

# HS2

## Amersham Community Meeting

Tuesday 11 February 2020

# Who is presenting to you tonight

## FUSION JV – Enabling Works Contractor

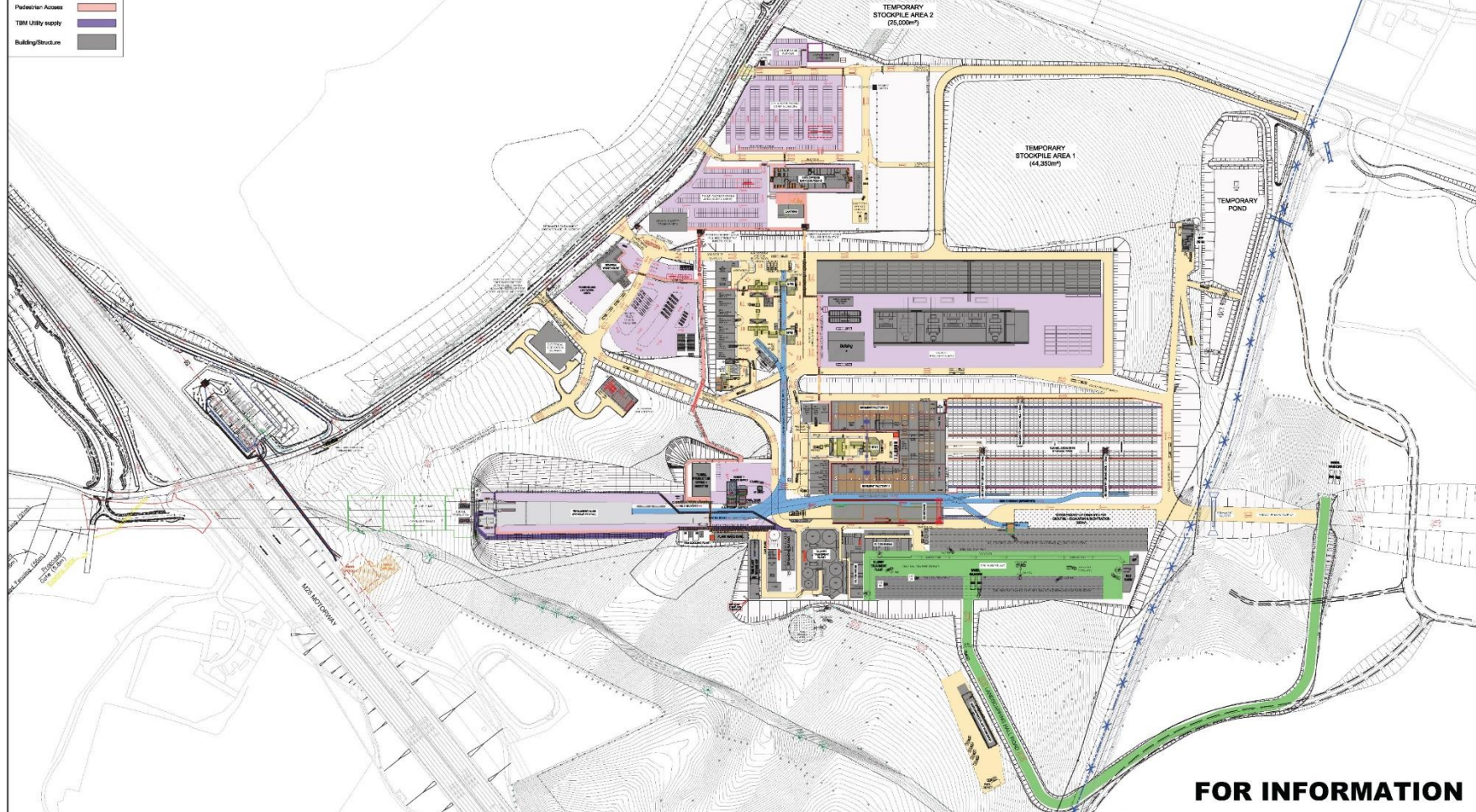
- FUSION JV, in this area, are responsible for designing and improving the junction at Whielden Lane where it meets the A404, close to the location of the future Amersham ventilation shaft for the Chiltern Tunnels. HS2 are improving several junctions across the county as HGVs will be using local roads to access the construction sites. Through the passage of the Hybrid Bill through Parliament, Buckinghamshire County Council, as the local Highways Authority, obtained what is known as an Undertaking and Assurance for these works to happen. HS2 is required to deliver these improvements, working closely with the Council on the designs. FUSION JV are also undertaking tree/vegetation clearance and site fencing/security.

## ALIGN JV – Main Works Civil Contractor

- ALIGN JV are building the Colne Valley Viaduct, Chiltern Tunnels and associated ventilation/ intervention shafts. There are four ventilation shafts (Chalfont St Peter, Chalfont St Giles, Amersham and Little Missenden) and one intervention shaft at Chesham Road, South Heath. ALIGN JV's are also constructing the South Portal in West Hyde and North Portal at Great Missenden for access to/from the Chiltern Tunnels.



# Progress of works at the South Portal



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511	Desktop	Drawn	Checked	Con App	19/02/19	19/02/19	19/02/19	Scale with details as indicated on sheet.	

**HS2**

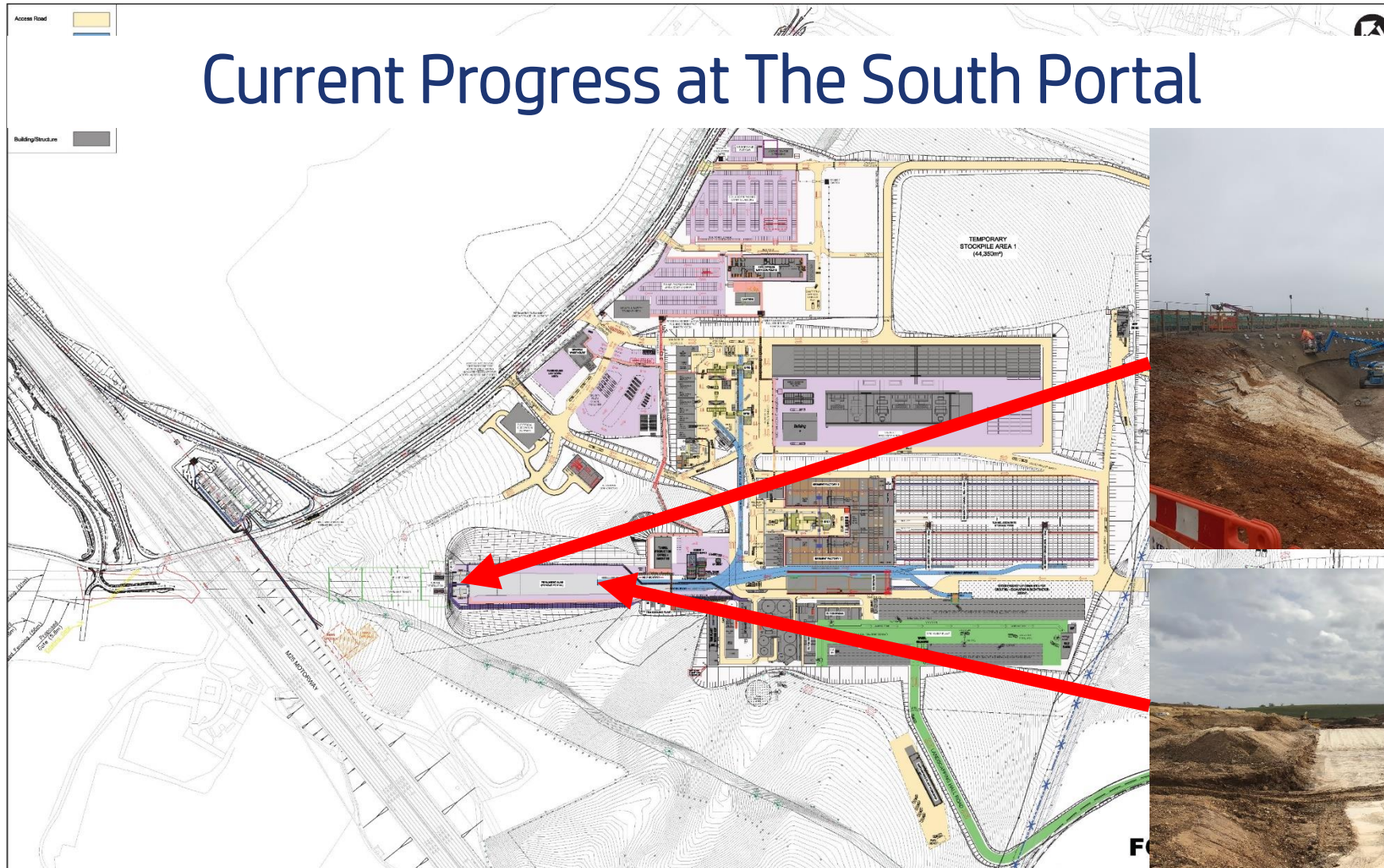
Registered in England  
 Registration No: 30791688  
 Registered office:  
 2 Snow Hill, Coventry,  
 CV1 2PL, UK

Contract signature: ALIGN JV

Zone	TUNNELS AND APPROACH CUTTINGS	Project/Contract	HS2 - 1MCO5 CONTRACT		
Design Stage	SCHEME	Discipline/Fundator	CIVIL		
Drawing Title	CHILTERN TUNNEL SOUTH PORTAL SITE INSTALLATION LAYOUT FOR TBM TUNNELING OPERATIONS	Discipline	N Buenafe	P Venter	A Combarre
Contract signature	ALIGN JV	Date	05/11/19	Scale	1:2000
Security Code	OFFICIAL	Sheet	A1	Size	S2
		Drawing No.	1MCO5-AL-CV-DGA-CS02_CL03-807038	Rev	P07



# Current Progress at The South Portal



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REV	CLIENT SHARE - FOR INFORMATION	NR	TV	AC	04/05/19	04/05/19	04/05/19		
REV	INTERNAL REVIEW	NR	TV	AC	24/05/19	24/05/19	24/05/19		
REV	Drawn	Checked	Con App	1002 App	10/02/19	10/02/19	10/02/19	Blank with outline as station car colour.	

