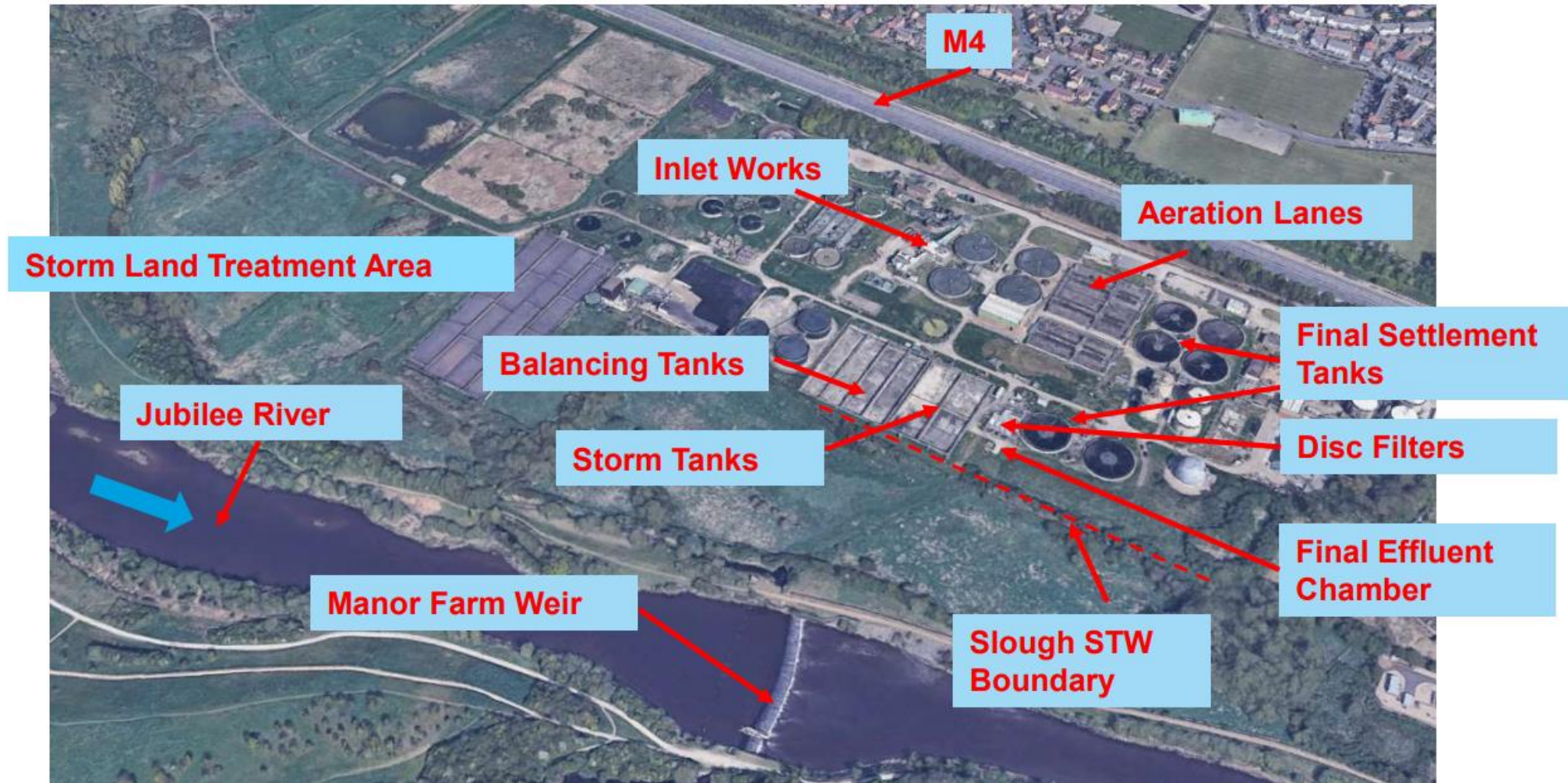


# K222 Slough STW Upgrade Stakeholder engagement Presentation



# Existing Site

As seen from aerial footage



# Slough Project Team

Thames Water acknowledges Slough STW has reached the stage it is due for an upgrade.

