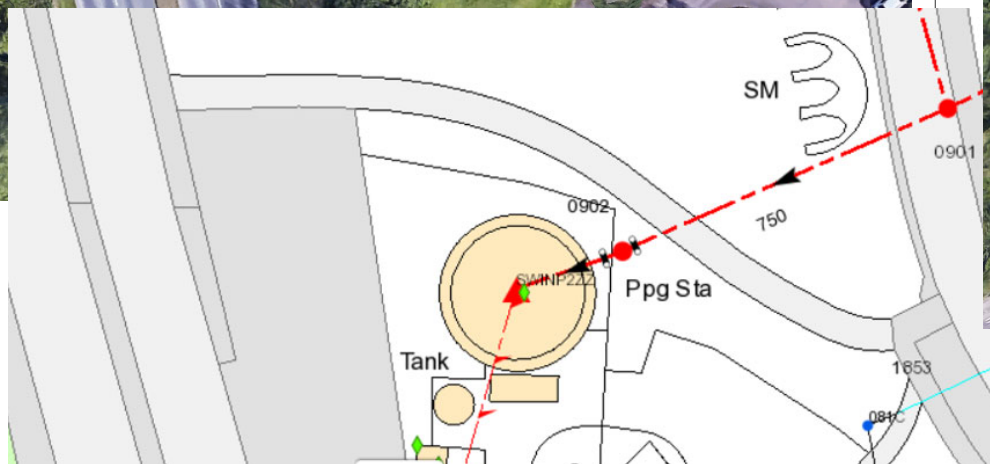
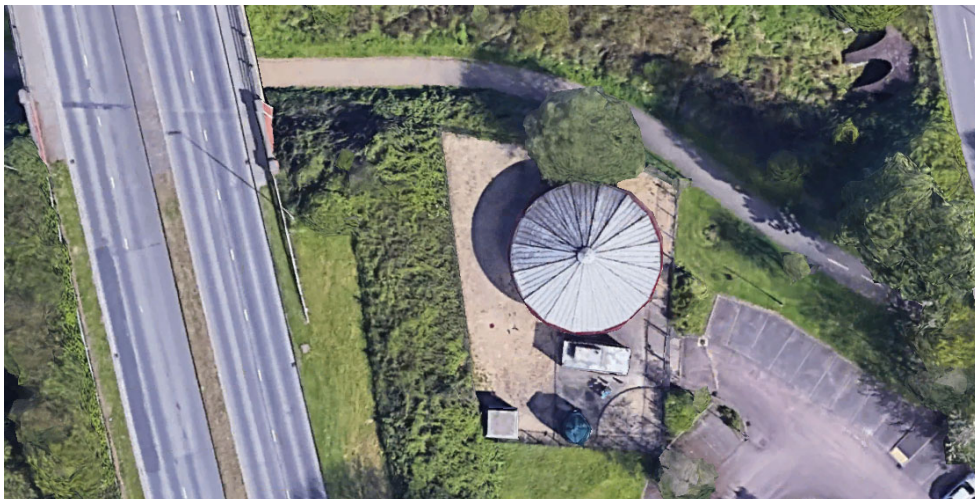




**Haydon End Rising Main Burst  
Brief to Swindon BC  
Infrastructure Delivery Board**

- Introductions
- Summary of Issues
- Short Term Mitigation Measures
- Programme (Key Dates)
- What are the key issues that need to be considered for this new rising main
- Options considered for routes of new rising main

