

Location

Where is the Mandeville Road vent shaft?

The vent shaft is located on the old Affinity Water pumping station, off Mandeville Road. The area is predominantly residential.

The south of the site is bound by the Network Rail corridor and to the north the existing Affinity Water facility, which is to be relocated. To the west is Northolt Station.

The site is located on a steep embankment for the Central Line



Key viewpoints showing:
vent shaft entrance (1)
Northolt Station (2)
Central Line rail corridor (3)

Overview of a vent shaft

What is a vent shaft?

A vent shaft or ventilation shaft, is the vertical opening that connects the tunnels to the surface and open air. It regulates air quality and temperature in the tunnel, provides access for emergency services and allows smoke to be extracted in the event of a fire.

What is a head house?

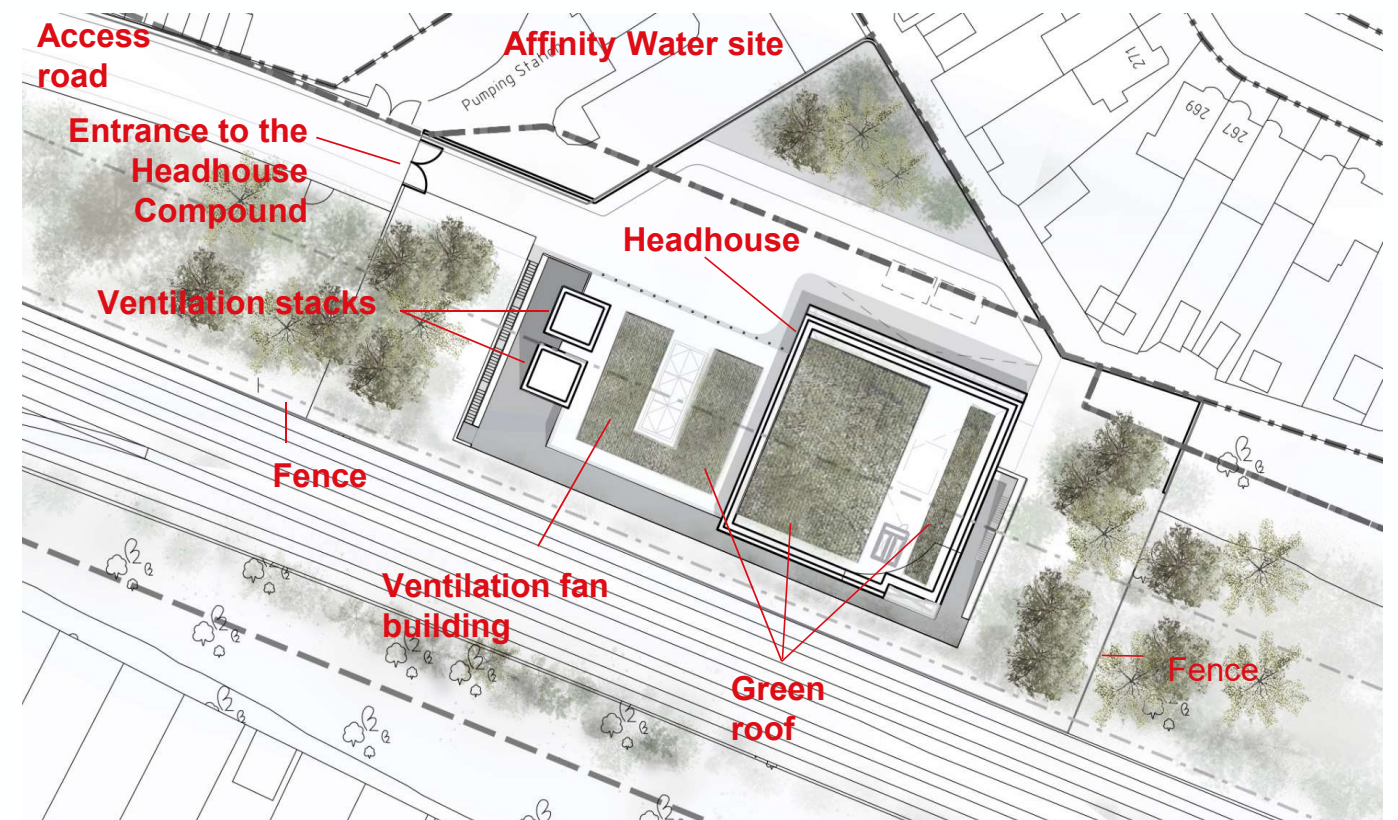
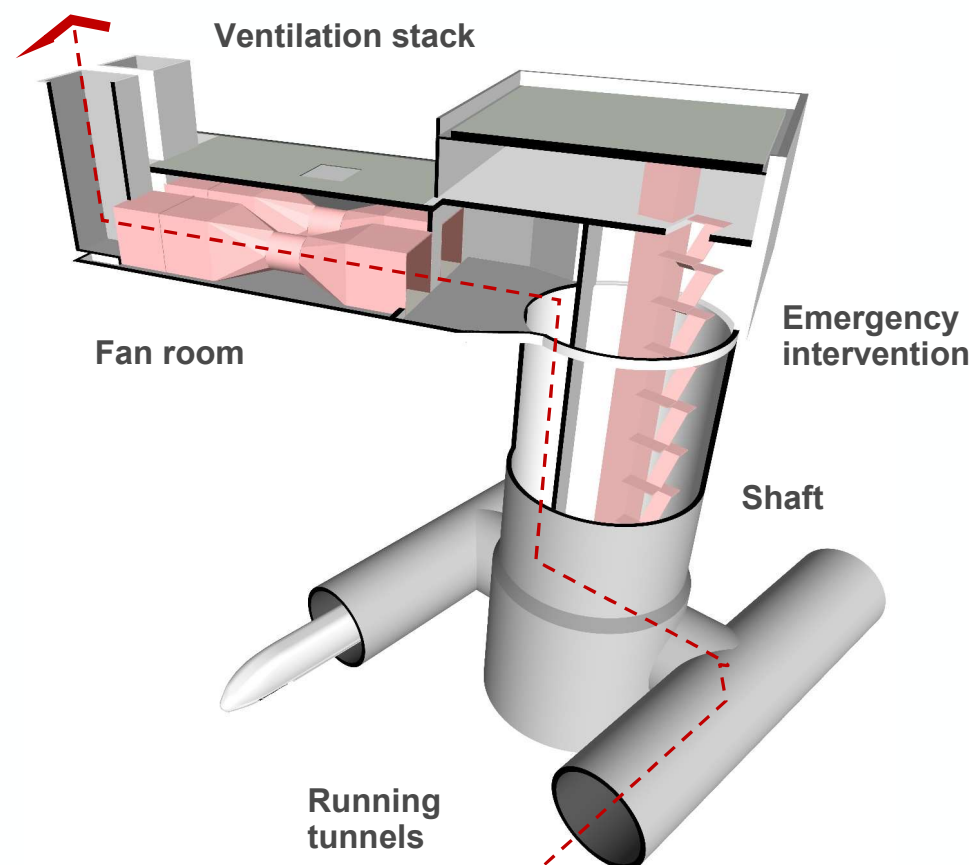
The headhouse is the building on top of the vent shaft which contains fire control systems and the ventilation systems for the railway tunnels below.

