

**GREENWICH PUMPING STATION &  
DEPTFORD CHURCH STREET  
ONLINE COMMUNITY LIAISON WORKING GROUP**



**Tideway**



**12 October 2021**

# STAFF



**Chair: Mehboob Khan**

## **Tideway**

- Emily Black, Engagement Manager

## **CVB – main works contractor**

- Joe Selwood / John Pearson, Consents
- Robert Margariti-Smith, Greenwich, Tunnel & Site Manager
- Rebecca Oyibo, Community Relations Officer
- Massouda Raach / Megan Bergh

# AGENDA



## **Greenwich Pumping Station Update**

- Planning submission
- Works update
- Looking ahead
- Noise and Air Quality

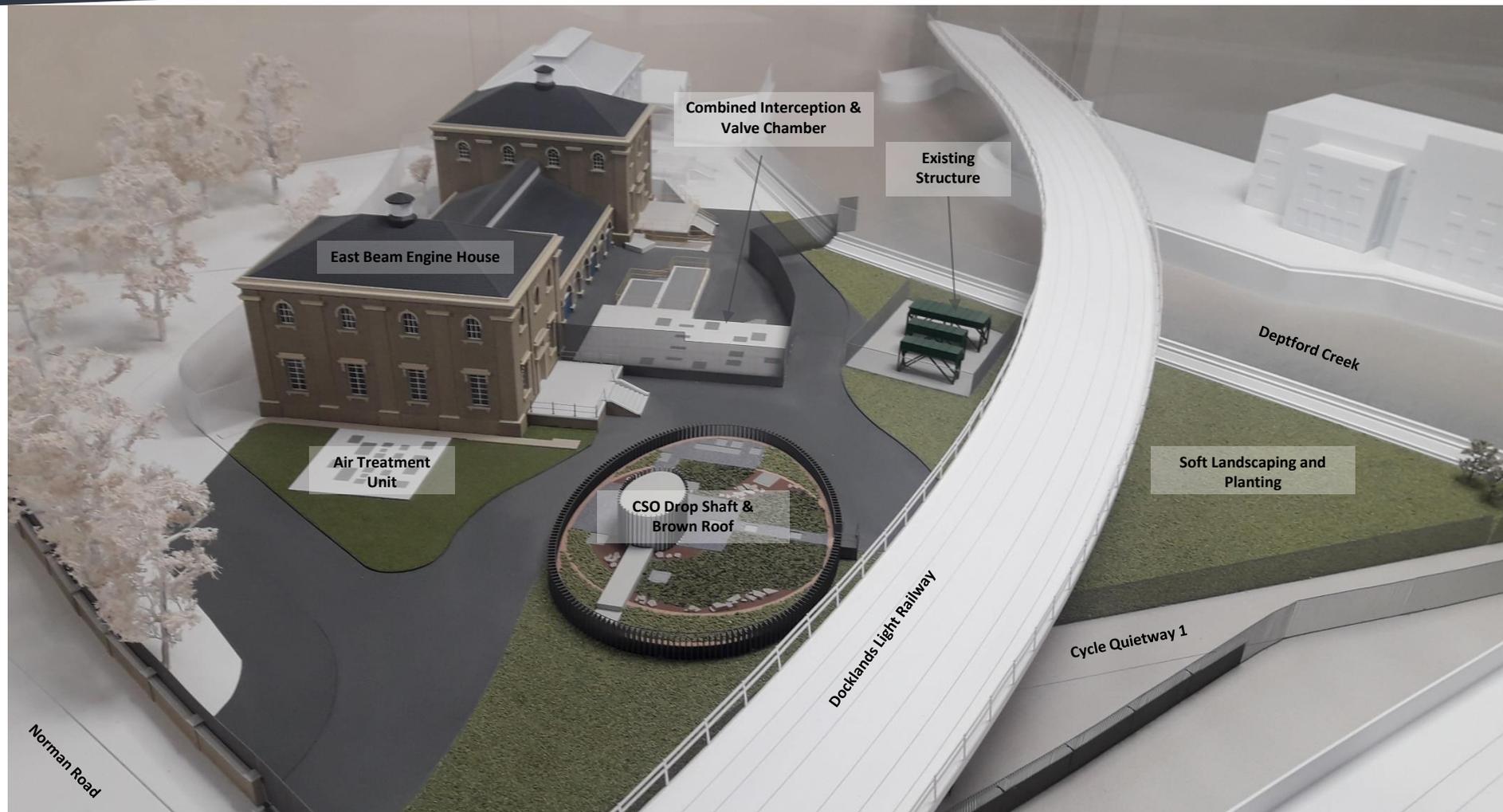
## **Deptford Church Street update**

- Works update
- Looking ahead
- Noise and Air Quality

## **Community Investment**

## **Community Feedback / Questions**

# GREENWICH PUMPING STATION ARCHITECTURE AND LANDSCAPING SUBMISSION



# Thames Tideway Tunnel



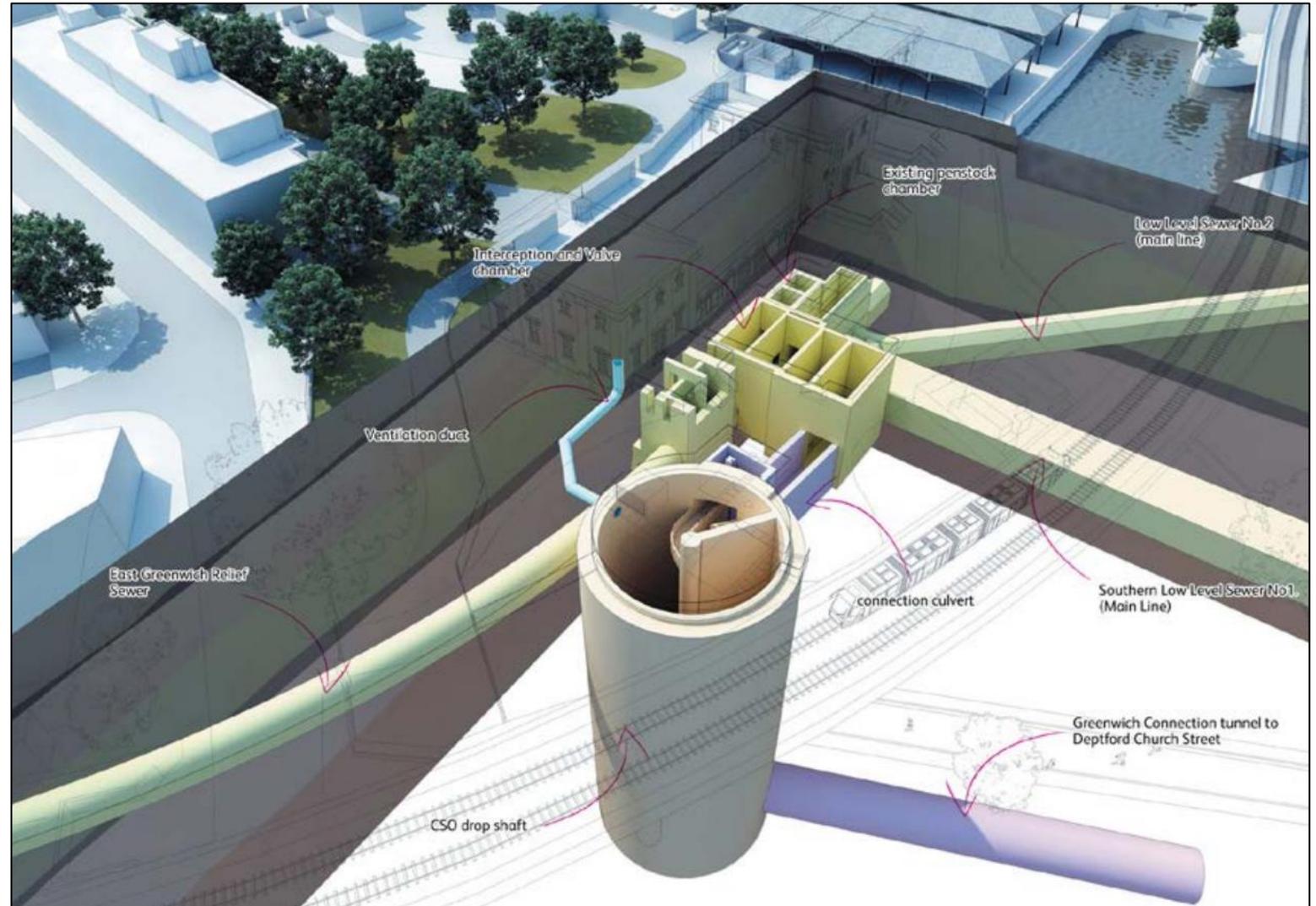
- The Thames Tideway Tunnel (TTT) project is a Nationally Significant Infrastructure Project (NSIP)
- TTT Project (The Project) is authorised under Thames Water Utilities Limited Development Consent Order 2014 (DCO)
- The tunnel will intercept combined sewer overflows (CSOs) that frequently discharge into the River Thames and transfer them for treatment at Beckton Sewage Treatment Works.
- The development at Greenwich Pumping Station once constructed will intercept the Greenwich Storm Relief CSO



5000-CVBJV-TTEAS-00-ZZ-RG-000435

# Greenwich Pumping Station

- The proposed works to intercept the sewer comprise:
- Combined Sewer Overflow drop shaft approx. 17m in diameter and 46m in deep.
- Interception and Valve chambers
- Connection culvert
- Ventilation duct and Air Treatment chamber



