You Said, We Did
Chalfont St Peter Ventilation Shaft

ALIGN Working on behalf of HS2

HS2 Route

High Speed Two (HS2) is the new high speed railway for Britain.

Align are working on behalf of HS2 Ltd to build 22 kilometres of the high speed rail line, running between the Colne Valley and the Chilterns. It includes the 3.4 kilometre long Colne Valley Viaduct and the Chiltern twin-tunnels with their four vent shafts to regulate airflow, one intervention shaft and the shaft headhouses which house electrical equipment.

In 2020 we began to undertake critical work ahead of our main works programme. We are also developing the design of key structures, such as vent shafts and headhouses.

Throughout the design period a series of information events will be taking place to share information on the progress of the design, to seek views and respond to feedback.

During this period, due to COVID-19 we have postponed all public face-to-face engagement events and meetings. We will hold online events and ensure that staff are available to answer questions.

Key

- HS2 Route
- Section of route being built by Align Chiltern
- Tunnel
- Colne Valley Viaduct and Approach Embankments
- Tunnel Portals
- Ventilation Shafts
- Chilterns Area of Outstanding Natural Beauty
- Colne Valley Regional Park
- Local Planning Authority Boundaries

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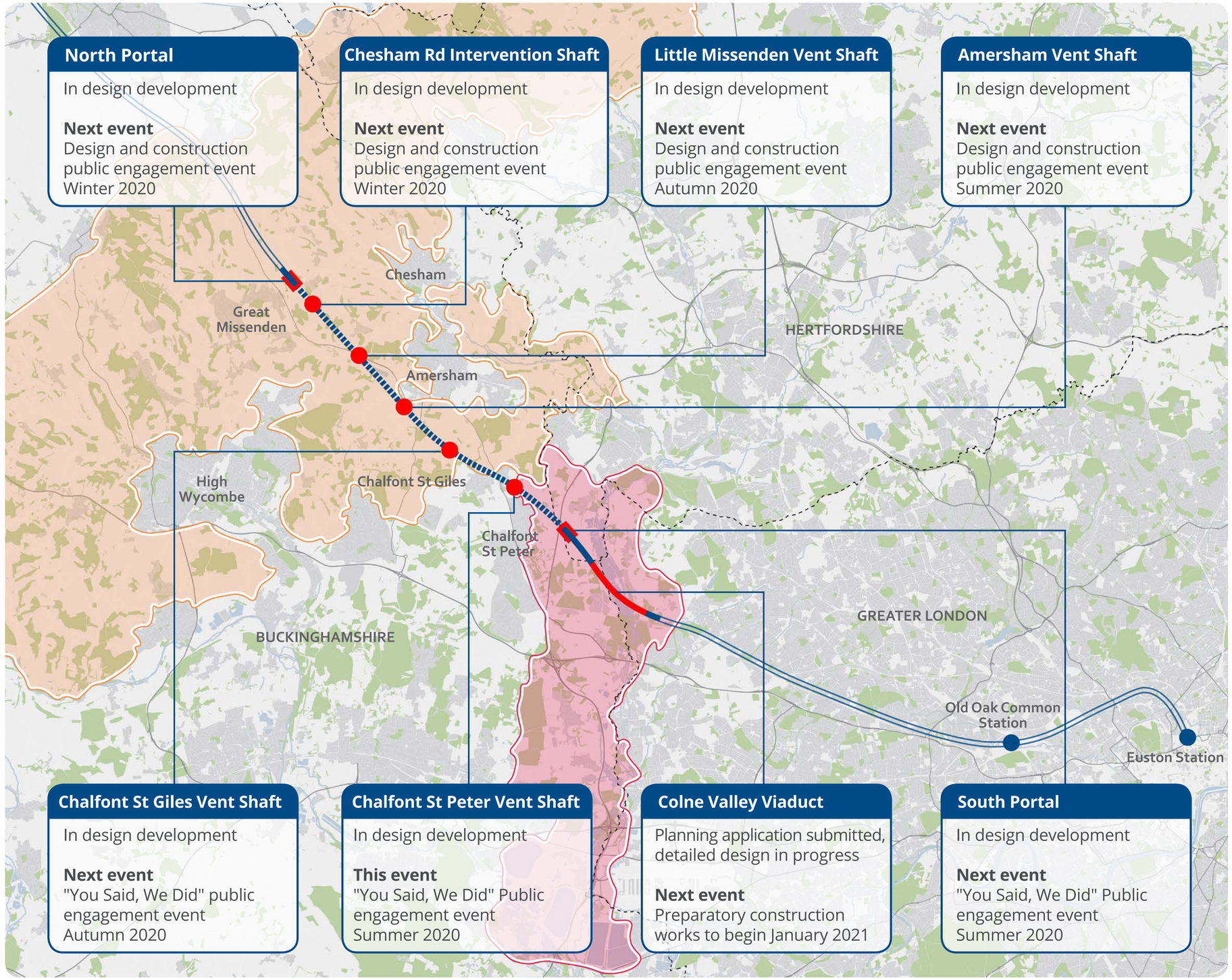

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Welcome to the Align and HS2 online engagement event showing the design for the Chalfont St Peter vent shaft and headhouse.

Last year we held a public event to show our developing design for the Chalfont St Peter headhouse and site.

At the event we also gave early information on the construction processes, traffic management plans and the early plans for the layout of the construction site.

Now we would like to:

- Show you the key feedback that we have received during design development, and which has influenced our approach
- Share the final designs we will be submitting to the local authority
- Provide information on the construction of the vent-shaft and headhouse
- Show you how we plan to reduce any impacts of our works on residents.