When do the fans work?

Fans will not work all time when the trains are operating; they will only work during congestion of the tunnels, during maintenance (testing or activities in tunnels requiring ventilation) and during an emergency (in case of a fire in the tunnels)

How noisy are they?

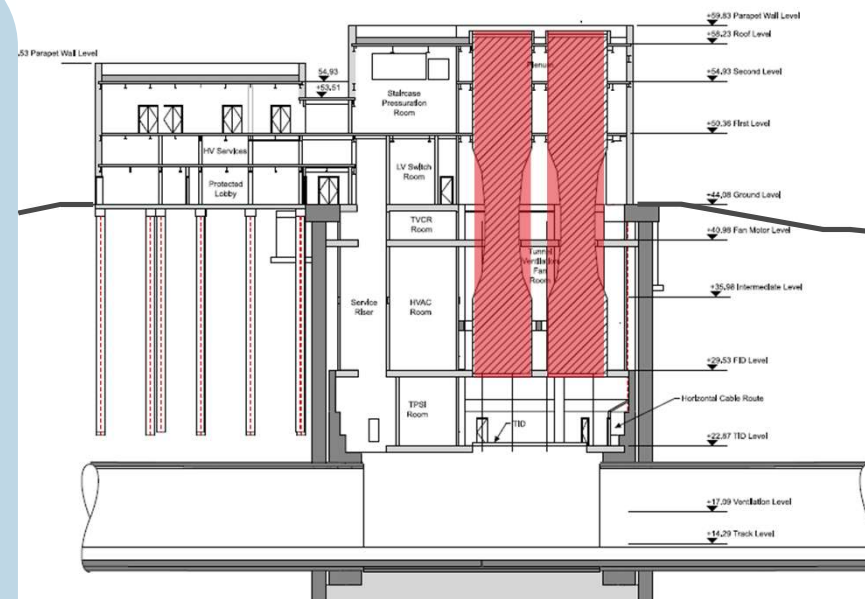
It is anticipated that during normal working operation of the railway the fans will not be heard above the usual ambient noise of the area. However, During an emergency, the fans may be heard over the normal noise of the area nearby.