# What's for approval?

- The overarching approval of the DCO approved the principle of the development, including the necessity and location of the permanent above ground works and their maximum height. Therefore, the scope of what RB Greenwich can assess and approved is limited to:

- Size and height
- Visual appearance
- Materiality

- This is achieved by discharging the relevant requirements set out in Schedule 3 of the DCO:

DCO Sch 3 Requirement	Title
GREPS2	Detailed design approval for permanent above-ground structures
GREPS6	Landscaping works
GREPS11	Specification of accesses (construction and operational)
GREPS12	Surface water drainage
PW11	Interpretation Strategy (Artwork)

- In this regard, the application only related to the above ground materials, finishes and soft & hard landscaping

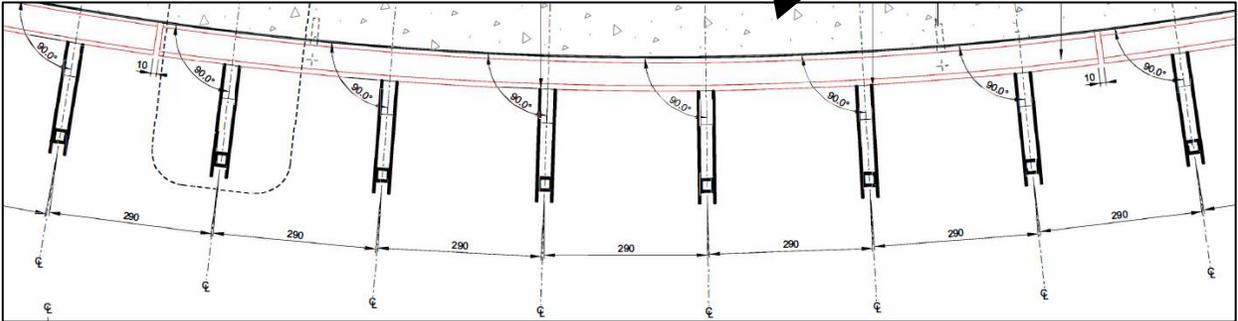
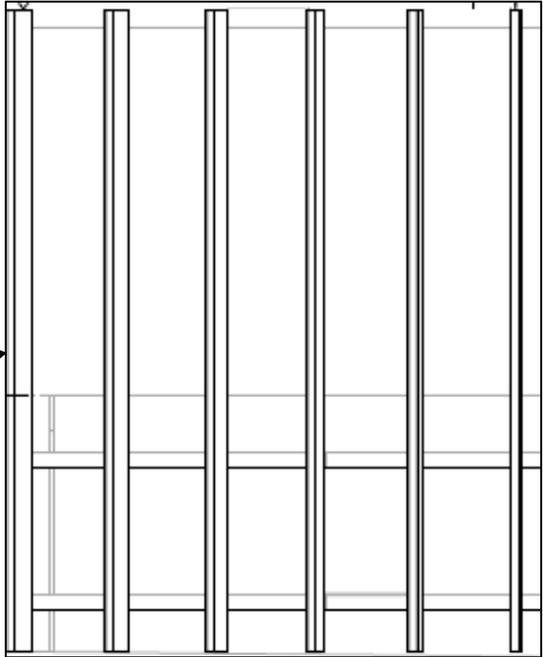
# Permanent Above Ground Structures

What are they?

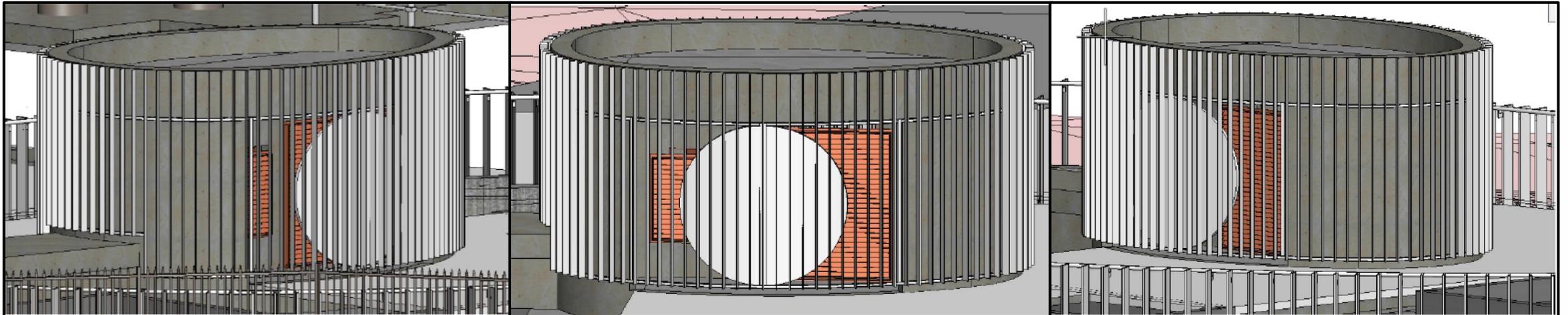
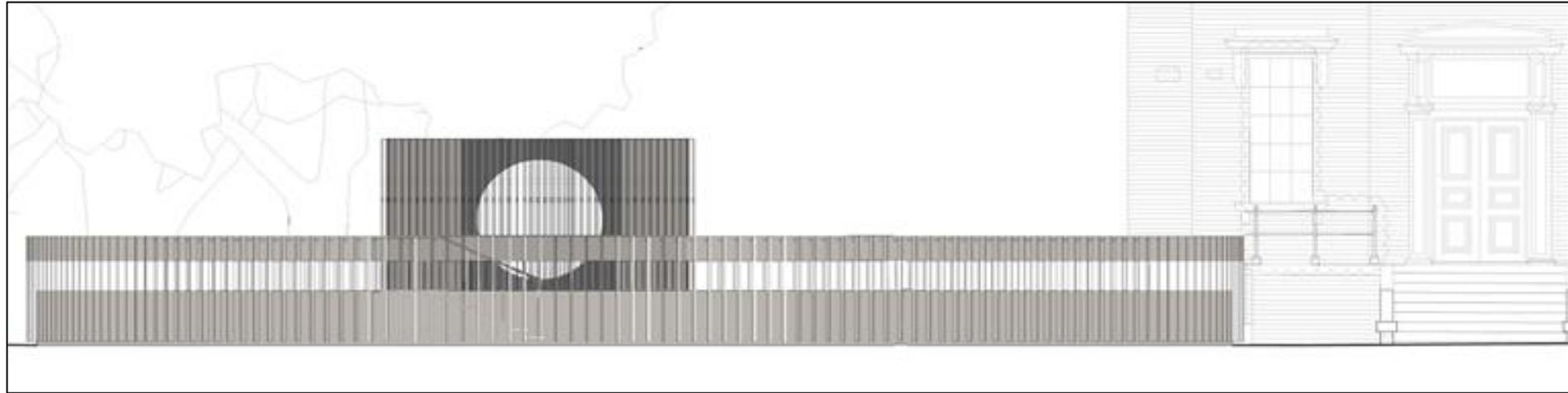
- These are the structures which will be left permanently in place once Tideway construction works are finished.
- They will be located above ground and will be visible
- There are two main elements:
  - CSO dropshaft enclosure and ventilation house
  - Interception and valve chamber



# CSO Dropshaft/Ventilation House Cladding



# Artwork



# Soft and Hard Landscaping

- Two elements of landscaping
  - Soft Landscaping
    - Acidic Grassland
    - Tree Planting
    - Brown Roof
  - Hard Landscaping
    - Reinforced Grass areas
    - Tarmac areas
    - Air Treatment Unit and associated access hatches
    - Maintenance pathways