Public Feedback

After the public Design Input event in October 2019, you completed questionnaires via freepost, online, and email. The questionnaire covered 4 topics and asked you to rank our objectives in order of priority and provide comments.

Your ranking of objectives is shown below:

Landscape Design

1. Replace lost trees and hedgerows which must be removed during construction
2. Use existing trees, hedgerows and new planting to conceal structures as far as possible
3. Find ways of reusing soil and materials excavated from the vent shaft in the new landscape
4. Consider the long-term management of the site and appearance of the landscape
5. Reflect the rural character of the site and surrounding landscape
6. Consider ways to enhance public experience in places where people get close to the site

Ecology

1. Protect existing wildlife species on the site during construction
2. Create habitats that support as many species as possible (biodiverse)
3. Restore the area using planting or seeding of native and indigenous species
4. Create habitats that are typical of the area but rare and declining – for example, chalk grassland
5. Consider the long-term management of the site
6. Create ponds to encourage new aquatic species to colonise the area

Headhouse Design

1. Design structures that can be concealed or blend into the landscape
2. Keep the overall footprint (area) of the compound as small as possible
3. Reduce visibility through lowering buildings where possible
4. Reduce the environmental impact of the proposed structure
5. Maintain a familiar scale and form to local agricultural setting
6. Add building colour and detailing to help blend into the landscape

Construction

1. Return the construction site to how it was before construction started
2. Reduce noise and vibration on the construction site
3. Let people know when noisy works are occurring and keep residents regularly updated
4. Reduce movements of earth and dirt by road
5. Minimise any visible impact of construction
6. Minimise carbon footprint, and reduce noise and air pollution across construction fleet

You Said, We Did
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Chalfont St Peter landscape design

You said: **Replace lost trees and hedgerows which must be removed during construction**

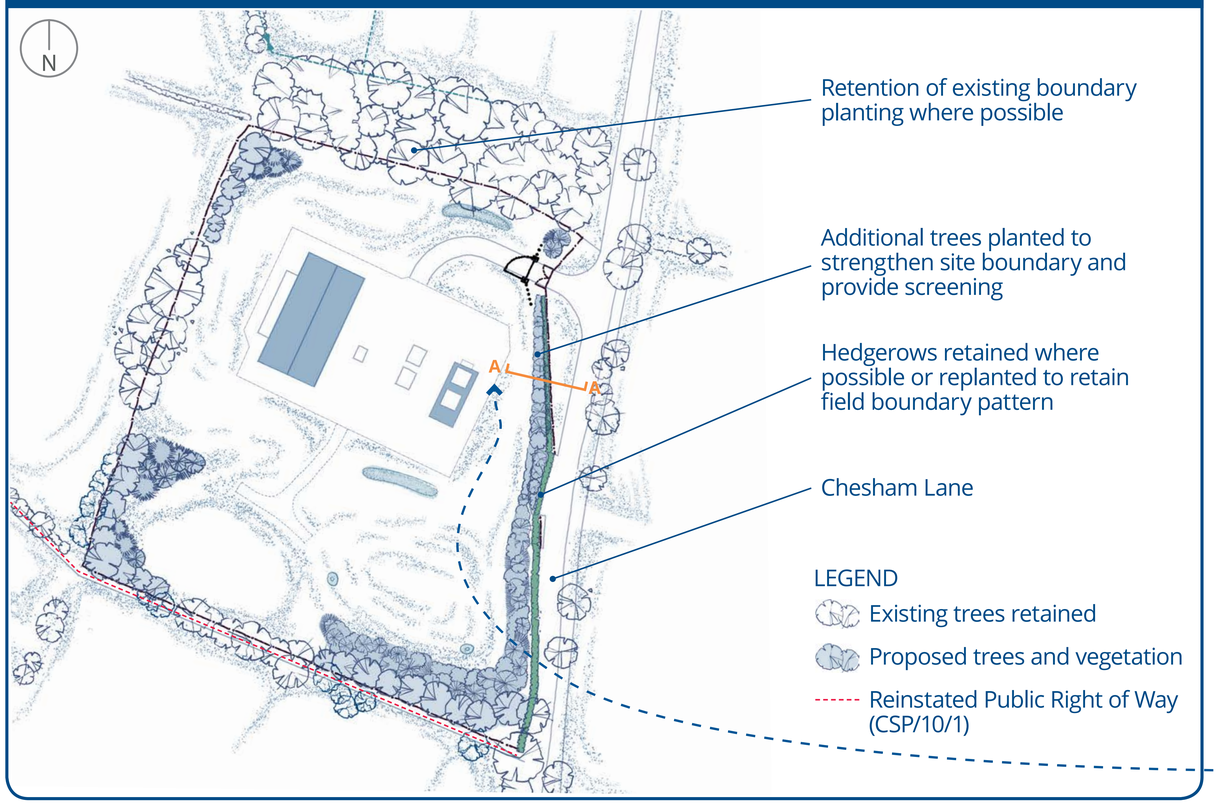
"Conceal structures as far as possible"

"We want the Area of Outstanding Natural Beauty to remain."