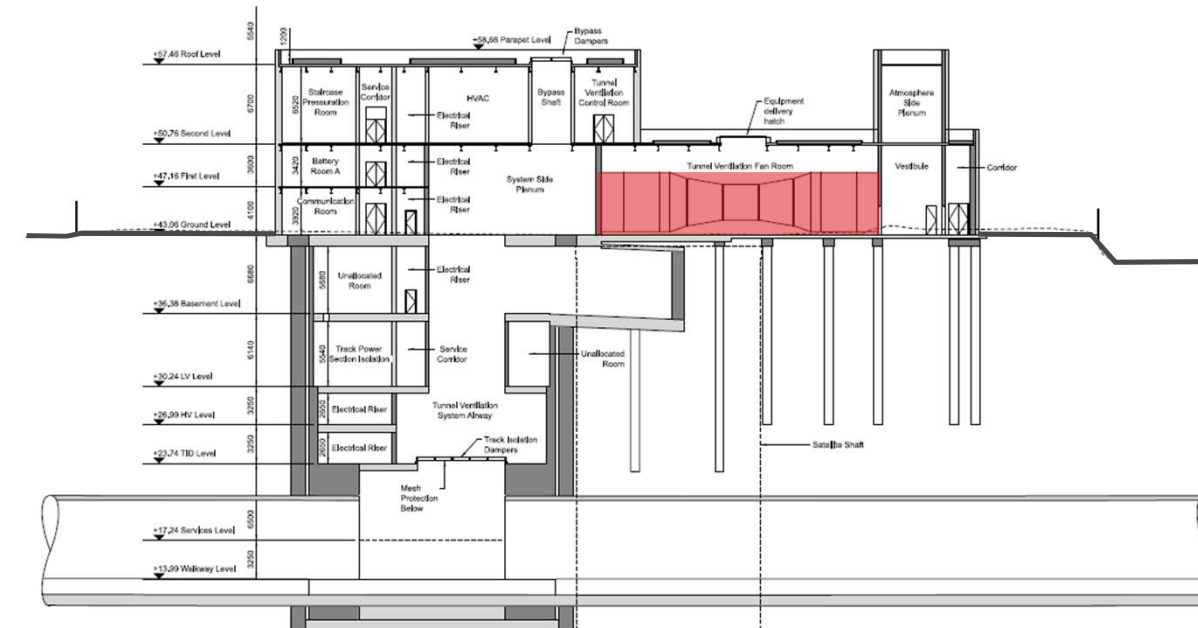
Changes since the Hybrid Bill

Working with HS2 for better outcomes

The design of the vent shaft has been changed with the fan orientation changed from vertical to horizontal. This change means there will be less excavation required and therefore fewer lorries and less noise and dust during construction. The trade off is that larger above ground structures will be required. Being positioned on the embankment (see overleaf), the building will be integrated into the landscape.

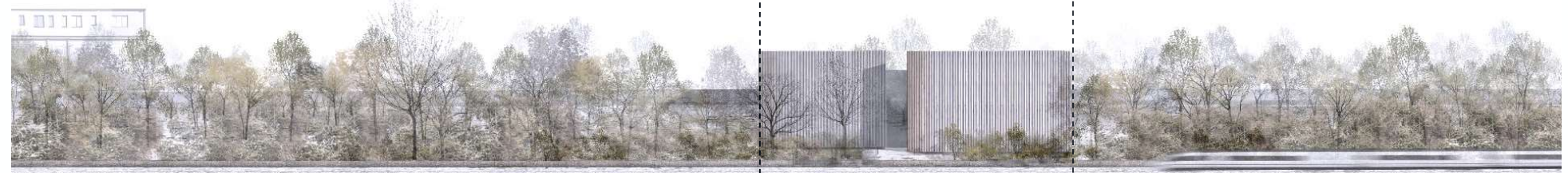


Horizontal fans as presented during the Hybrid Bill

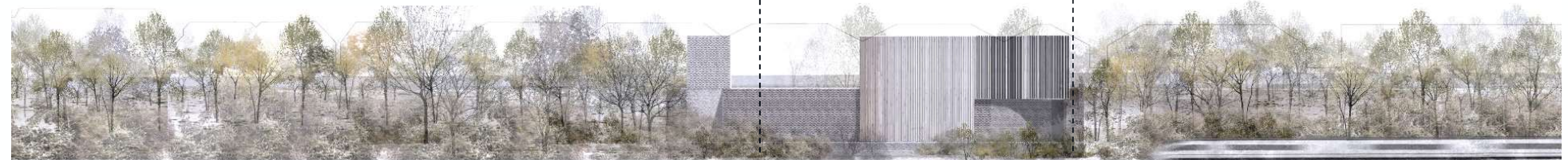


Changed to vertical fans as part of the current design

Q1: Please let us have any comments that you have on the changes we have made to the design since it was first presented during the Hybrid Bill parliamentary process



This change has led to the above ground structures increasing in size





View from the east

Integration into the surrounding landscape

The vent shaft is located on the Central Line embankment fading the boundaries between the building and its surroundings to integrate the architecture and landscape. It is embedded into the green corridor; the network of new wildlife habitats, woodlands and community spaces, helping to leave a lasting legacy along the route

The setting and design of the vent shaft

Site Context

We have studied the site and its surrounding to ensure it fits into the existing context. The site is in a predominantly suburban area characterised by low rise residential buildings. The visual impact on these surrounding properties was a consideration. The vent shaft is situated on the steep Central Line embankment within an existing Site of Biological Importance. Therefore the sites function for ecological connectivity was also a consideration.

Q2: The headhouse building is proposed to be embedded into the steeply sloping railway cutting, reducing the visibility of this building in the surrounding area. What is your opinion on the design and setting of the headhouse building?



