Near Sawrey

Claife PC Meeting

16th April 2024

Ennerdale Water

United Utilities

Water for the North West

Better Rivers Overview

Phase 1 – Accelerated Programme

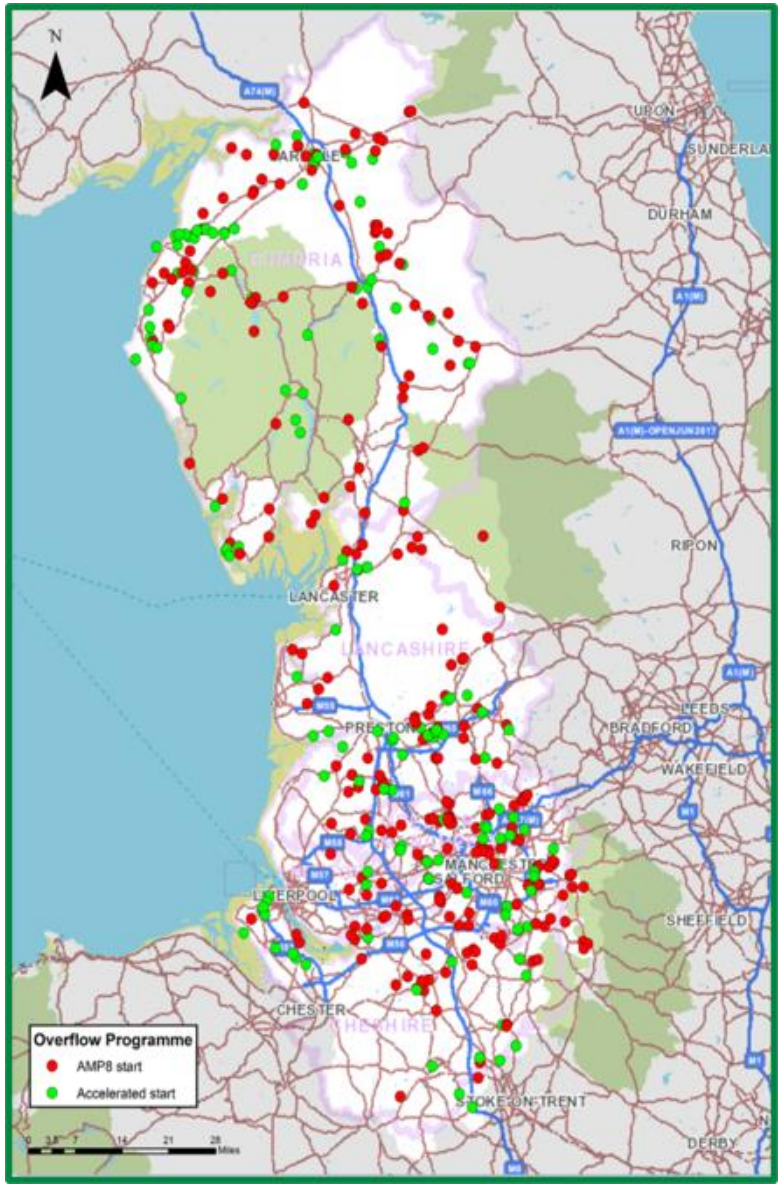
- **154** Projects – early commencement from Apr-23
- Network Modelling, Fast-track design , Ground Investigation, Topographical / Eco surveys
- Windermere / Bathing Water priorities

Phase 2 – Transitional Investment and AMP8 Programme

- **32** Phase 2 projects brought forward with transitional investment from Oct-23
- **233** Phase 2 projects from Apr-25 to Mar-30
- A further **16** bathing waters/shellfish projects through change control with EA from Oct-23

Interim Solutions (various locations)

- Reducing spills in 2023 and 2024
- Advanced interim solutions for storage, treatment and optimisation.



