

C6 – HS2 published details 13 August 2015 – REPA edits and questions

Text with REPA queries is highlighted in yellow with some questions in blue

From: Systems & PMO Team

Sent: Thursday, August 13, 2015 12:19:52 PM

Subject: HIGH SPEED RAIL (LONDON – WEST MIDLANDS) BILL

Dear Sir/Madam,

As promised in David Walker's email of 28 July, please find below a summary of the main changes from the Hybrid Bill scheme should the extension of the South Heath green tunnel that was referred to in the Select Committee's statement on 21 July be adopted.

Background

On 21 July the Chair of the HS2 Select Committee, Rt. Hon. Mr Robert Syms MP, made the following statement regarding interim Chilterns tunnel decisions:

'We heard argument and submissions this week and last week in relation to options for further Chilterns tunnelling. Our views are as follows.

First—on the long tunnel options, we have kept in mind the potential non-quantifiable effects of the project on the Chilterns Area of Outstanding Natural Beauty. On the evidence heard we are strongly of the view that the case for a long tunnel is not made out. Without prejudging the arguments we may hear from future petitioners we believe it is unlikely that an overwhelming case will be made out for the long tunnel options as we move forward into further hearings.

Secondly, we believe that the case has been made for an extension of the bored tunnel to the northern end of the South Heath green tunnel. This would not cause an overall delay to the scheme. We want reassurance on how far that option will result in a deepened cutting laterally to the west of the portal, and we want HS2 to evaluate the effects of a deepened cutting on the local area. Provided that review is satisfactory, we will direct the promoter to work up that proposal as an additional provision'.

The Government are currently considering this option and will respond to the Select Committee in due course.

This briefing provides an overview of the key changes to the scheme that would arise from this proposed Chiltern Tunnel extension.

Description

The proposed amendment is for a 2.6km extension of the Chiltern bored tunnel from Mantle's Wood to the current north portal of the South Heath green tunnel (at Ch47+205 excluding the portal hood structure). We presume the portal hood will be 200m long? This would remove the need for the cuttings between South Heath and Mantle's Wood and the South Heath green tunnel currently shown in the Proposed Scheme.

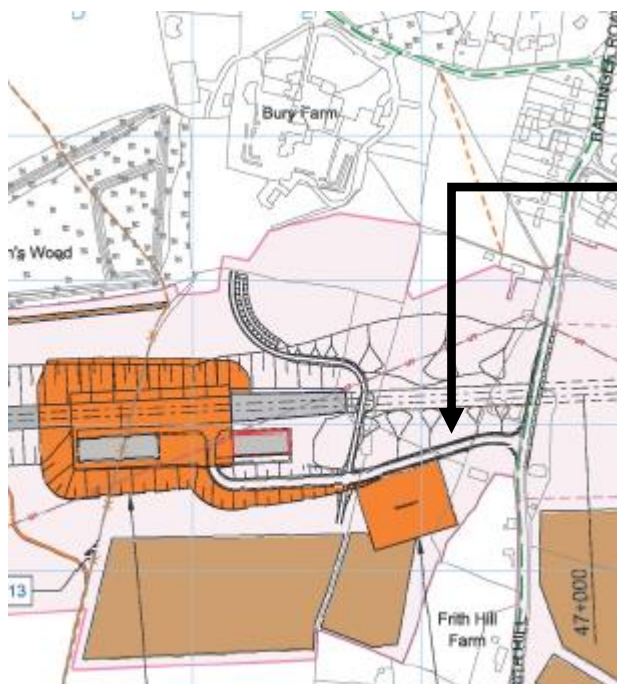
There would be no change to the horizontal alignment of the railway but the vertical alignment would be lower through the tunnel extension than the Proposed Scheme by up to 30m. At the new north portal the tracks would be approximately 17m deep, with the deeper and wider cutting required by the tunnel bore separation and depth gradually reducing to match the Proposed Scheme profile before Leather Lane. (Can we know at what point it rejoins previous profile?) Earthworks around the tunnel portal would integrate with the surrounding landform.