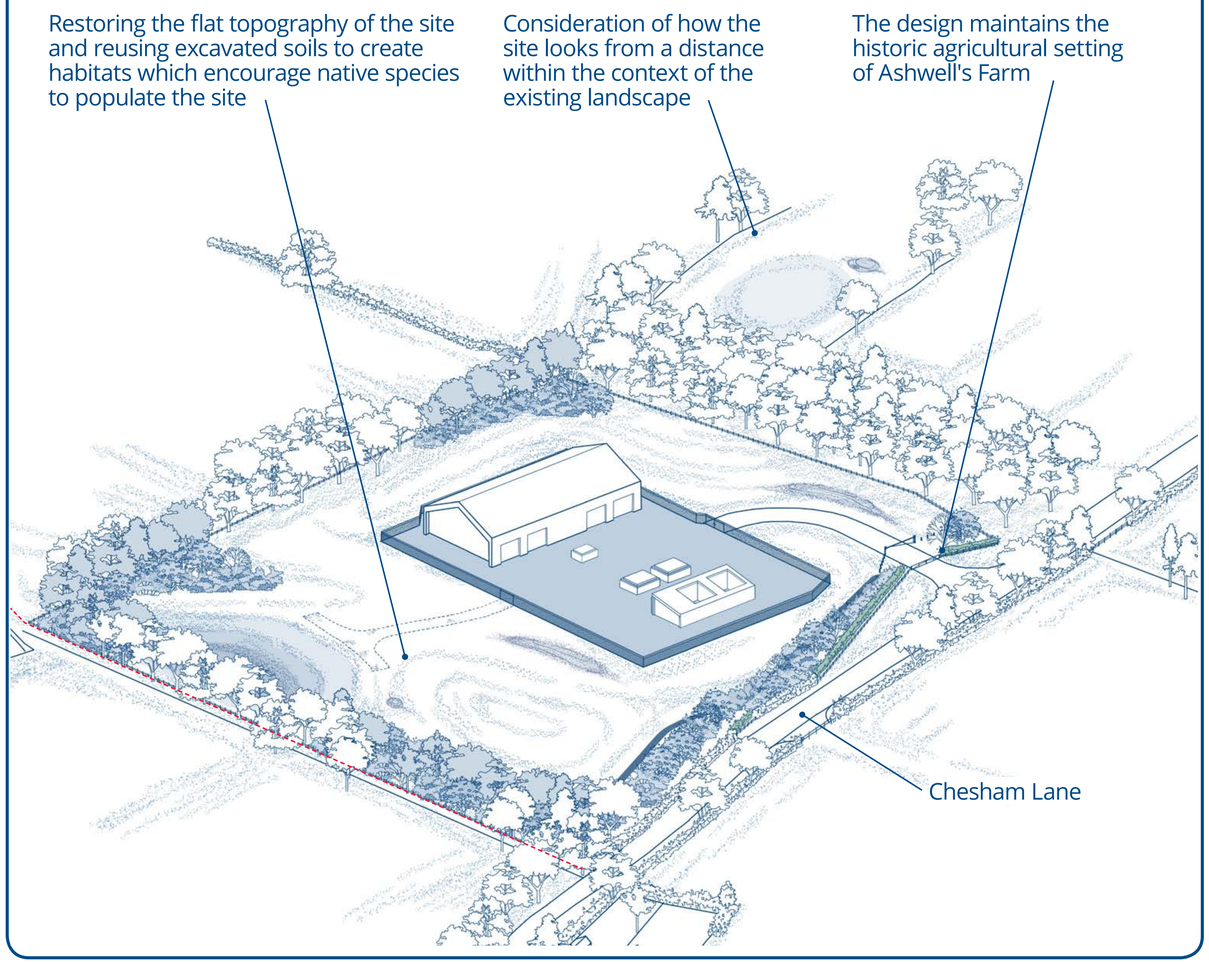
The landscape design will provide a range of habitats which will support biodiversity.

The plant and wildlife habitats will be created and managed to complement the existing landscape and ecological character of the Chiltern Hills.

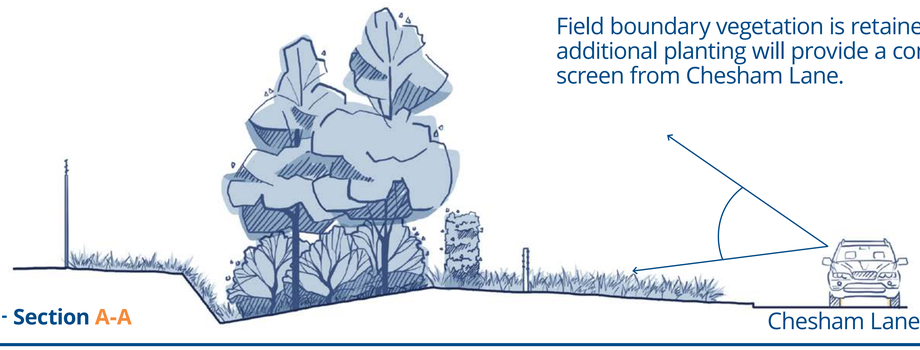
We did: Retain mature trees and habitat within field boundaries