Near Sawrey WwTW – Legislation

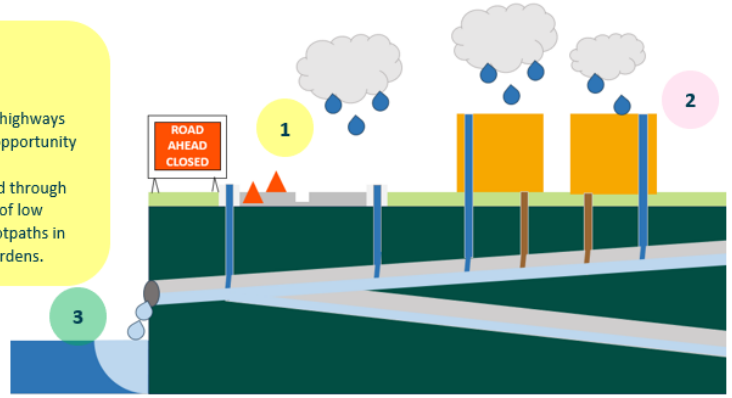
Asset Name	Discharge Reference	Receiving Waterbody	Primary Driver	Secondary Driver	Tertiary Driver	Quaternary Driver
NEAR SAWREY WWTW	017370030SO	Cunsey Beck	EnvAct_IMP2	EnvAct_IMP3	EnvAct_IMP4	EnvAct_IMP5
			Improvements to reduce storm overflows spills to protect the environment so that they have no local adverse ecological impact.	Improvements to reduce storm overflows that spill to designated bathing waters to protect public health.	Improvements to reduce storm overflows spills so that they do not discharge above an average of 10 rainfall events per year by 2050.	Improvements to reduce storm overflow aesthetic impacts by installation of screens.

Rainwater & Groundwater Management

Combined system

1) Highways Drainage Disconnection

30% of surface water comes from highways and therefore this presents a big opportunity to manage those flows at source. Interventions that can be delivered through retrofit include permeable paving of low traffic areas, parking areas and footpaths in addition to street trees and raingardens.



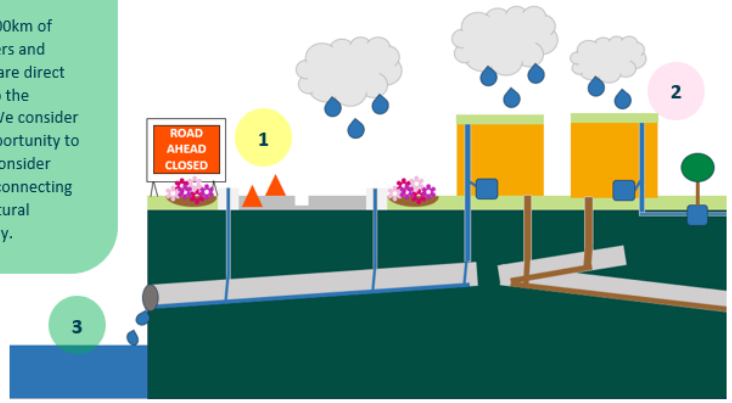
2) Property Level Disconnection

Where new surface water sewers are being laid to disconnect highways presents an opportunity to disconnect individual properties. This should be considered after disconnection from highways and extraneous sources to avoid disruption and significant customer engagement should be undertaken.

