Overview

What is a Tunnel Portal?
A tunnel portal is the term used to describe the structures at the railway’s tunnel entrances and exits. When a train enters a tunnel, there is an increase in air pressure surrounding the train. In order to address this, the proposed tunnel portal contains perforations and has a flared entrance, acting to smooth the change in air pressure as the train passes through the tunnel.

Location
The Chiltern Tunnel south portal and cutting is located between Denham in the south and Maple Cross in the north and between the M25 Motorway and A412 Denham Way/North Orbital Road in undulating agricultural land.

Landscape Setting
- The design of the proposed portal is influenced by the results of the public consultation.
- The public consultation, whilst informing the design, will be included as part of the statutory consultation process.

Structure
- The proposed solution comprises of two individual exposed arched portal structures.
- The portal structures will be approximately 200m long and contain perforations 0.22m in height x 1m long at 2m intervals at the top of the portal side walls.
- The 0.8m thick structure is likely to be formed of cast in situ concrete side walls and precast arched hood sections.
- The use of precast concrete construction will maintain quality and reduce time on site.

Compound
- A portal compound building will be located as close to portal structures as practical.
- The portal building design will be driven by functional aesthetics whilst maintaining ventilation and access requirements.

Have your say...

We think that the following objectives are important. Do you agree?
Please rank their importance to you from 1 (high) to 6 (low).

- Reduce the width of the cutting
- Move the tunnel portal south to create more tunnel and less cutting
- Minimise changes to local lanes and public rights of way
- Portal structures screened by landscaping and new trees
- Ensure our plans align with the recreational proposals of the Colne Valley AMP
- Pursue a simple, clean form for exposed portal structures