**HS2**  
 Registered in England  
 Registration No: 3075588  
 Registered office:  
 2 Snow Hill, Queensway,  
 Birmingham, B4 6QA

Created/Checked: ALIGN JV

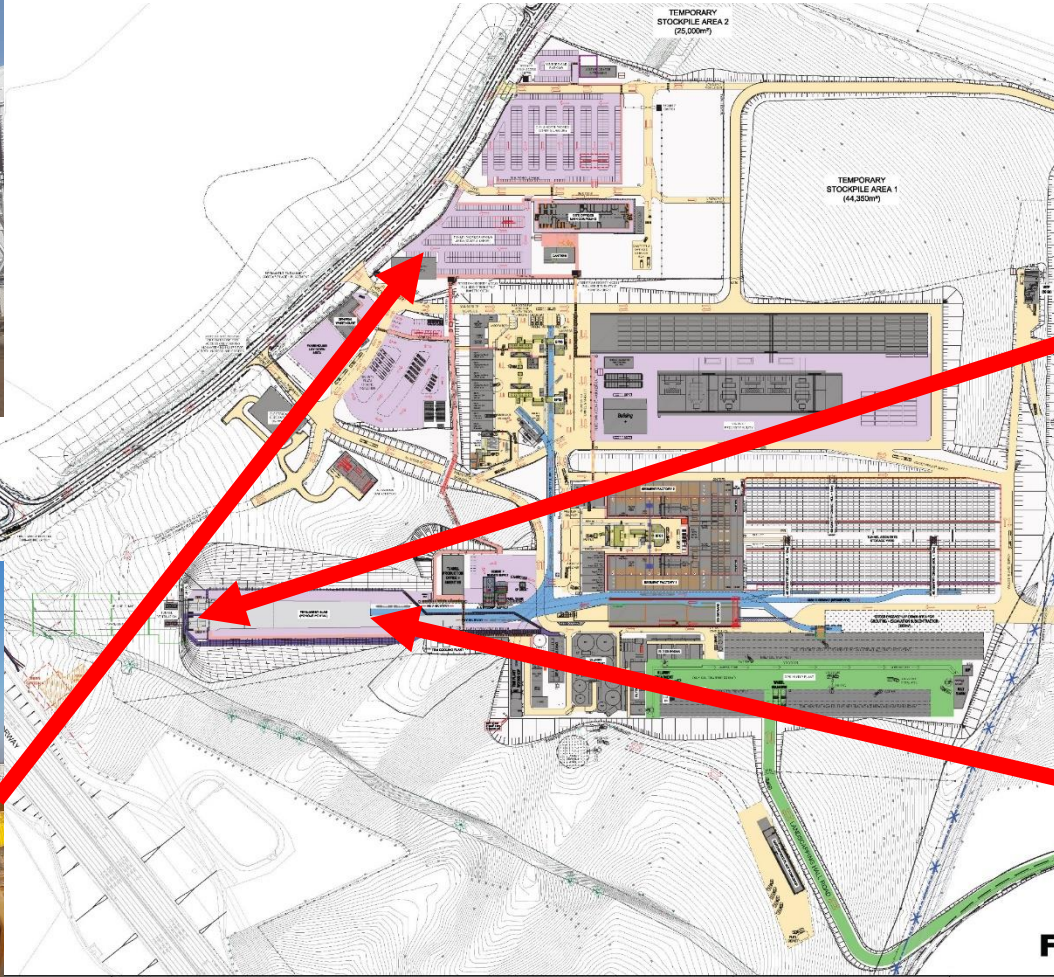
Date: TUNNELS AND APPROACHES  
 Design Stage: SCHEMATIC DESIGN  
 Drawing Title: CHILTERN TUNNEL SITE INSTALLATION TBM TUNNELING  
 Security Code: OFFICE



# Current Progress at the South Portal



100	INTERNAL REVIEW	MM	JV	AD		
101	DESIGN	24/2/15	24/2/15	24/2/15		
102		EMIT	CHEK	CON APP	15/2 APP	Scale with details as indicated on sheet.



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Landscape/Utilities

**HS2**

Registered in England  
 Registration No. 501791688  
 Registered office:  
 2 Snow Hill, Coventry,  
 CV1 2JQ, UK

Zone: TUNNELS AND APPROACHES

Design Stage: SCHEMATIC DESIGN

Drawing Title: CHILTERN TUNNEL SITE INSTALLATION TBM TUNNELING

Security Code: **OFFICIAL**

Drawing No: 1MC05-AL-CV-DGA-CS02\_CL03-807038

Rev: P07





# Current Progress on TBM Manufacture





# Current Works at Amersham Shaft Site



# Who are we ?



- Fusion are the Enabling Works Contractor for the Area Central section (circa 100km) of HS2 Phase 1
- Area Central runs from Denham, Buckinghamshire to Southam, Warwickshire
- Examples of Enabling Works:
  - Archaeological investigations
  - Setting up construction compounds
  - Species translocation
  - Site clearance and fencing
  - Utility diversions
  - Highways realignment





# Fusion enabling works : Local scope

- Undertake archaeological investigations at Little Missenden
- Highway junction safety and capacity improvements on the construction routes
- Temporary access road for the Chalfont St Giles vent shaft alongside the existing Bottom House Farm Lane
- Site clearance and fencing for the vent shafts





# Amersham Vent Shaft

## Site mobilisation works

- Vegetation clearance
- Perimeter fencing
- Junction construction welfare establishment
- Programme : Start of Feb to end March '20
- Footpath remains open until main works commencement





# Amersham area junction works

Being upgraded to provide increased safety and capacity, Subject to final consents and approvals

1. Access to Amersham Vent Shaft : A413 - A404 Crematorium Roundabout
2. A413 Bottom House Farm Lane junction and temporary construction access road
3. A355 Amersham Rd, Ledborough Lane

Junctions currently under review

- A40 London Rd / A355 London End Roundabout
- A413 - A355 Gore Hill Roundabout (Amersham Roundabout)





# Amersham vent shaft junction

- Traffic lights installed at the junction of Whielden Lane onto the A404
- Widening of the A413 alongside the vent shaft - Great Missenden and A404 direction of travel
- Basis of design no works on the opposite side of the A404