We did: Preserve the character of the AONB



We did: Conceal structures where possible



You Said, We Did
Chalfont St Peter Ventilation Shaft

ALIGN Working on behalf of HS2

Chalfont St Peter ecological design

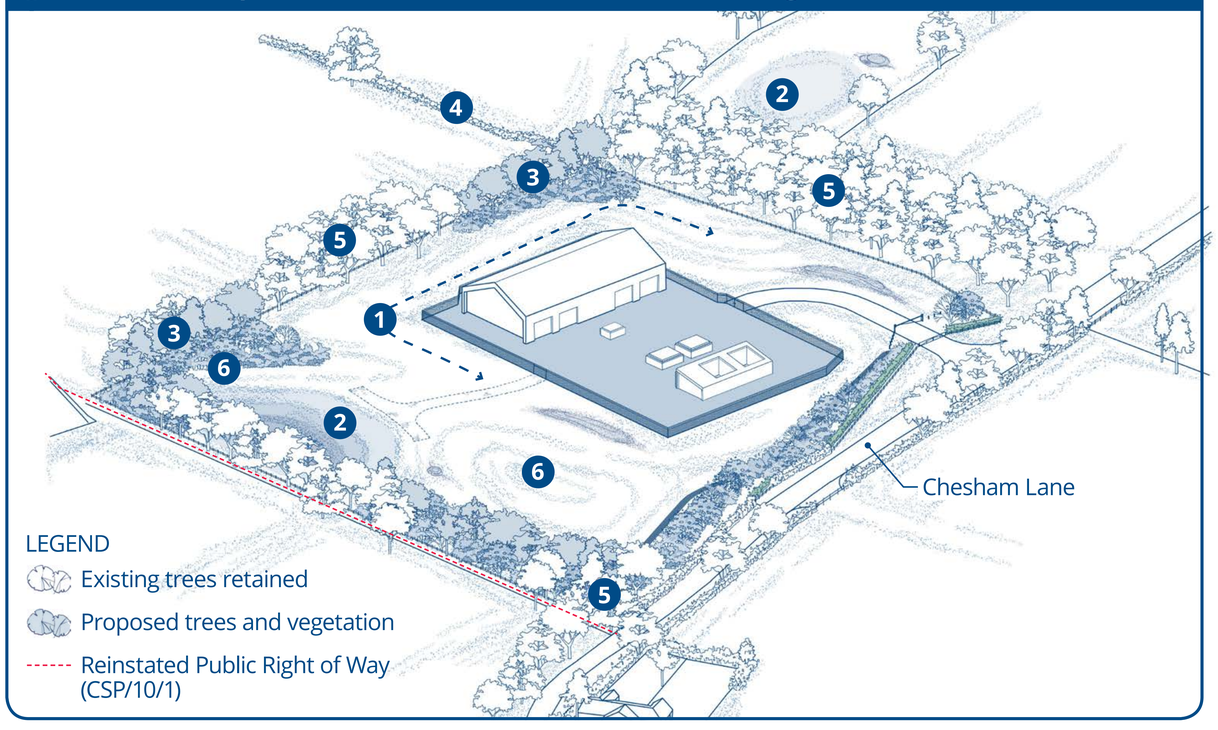
You said: **"Protect existing wildlife species on the site during construction"**

"There are newts, badgers and snakes on the site. How are you going to protect them during construction?"

"Will wildlife return after construction?"

We surveyed all existing species on the site and planned detailed measures to mitigate any impact on local wildlife during construction. We have also developed a Habitat Management Plan that promotes the future creation and management of habitat suitable for the local wildlife.

We did: **Incorporate habitat features – hibernacula, basking banks, bat and bird boxes**



Key habitat types

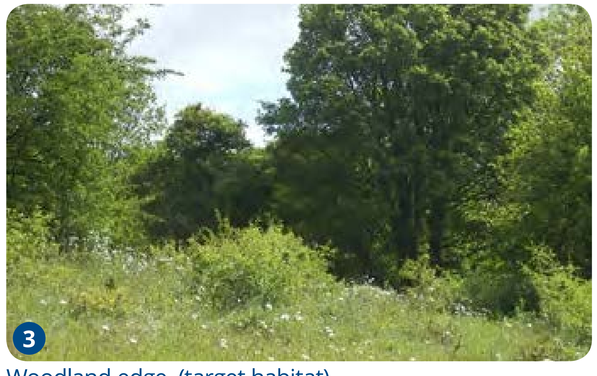
	Type	After construction	Management
	**Species rich grassland**	A contextually appropriate mix of wildflowers and grasses will be sown to create a diverse species rich grassland.	Grassland and scrub managed by cutting/mowing, with a variety of lengths maintained to create micro habitats for a diverse range of invertebrates.
	**Scrub and woodland planting**	Planting to replicate woodland and scrub in local area. Fruiting shrubs and trees will be planted for diversity.	Tree and shrub planting will be maintained to ensure successful long-term establishment. This will include watering, weeding, pruning and the replacement of plants where necessary.
	**Habitats for protected species**	Reptile basking banks, a hibernaculum and a grass snake egg-laying heap installed to create diverse habitat.	Annual checks to control dense growth of invasive plants and to maintain open south-facing sides of basking banks and the hibernaculum.

Habitats will be created and managed within the site to reflect the existing ecological character of the Chiltern Hills.

The list below demonstrates the added ecological features being built:

1. Creation of species rich grassland habitat – reflective of Chilterns grassland.
2. New wetland habitat.
3. Gap planting including grading tree/ scrub planting.
4. Integration with connecting habitats to encourage animal foraging and movement.
5. Retention of mature trees as key habitat within field boundaries.
6. Incorporation of incidental habitat features – hibernacula, basking banks, bat and bird boxes.

Species rich grassland (target habitat)



Woodland edge (target habitat)

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The site compound

You said: **Design structures that can be concealed or blended into the landscape**

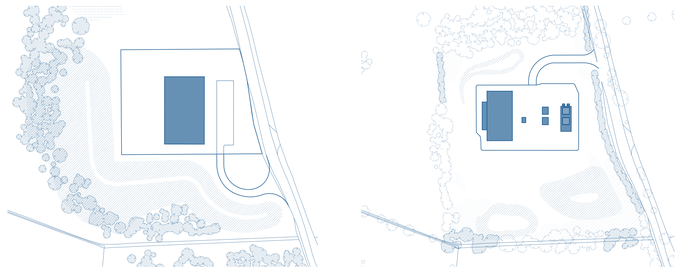
"The building looks unobtrusive"

"Please do your best to hide it"