Separate system

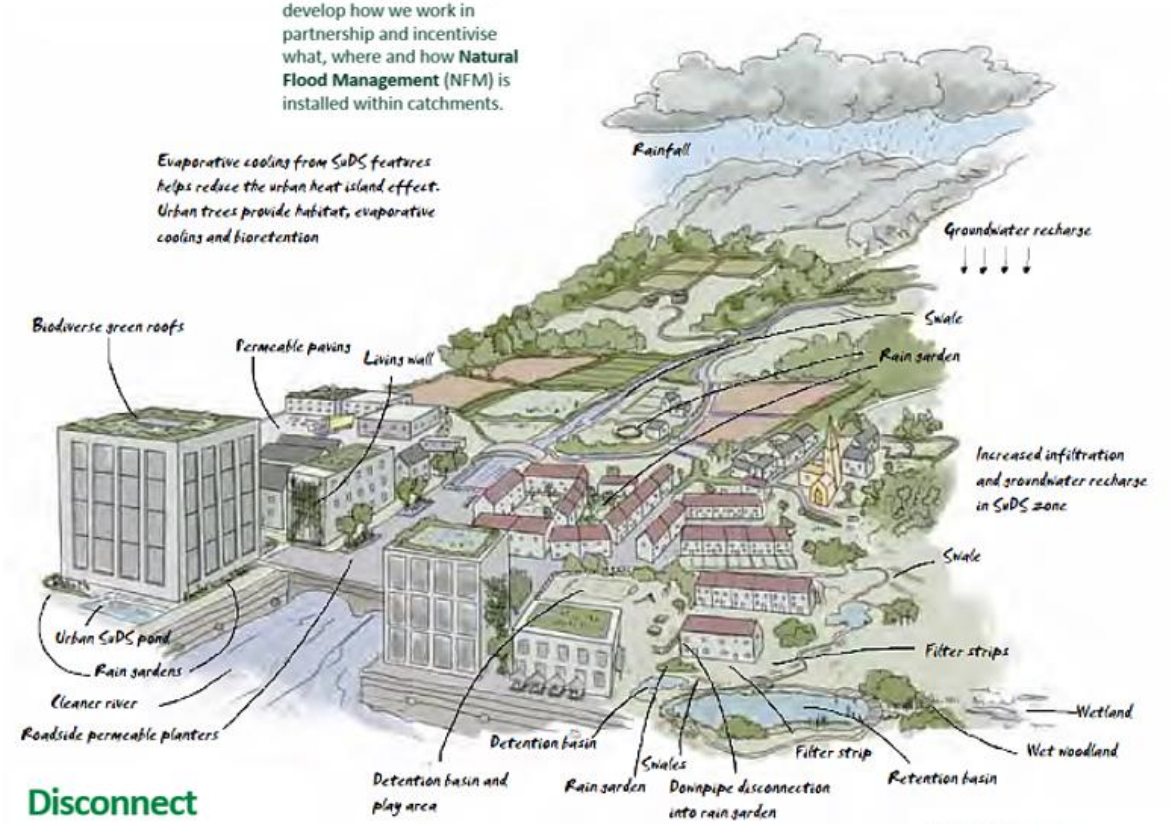
3) Watercourse Disconnection

There are over 2,000km of surface water sewers and watercourses that are direct piped discharges to the combined sewer. We consider that there is an opportunity to look at these and consider retrospectively disconnecting them to a more natural receiving waterbody.



Capture

We will work collaboratively to develop how we work in partnership and incentivise what, where and how **Natural Flood Management** (NFM) is installed within catchments.



Disconnect

Create capacity in and deliver step change in networks performance through **disconnection and separation of rainwater from combined sewers.**

Reuse

Value rain for the precious resource that it is! We want to embrace the extremes of rainfall through reuse and think differently about rain, so it **doesn't go down the drain** all so quickly.

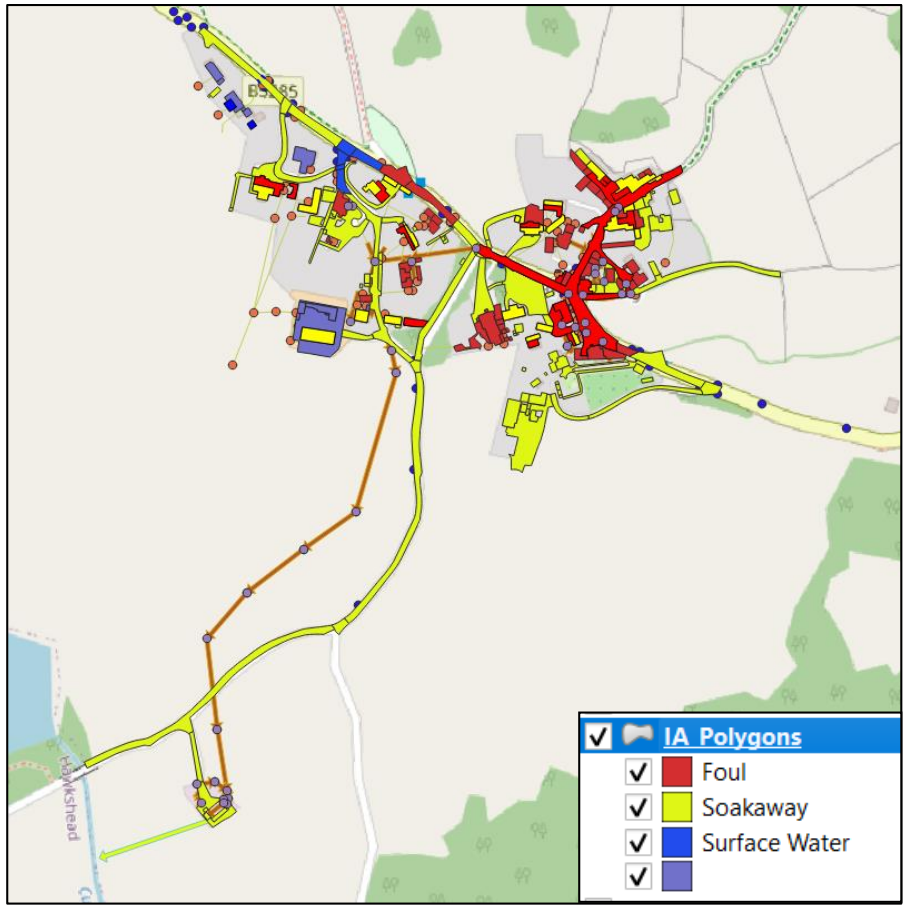
Attenuate

Controlling **everyday rainfall at source**. By managing the first 5mm of rainfall, this natural resource is productively utilised, whilst reducing peak flow to sewers and increasing the efficiency and performance of drainage networks.