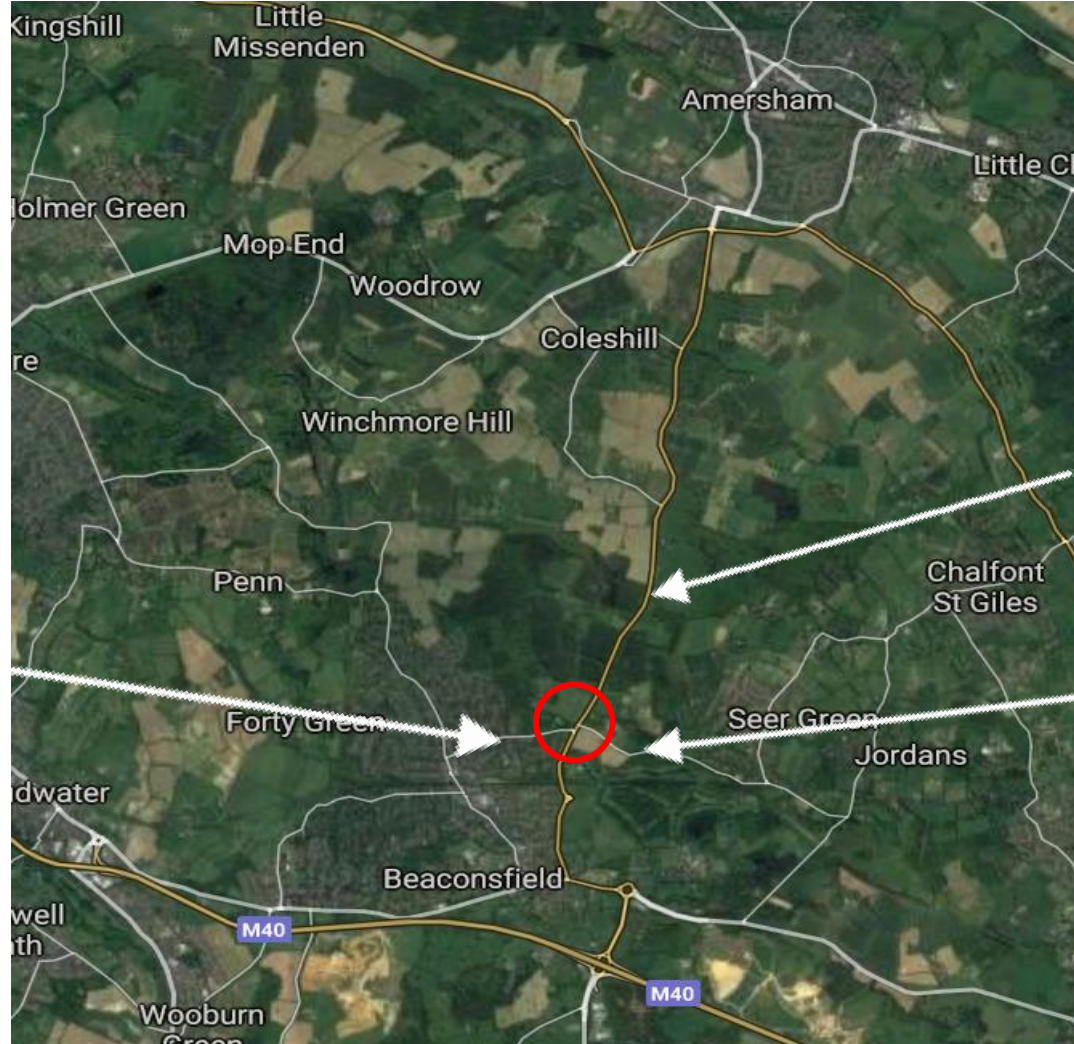
# Amersham Vent Shaft junction

Subject to final consents and approvals, including night time working

	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20	
<b>Phase 1 (A413)</b>							
Site Clearance				■			Days (9.30am - 3.00pm)
New kerbs				■			Days (9.30am - 3.00pm)
Signing					■		Days (9.30am - 3.00pm)
Road Marking					■		Nights 9pm to 5am
<b>Phase 2a (Whielden Lane)</b>							
Site Clearance				■	■		Days (9.30am - 3.00pm)
Change Kerb Line				■	■		Days (9.30am - 3.00pm)
Signing					■	■	Days (9.30am - 3.00pm)
Surfacing					■	■	Nights 9pm to 5am
Road Marking					■	■	Nights 9pm to 5am
<b>Phase 2b (A404 - Crematorium)</b>							
New footway					■		Days (9.30am - 3.00pm)
Signing						■	Days (9.30am - 3.00pm)
Road surfacing						■	Nights 9pm to 5am
Road marking						■	Nights 9pm to 5am



# A355 Ledborough Lane junction



Ledborough Lane

A355 Amersham Road

Longbottom Lane



# A355 Ledborough Lane junction

A355 Amersham Road - Ledborough Lane and Longbottom Lane junction

- White lining
- Signage upgrade
- Vegetation trim back
- All works within the highway boundary

Timeline and night working subject to final consents



	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20	
Site Clearance							Days (9.30am - 3.00pm)
Signage							Days (9.30am - 3.00pm)
Lighting							Days (9.30am - 3.00pm)
Lining							Nights 9pm to 5am