View from the north



View from the south

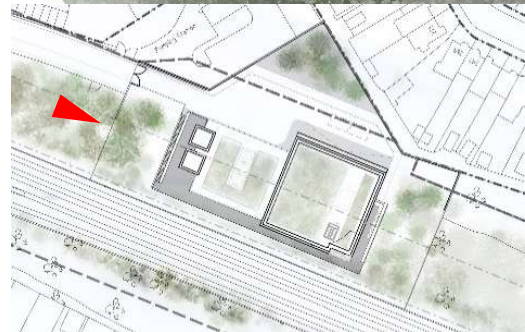
SKANSKA



Working on
behalf of

HS2

View from the west



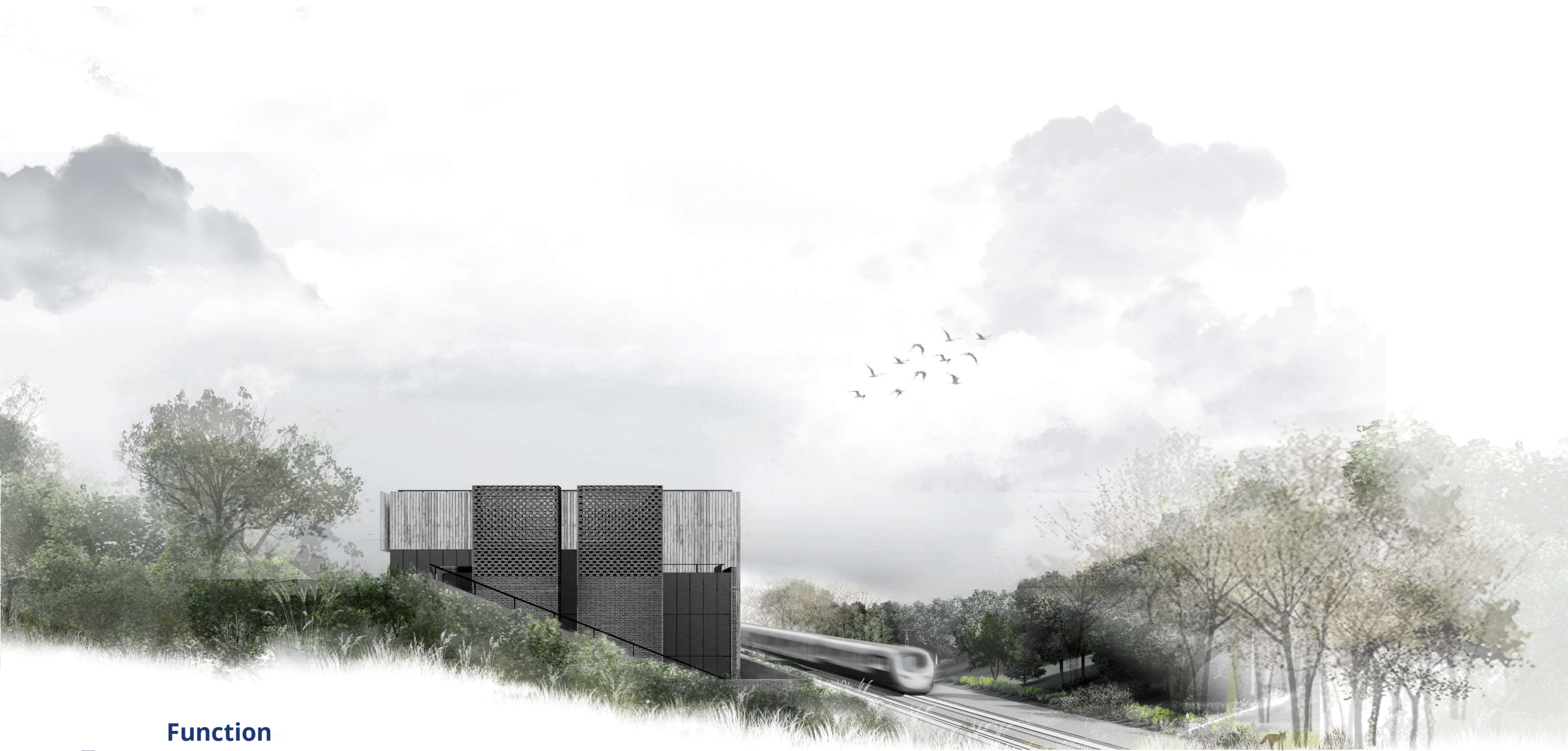
Form

Geometries of the vent shaft will be adapted to generate variations in scale and detail across the facade