We did: **Move building as far away from the road as possible**

Our proposal has improved on the design in the Hybrid Bill:

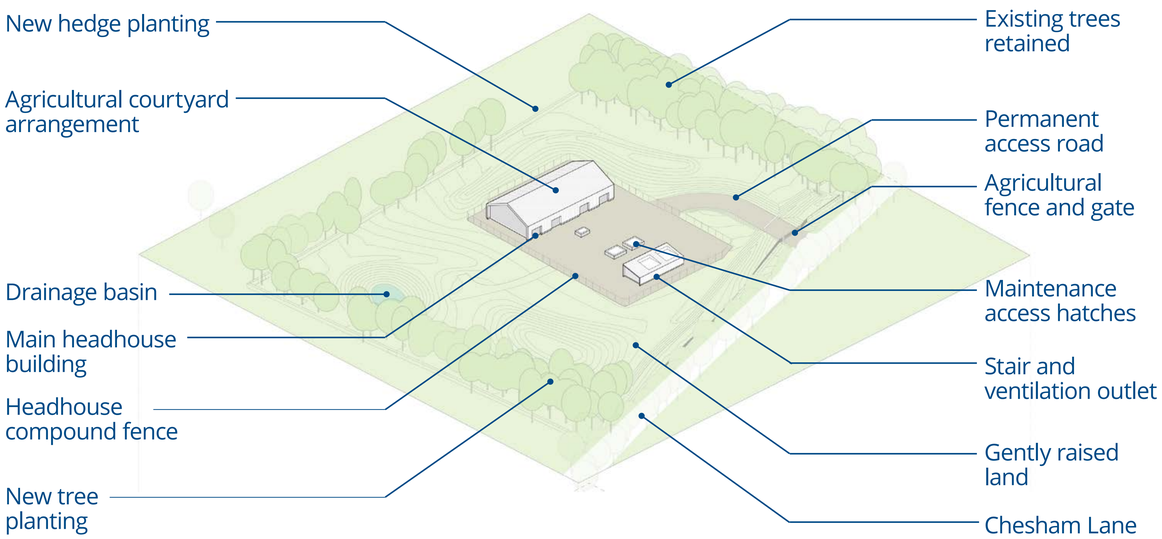
- The access has moved away from the nearest houses and the building has moved away from Chesham Lane
- The compound is smaller and arranged around an agricultural style courtyard



Hybrid Bill

Our Proposal

We did: **Arrange the buildings around an agricultural style courtyard**



View from Chesham Lane looking West

This view looks west from Chesham Lane close to the proposed permanent access road entrance.

Year 1 of HS2 in operation - The headhouse is visible beyond the agricultural style gate and fence in the foreground.

Year 15 of HS2 in operation - The new hedge planting and scrub planting will be established enough to provide more visual screening of the headhouse and integrate it with the surrounding landscape.

View prior to HS2 works

Year 1 of HS2 in operation

Year 15 of HS2 in operation

Headhouse design

You Said, We Did

Chalfont St Peter Ventilation Shaft

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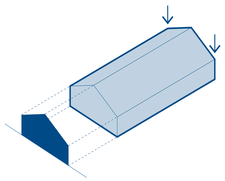
Building scale and appearance

You said: **Design structures that can be concealed or blended into the landscape**

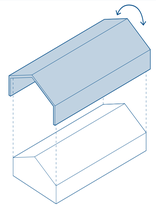
"The building looks unobtrusive"

"Please do your best to hide it"

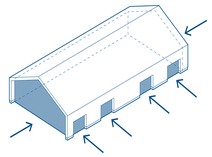
We did: **Design the building to have a simple contemporary barn aesthetic**



Form and Scale
Reduce building height where possible and maintain a familiar shape to agricultural barns.



Roof Wrap Around
The pitched roofs wrap around the buildings, creating simple agricultural barn shapes.

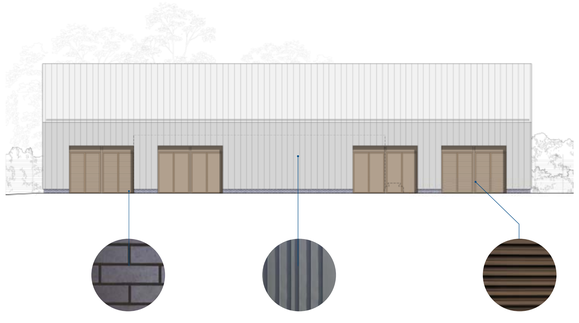


Door and Vent Openings
Are pushed in and treated in a different material, similar to local agricultural buildings.

We did: **Choose a simple robust palette of materials that will age naturally**

The simple choice of materials is inspired by local agricultural buildings. The materials used will be durable and designed to age naturally over time, blending into the landscape, without losing robustness and quality.

The roof wrap around will be made from pre-patinated grey zinc in a vertical pattern, with openings as horizontal dark bronze louvres to provide contrast. The building will sit upon a dark blue brick plinth, typical of agricultural buildings.



Main Headhouse Elevation

Aerial View

Public footpath view

This view is from the footpath to the south of the site.

Year 1 of HS2 in operation - The proposed headhouse is clearly visible through breaks in the vegetation that bound the footpath.

Year 15 of HS2 in operation - The scrub planting in the foreground will have grown to provide filtered views through to the headhouse compound.

View prior to HS2 works

Year 1 of HS2 in operation

Year 15 of HS2 in operation

Headhouse design

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Traffic management

You said: **"Please don't run HGVs on the streets of our village"**

We did: **Built a temporary access road for Heavy Goods Vehicles (HGVs)**

We have been working closely with stakeholders to find a solution that takes the HGVs out of the residential area of Chalfont St Peter, which includes Robertswood School and the Epilepsy Society.