# Gore Hill : A413 and A355 roundabout



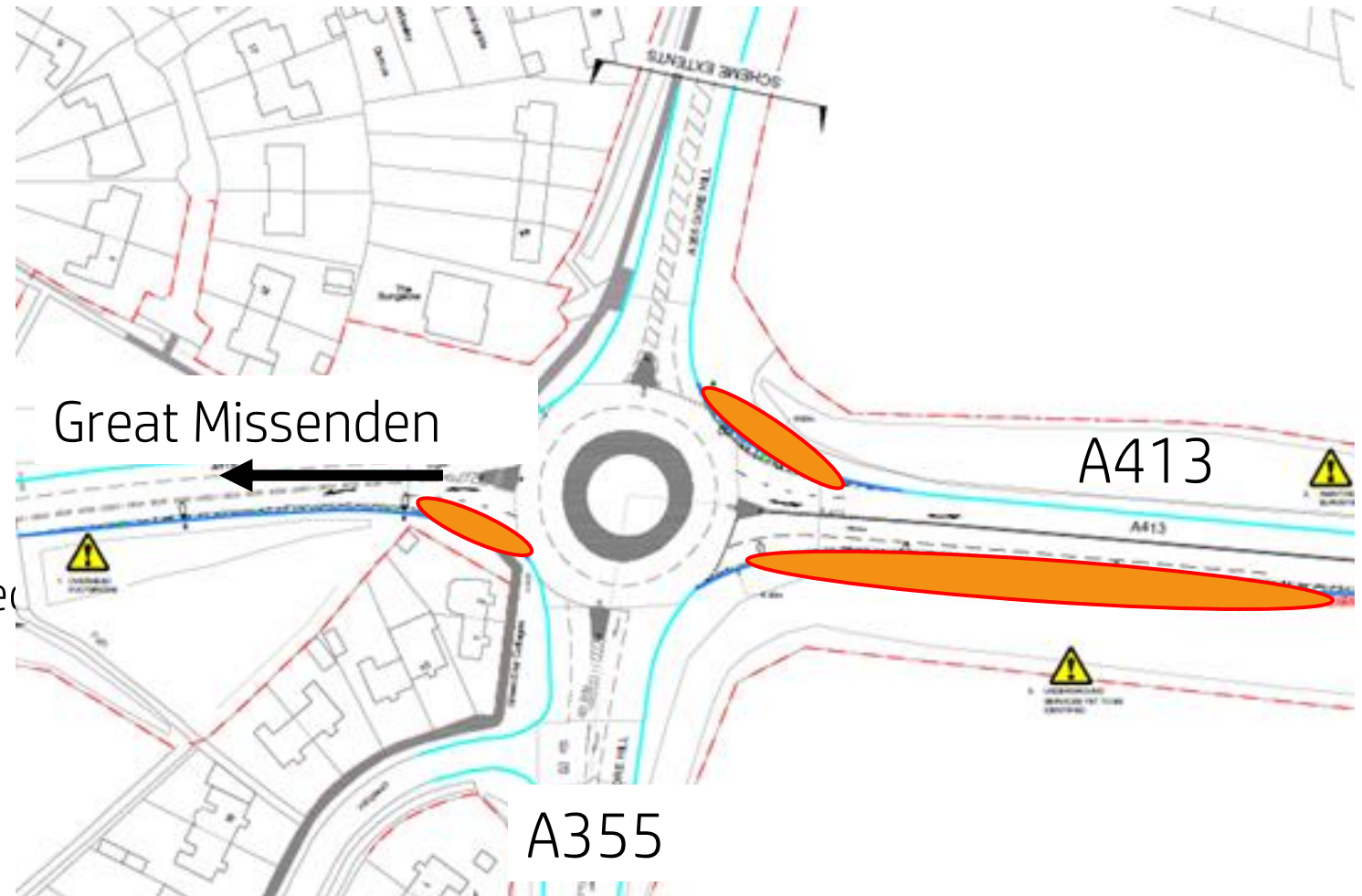
# Gore Hill : A413 and A355 roundabout

Currently under review

- Widening at 3 locations
- Site clearance
- Drainage
- Signage
- White lining

Timelines and night time working subject to final consents and approvals

All works within the highway boundary

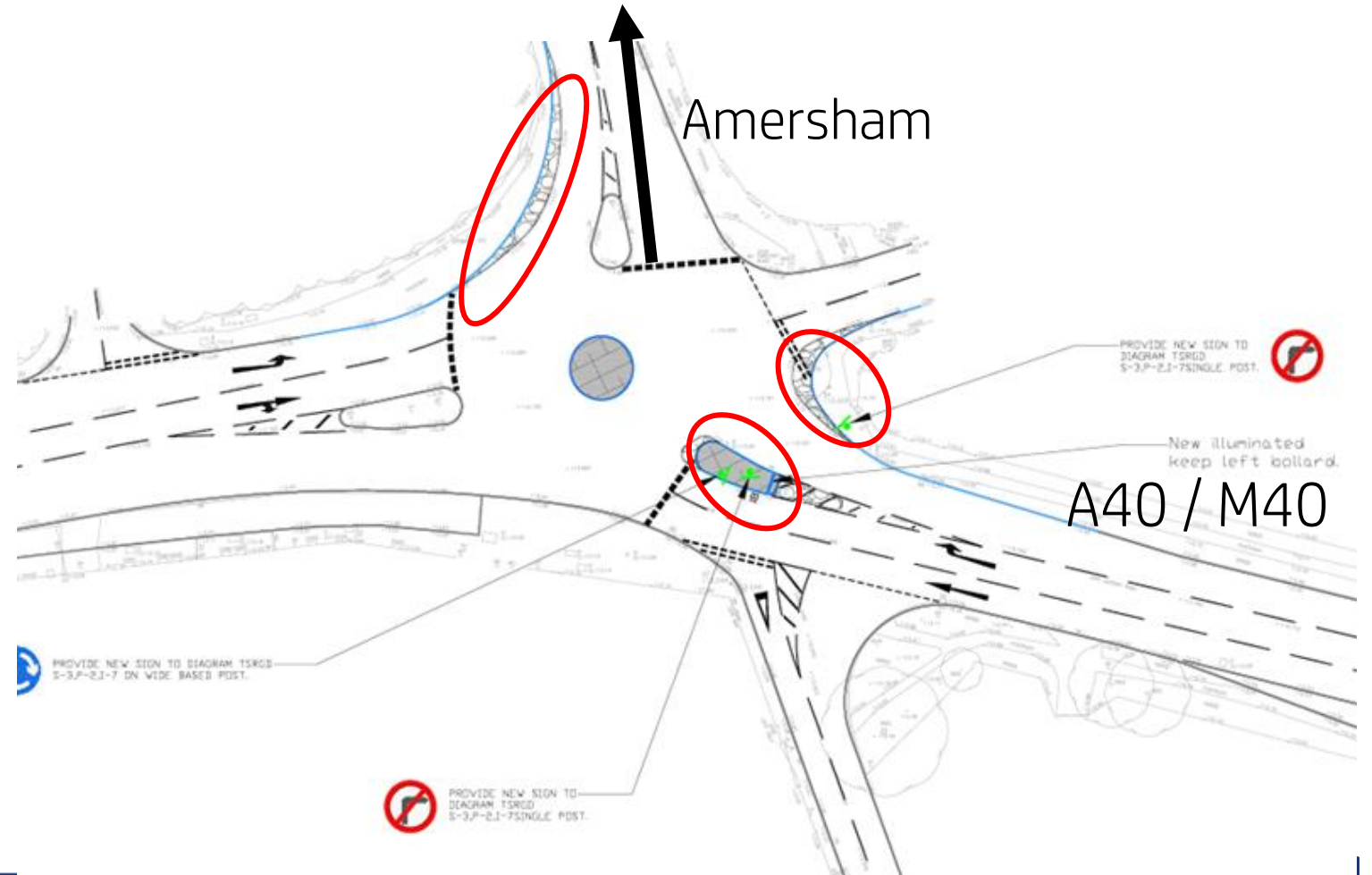




# A355 : A40 London Road junction Beaconsfield (Under review)

- Localised widening at 3 locations
- Signage
- White lining

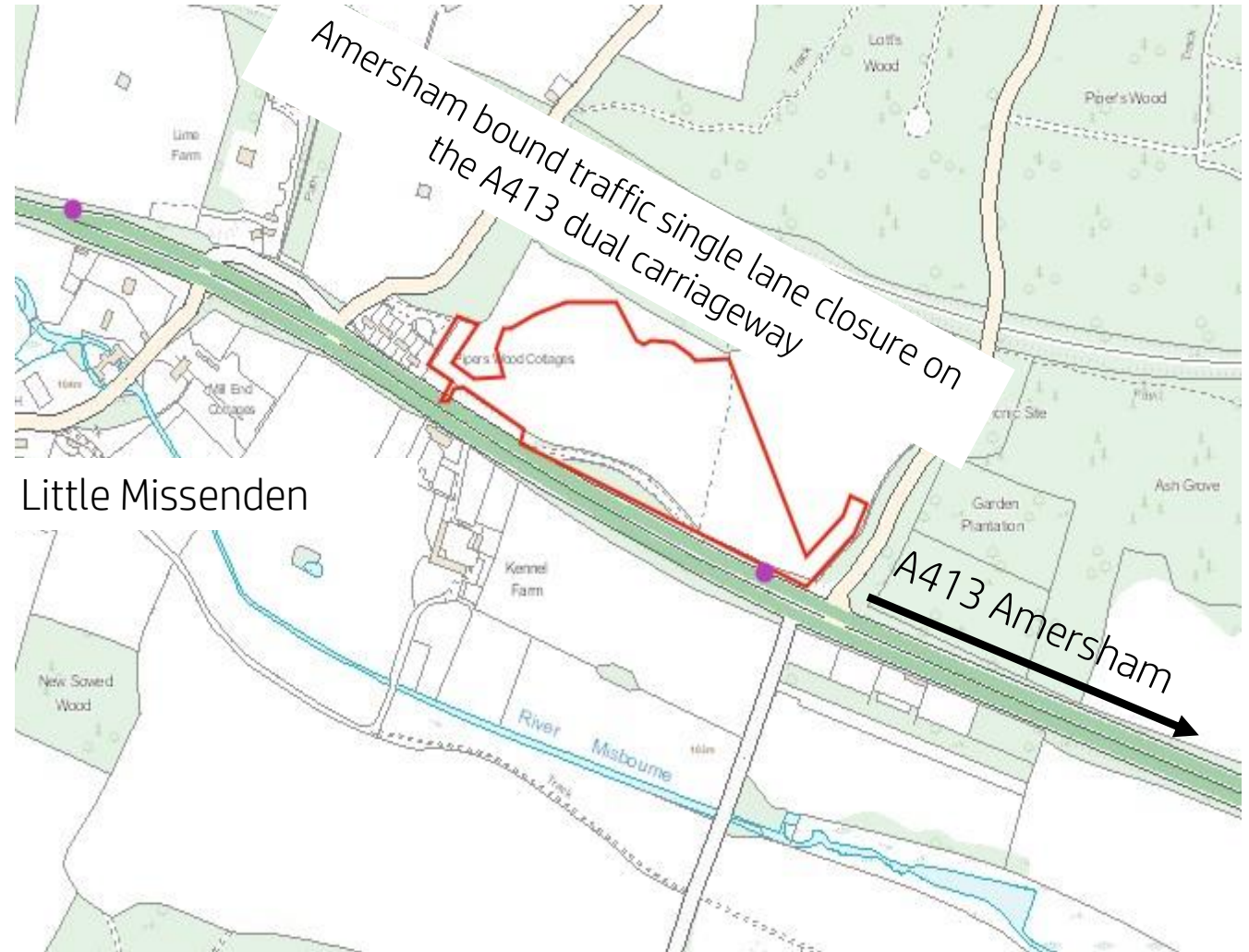
Timeline and night time working subject to final consents and approvals



# Little Missenden Vent Shaft

- Archaeological investigation works
- Ground investigation / pumping test by ALIGN to then follow
- Site entrance / exit. Single lane closure on A413 dual carriageway – Amersham bound traffic
- Full time lane closure planned from start of March to mid summer 2020

Subject to final consents and approvals





# Align Amersham Community Update

February 2020





# ALIGN - Who are we? Why?

**ALIGN**



**VolkerFitzpatrick**

**Sir Robert  
McALPINE**

**ALIGN-D**

**JACOBS**

**ALIGN**

**INGEROP**  
*Inventing for tomorrow*

**GRIMSHAW**

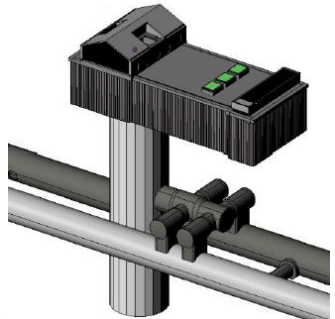
**LD&DESIGN**

- World class projects, to push innovation boundaries
- To pursue excellent
- To build Britain's future heritage





# What are we building?





# Key Community Objectives

- Ensuring the safety of the public and our workforce
- Reducing the impact on local highways as far as practicable
- Protecting the local environment – ecology, water features, archaeology
- Integrity - Openness and Transparency
- Protecting the Aquifer – monitoring, grouting, turbidity plants and outages
- Reducing the visual and noise impact of our works as far as practicable