Function

Vital piece of infrastructure that enables the new high speed line to function



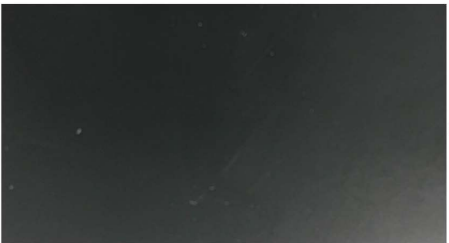
Building Appearance



4. STAINLESS STEEL
Kick plates, handles and special panels in brushed finish



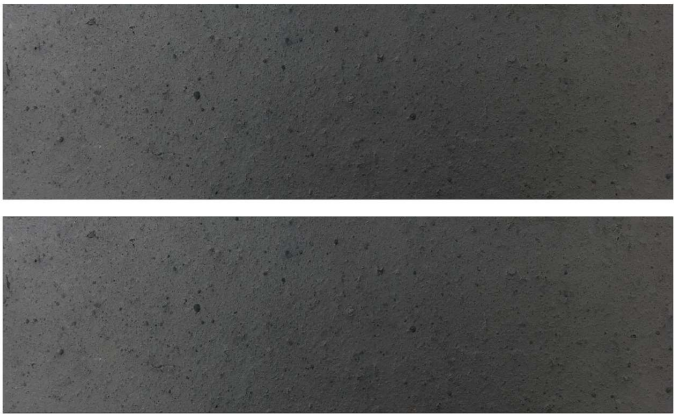
5. GREEN ROOF
Intensive Green Roof with deep growing substrate and biodiverse planting of grasses, herbaceous and shrub planting.



3. METAL
Steel cladding panels, doors and louver panels polyester powder coated dark grey



2. TIMBER
Accoya or similar modified softwood naturally weathered to silver grey colour



1. BRICK
Engineering brick for walls, retaining walls and pavements in dark grey or similar

The material pallet selected for the vent shaft, exploring robust, distinctive and low maintenance materials suitable for the setting, transitioning from an urban to rural landscape.

URBAN



RURAL

Q3: The proposed materials for the headhouse building have been selected to blend in with the proposed landscape and reflect the location in a railway cutting, adjacent to residential properties. What is your opinion on the proposed materials of the headhouse building? Do you feel that this is in keeping with the local area?

Landscape proposals

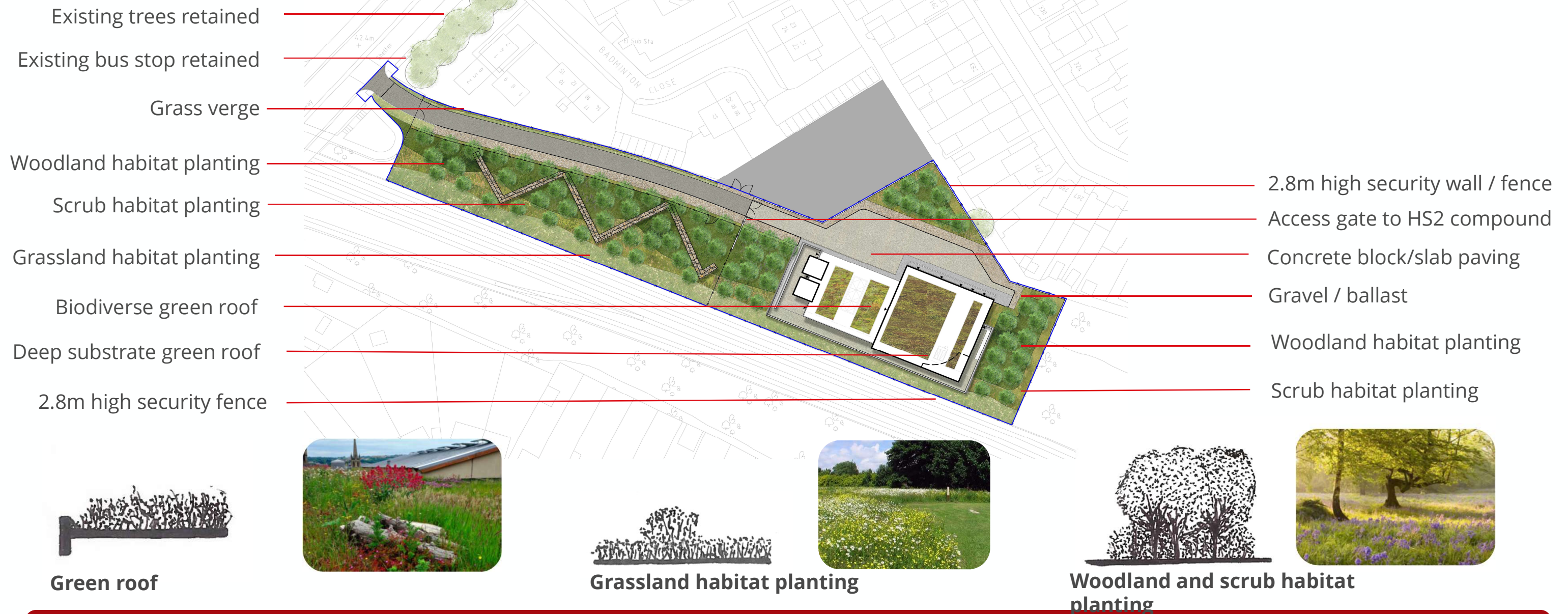
SKA

COSTAIN

STRABAG

Working on
behalf of

HS2



Q4: We intend to re-provide planting on the railway embankment with a greater range of plant species to enhance biodiversity; this is further supported by the provision of green roofs on the headhouse building. What is your opinion on the proposed planting?