## Haydon End Pumping Station





## Existing Route of the 500mm Diameter Haydon End Rising Main

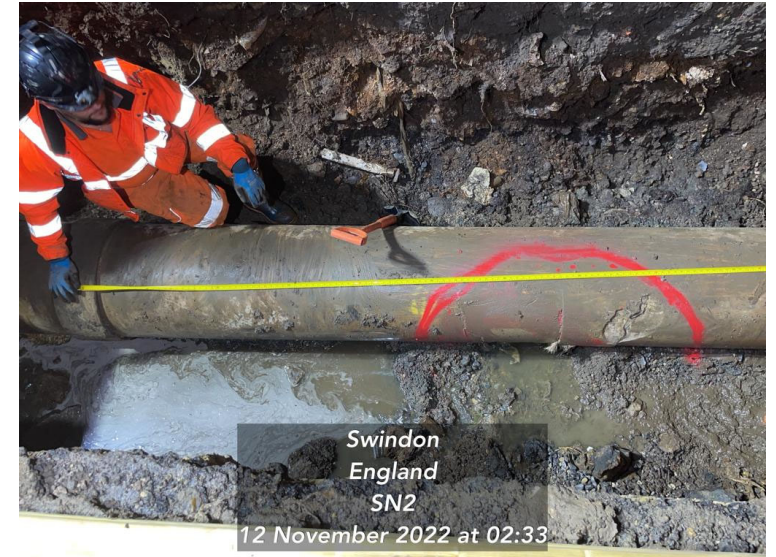
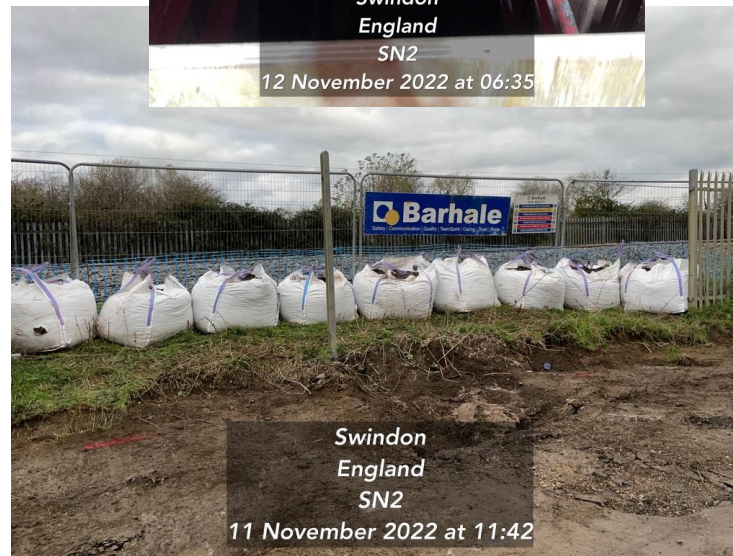
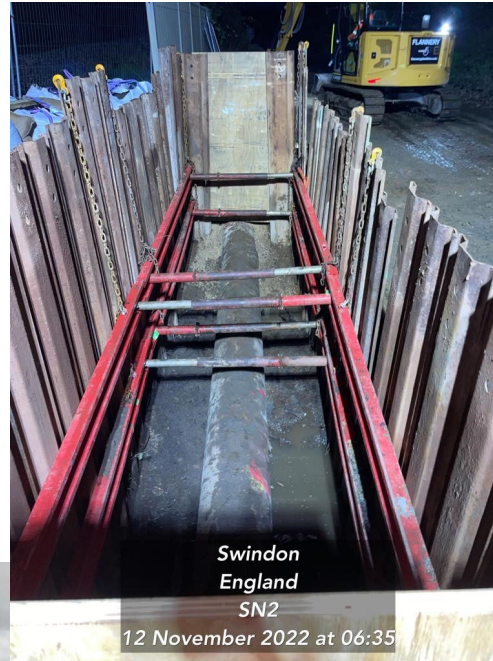




## What is the Issue



The pipe is a 500mm diameter GRP (Glass Reinforced Polymer) pipe.