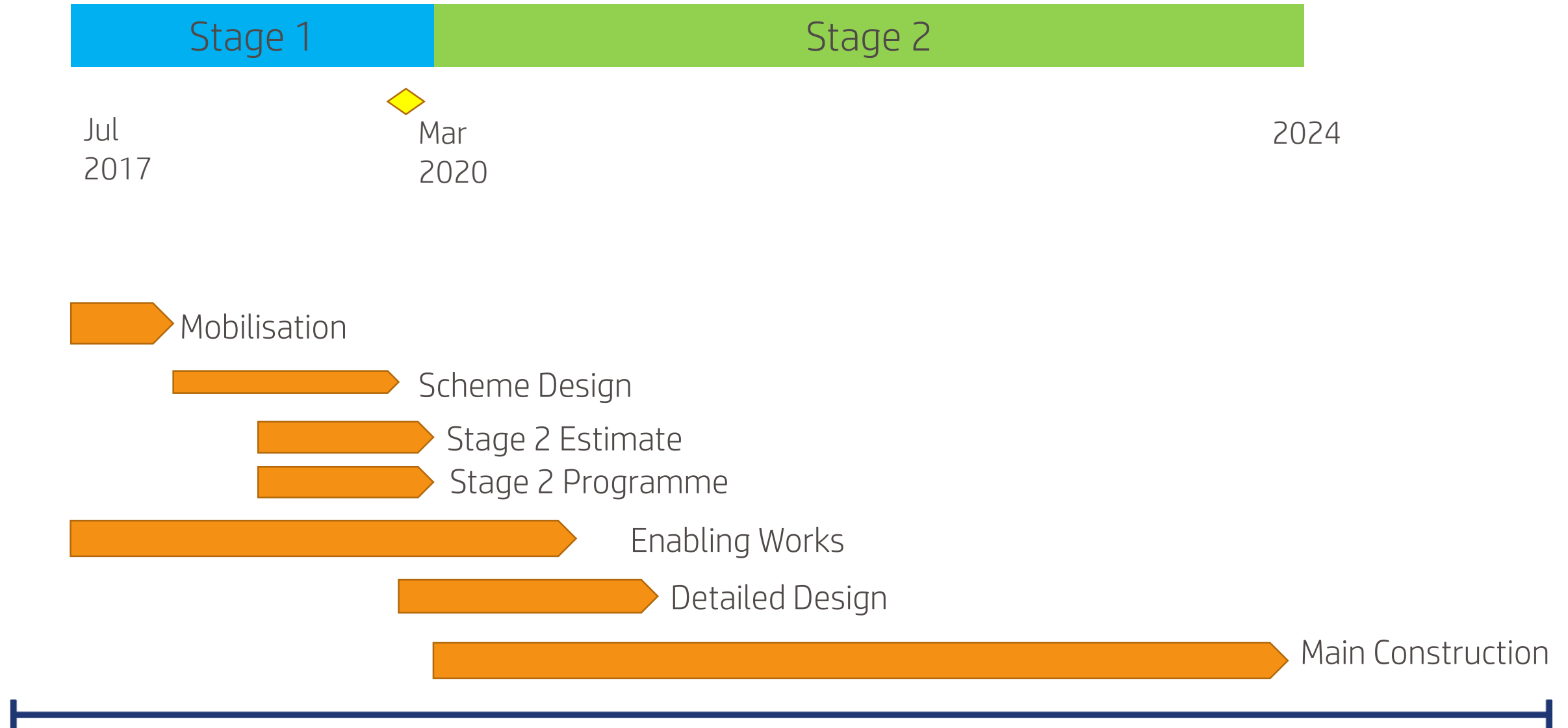




# Programme

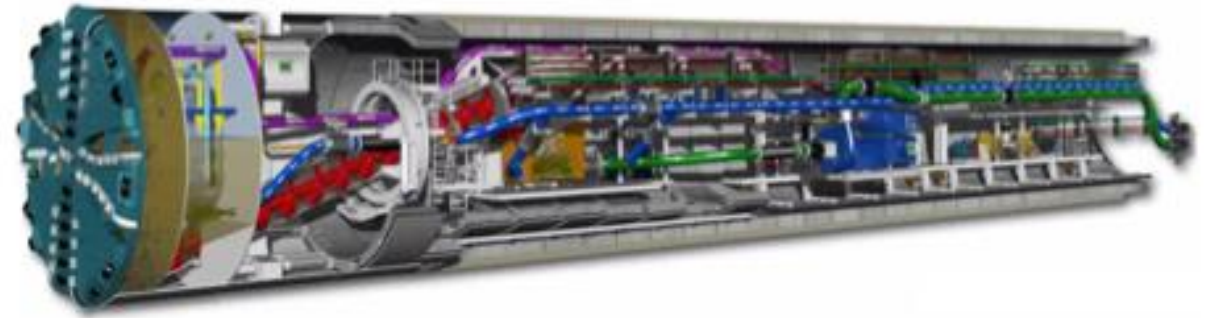
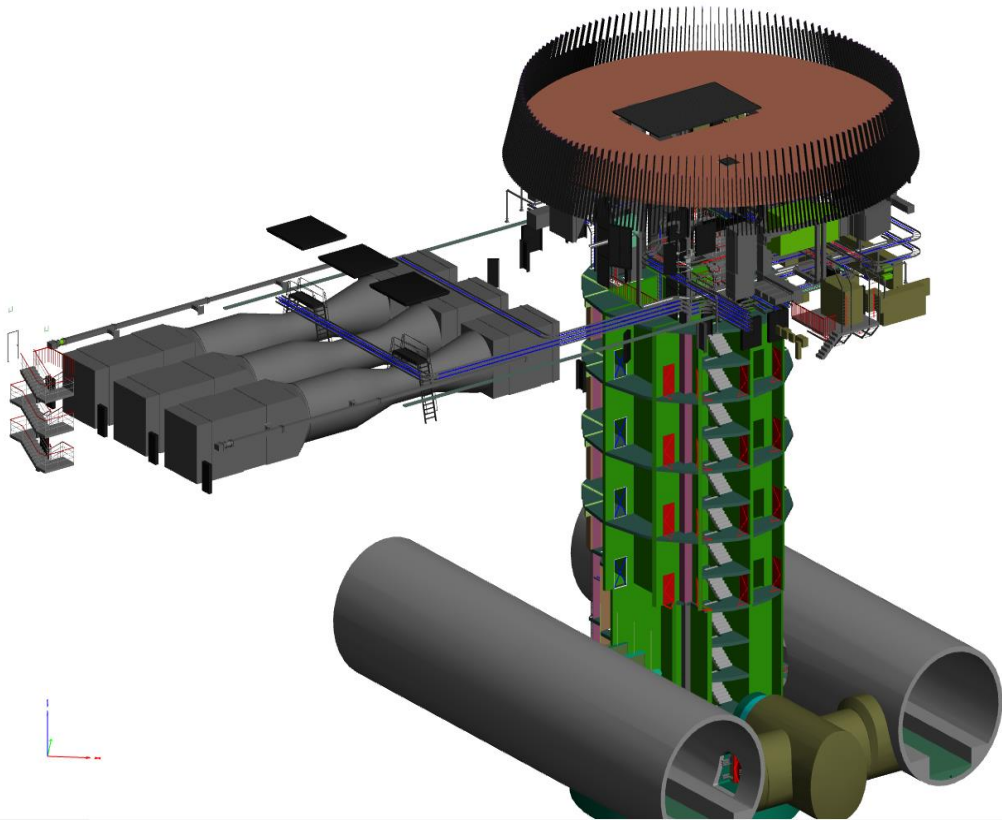


# Main Civils Works – High Level Programme





Construction of the Amersham shaft starts June 2020  
Construction of the tunnel starts March 2021



# Amersham Shaft





# Amersham Location



Amersham Old Town

Amersham Hospital

A413

Amersham Vent Shaft Location as per Hybrid Bill

The Chilterns Crematorium


A335 Amersham Road

A404 Whielden Lane

Coleshill

## KEY

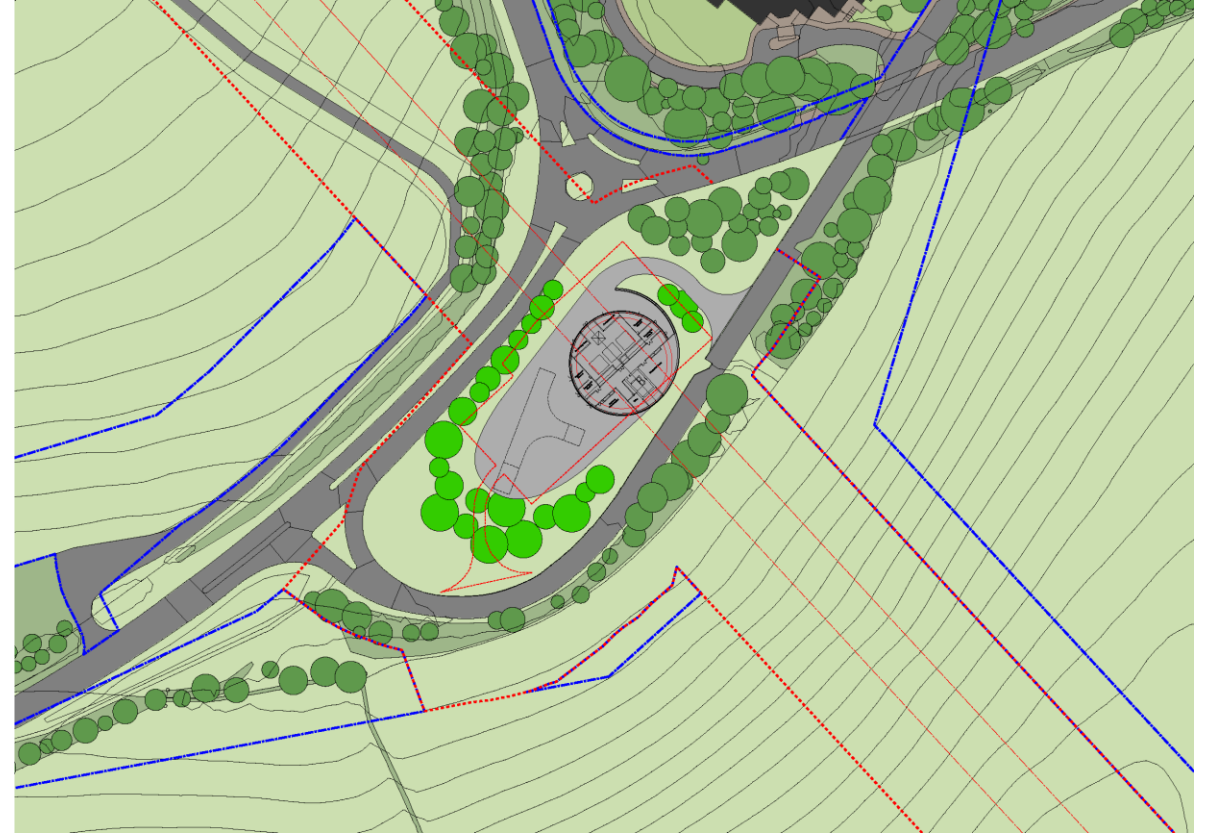
 Proposed HS2 Route

 Limit of Deviation

 Limit of Land Acquired and/or Used



# Concept Layout





# Stakeholder and Community Design Engagement



# Planned Public Engagement in Bucks

Site	'Design Input EVENT'	Interdisciplinary Design Review	'You said We did' EVENT	Target Sch 17 Submit
WVS/South Portal	Completed CVV Events Summer 2019	April 2020	May 2020	July 2020
Chalfont St Peter	Completed October 2019	January 2020	April 2020	May 2020
Chalfont St Giles	27 February 2020	April 2020	July 2020	September 2020
Amersham	June 2020	July 2020	October 2020	December 2020
Little Missenden	June 2020	September 2020	October 2020	February 2021
Chesham Road	October 2020	November 2020	January 2021	April 2021
North Portal	October 2020	N/A	January 2021	April 2021



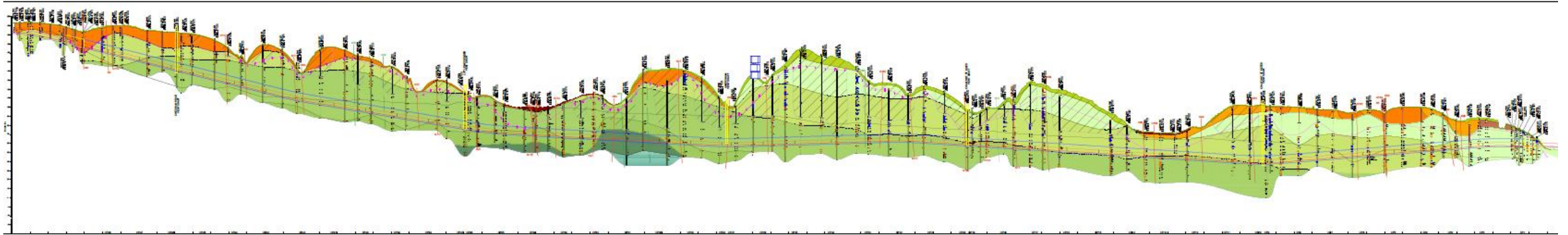
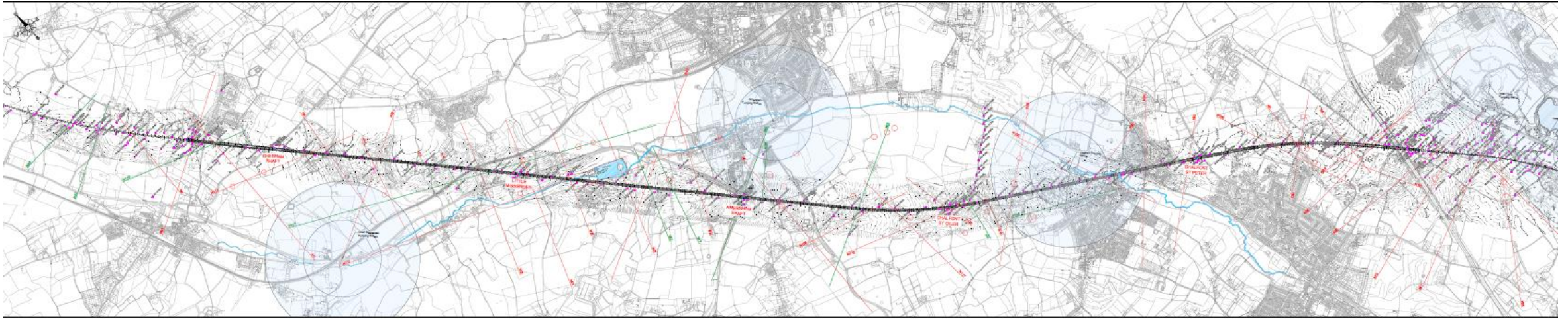


# Protecting your water supply



# Tunnel Route Ground Investigation

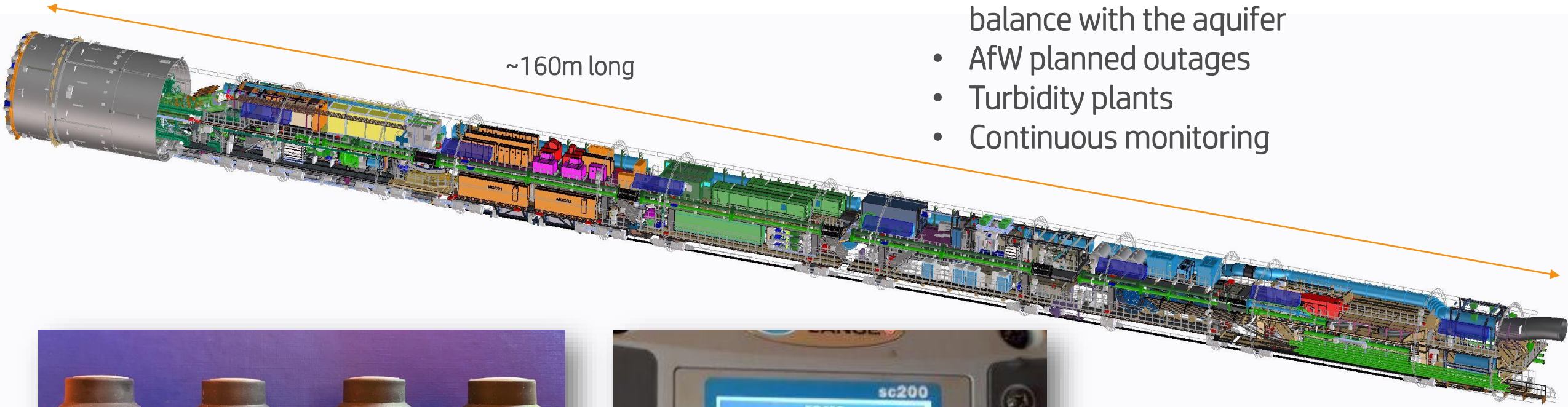
- Over 100 boreholes carried out by HS2 prior to main works contract award
- Over 100 more GI locations carried out Align



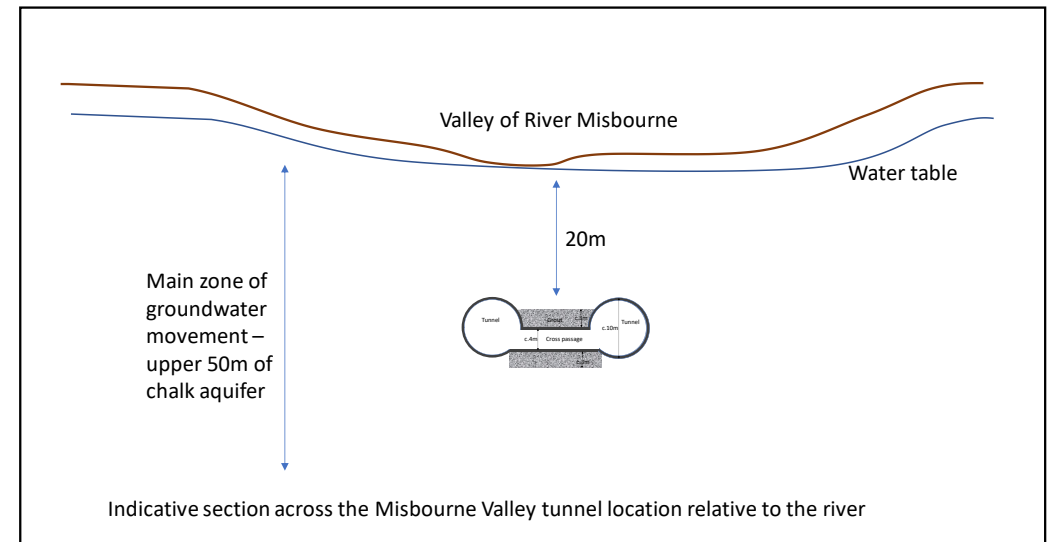
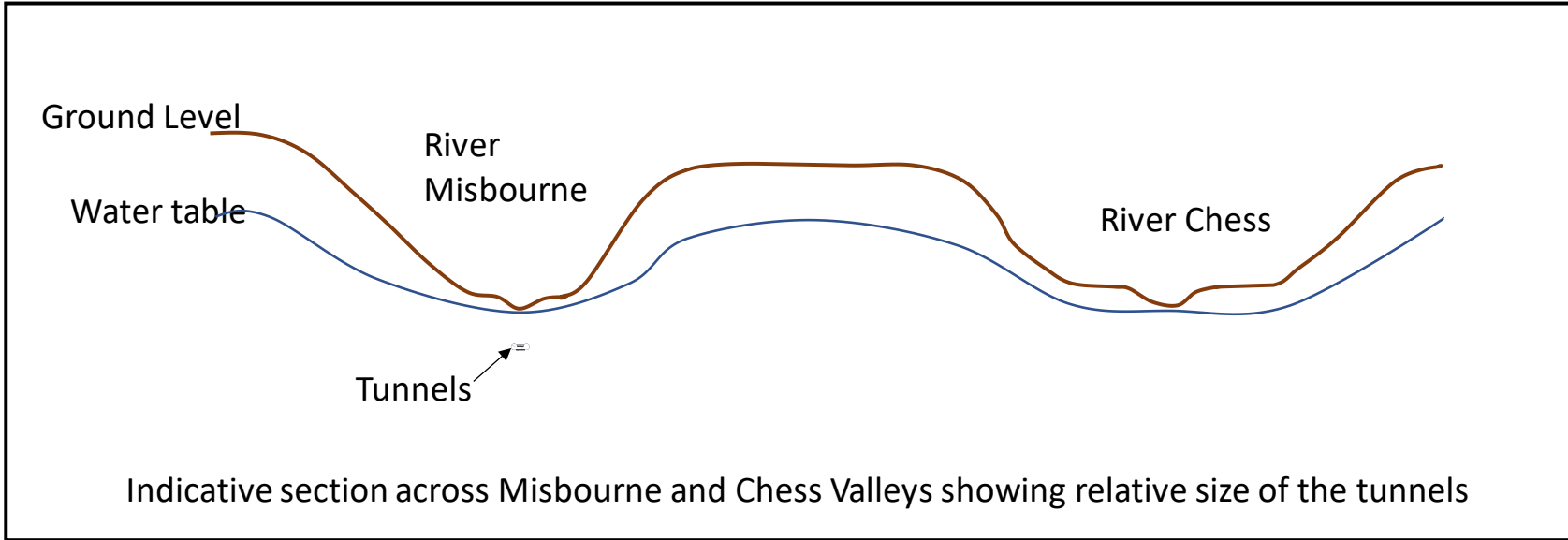


# Variable Density Tunnel Boring Machine

- Ø10.256 Boring diameter
- Adapts to varying face pressure to maintain balance with the aquifer
- AfW planned outages
- Turbidity plants
- Continuous monitoring