Constructing the vent shaft

SKANSKA

COSTAIN

STRABAG

Working on
behalf of

HS2

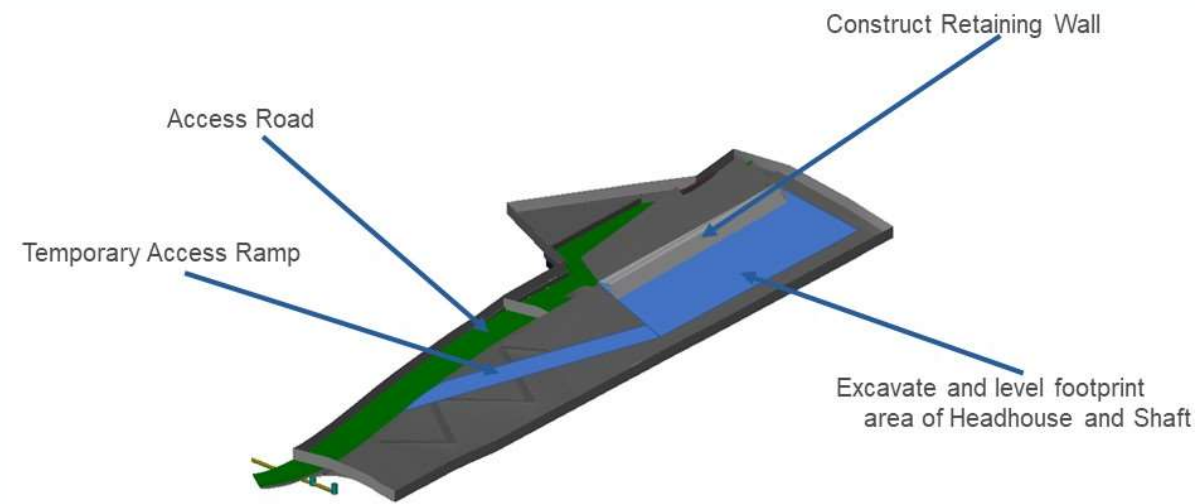
When will construction commence?

To minimise our impact on the local community, we will build the vent shaft and headhouse as quickly and safely as possible. Some works have already been completed by the enabling works contractor. SCS Railways, who are a joint venture between Skanska, Costain and Strabag, will takeover these works and are due to start in Q3 2020 until Q3 2024. Several measures are being implemented to minimise disruption:

Air Quality

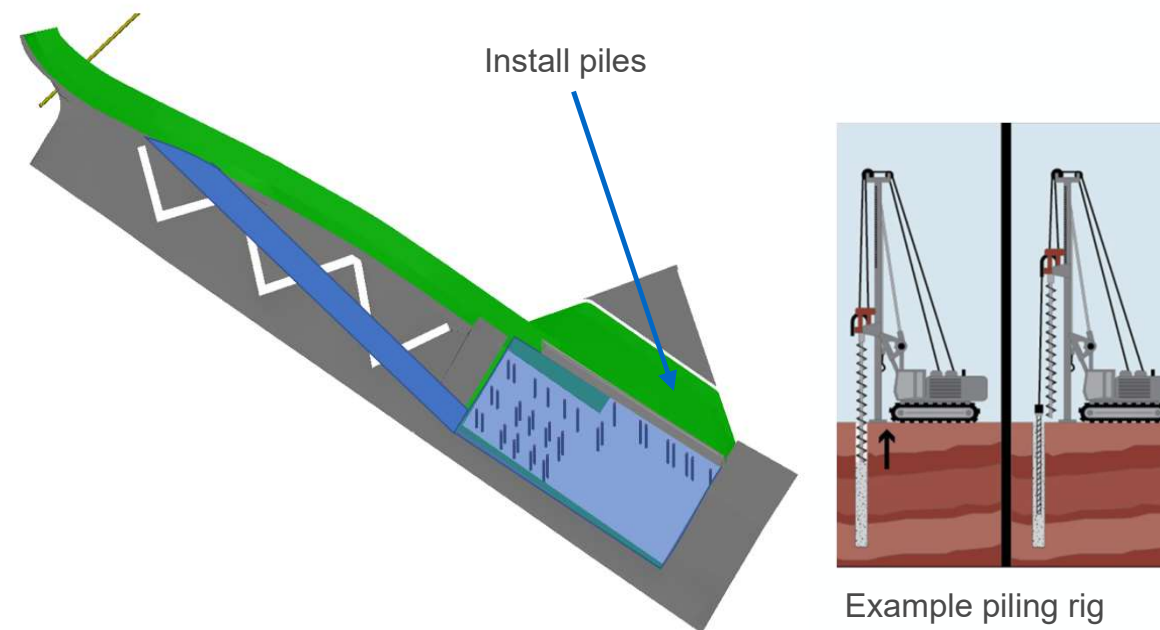
We will manage dust, air pollution, odour and exhaust emissions during construction through:

- Regularly inspecting and monitoring site and equipment.
- Cleaning roads.
- Managing completed earthworks to contain dust
- Regularly monitoring air quality on site.