Whilst it may seem to the outside world that no work has been happening, I can advise that behind the scenes that a lot of engineers and designers have been working to produce the right solution that does not just shift the problem from location A to location B.

As previously conveyed the building of the tunnel was removed from the solution with a concentration made to design a robust solution to process and treat the incoming sewage on a flow to fall basis.

What does this mean in reality ?

The amount of final effluent that is discharged into the ditches will increase to 1416 lp/s, an increase of 266lp/s, but that output will be much lower in ammonia, lower in phosphorus and lower in particulates.

On the site there will be greater odour control to reduce the impact to the locality. The final effluent will no longer have the nutrients that have fed the weed in the ditches so the spring and summer flooding will dramatically decrease.



# Project Background

PE is the Population Equivalent which is used to design the current anticipated population growth for that period in time. With the delay that was suffered Thames Water took that opportunity to redesign to 2041 predictions to give the plant over ten years future proofing before further works is needed.

Design Horizon	2021	2026	2031	2036	2041
PE	222,414	228,946	236,410	238,782	241,409

## Effluent discharge consent

Suspended Solids (95 <sup>th</sup> ile), mg/l				15	
BOD (95 <sup>th</sup> ile), mg/l				10 → 5	
Ammonia (95 <sup>th</sup> ile), mg/l				3 → 1	
Total Phosphorous (rolling 12-month average), mg/l				1 → 0.25	
Iron (95 <sup>th</sup> ile), mg/l				4	

## Flow Permit

FFT, l/s				1,150 → 1,416	
DWF, m <sup>3</sup> /day				52,609	
Storm volume, m <sup>3</sup>				18,000	

# Project scope and constructability

As you will see from the following site plan this is not as simple as building a new side stream to one side but is an intrinsically complicated build in a live working environment with hazardous areas.

What does this mean to the project in layman's terms?

In short there are risks in this scenario that we have to plan for. This is not only for the safety of the live operations staff, the builders and engineers but also to ensure that no part of the facility is taken out of service without that process being able to be run in a safe manner to protect the works and the environment.