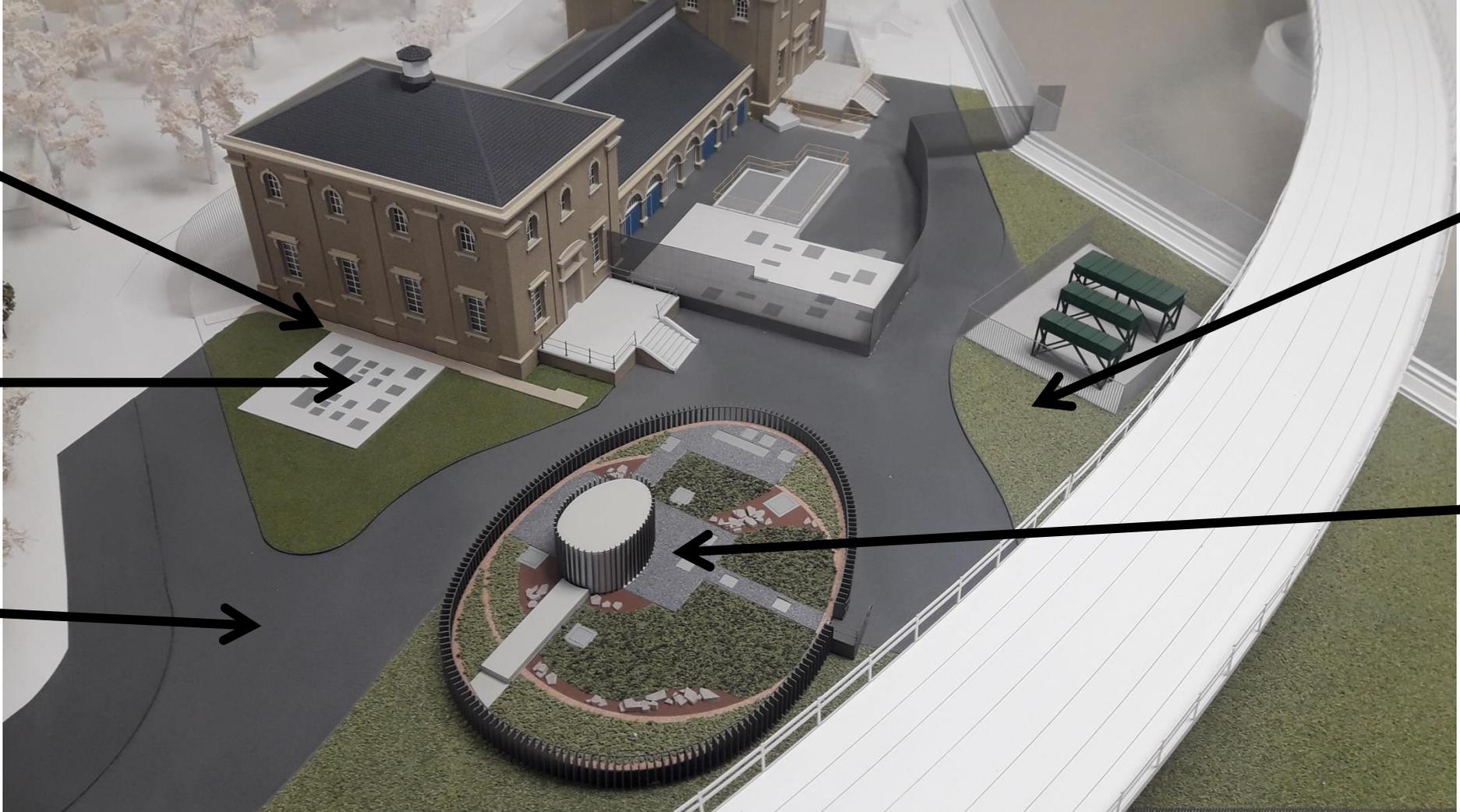
# Hard Landscaping Plan



Reused York  
Stones

Air  
Treatment  
Unit

Tarmac  
access road



Reinforced  
Grass

Concrete  
Maintenance  
Path

# Landscaping – Acidic Grassland

## Acidic Grassland Planting

Bespoke acidic grass mix containing the following species:

- Agrostis capillaris 12%
- Campanula rotundifolia 0.25%
- Galium saxatile 6%
- Festuca rubra - 40%
- Festuca ovina - 20%
- Deschampsia flexuosa - 8%
- Potentilla erecta - 0.25%
- Rumex acetosella - 13.5%



Agrostis capillaris.



Campanula rotundifolia.



Deschampsia flexuosa.



Festuca ovina.



Festuca rubra.



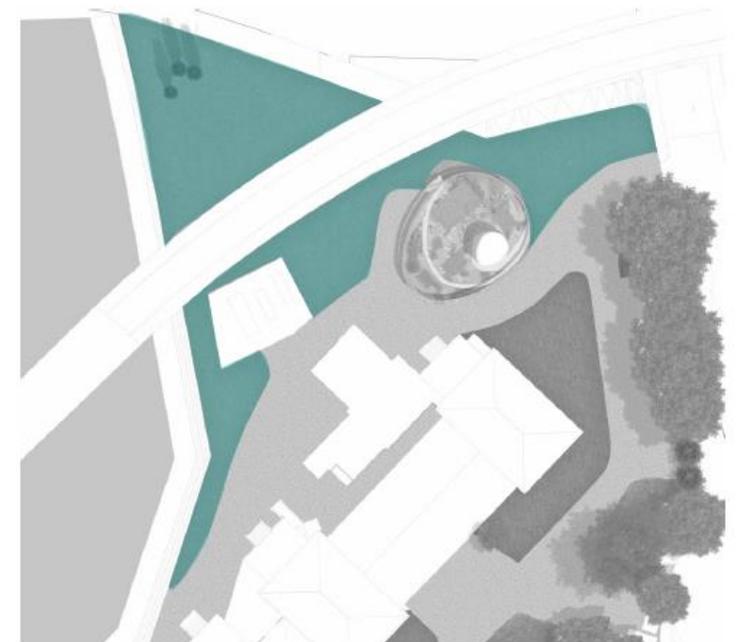
Galium saxatile.



Potentilla erecta.



Rumex acetosella.



Location plan showing areas of proposed acidic planting - NTS

Key

Acidic grassland

# Landscaping – Tree Planting



Tilia cordata trees.



Tilia cordata leaves.



Populus nigra trees.



Populus nigra leaves.



# Landscaping – Brown Roof



Short stacked logs in sculptural mound.



Lined scrape feature.



Sculptural stone cairn with open sand.



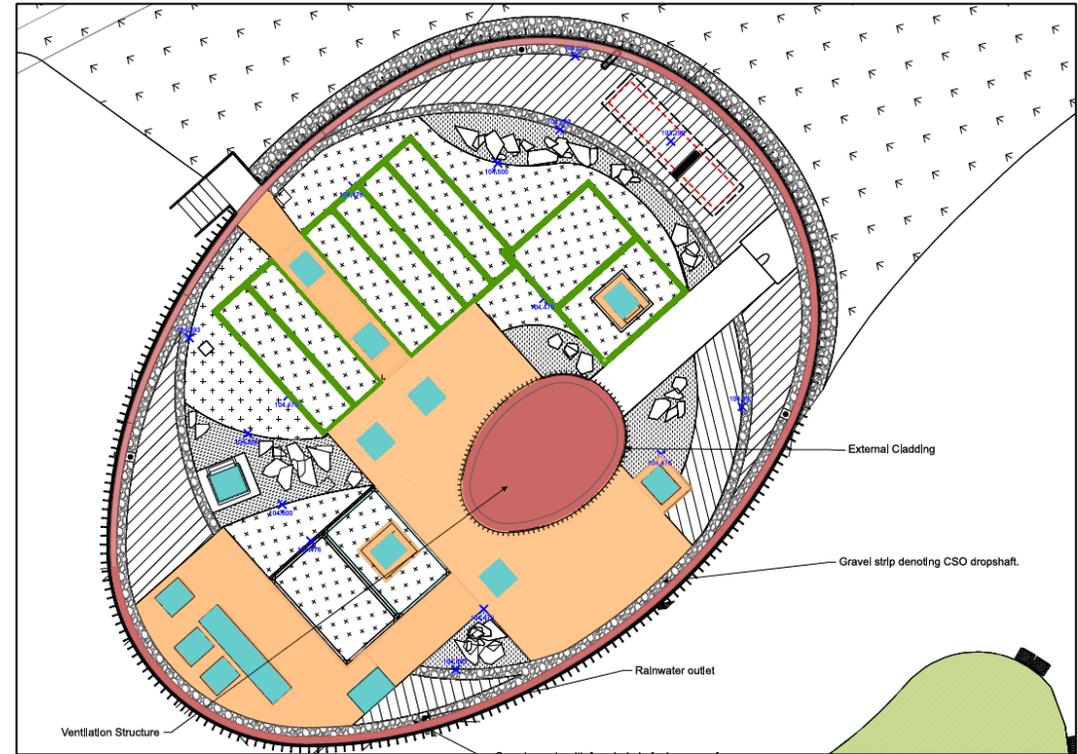
Crushed brick and aggregate.



Flat sandstone basking rocks.



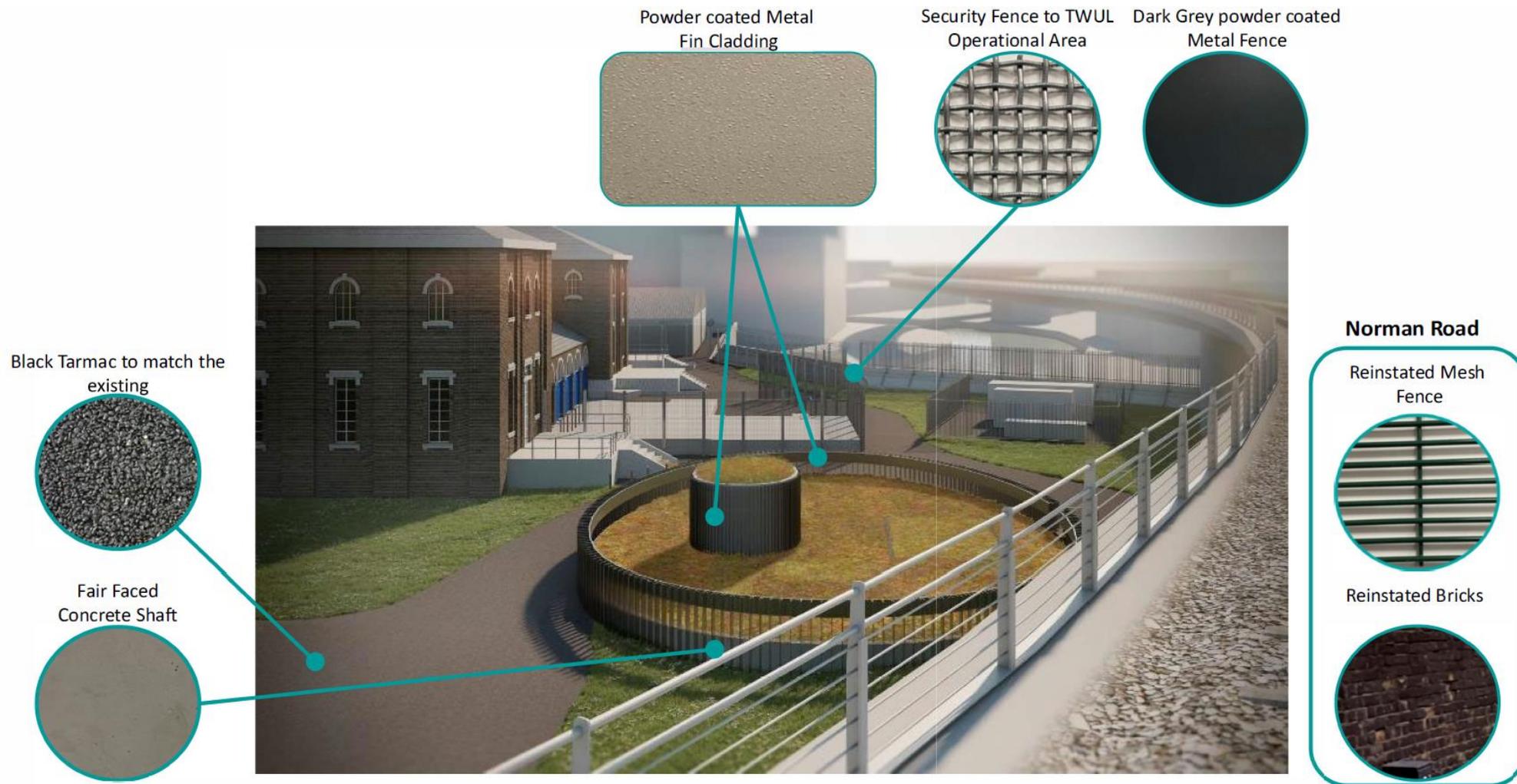
Felled logs.