1) Preparatory Works Q3 2020 to Q2 2021

Undertaking works including construction of the access road and drainage, temporary access ramp, construction of a retaining wall and excavating the footprint of the headhouse and shaft.



2) Install Piles Q2 2021

A pile is a long cylinder of a strong material such as concrete that is pushed into the ground to act as a steady support for structures built on top of it. Piles at this site are constructed by drilling to the designed depth and then concrete is then pumped through the hollow stem of the auger during the extraction of the drill.

Lorry Movements

Construction Traffic:

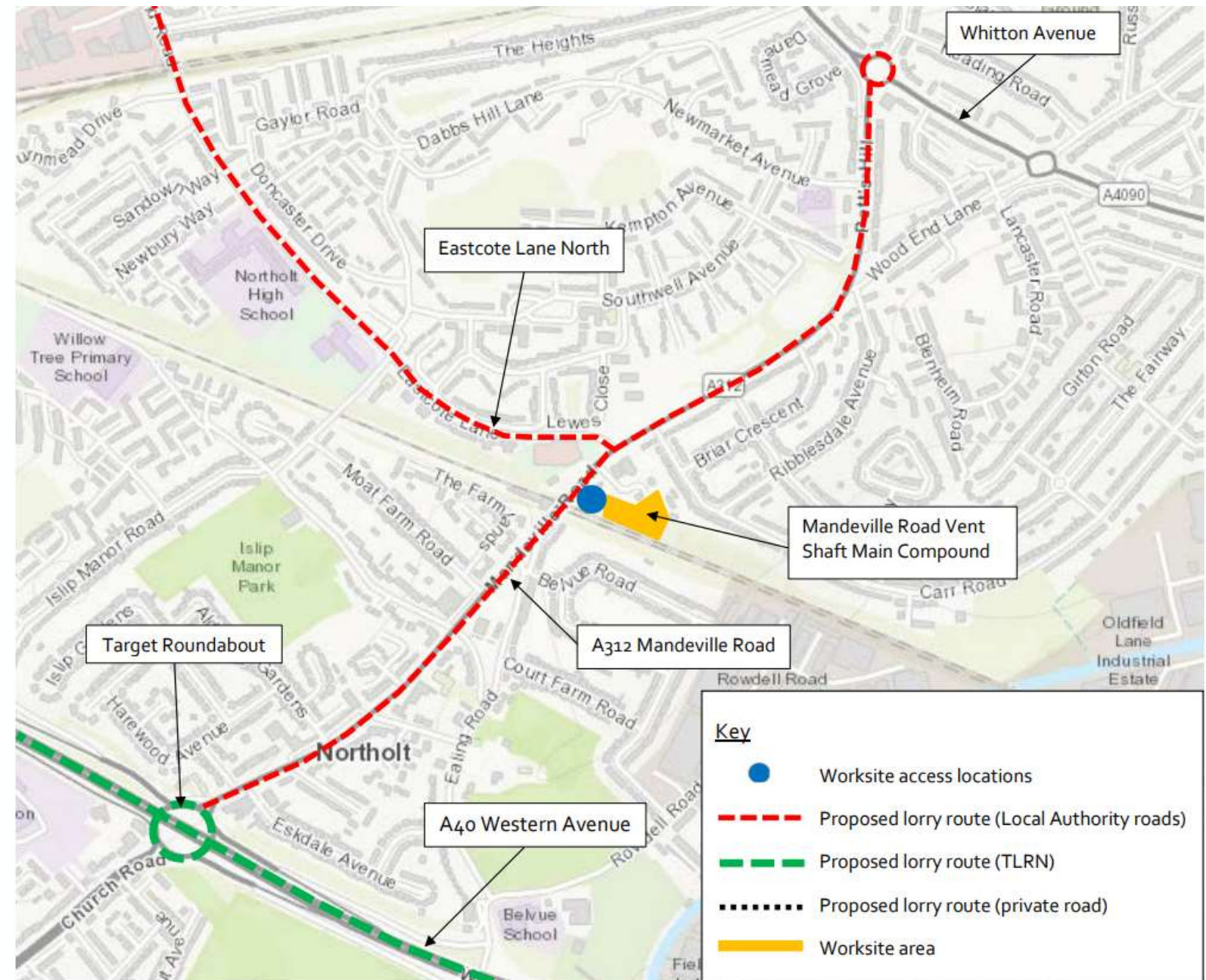
Vent shaft construction has periods of high activity and periods of relatively low activity.

During stage of high activity on site – such as piling, excavation and construction of the shaft – there will be a corresponding increase in heavy goods vehicle (HGV) movements. This is currently forecast as 40-50 vehicle trips (one vehicle entering and then exiting the construction compound). There will also be periods during the construction where the need for HGV movements will be lower.