Due to the longer tunnel length an additional vent shaft would be required adjacent to the former Annie Bailey's public house, accessed off the B485 Chesham Road.

A permanent access road to the northern portal for maintenance and emergency access during operation would be provided from Frith Hill. This would be in broadly the same location as the access road in the Proposed Scheme for the South Heath green tunnel portal. What buildings if any does this lead to demolishing?

Layouts extracted by REPA from CT-05 and 06-033 ie the previous plans for this area showing the road

Construction



Operation



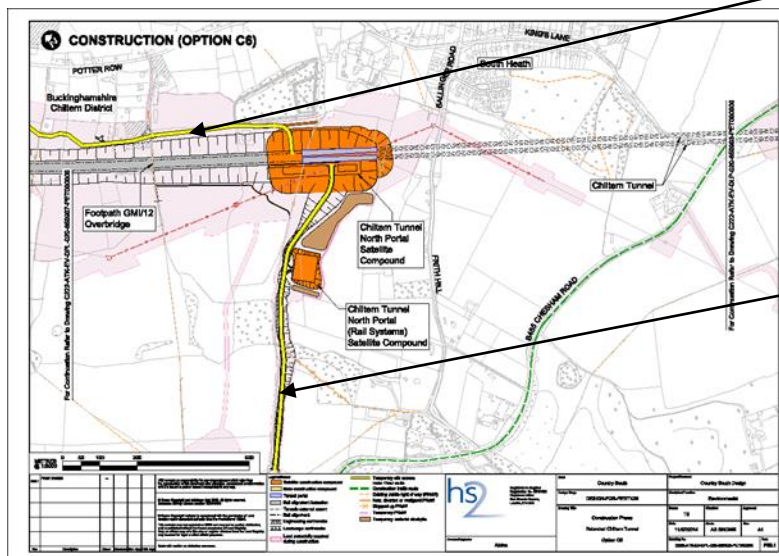
Noise fence barriers within the South Heath cutting and landscape mitigation bunds north of Mulberry Park Farm would continue to be used to improve noise and visual screening in this location. Is there now to be screening for the new permanent access road from the west and also from the Frith Hill SHL as otherwise the portal area will be visible from south heath to south and to west side of portal ?

Construction

During construction, a temporary access road would be provided from the A413 roundabout at Great Missenden to the new northern portal site. In addition, provision would be included for construction lorries to utilise the trace to access the Leather Lane compound. Is the temporary road that runs alongside of the trace and adjacent to Jenkins wood still there, that was originally said to be for this purpose, – see C6 original map below, or has it now also gone? These measures would remove all construction lorries from Frith Hill and Potter Row and Frith Hill would not require temporary closure. Some construction traffic would continue to use the B485 Chesham Road for construction of the Chesham Road vent shaft.

In order to maintain the existing construction programme, this proposed tunnel extension would require that the subsequent fit-out of rail systems in the tunnel is undertaken from the new northern portal as well as from the current southern portal by the M25. A rail systems compound would be provided by the north portal for this work, serviced via the temporary access road from the A413

Layouts of C6 option issued as part of Part 4 (July 2015) to show road that was permanent (to A413) and now temporary



Does this temporary road that goes next to Jenkins Wood and the trace still exist?

Haul road was permanent and is now temporary

The bored tunnel extension would be driven from the current south portal, increasing the excavated material arising here which would need to be removed from the site via the M25.

Excavated material from the revised South Heath cutting would be transported northwards for beneficial use in the scheme. But presumably material is stored temporarily as shown on the original July C6 map above? Transport of excavated material would be either along the trace onto the A413 at Rocky Lane (as described in the recent Additional Provision (AP2)) or for some material to be removed via the temporary access road onto the A413 roundabout at Great Missenden. Is there any information on volumes, how much traffic, and over what period this would occur?

The temporary access road from the A413 would be removed on completion of the construction works and the land reinstated. When is this programmed to be?