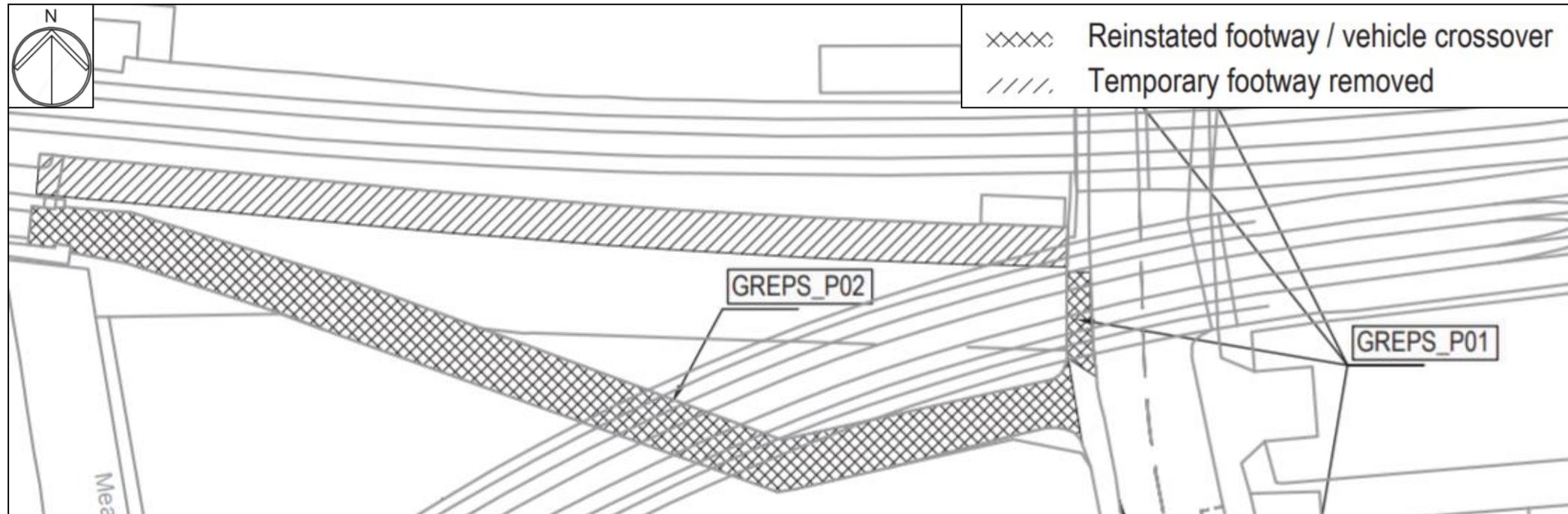
## Key:

- |   |   |   |   |
|---|---|---|---|
|    | Maintenance path                        |    | Brown roof substrate  |
|   | Soft trays to large access covers       |   | Recycled brick brown roof substrate by Blackdown Green Roofs or equal and accepted. |
|  | Concrete                                |  | Proposed lined scrape feature.  |
|  | Flush metal cover                       |  | Pebble/gravel margin  |
|  | Proposed wildflower seeded and plug mix |   |   |
|  | Proposed sedum Green Roofs              |   |   |

# Materials and Finishes



# Cycle Quietway 1 alignment



- Cycle Quietway 1 to be return to original alignment as part of completion of Thames Tideway Tunnel works.
- Detailed design being configured with Royal Borough of Greenwich