HGV Routes:

The aim with HGV routes is to use the largest possible roads to get to and leave the site as these are most suited to accommodate HGV traffic. The routes proposed for the construction compound are as follows:

- To compound: A40 exiting from the Target Roundabout → A312 Church Road / Mandeville Road / Pett's Hill → Compound Access
- From compound: Compound access → A312 Mandeville Road/Church Road → Target roundabout onto the A40.



Constructing the vent shaft

SKANSKA

COSTAIN

STRABAG

Working on
behalf of

HS2

Noise

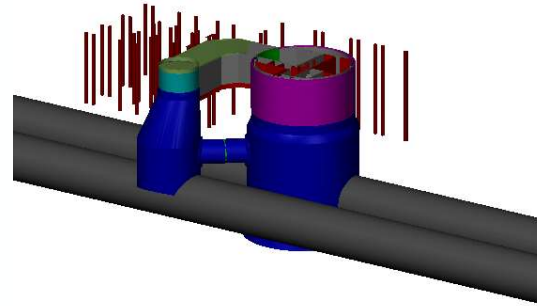
Each construction activity has the potential to have noise impacts. We are required by law to apply measures to control the effect of noise and vibration. We will be monitoring noise on site. Other mitigation that may be applied include:

- Tackling noise at source, reviewing the location of equipment on site.
- Localised screening and enclosures around noisy plant activity.

Traffic Management

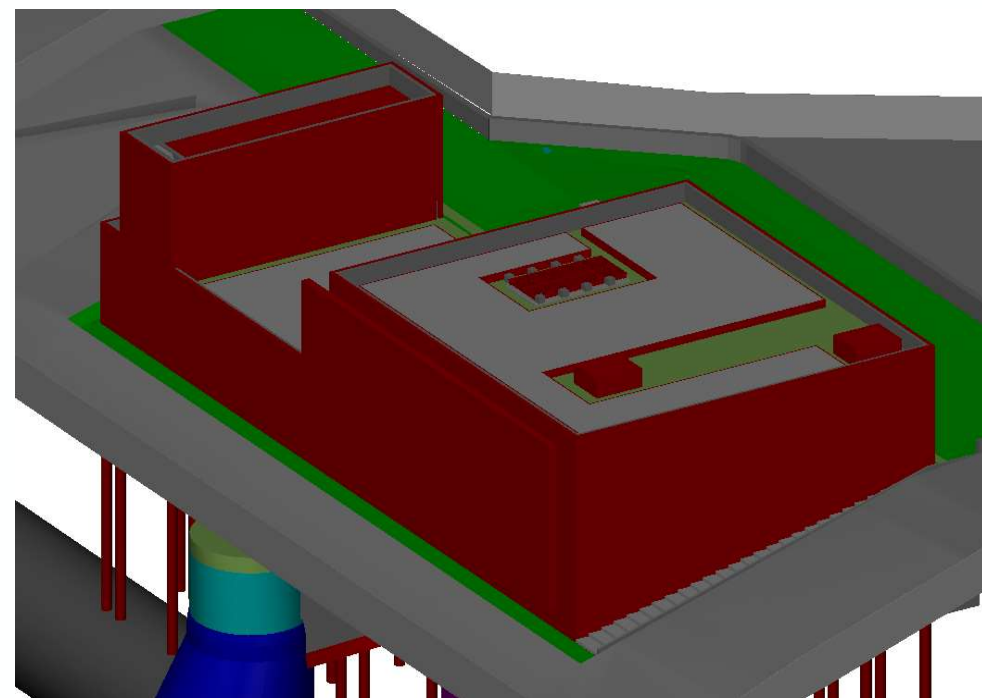
We will manage the logistic routes and site traffic carefully during construction:

- Ensuring compliance with vehicle safety standards.
 - Providing enhance training for drivers
 - Scheduling site deliveries to avoid congestion
 - Tracking removal trucks to ensure correct routes are used.
- Installing clear signs at site approaches and exits.



3) Construct the main shaft Q2 2021 Q3 2023 and satellite shaft Q2 2024

This requires excavating the shaft and removing the material as well as installing concrete rings and sprayed concrete lining.



4) Construct the headhouse Q1 2023 to Q2 2024

This involves the construction of all the above ground structures. The installation of the ventilation equipment such as the fans and all other electrical and mechanical equipment. Landscaping and planting works will reinstate the area.

We are seeking your views

We want to hear your views and ideas on:

The questions on the previous pages in the red boxes on:

- Changes since the Hybrid Bill scheme
- The design and setting of the headhouse
- The materials being used for the headhouse
- The landscape proposals and measures to enhance biodiversity.

How to have your say?

Please provide us with your feedback by **5pm on 24 July**. It is important that we receive your comments by this date so that we can consider your feedback in the next stage of the review for the vent shaft and headhouse design. You can provide feedback in the following way:

Online: Please visit: www.hs2inkilburn-northolt.co.uk for a link to the survey.

Email: You can email hs2enquiries@hs2.org.uk

Post: Unfortunately due to the current global pandemic we are unable to process posted responses. For further assistance on this please call the HS2 Helpdesk on **08081 434 434**. For those who have speech or hearing difficulties we offer a minicom service on **08081 456 472**.

Next Steps:

