

HS2's Chilterns 'barn design' vent shaft gains planning approval

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The first of five headhouses that will provide ventilation and emergency access to HS2's ten-mile long Chiltern tunnel has gained planning approval from Buckinghamshire Council.

The Chalfont St Peter headhouse is designed to fit into the surrounding landscape and takes its inspiration from the style of nearby barns and other agricultural buildings.

Set back from the road, the single-story building will be wrapped in a simple grey zinc roof with doors and vent openings picked out in a dark bronze colour to provide contrast. The pre-weathered grey zinc roof will age naturally over time, without loss of robustness or quality, while the whole structure will sit on a simple dark blue brick base.

Below ground level, a 78 metre ventilation shaft will reach down to the twin tunnels below, with fans and other equipment designed to regulate air quality and temperature, remove smoke in the event of a fire and provide access for the emergency services.

HS2 engaged with the Chilterns AONB Review Group and Buckinghamshire Council during the

development of the designs and held a series of public engagement events to gather views from the local community.

Mature trees along the existing boundary will be retained as far as possible and once construction is complete the whole site will be landscaped with new trees and hedgerows planted to help screen the site from neighbouring properties.

Within the site boundaries, species-rich grassland habitats will be created, designed to further blend the site into the surrounding Chiltern hills. Material excavated from the shaft will be used to create much of the landscaping and avoid putting extra lorries onto local roads.

The plans were drawn up by HS2 Ltd's main works contractor Align JV – a team made up of Bouygues Travaux Publics, Sir Robert McAlpine, and VolkerFitzpatrick – working with its design partners Jacobs and Ingerop-Rendel, and the architect Grimshaw and landscape designers, LDA.

Rohan Perin, HS2 Ltd's Project Client Director said: "Planning approval for the Chalfont St Peter headhouse is a major milestone for the project and I'd like to thank all those who have helped get us to this stage. Throughout the design process we have been very aware of the unique rural setting of the headhouse structures and the importance of creating something that fits into the landscape. I'm glad that aspiration has been recognised and look forward to working closely with the council and community as we bring forward the designs for the remaining structures."

Alan Price, Align JV Design Director said: "We are always very conscious of the sensitive setting for any permanent structures on the project and the Chalfont St Peter headhouse is no exception. As well as splitting up the buildings to create the farmyard feel, we have created a shallow basement structure to hide the ventilation equipment below ground. We are very pleased that this has been recognised by the local planning authority in granting this approval."

A temporary access road has already been completed to link the site with the A413, Amersham Road. This will allow construction traffic to avoid the centre of Chalfont St Peter and stop heavy goods vehicles (HGVs) driving past Robertswood School and the Epilepsy Society.

A new temporary marshalled lorry holding area has also been established 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 – helping to reduce congestion and eliminate queueing at the site entrance.

The two tunnel boring machines that will excavate the Chiltern tunnels are set to launch from a site near the M25 later this year.

Photo credit: HS2 Ltd