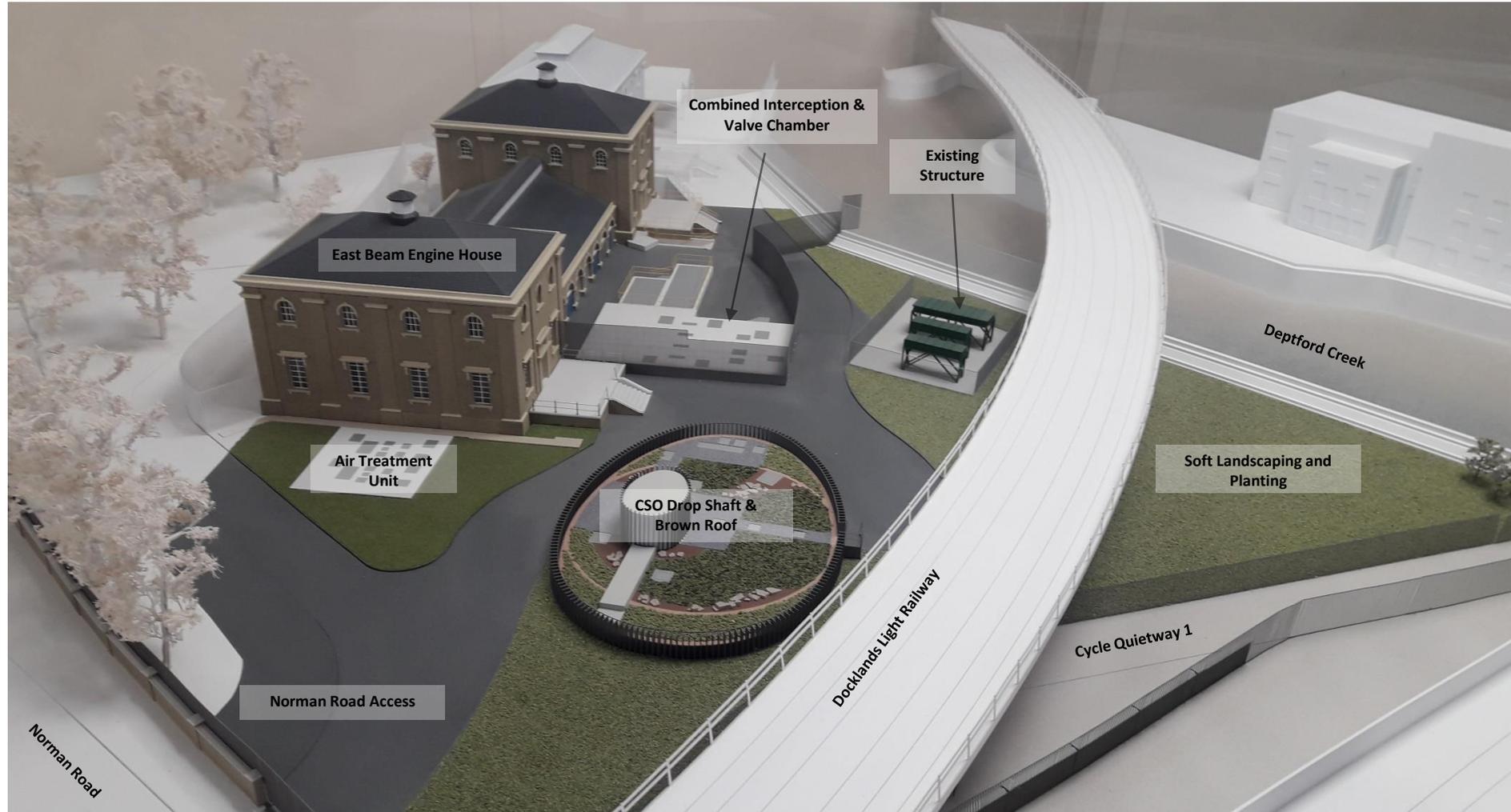
# Pre and Post Construction



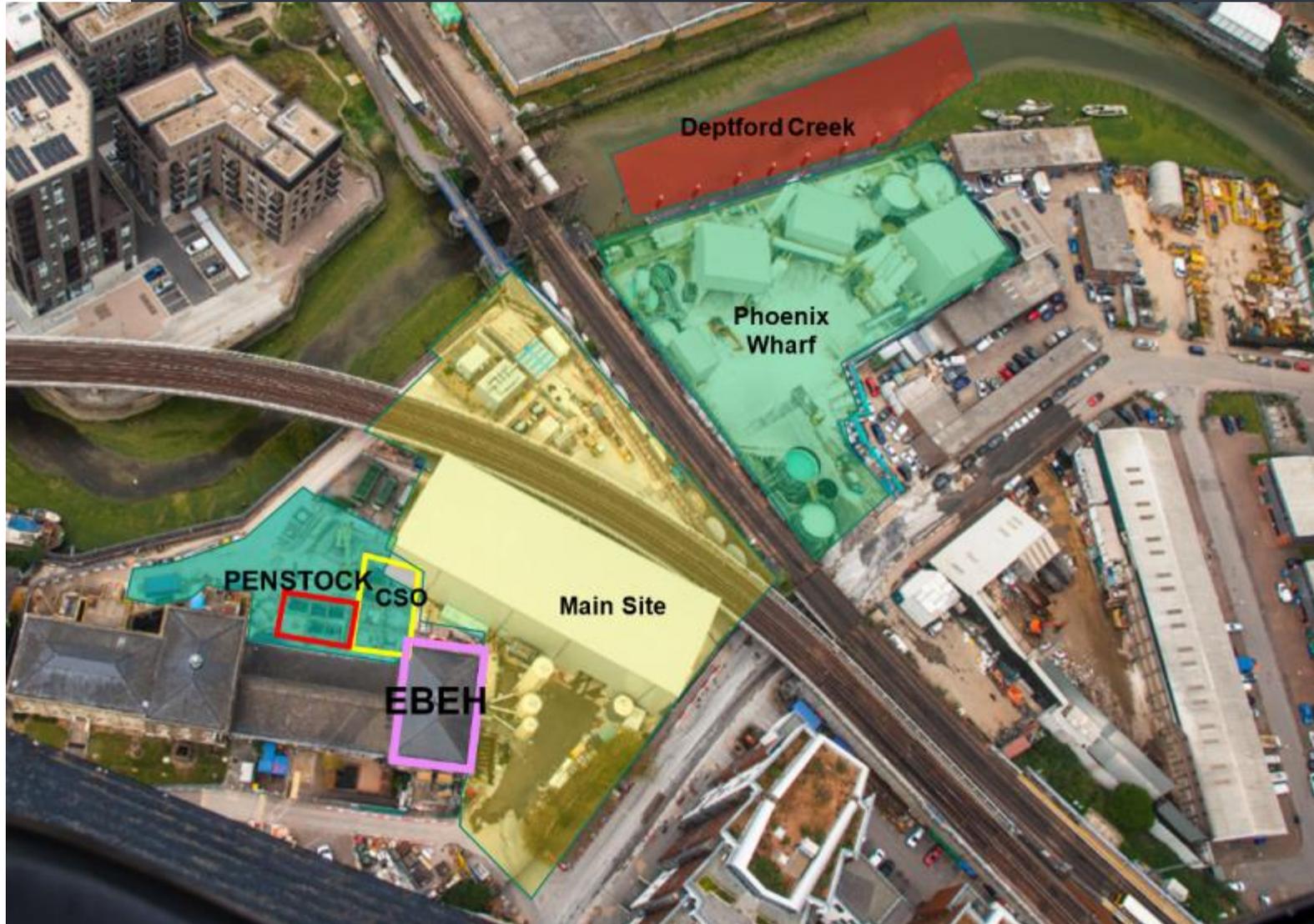
# Application Details

- Application reference: **21/3483/G**
  - Submitted on 24 September 2021
- **How to view application documents and comment on the application**
  - Visit the [Royal Borough of Greenwich](#) website
  - Navigate to the '[View planning applications, decisions and appeals](#)' page and search using the application reference above.
- Draft period ceases: **25 October 2021**

# Questions?



# Site progress



CSO = Combined Sewer Overflow  
EBEH = East Beam Engine House

# GREENWICH WORKS UPDATE



## Main Site & Shaft

- Tunnelling has continued to R1199 (Ch 1,840m)
- P2.4 slurry boost pump has been installed in the tunnel
- Muck Away
  - Road – 66,756t (54%)
  - River – 57,420t (46%)
  - TOTAL – 124,166t**

## Combined Sewer Outfall (CSO)

- Mid-level propping work complete
- Beam installed in existing penstock chamber brickwork
- Excavation to temporary prop level underway
- Removal of numerous old Thames Water obstructions from within the excavation

## East Beam Engine House

- Slab installation works commenced – delayed due to presence of voiding within the old backfill
- Works are progressing with the slab installation & removal of cast iron beams from beneath floor slab

# TUNNEL BORING MACHINE (TBM)



**Current progress**

<https://www.tideway.london/tbm-tracker/>



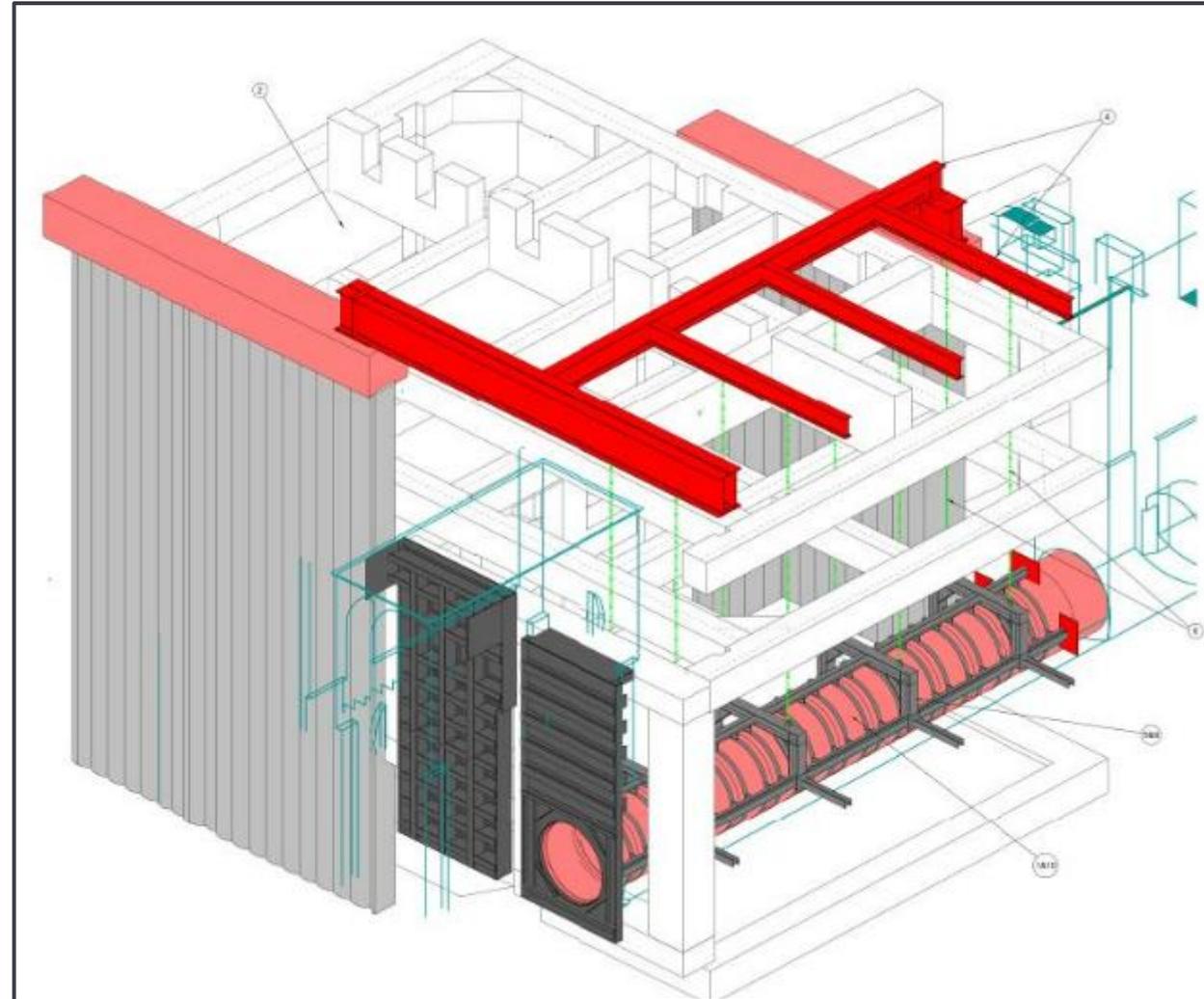
# IN THE TUNNEL & TBM



# PHOENIX WHARF



# COMBINED SEWER OVERFLOW WORKS



# EAST BEAM ENGINE HOUSE



## Tunnelling

- Continue tunnelling towards Earl Pumping Station shaft (at Ring 1494) – target arrival early Nov 21
- Install mid-tunnel crossing & slurry boost pump

## Combined Sewer Overflow

- Continue excavation down to temporary prop level
- Installation of temporary props
- Hanging flume on steel support frame
- Continue excavation down to base slab formation level – constructing opening to penstock chamber during excavation