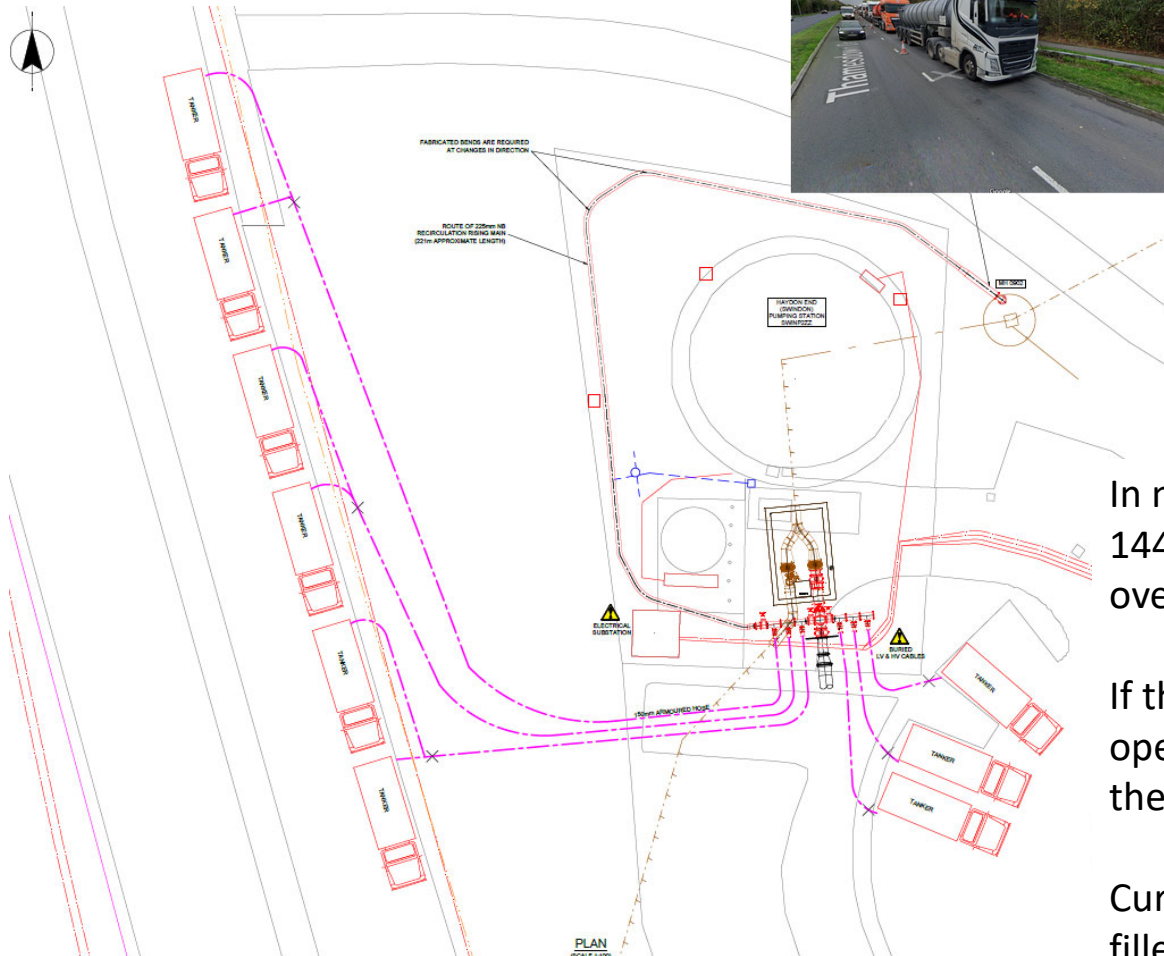


## What is the Issue





## Short Term Mitigation Measure – Tanker Filling Manifold



In normal conditions Haydon End Pumping Station can pump 144 l/s. That would fill an Olympic sized Swimming Pool in just over 4½ hours.

If the rising main bursts this requires around 35 tankers to be operating with specialist pumps having to be installed to fill the tankers.

Currently a manifold is being fitted to enable the tankers to be filled directly using the high powered pumps in the pumping station. This to reduce the time it takes to set the tankering operation up and also the time it takes to fill a tanker

## Short Term Mitigation Measure – Tanker Filling Manifold

When used recently the tanker filling manifold enabled us to fill between 6 and 12 tankers at a time, using the pumps at Haydon End Pumping Station to Pump Direct to the Tankers (significantly reducing filling time)





# High Level Programme

The current indicative programme for this scheme is as follows:-

## Work Face 1

- Construction of Tunnel Drive Shafts (5 No) – Start date 04/07/23, Completion Date 11/09/23.
- Tunnelling between shafts 1 and 5 (1205m) – Start Date 08/09/23, Completion date 20/02/24
- Pulling pipe through tunnels – (1205m) – Start Date 20/12/23, Completion Date 22/03/24

## Work face 2

- Excavation and laying of new pipework via open cut along route of old railway (1530m) – Start Date 14/08/24, Completion Date 06/03/24.

## Work face 3

- Directional Drilling (310m) – Start Date 04/08/23, Completion Date 09/10/23.
- Excavation and laying of new pipework via open cut from end of Direction Drilling Section to Swindon STW (400m) – Start Date 04/10/23, Completion Date 21/12/23.

The overall programme of site works has now commenced and the new rising main is programmed to be on line on 19/04/24 following testing.

## **What are the key issues that need to be considered for this new rising main**

The options for repair have to consider a large number of factors but the following are the key items.