Our solution to create a temporary access road includes the creation of a new signalised junction with the A413 Amersham Road.

The signals will allow free movement north and south on the A413 at all times, except for when an authorised construction vehicle approaches the junction. The approaching vehicle will trigger the signals to change to allow just enough time for the vehicle to safely enter or exit the site.

Construction

You Said, We Did
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Traffic management

Vent shaft construction has periods of high and low activity.

During stages of high activity on site – such as shallow shaft excavation and piling works – there will be an increase in HGV movements.

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

- ensuring compliance with vehicle safety standards
- providing enhanced training for drivers
- scheduling site deliveries to avoid congestion
- tracking spoil removal trucks to ensure correct routes are used
- installing clear signs at site approaches

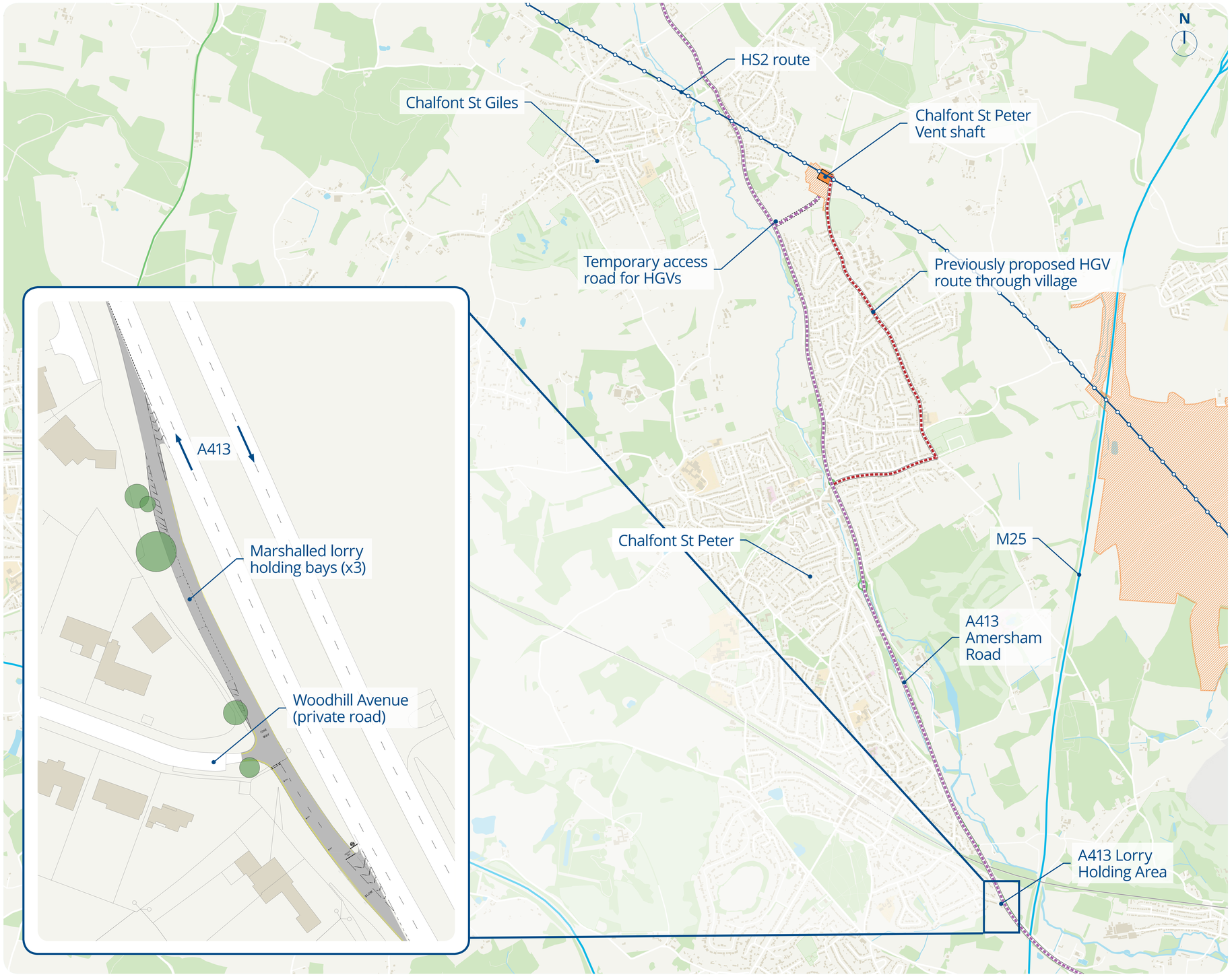
You said: Keep lorries from queuing in our villages

We did: Created a lorry holding area on the A413 near Gerrards Cross

Working with Buckinghamshire Council and local residents we have put in place a new marshalled lorry holding area on the A413 near Gerrards Cross.

HGVs can be held in this newly surfaced layby until their approach to the vent shaft site is clear. This helps to reduce congestion and eliminate queueing at the site entrance and A413 and will help us to ensure HGV movements can be efficiently managed during the heaviest periods of construction activity.

Usage of this lorry holding area will be discontinued once construction is complete.



Construction

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Managing the construction site

You said: Return the site to how it was before construction started

We did: Designed the compound to fit within the existing landscape

We made the main compound as small as possible to fit within the existing boundaries, keeping as many trees and hedgerows on the site as possible. Welfare blocks, staff parking, and site roads were designed to make movement more efficient, reduce our carbon footprint, and long-term impact on the surrounding landscape.