## East Beam Engine House

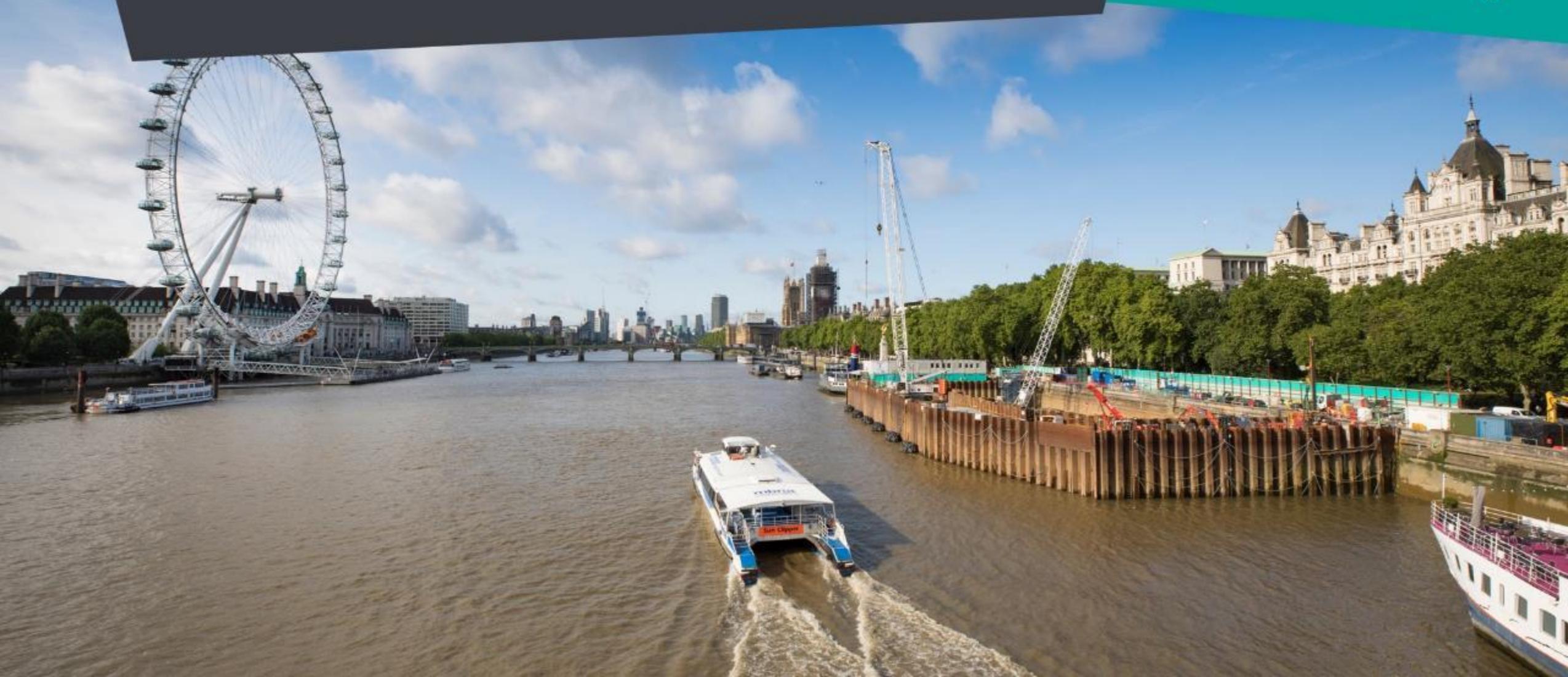
- Casting of new permanent spanned slab
- Excavation of “MEICA\* pit” in Northeast corner (~3.5m deep)
- Installation of MEICA air duct & backfill

\***Mechanical, Electrical, Instrumentation, Control and Automation** – the mechanics that will finally operate

# NOISE AND AIR QUALITY

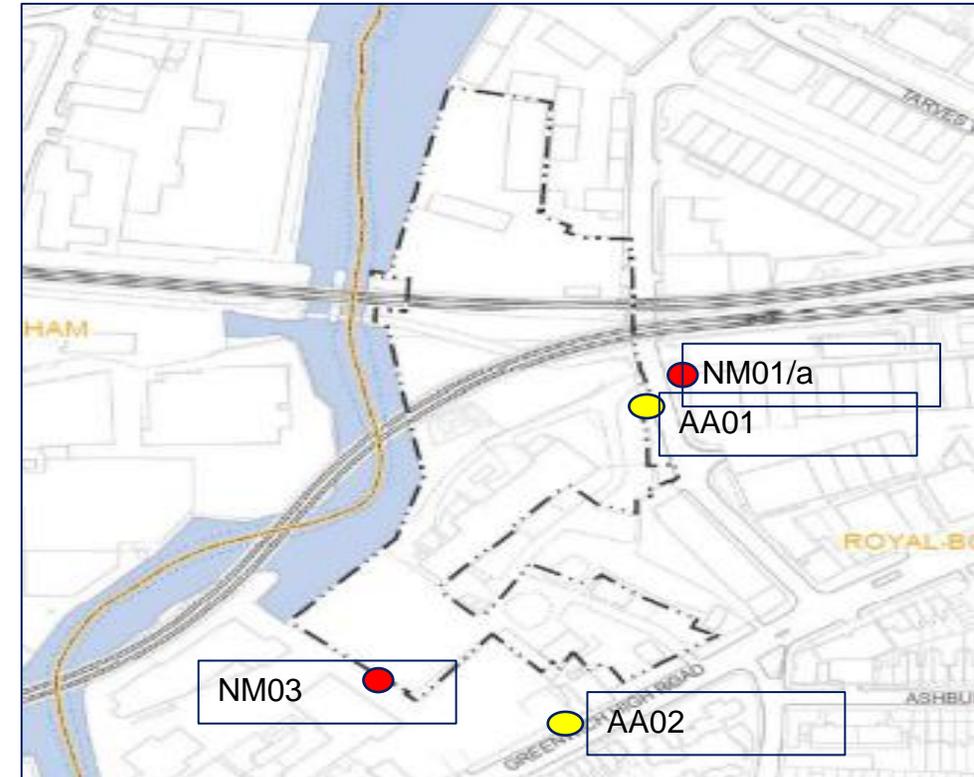


Tideway



# Greenwich: Noise and Air Quality

Month	Noise	Air Quality
	S61 Exceedances	24h PM10 exceedance
Jan-21	0	0
Feb-21	0	0
Mar-21	0	0
Apr-21	0	0
May-21	0	0
Jun-21	0	0
Jul-21	0	0
Aug-21	0	0
Sep-21	0	0



- Regular damping down and wheel washes are used to reduce risk of dust
- 45 loads of tunnel chalk taken by barge to date
- HVO biofuel is now used on site