# Tunnel & CP impact to water flow

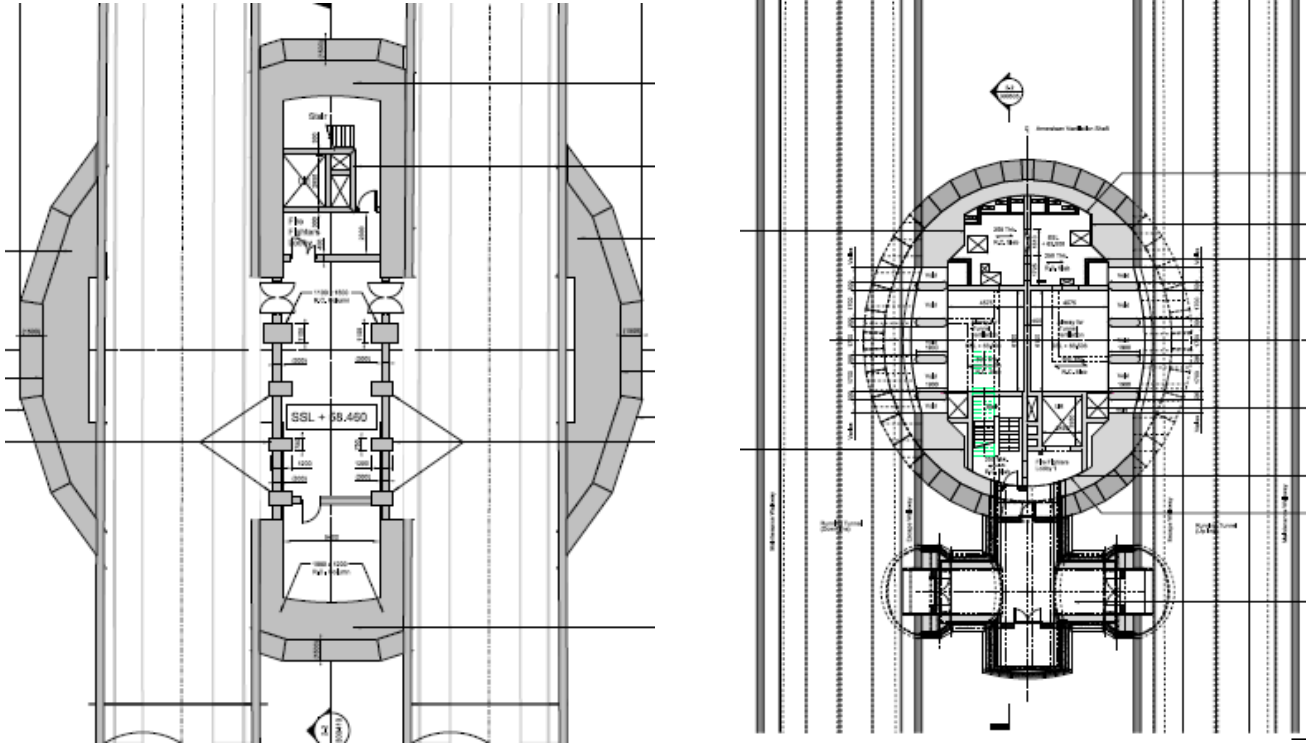




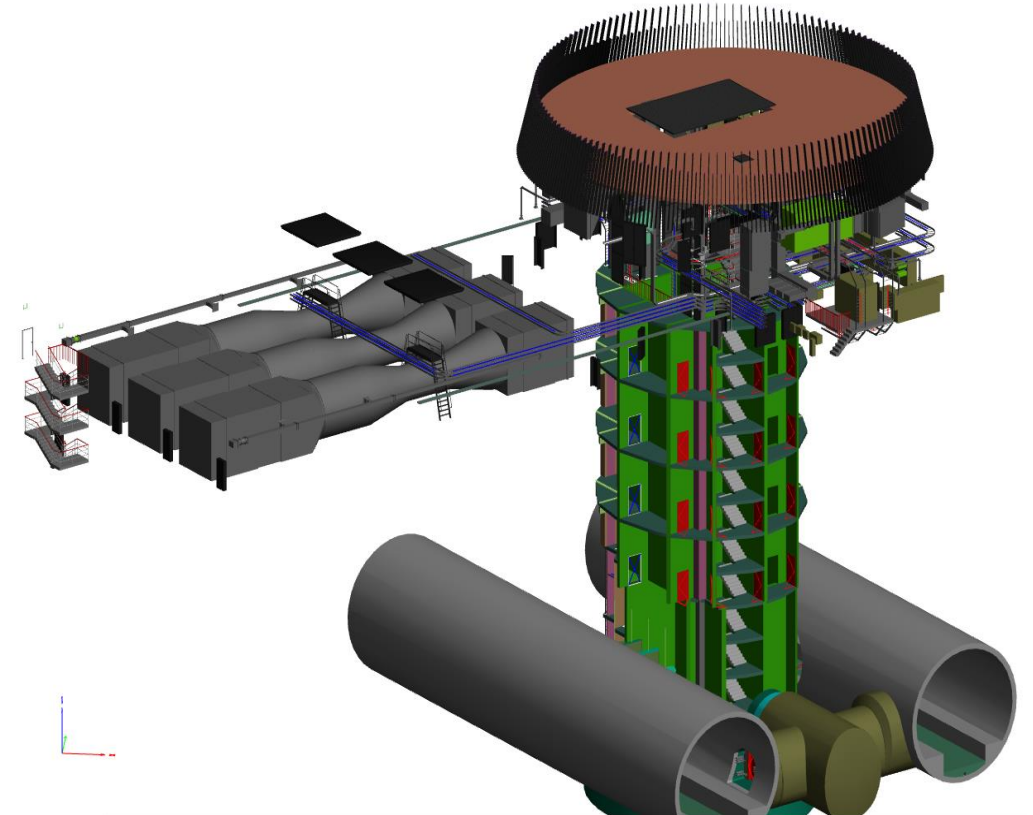
# Community Impacts Traffic



# Shaft Design Efficiencies

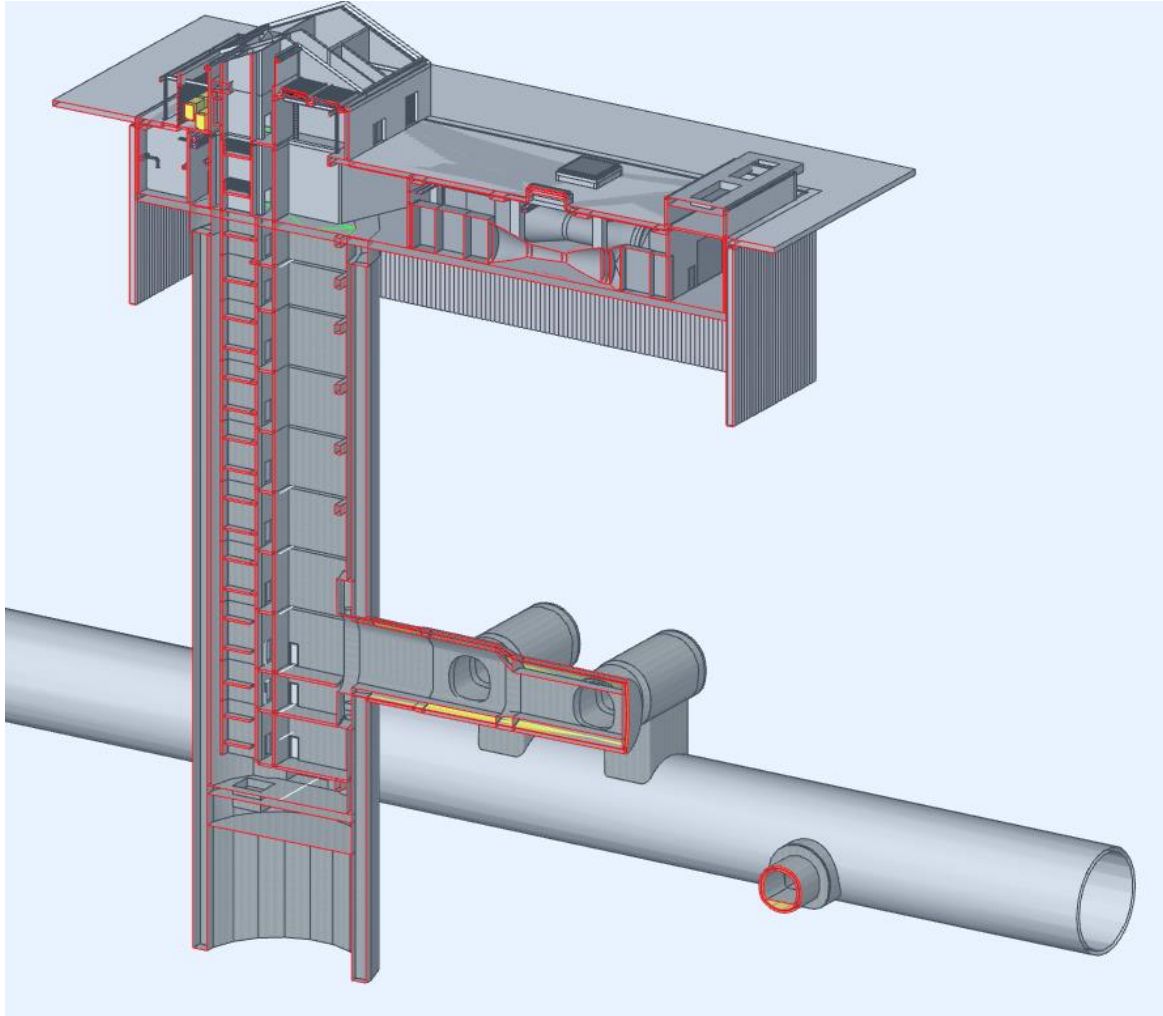


- Vent shafts: 32mØ to 18.13m

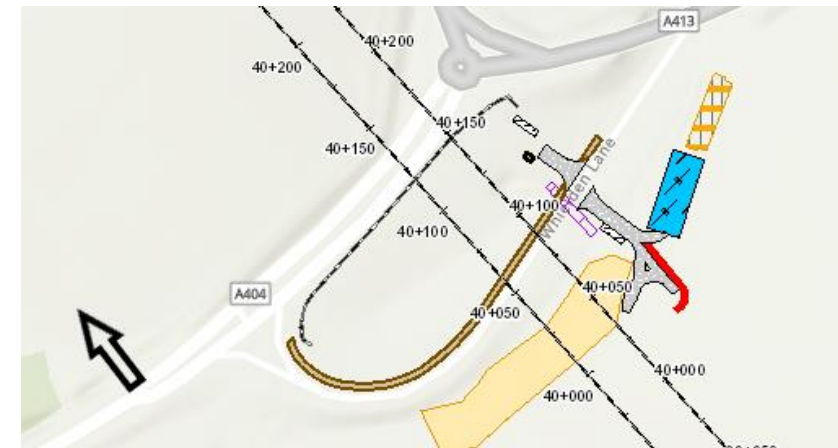




# Minimising impacts from Shafts and North Portal

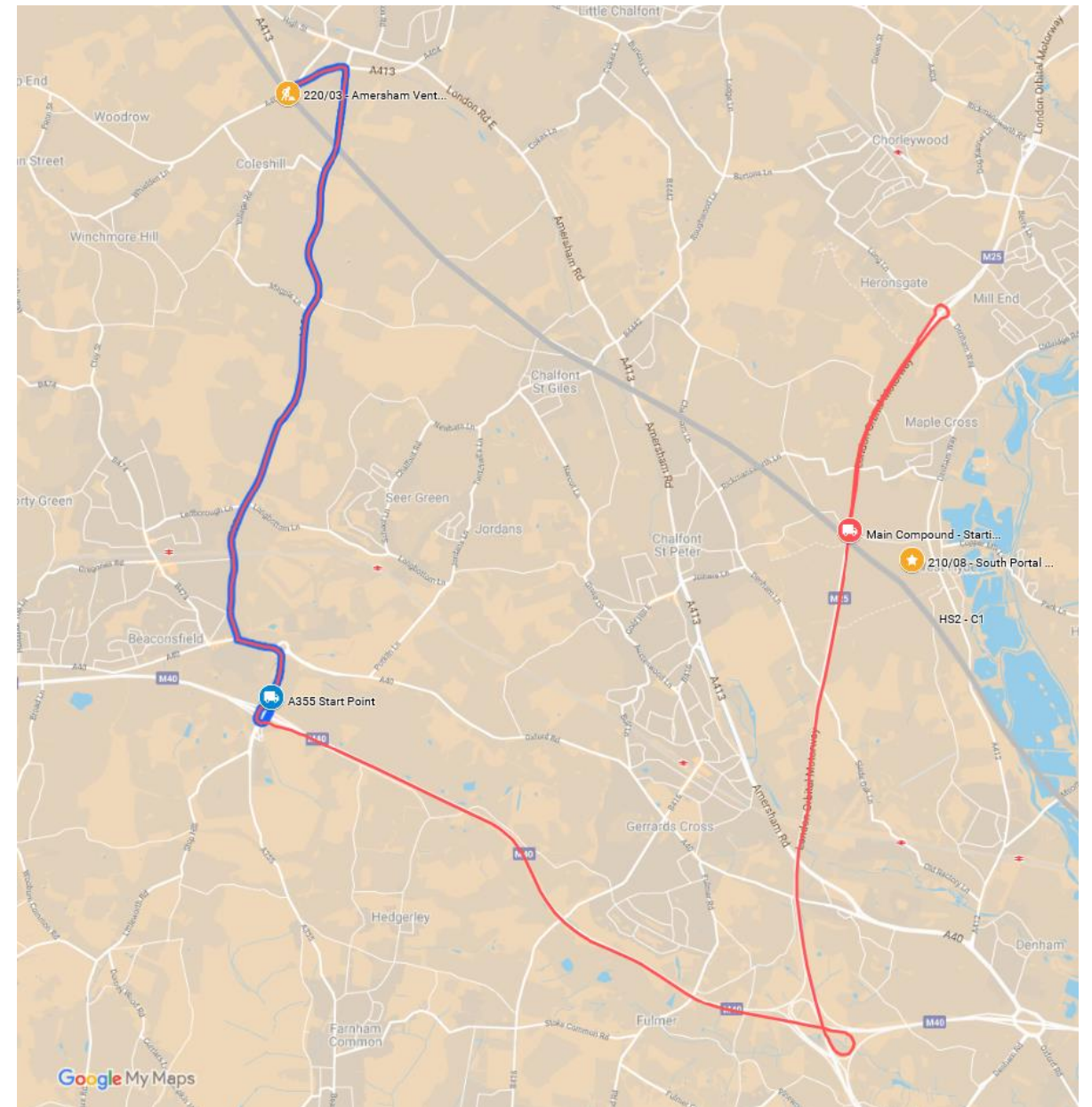


- Increases in the design efficiency of shafts correlating in reductions to required HGV movements
