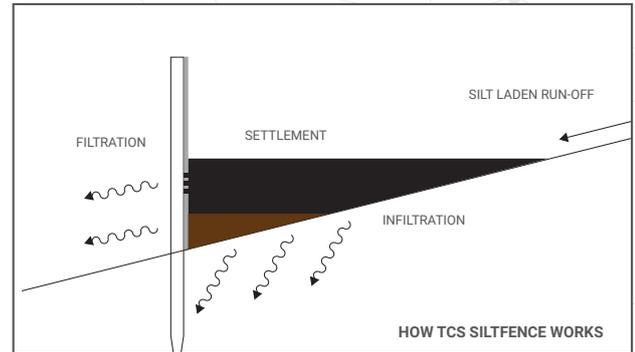


TCS SILTFENCE PREMIUM

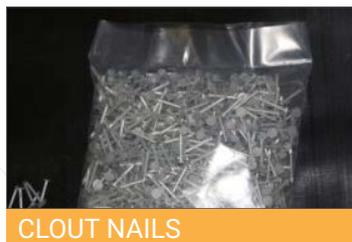


Timber posts installed at 1.5m centres. 69 posts required per 100m long roll

SPECIFICATIONS	TCS PREMIUM SILTFENCE
TENSILE STRENGTH	22 kN/m
PUNCTURE RESISTANCE (CBR)	3,500 N
PERMEABILITY (ISO 11058)	21 l/m ² .s (45 l/m ² .s to AS 3706.9)
OPENING SIZE (ISO 11058)	180µm
WEIGHT	200g/m ²
MATERIAL	1000µ thick, green/black, 400kLy UV stabilised, polypropylene, tear resistant non-fraying edges.
ROLL SIZE	0.75 x 100m
OTHER KEY FEATURES	Fibrous weft yarn, burial depth and max silt height marker lines, top tying-off + tensioning ribbon.



ANCILLARIES



REGISTERED OFFICE ADDRESS

Units 2 & 5 Tetbury Close
Martland Industrial Park
Wigan
Greater Manchester
WN5 0LA

1. TCS Geotechnics Ltd reserves the right to alter product specifications without prior notice.
2. It is the responsibility of all users to satisfy themselves that the above data is current.
3. The above figures are average values obtained from testing to current EN ISO standards
4. TCS Ltd cannot accept responsibility for the performance of these products as the conditions of use are beyond our control.
5. Installation details are available on request.