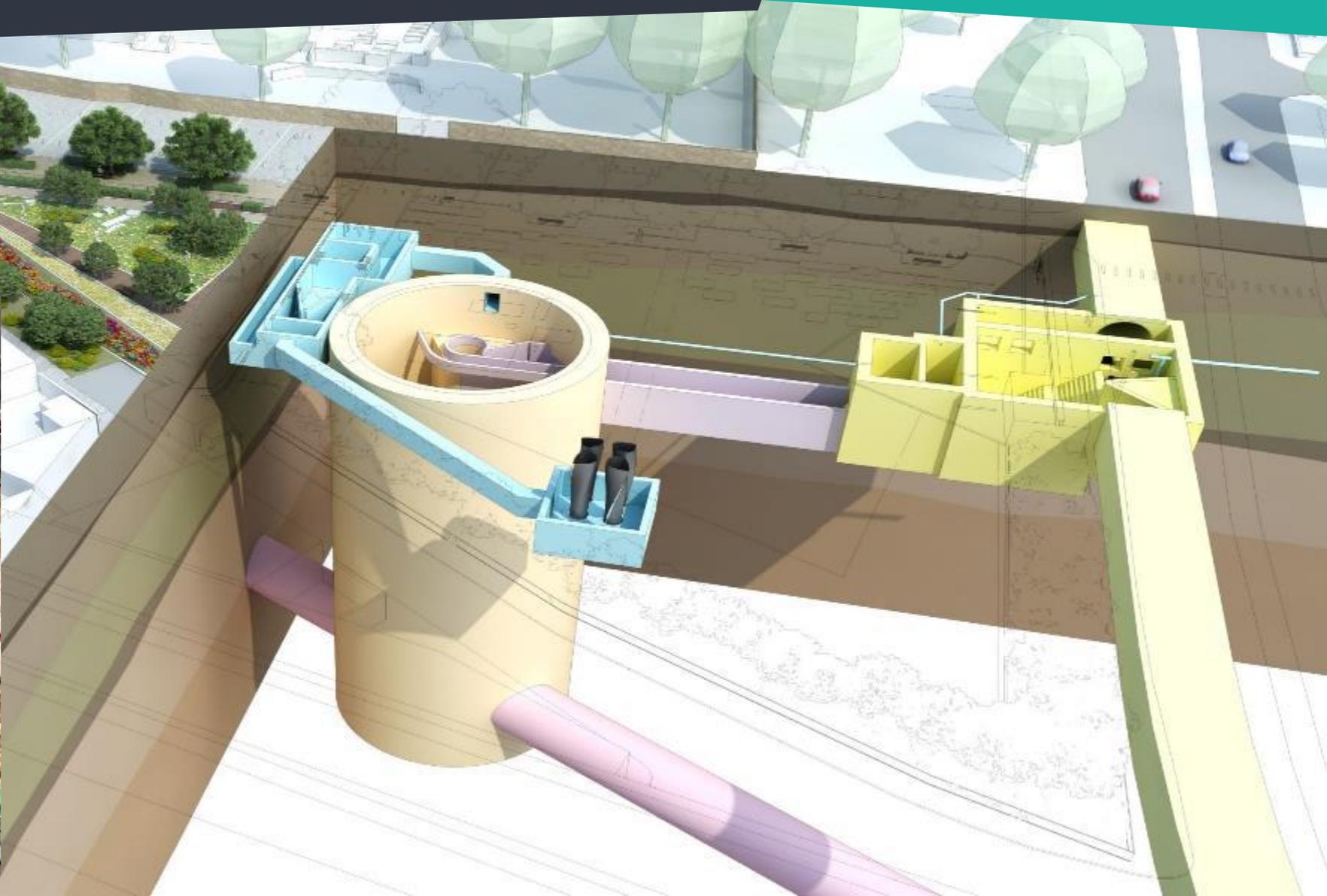
# DEPTFORD CHURCH STREET



Tideway



# WHAT WE'RE BUILDING



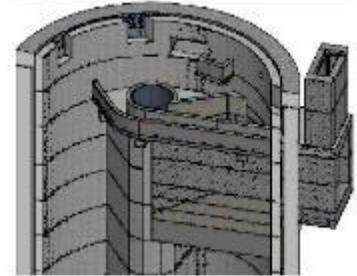
# DEPTFORD WORKS UPDATE

## SHAFT & CULVERT



### Shaft

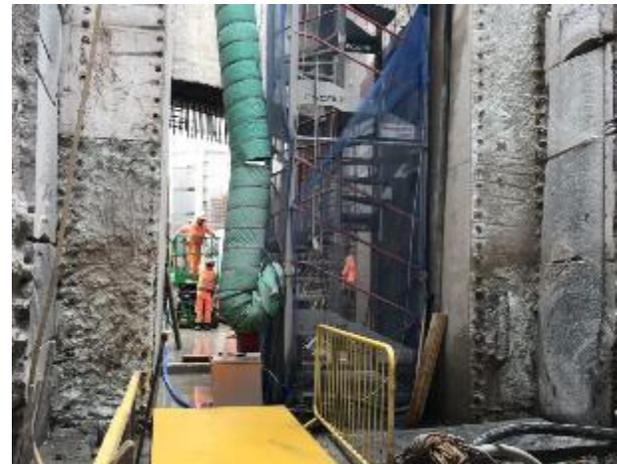
- Vortex generator works on-going



What it will look like...

### Culvert

- Intermediate wall removed = shaft now opened to culvert and Combined Sewer Overflow



# DEPTFORD WORKS UPDATE

## COMBINED SEWER OVERFLOW (CSO)

### CSO Phase 1: Interception Chamber

- MEICA equipment installation complete (testing outstanding)
- Remainder of civil works to restart in October



### CSO Phase 2: Sewer connection

- Excavation to sewer complete
- Demolition of sewer on-going (coring + wire sawing = minimum breaking)



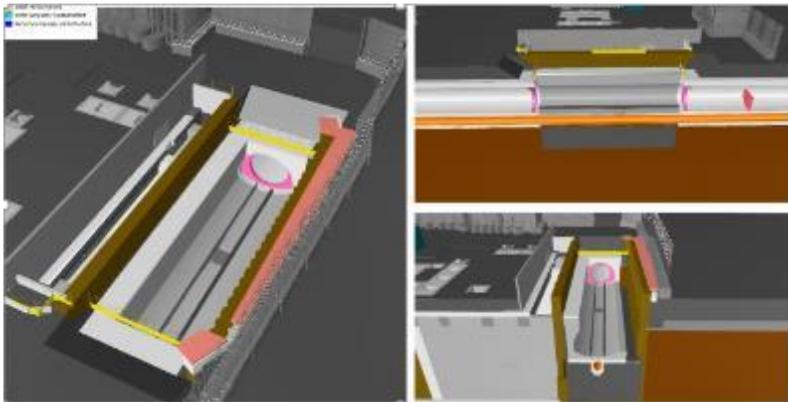
# DEPTFORD 12 MONTHS LOOK AHEAD

	2021					2022											
	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
Shaft/culvert civils + MEICA	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
Tunnel activities from DEPCS										█	█	█	█	█	█	█	█
Air Treatment chamber + MEICA				█	█	█	█	█	█	█	█	█	█	█	█	█	█
CSO civils + MEICA	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
Surface works, Landscaping and site reinstatement																█	█