We did: Retained excavated soil on site to re-use in landscaping

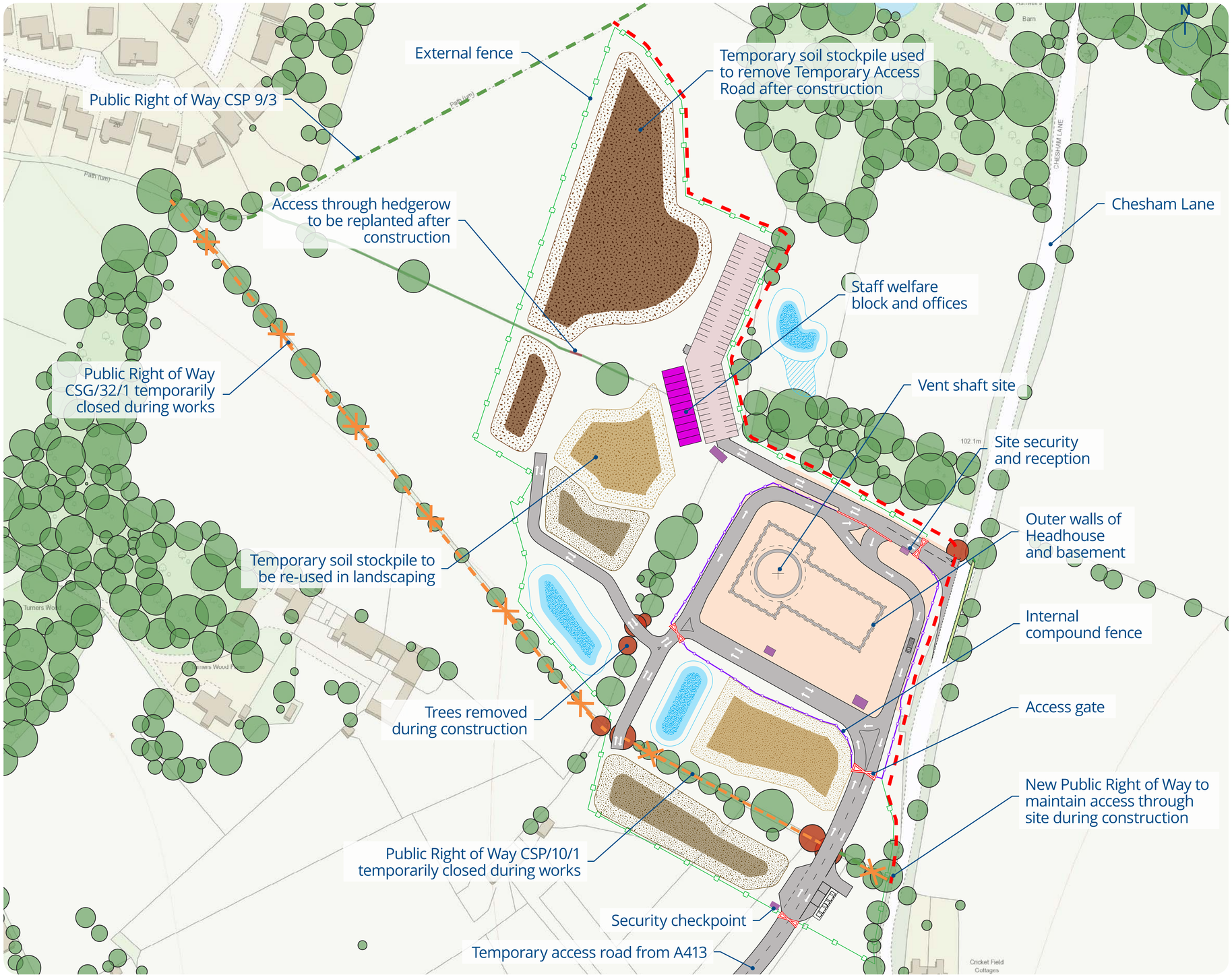
Storing excavated material in stockpiles local to the site enabling us to:

- reduce the number of lorries on local roads
- re-use local materials when returning the landscape to its previous state after construction

We have leased additional land west of the compound to store excavated materials from the temporary access road. This will act as additional visual screening for residents during construction and be put back once the access road is removed.

We did: Preserved Public Rights of Way

During construction we have maintained public access by creating a new path from Chesham Lane around the site. This replaces CSP/10/1. This new route maintains an important public right of way and recreational path and keeps the temporary access road open. When construction is complete, CSP/10/1 will be restored.



Construction

You Said, We Did

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The construction site

You said: **Reduce noise and vibration during construction**

The HS2 Phase 1 Code of Construction Practice (CoCP) outlines the measures we need to follow to control the noise and vibration effects of construction.

Before we proceed with work, a section 61 (S61) application needs to be agreed with the planning authority. The application outlines the works which are planned to take place, the working hours of the site and what plans will be put in place to mitigate potential noise and vibration impact by best practical means.

HS2 has established policies for temporary rehousing and noise insulation as a result of construction noise. Please refer to information paper E23 for more information.

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/672398/E23_-_Control_of_construction_noise_and_vibration_v1.7.pdf

We did: **Implement noise and air quality monitoring on site**

We have noise and air quality monitoring on site to confirm that we are working within the levels identified within the S61 consent application. If we breach the agreed levels, work will have to stop.

We are also carrying out regular monitoring of noise and air quality levels further away from the site using mobile monitoring equipment. This helps us to understand the impact of works and how we may reduce them even further.