https://www.wwt.org.uk/news-and-stories/news/parliament-pushes-back-on-flood-defence/

Initial Survey Results

- Impermeable Area Survey (IAS) completed in 2023.
- Stone Lane and B5285 confirmed as the main sources of highways connecting to the foul drainage network.
- CCTV confirmed routes for infiltration.
- Field surveys confirmed ‘watercourse’ connectivity.

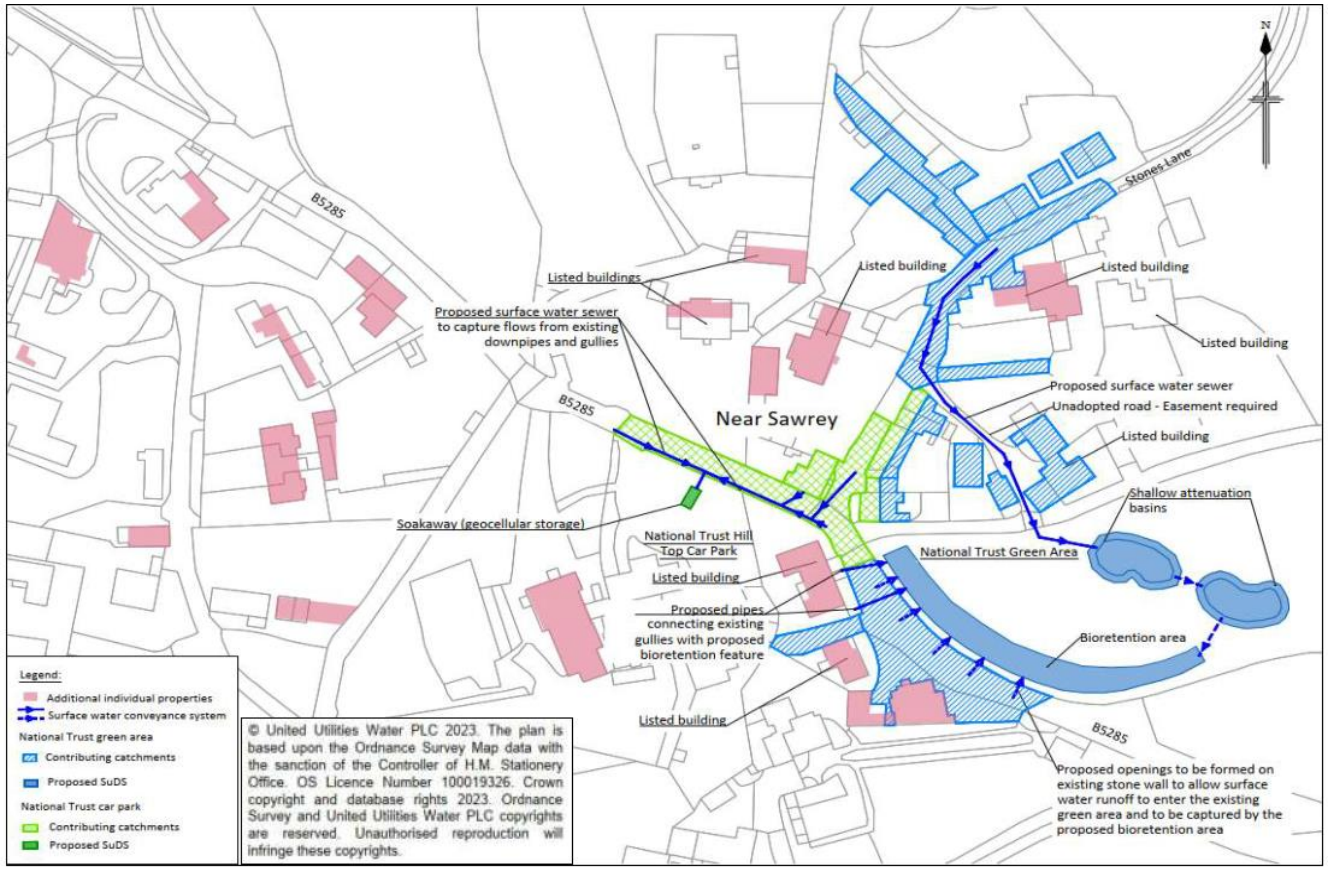


Near Sawrey – IAS results 2023

Initial SuDS Solutions

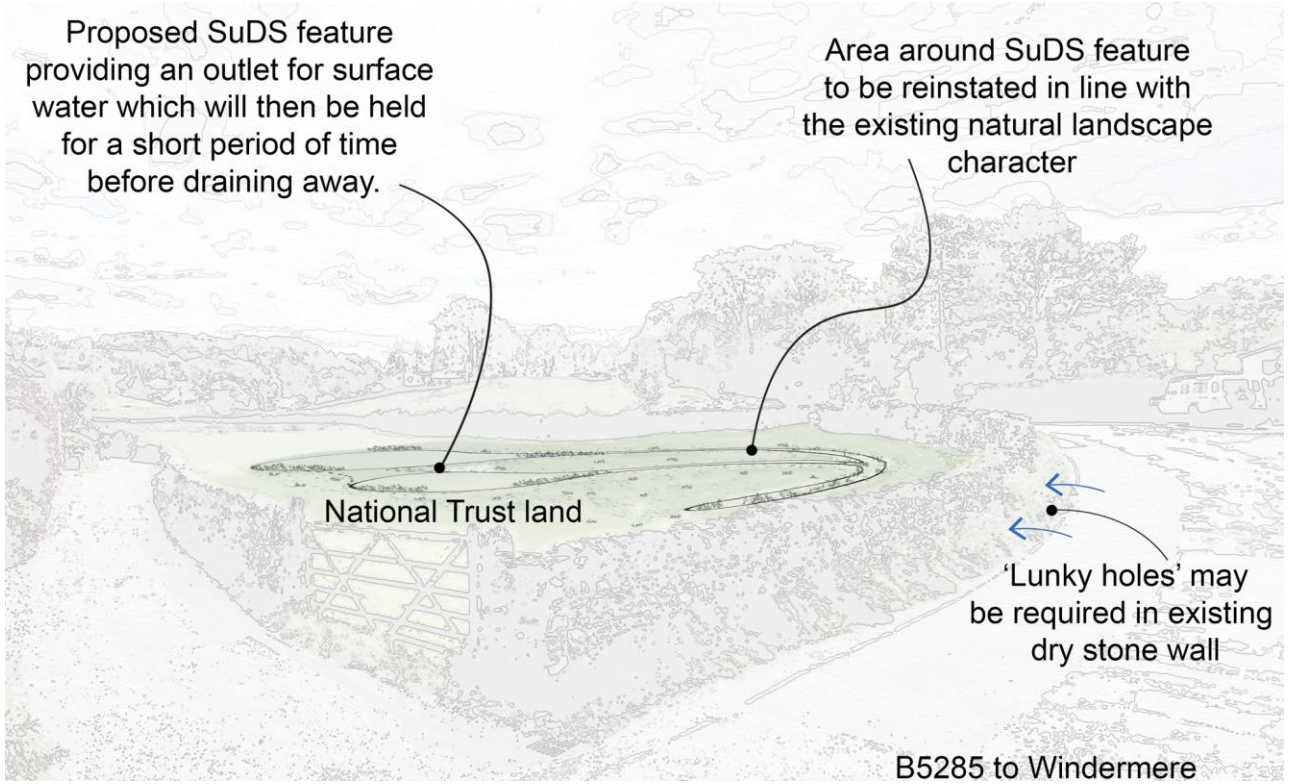
Preferred opportunities:

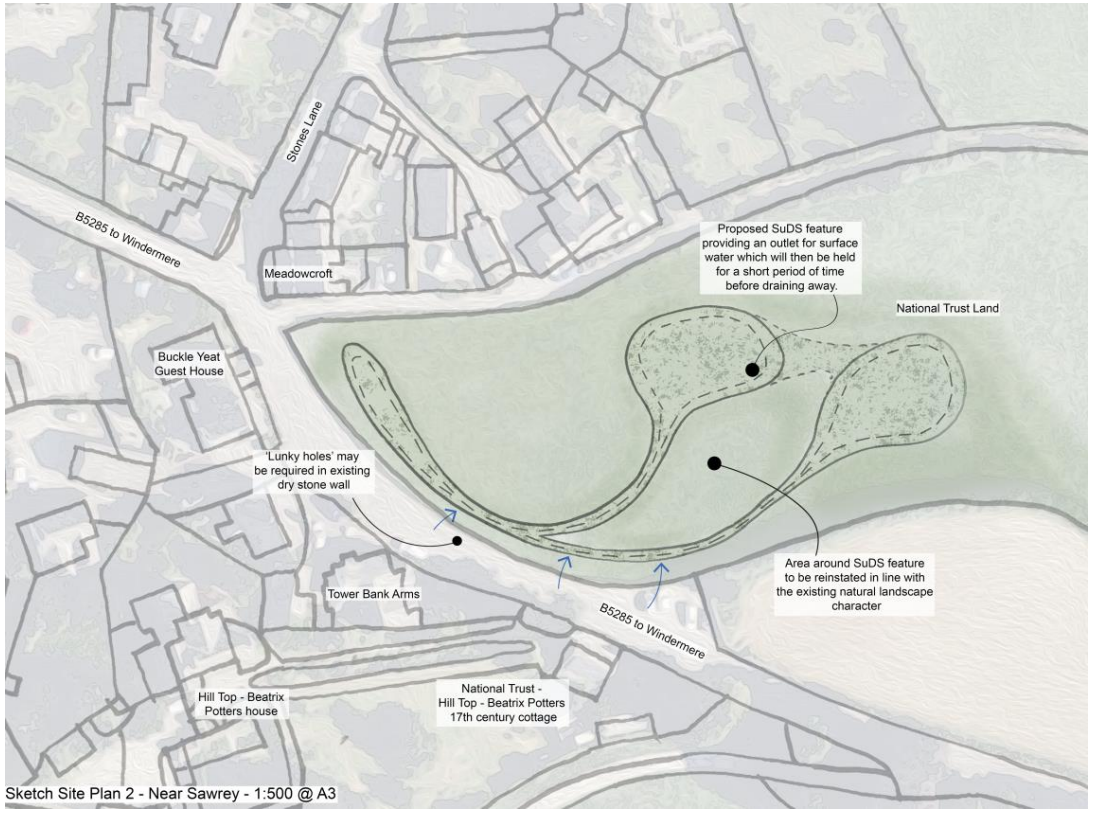
- Attenuation basin and bioretention strip in the National Trust field to the east of the B5285.
- Soakaway in National Trust Hill Top carpark.
- Separate surface water sewer network needed to collect and convey runoff.



Preferred SuDS Solutions

Initial SuDS Solutions – Draft Visualisations





Additional Opportunities

- Foul drainage improvements to resolve identified infiltration (commissioned, due to start).
- Separation of the identified watercourse (following further investigation).
- Property level SuDS (unlikely to provide full solution).
- Nature Flood Management (NFM) on the fell land (unquantified improvement).

Storage Solution

- 3500m3 internal volume needed to meet 10 spills/10 year average based on high level modelling
- Assuming WwTW flow rate remains at 3 l/s
- High likelihood that the WwTW would need an upgrade as a result to empty the tank
- Indicative location shown as a 20m diameter tank
- Amendments would be needed off the existing track to the WwTW to access the tank on a temporary and permanent basis
- This results in 6,700m3 of spoil to be removed.
- Assume bulking factor of soil is 1.5 the 6700m3 becomes 10,000m3.
- That's approx. 1000 lorry movements in one direction from the excavation site and another 1000 to the excavation site.
- If rock is encountered in the excavation, the bulking factor for that is closer to 2 so even more movements would be expected.

Planning

- United Utilities have very limited Permitted Development Rights for SuD's solutions and therefore likely to require Planning Permission for proposed works

- United Utilities will need to provide at least 10% Biodiversity Net Gain as part of the Planning Application, either through delivery of landscaping scheme or purchase of Biodiversity Credits

- Pre-application discussions to take place with LDNPA, Westmorland and Furness and Natural England in advance of any Planning Application being submitted

- UU have appointed ARUP to undertake production of the Planning Application including any surveys and landscape design – would consult landowner / tenant(s) during production of landscaping scheme

Customer

We will keep the customer informed on a regular basis throughout the project.

We will use different methods of communication including

- Drop in sessions
- Letters
- Text messages
- Emails
- Posters in the local area
- Face to face home visits if required
- Telephone surveys on how we are doing
- Postal surveys
- Engagement with local groups
- Engagement with local schools

United Utilities

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