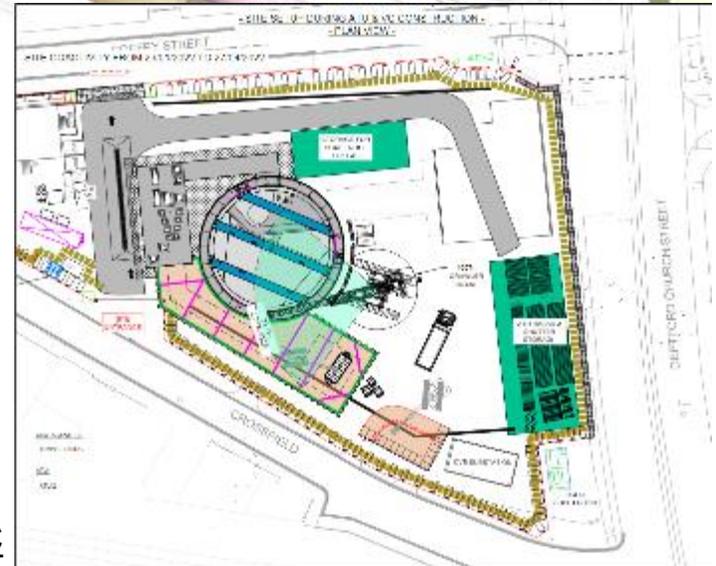


Overall scheme

CSO 3D views



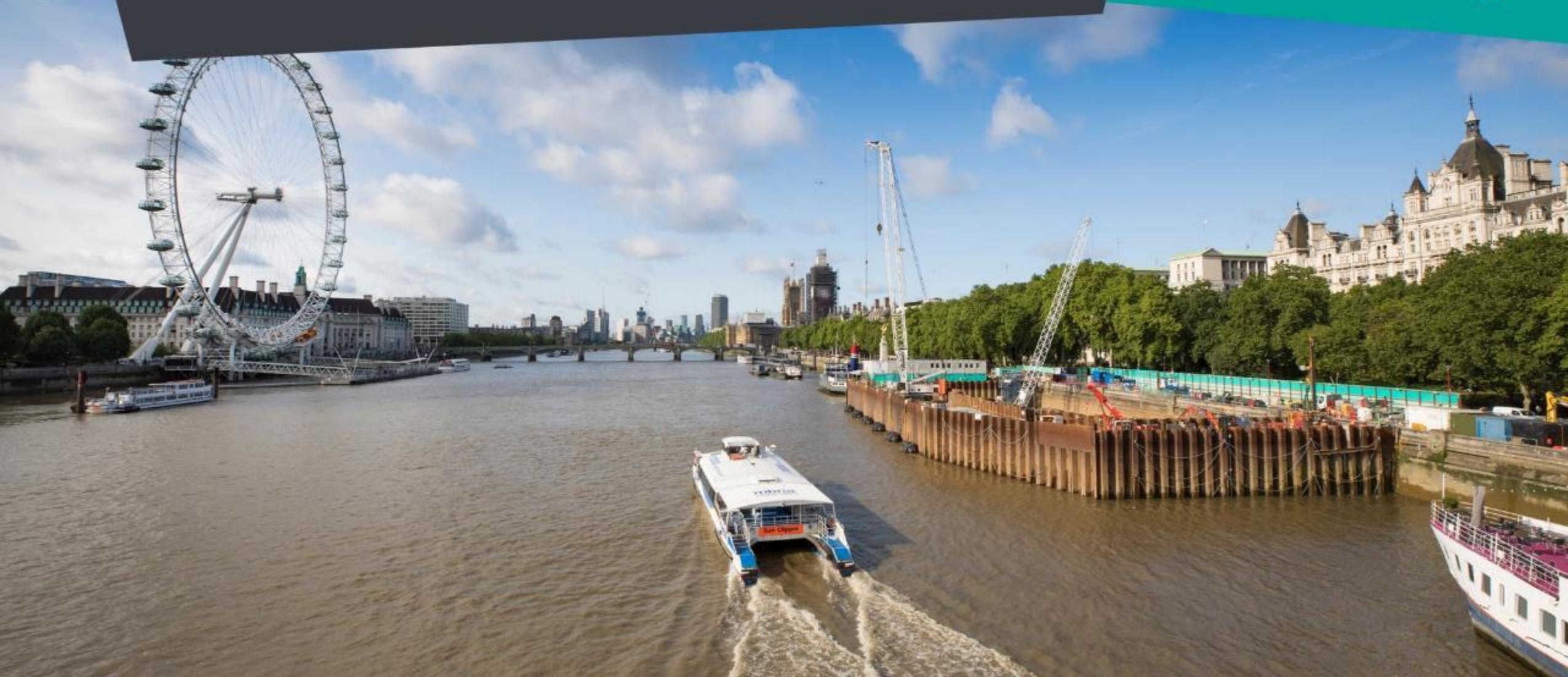
ATC



# NOISE AND AIR QUALITY

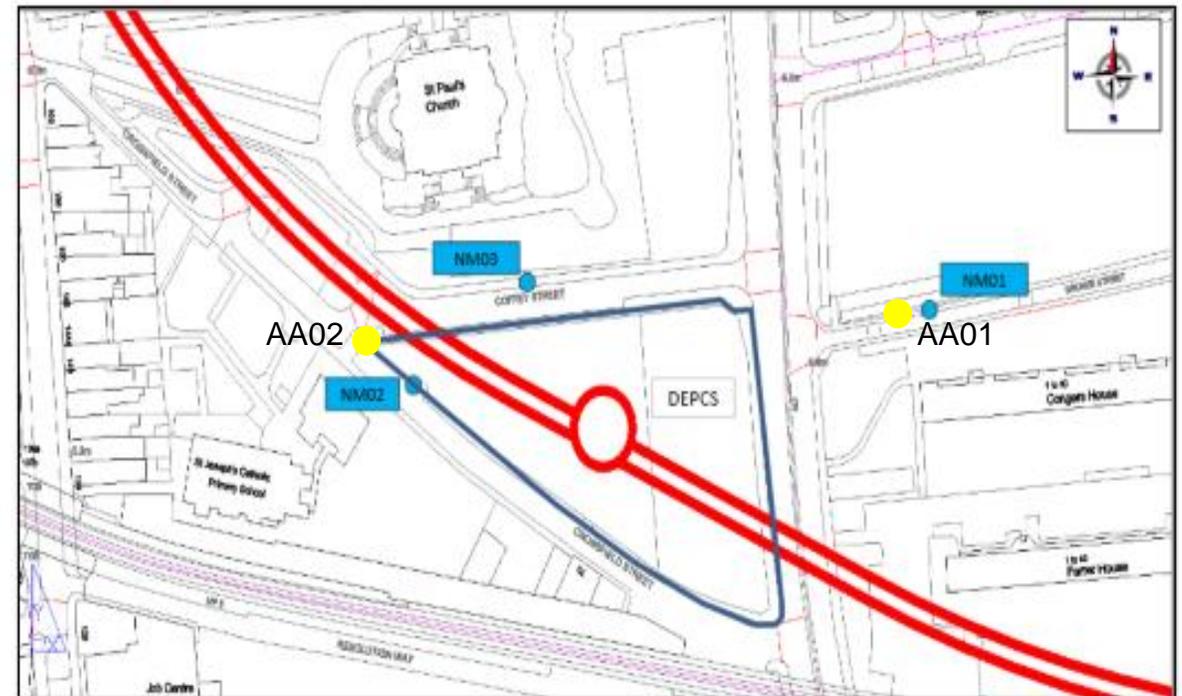


Tideway



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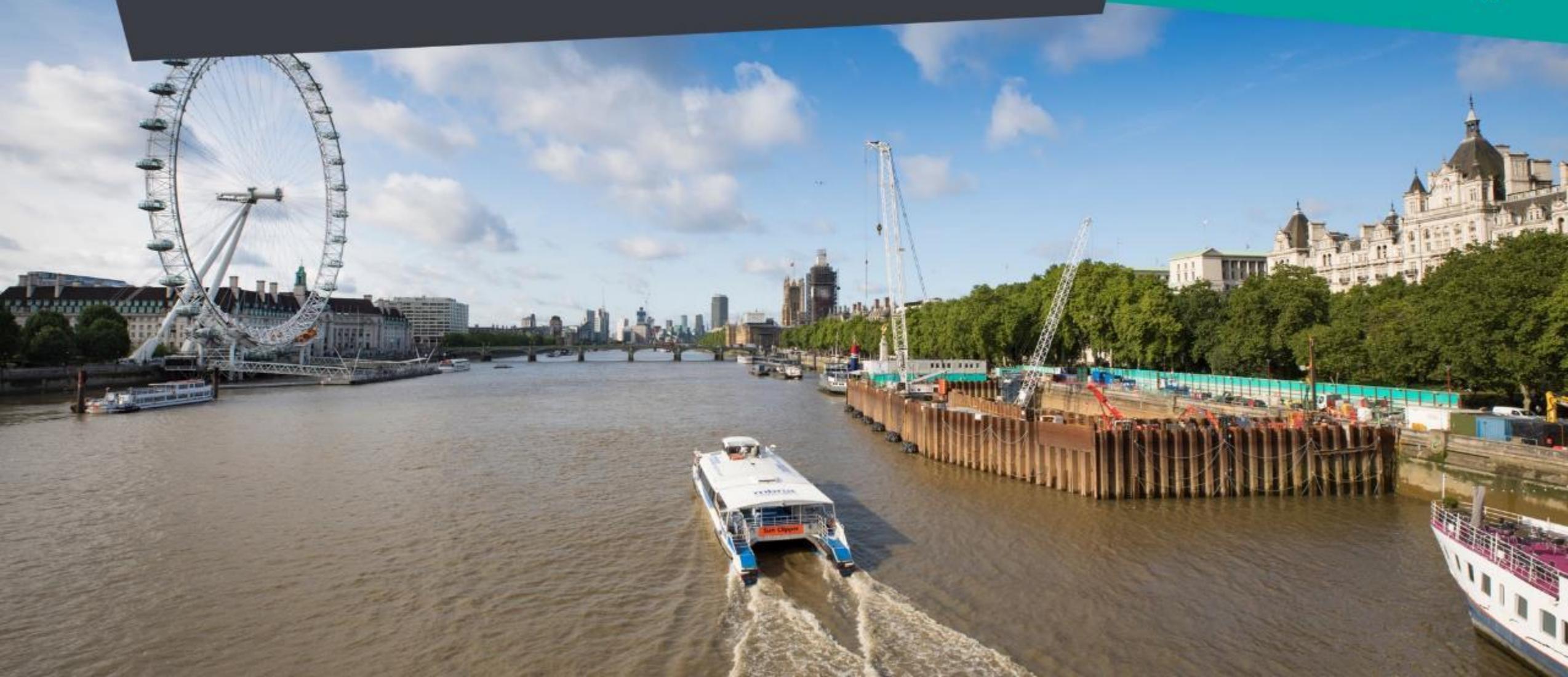
- HVO biofuel used on site
- Idling reduction campaign continues to reduce plant idling

**COMMUNITY  
QUESTIONS AND  
FEEDBACK?**

# COMMUNITY INVESTMENT



Tideway



# Celebrating 8yrs of partnership with London Youth Rowing



Tideway staff past and present joined schools from the Active Row and Breaking Barriers programme and the whole team from London Youth Rowing at the Olympic Park to celebrate the success of our partnership with the charity.



Autumn 2021



BERMONDSEY • DEPTFORD • GREENWICH • SHADWELL • ROTHERHITHE

# RIVER TIMES

Tideway

YOUR UPDATE ON LONDON'S SUPER SEWER



Deptford urban wildlife charity gets funding boost from Tideway  
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## LOCAL NEWS

For the latest updates visit [www.tideway.london/news](http://www.tideway.london/news)



### TBM ANNIE UPDATE FROM GREENWICH PUMPING STATION

'Annie', a giant tunnel boring machine (TBM) creating the 4.5km link between Greenwich and London's new super sewer, is now around a quarter of the way to her destination.

The 'Greenwich connection tunnel' is a vital piece of Tideway's new infrastructure needed to clean up the River Thames.

Six TBMs are being used to create the super sewer and its connection tunnels on the Tideway project, and Annie is one of only two still working underground.

Although not as big as the TBMs used on the main tunnel, Annie is still around 6.4m wide, and will excavate through Tideway's sites at Deptford Church Street and Earl Pumping Station.

Named after Annie Scott Dill Russell, the first female scientist to work at the Greenwich Observatory, the machine was initially assembled at a site by the O2 Arena (see below) having been shipped from Germany before being dismantled and transported via local roads.



### DEPTFORD CREEK USED TO REMOVE TUNNELLING SPOIL FROM GREENWICH SITE

Barges have begun to navigate Deptford Creek to remove tunnelling spoil from Phoenix Wharf at Tideway's Greenwich Pumping Station site.

The creek, also known as the River Ravensbourne, is a tributary of the Thames, and facilitates marine access for Tideway's barges.

Using the river helps keep tens of thousands of lorries off London's congested roads, is safer for pedestrians and cyclists and produces far fewer emissions than the HGV equivalent.



## LOCAL NEWS

### TBM SELINA WITHIN 5KM OF SUPER SEWER FINISH LINE



The tunnel boring machine (TBM) being used to create the final, easternmost section of London's new super sewer now has less than 5km to go.

Once complete, the Thames Tideway Tunnel will be fully excavated from Acton in west London, to Abbey Mills Pumping Station, where TBM 'Selina' is set to finish.

TBM Selina arrived in London last summer, carried by a giant vessel called a Skylift 3000, before being lowered 60m underground at Tideway's site in Bermondsey.

At the time of writing, Selina was between Brunel's Thames Tunnel and the Rotherhithe Tunnel, before making her way past King Edward Memorial park and on to her destination.

For the latest updates visit [www.tideway.london/news](http://www.tideway.london/news)



### TBM URSULA LIFTED FROM SITE AFTER 7.6KM TUNNEL DRIVE

A giant floating crane was used to lift a 700-tonne tunnel boring machine from Tideway's Chambers Wharf site in Bermondsey.

The machine, TBM Ursula, had finished its 7.6km tunnel drive from Kirling Street in Battersea to Bermondsey.

The crane, the 'Matador 3', had travelled from Rotterdam for the manoeuvre, which first involved lifting Ursula from the bottom of a 60m-deep shaft.

Delivery Manager Jim Avant said: "This is another step towards a cleaner River Thames and is another huge milestone involving so many of our partners to ensure a successful and safe operation. The lifting and removal of TBM Ursula from site required months of detailed planning and collaboration across our teams."



# Creekside Discovery Centre, Deptford



## CREEKSIDE DISCOVERY CENTRE OPEN DAY

25 SEPTEMBER 2021 11am - 3pm FREE ENTRY



<https://www.creeksidecentre.org.uk/>



Activities on land and our beach with crab racing, prizes, quizzes and games for all the family.

Find local archaeology, discover creek fish and wildlife with visiting experts.

Food: Dookies Caribbean Grill - chicken, fish and vegan - £1 per ticket for first 100 portions.

Find out what we do for you:  
Creekside Discovery Centre, 14 Creekside,  
Deptford, London SE8 4SA



Book online:  
[creeksidecentre.org.uk](https://www.creeksidecentre.org.uk)



**CREEKSIDE**  
DISCOVERY CENTRE  
for people and water



**THANK YOU**

**ANY  
QUESTIONS?**