We did: **Commit to letting residents know about noisy works in advance**

We will contact local residents in advance to let them know of any upcoming periods of work which may give rise to increased noise levels. We will:

- Distribute Advanced Works Notifications in advance
- Post notifications on HS2 Commonplace in Bucks and Ox – www.hs2inbucksandox.co.uk
- Write directly to residents

We did: **Implement mitigation measures during construction**

Examples of these additional commitments include:

- 24/7 Monitoring
- Providing screening wherever possible to reduce noise
- Choosing quietest generators available for works
- Providing a purpose built perimeter hoarding around main works to act as a noise barrier
- Mobile off-site monitoring at potentially sensitive locations

You Said, We Did

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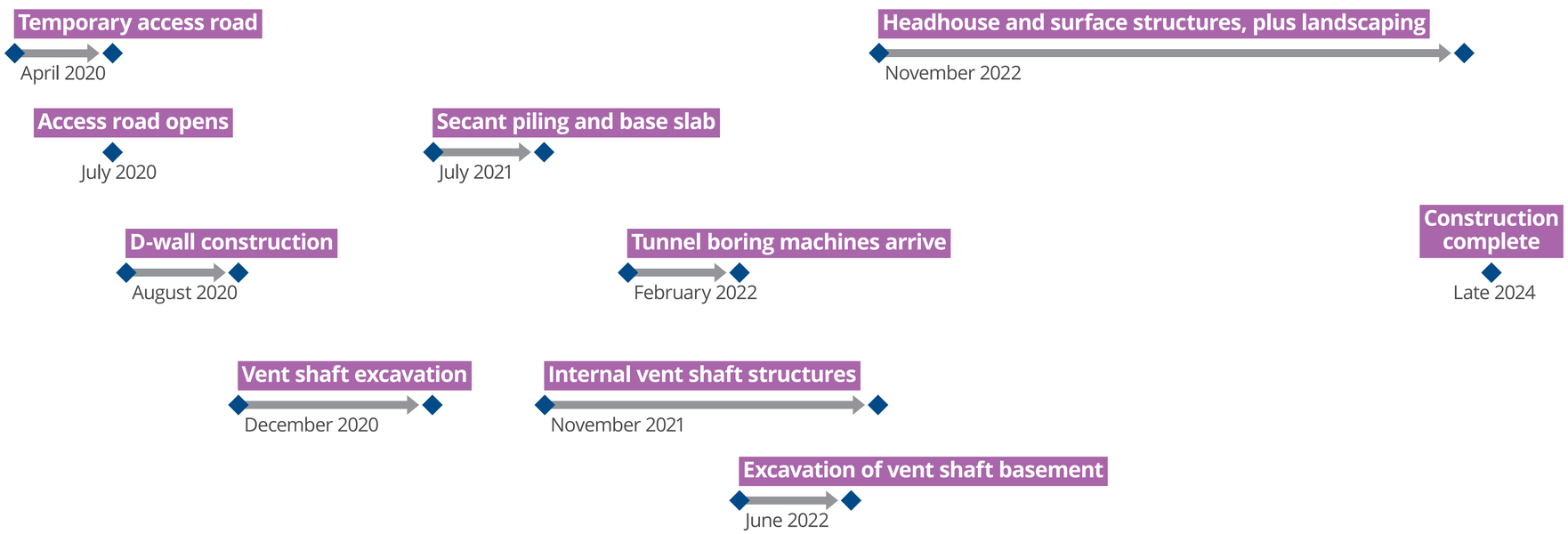
Vent Shaft construction timelines



To minimise our impact on the local community, we will build the vent shaft and headhouse as quickly and safely as possible. The timeline below shows an indicative timeline to construction and highlights activities which may be more noticeable to local residents.

April 2020

Temporary access road construction.

July 2020

Temporary access road opens. Traffic signals operational.

August 2020

Diaphragm Wall (D-wall) construction.

Visual impact:
Cranes, cutters, and D-Wall rigs may be visible on site.

Noise impact:
Extended working hours will be required on some nights and weekends.

Traffic impact:
This will be one of the busiest periods for site traffic.

December 2020

Excavation of vent shaft.

Noise impact:
Earthworks and stockpiling activities at surface.

July 2021

Secant Piling and Base slab / Headhouse walls.

Creation of vent shaft connection with Tunnel prior to Tunnel Boring Machine (TBM) arrival.

Noise impact:
Piling will occur. Extended working hours may be required on some days and weekends.

Traffic impact:
Increased traffic to site to facilitate concrete pours.

November 2021

Construction of internal vent shaft structures (floors and access).

February 2022

Tunnel Boring Machines arrive underneath the vent shaft and connection is made.

June 2022

Excavation of vent house basement.

November 2022

Construction of the headhouse and surface structures.

Electrical outfitting and machinery installation.

Landscaping.

Late 2024

Construction complete.

Construction

Further information

Thank you for visiting our online engagement event for Chalfont St Peter vent shaft.

This online engagement event will remain open until:

23:59PM 22nd August 2020

We would be delighted to receive your feedback on the content of this exhibition, and any other queries you may have.

Please visit: www.hs2inbucksandox.co.uk for a link to the survey

Email: hs2enquiries@hs2.org.uk

If you are unable to provide a written response, please call the HS2 Helpdesk on 08081 434 434.

HS2 Community and Business Funds:
https://hs2funds.org.uk/home/community-environment-fund/

Residents' Charter
https://www.hs2.org.uk/in-your-area/assistance-for-property-owners/residents-charter/

HS2 Need to Sell Scheme
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/811243/CS_NTS_Scheme.pdf

HS2 Community Engagement Strategy
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/773683/HS2_Community_Engagement_Strategy_FULL_HiRes_WEB.pdf