Operation

The longer tunnel length would require the introduction of a new vent shaft at Chesham Road and the potential addition of an Auto-Transformer Station (ATS) at this shaft. Is there a revised map for this? In addition, the layout and size of the Chalfont St Giles vent shaft area would need to be amended to incorporate potential revised power requirements.

The South Heath Auto-Transformer Station (at the Green tunnel north portal in the Proposed Scheme) would be relocated adjacent to Leather Lane where exactly? to better suit required track geometry.

The longer tunnel would also require the introduction of tunnel cooling. Provision would need to be made for additional facilities that may be required at the vent shaft compounds.

Environmental effects

Compared with the Proposed Scheme this extended Chiltern tunnel avoids the following main residual permanent adverse effects:

- Agriculture: There would be no residual effects on Mantle's Farm, Hyde Farm, Middle Grove Farm, Elwis Field Farm and Bury Farm. Unclear how agricultural land at Bury farm is not affected – as portal area sits on its land? However the effects on Mulberry Park Hill including demolition of one residential building and four outbuildings would remain. The use of Hunts Green Farm as a materials handling area as described in AP2 would remain, although the extent and scale of use is expected to be less;

- Property demolition: The demolition of seven residential properties, two properties on Hyde Lane, two properties on Chesham Road (including the residential property over the former public house Annie Bailey's), two properties on King's Lane and **one property on Frith Hill would be avoided**; No mention is made of the commercial property on Frith Hill (the gym) or the outbuilding of another residential property on Frith Hill SHL – does this mean they are not avoided ie they are still demolished (eg by permanent access road)?



W & M Gym

Which residential property on Frith Hill is saved from demolition – Chiltern Cottage? What about outbuilding impacts?

- Ecology: The loss of ancient woodland at Mantle's Wood, Farthings Wood and Sibley's Coppice would be avoided. **The wider cutting by the tunnel north portal would avoid impact on the adjacent Jenkin's Wood.** Can this be explained as if the cutting is wider it will impinge more rather than less? Further the original C6 map showed a temporary road running alongside the trace – does this still exist (see previous map)? Ecological mitigation areas and compensation planting areas for ancient woodland would no longer be required and would be removed;
- Cultural heritage: The impacts on the setting of listed buildings at Hyde End, King's Lane, Frith Hill and **Potter Row (loss of archaeology on western edge of Potter Row and impacts on Bury Farm)** would be avoided; **We are unclear what is intended as the western edge of Potter Row appears to be impacted more rather than less – now its deeper and wider than before.**
- Landscape: The loss of ancient woodland at Mantle's Wood, Farthings Wood and Sibley's Coppice would be avoided. It would retain the characteristics of the dry valleys around Mantle's Wood and the hamlet of Hyde End. The visual effects of construction of the green tunnel would be avoided. Landscape mitigation areas would be removed between Hyde Heath and South Heath;
- Sound, noise and vibration: **Construction noise between Mantle's Wood and alongside South Heath would be avoided.** Does this include frith Hill SHL part of South Heath? The residual effects during operation at Hyde Lane and the **significant (presumably "significant" is being used in the technical rather than in common English sense) noise effect on Potter Row properties would be removed**; Does this relate to the whole of Potter Row?
- Traffic and transport: The need to provide diversions around South Heath and a new roundabout junction for Chesham Road and King's Lane would be avoided. Construction lorries would be removed from Hyde Heath Road, Frith Hill and Potter Row with reduced construction traffic on the B485 Chesham Road for the vent shaft construction only. **A temporary junction would be provided off the A413 Great Missenden roundabout to enable access up to the trace. Mass haul movement of excavated material from the South Heath**

cutting would be along the trace (similar to AP2 proposals) or some material removed via the temporary access road to the A413. See above concerning volumes and timescales and amount of traffic – how does it compare with the 350/day truck movements Potter Row was to have experienced along the trace?

There is no reference to

- (1) community and amenity impacts as hundreds of properties lie within 1km of the portal
- (2) what happens to power lines –the HS2 Ltd July 2015 costing of C6 had removed this element (as C6 had the same costing as for the longer C1 to C5 options), but there is no mention of it now being avoided in the above description. Could this be clarified?

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