- Changed earthworks strategy to avoid HGV movement across the A404
- Coordinating with EK to minimise double-peaks where logistics overlap
- HGV booking system to manage daily peaks where practicable
- No HGV through Old Amersham



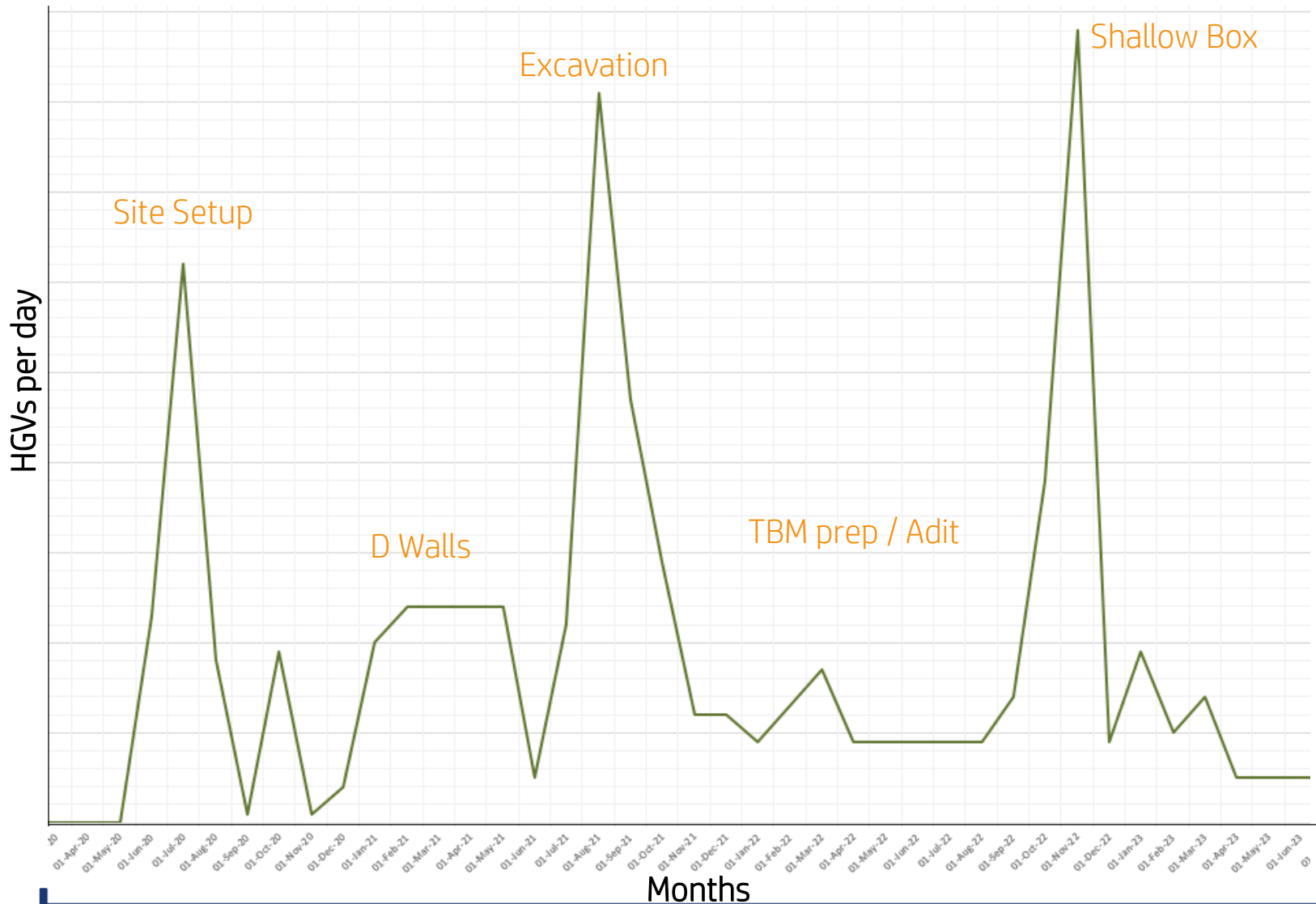
# Amersham Construction Route

- Main compound – M25 – M40 – A355 – A413 – A404





# Typical Traffic Peaks from vent shaft construction



- Amersham Shaft Construction  
48 months
- Busiest period 4 months  
70–90 HGV per day

Thank you