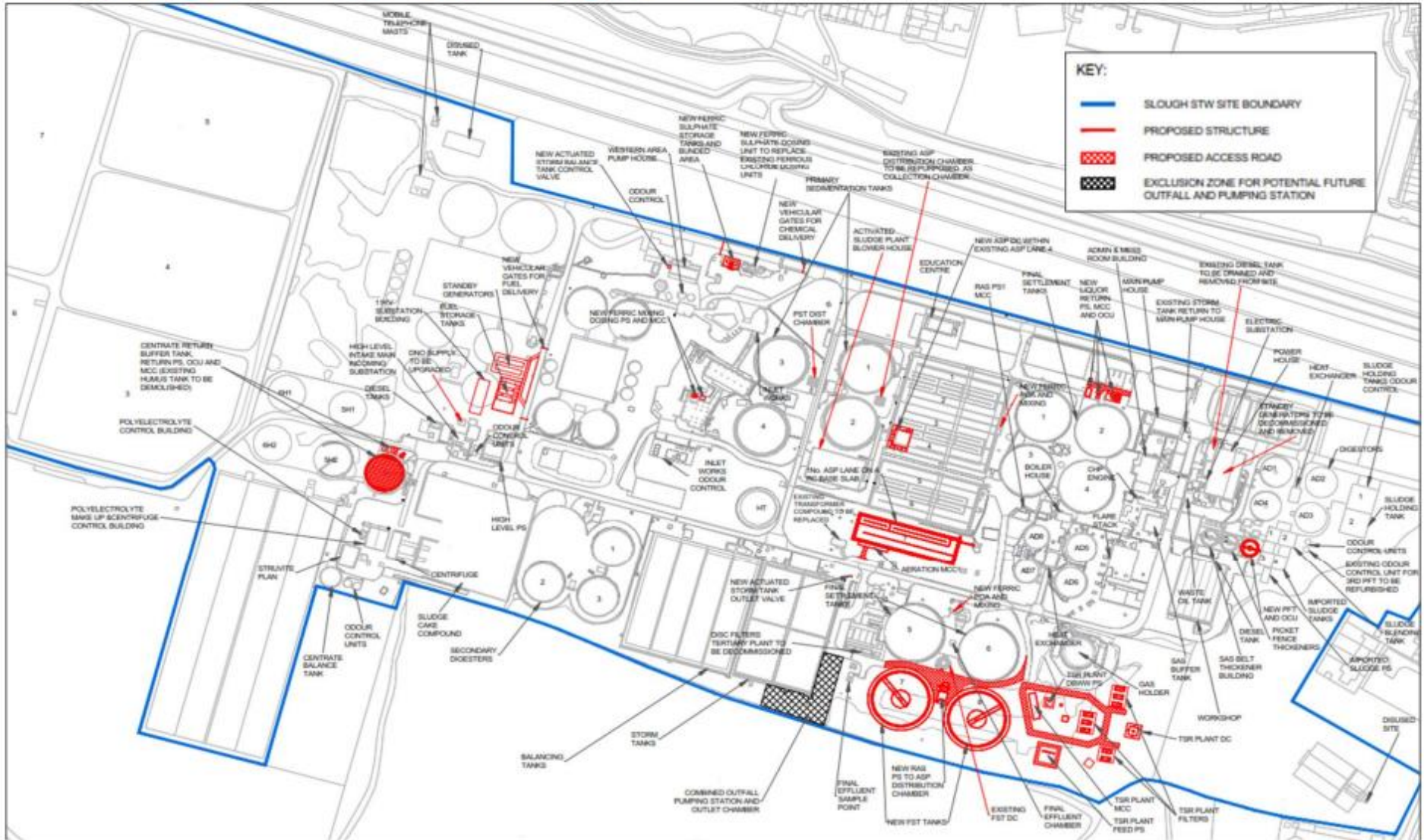
Our specialist consultants have reviewed the proposals along with our commissioning engineers to devise a programme that we believe we can achieve with the contractor who wins the tender process.

We believe we will be making our final contractor selection at the back end of 2024 with contract award around March 2025. There will then be 12 months of designing from the contractor with the build starting in 2026.

Having said that some works have started on site as I am sure residents will have seen. We will also be bringing forward the power supply install. SSE previously stated we had an install date in 2034 but this has been brought forward after a meeting with the senior project managers on both sides.



# Slough STW Site Layout



All existing in black, proposed is in red



# Roundmoor Ditch Maintenance

- Anecdotally, the flooding issues increased significantly after the Environment Agency (EA) suspended weed cutting/clearing c2010.
- CainBio has undertaken a range of studies and modelling during 2022, that show the Roundmoor Ditch has sufficient hydraulic capacity to convey the peak flows (STW and catchment derived) and remain in channel if maintenance in the form of weed cutting and clearing is undertaken.
- Trial weed cutting was undertaken in 2022 where river levels were monitored over this period.
- Several periods of high rainfall and flow events happened subsequently where no property flooding was reported until early 2024.
- The weed growth throughout the period of 2023 to 2024 has demonstrated that if weed cutting is not undertaken that flooding will remain an issue as denoted throughout the spring and June of 2024. The Thames Water Project team met with the local stakeholder action committee and Cllr Mike Wilson from Feb until present to liaise and agree a managed solution where Thames Water would assist in weed control.
- TWUL project team arranged for a specialist company to clear the weed this year at a cost of circa £60k, for two cuts. The EA did not allow access to the ditch for clearance during the fish spawning periods so the earliest date was June 17<sup>th</sup> where we immediately started to tackle the problem.
- This is not funding any bank restoration work which sits with the Riparian Owners and is only for weed in the channel. On joint site visits it was recorded that banks were damaged, trees fallen and very high weed growth as in some of the photos below.
- Whilst on the inspection of the area the TW Senior Project Manager took the opportunity to speak with some of the residents listening to their views and gave a commitment that we would assist the clearance in June as soon as we could. We delivered on that promise.



*Before-and-After-Weed-Cutting-and-Clearing*

# Spring 2024 Before the June Cut