- We need to keep the pumping station flowing, it cannot just be switched off, and tankering is not really an option apart from in an Emergency.
- Environmental and Ecological Concerns are very high on our agenda.
- The existing GRP Rising Main has to be considered as fragile so we don't want to be working too near it.
- We have numerous other services including gas, water, telecoms, Low and High Voltage Electricity and Extra High Voltage Electricity.
- It is best to keep the pipe as level as possible, hills or valleys are issues.
- Impact on local residents and businesses.
- We are working in close proximity to a former landfill site.
- We are working near a number of watercourses and rivers.
- We need to cross the railway at some point.
- There are busy highways to consider including the dual carriageway A4198 and local highways.
- The areas we are working in are popular with walkers and cyclists.
- We need to undertake the work as quickly as is safe to so.
- Site safety is paramount, this can be risky work and as such has to be very thoroughly planned.

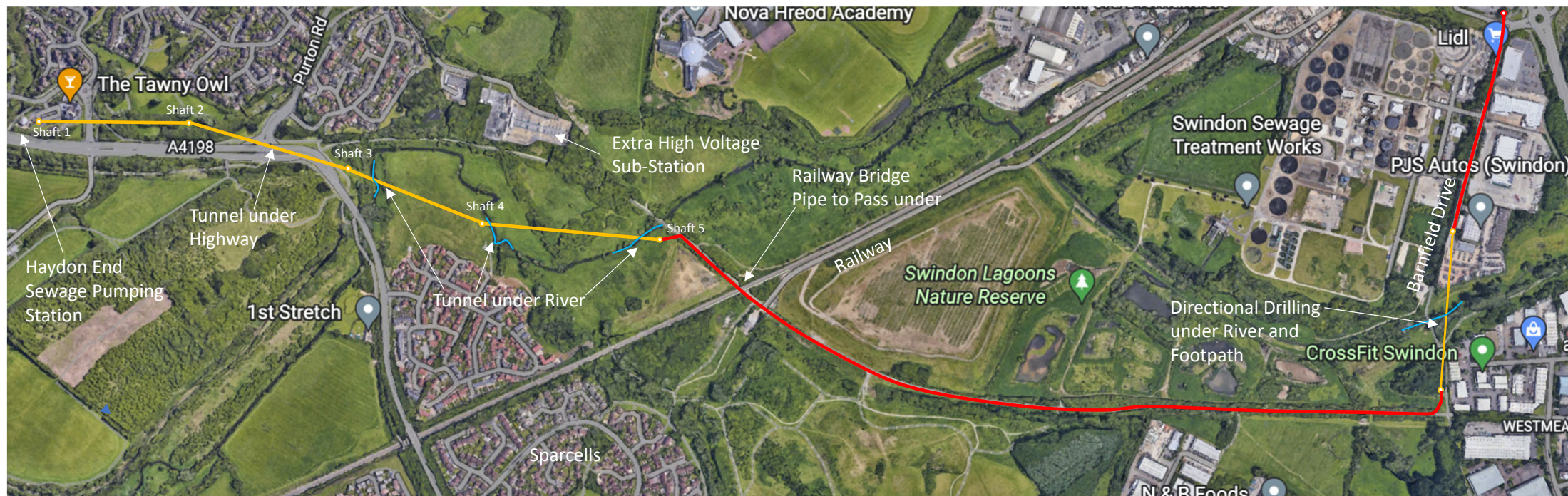


# The Route of the New 630mm Polyethylene Rising Main

This route has been designed with around a third of the length in tunnel to reduce the impact on the A4198 (Thamesdown Road) and also the four river crossings.

The route has also been selected to avoid the Extra High Voltage Cables, Rivers and Railway.

The total Length of Tunnelling is 1205m, Open Cut Excavation is 1930m and Directional Drilling (HDD) is 310m - Totalling approximately 3445m plus shafts



- Pipe in Tunnel or installed via Directional Drilling
- Pipe in Open Cut Excavation



# Haydon End Pumping Station





- Pipe in Tunnel or installed via Directional Drilling
- Pipe in Open Cut Excavation



# Haydon Henge



-  Pipe in Tunnel or installed via Directional Drilling
-  Pipe in Open Cut Excavation



## Railway Crossing



Proposed route to avoid bridge foundations

- Pipe in Tunnel or installed via Directional Drilling
- Pipe in Open Cut Excavation