Chapter 6

Route Window W15: Dog Kennel Bridge
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Location plan of Dog Kennel Bridge and Chequer Bridge

6.1 Introduction

6.1.1 The main ES describes proposals to widen the embankment between Chequer bridge and Dog Kennel Bridge by approximately 7 m to accommodate the planned new track on the northern side of the alignment. This will link existing freight lines so creating a continuous loop between Langley and West Drayton stations and providing additional capacity both for freight and passenger trains by increasing the route from four tracks to five along this section.

6.1.2 These works require a new bridge over Hollow Hill Lane to carry the relief line over the road. The proposed bridge was to be constructed using piled foundations and abutments, with plinths carrying the new bridge structure. To undertake the new bridge construction, a diversion of three high pressure gas pipelines and two oil pipelines would be required. This was because the piled foundations for the bridge would have been too close to the pipelines.
6.1.3 In order to reduce the impact on these strategic utilities, a review of the bridge and its construction was undertaken and a new construction method identified.

6.1.4 The new construction method will extend Chequer Bridge on the north side of the railway as a concrete box structure, thereby avoiding the need for any piled foundations. This will negate the need to divert the gas and oil pipelines and consequently will significantly reduce the size of the worksite required to the south of the railway. The reduced worksite to the south is required to assist in the assessment and monitoring of the gas and oil pipelines and to undertake potential remedial works. This new construction method will not alter the embankment widening works.

6.1.5 As a result of extending Chequer Bridge using a concrete box structure instead of the original abutments and plinths, Hollow Hill Lane will need to be realigned north of the railway to meet highway visibility standards with the extended bridge.

6.1.6 This chapter sets out information on the following:

- the original proposals for the bridge construction;
- the revised proposals for the bridge construction;
- a description of the construction works for the revised proposals; and
- an assessment of any changes to the significant environmental impacts reported in the main ES.
6.2 Permanent Works

The Original Works

6.2.1 The original scheme comprised a new bridge over Hollow Hill Lane to carry the new track. The bridge was to be constructed using piled abutments and plinths. In addition, three high pressure gas pipelines and two oil pipelines located in the vicinity of the eastern supports would have been diverted prior to construction of the bridge. The original scheme is shown in Map W15(i) of the AP2 ES mapping volume (AP2a).

The Revised Scheme

6.2.2 The revised scheme will extend Chequer Bridge on the north side of the railway as a concrete box structure, thereby avoiding the need for any piled foundations. This will negate the need to divert the gas and oil pipelines. A worksite to the south is required to assist in the assessment and monitoring of the existing pipelines and to undertake potential remedial works. This will not alter the embankment widening works.

6.2.3 As a result of the extended bridge, Hollow Hill Lane to the north of the railway will need to be realigned to ensure that highway visibility standards are met.
6.2.4 The permanent works will comprise:

- a new bridge structure over Hollow Hill Lane; and
- a new road alignment.

6.2.5 It is proposed that the new road alignment will be built to rural lane standard with a 6 m carriageway and 3 m verge. The design will be agreed with the Borough of Slough. The existing road will be removed and reinstated to open land.

6.3 **Enabling Works for the Revised Scheme**

6.3.1 Although the revised scheme does not require diversion of the gas and oil pipelines, it does require their protection during both the scheme's construction and once the scheme is in operation. The protective measures will be agreed with the relevant asset owner during detailed design; they are likely to include the construction of concrete slabs over pipelines located under highways. This will be undertaken within the worksite identified. Assessment and monitoring of the pipelines will also be undertaken throughout the construction period.

6.3.2 Due to the proposed road diversion, a number of minor utility diversions will be required as part of the revised scheme. This may include:

- diversion of overhead telephone cables;
- diversion of low voltage electric cables and equipment; and
- diversion of existing highway drainage onto the realigned road.

6.3.3 All of the above, and their connections, will take place within the worksite identified for the revised works. The connections to existing services in the road will be carried out at the same time as the new road is constructed.

6.4 **Construction of the Revised Works**

**Duration of the Works**

6.4.1 The total approximate duration of the works is predicted to be 38 weeks for both the utilities and the bridge works.

6.4.2 Of this 38 week time period, the protection of the gas and oil pipelines will take approximately 4 weeks, the minor utility works are approximately 4 weeks, and the bridge works approximately 30 weeks for completion. Monitoring of the pipelines will occur throughout this period.

6.4.3 All of the bridge works will be carried out in normal working hours. For a significant part of its length, the realignment of the road will be constructed off-line. However, a continuous road closure of approximately 17 weeks will be required to enable the utilities works, the construction of the box structure and the connection of the new road to the existing highway.
Construction Plant

6.4.4 Construction plant at the site will include a bulldozer, lifting cranes, excavators, vibrating roller, concrete pump, fork lift, concrete vibrators, road pavior, compressors and generators.

6.4.5 There will be increased lorry numbers for the new road construction, but this will be offset by the fact that there will be no lorry movements now for the pipe diversions. Overall it is likely that there will be a slight increase in the lorry numbers set out in the main ES, but no change to peak movements (Volume 3, Chapter 9, Section 9.14).

Worksites

6.4.6 The Hollow Hill Lane to Dog Kennel Bridge worksite has been extended to the north as shown in Map W15(ii) of the AP2 ES mapping volume (AP2a). The worksite to the south of the railway which had been identified for the diversion of the gas and oil pipelines will be reduced in extent.

6.5 Mitigation and Residual Impacts

Overview

6.5.1 The proposed temporary works do not change the conclusions as set out in the main ES with respect to landscape/townscape and built heritage, archaeology, noise and vibration, air quality, water resources, contaminated land, community or socio-economics. The temporary significant impacts of the revised scheme are illustrated on Map W15(iii) of the AP2 ES mapping volume (AP2a).

Impacts on Visual Amenity

Baseline

6.5.2 The visual amenity receptors for the Hollow Hill Lane to Dog Kennel Bridge worksite and the Chequer Bridge pipeline diversion worksite are of high to moderate sensitivity, comprising occupants of approximately 60 to 70 residential properties on Maplin Park, Southwold Spur, Market Lane, Paulant Road and to the north of the embankment in Mansion Caravan Park as well as users of the surrounding streets and open space.

6.5.3 The full baseline text for this route window is described within the main ES (Volume 3, Chapter 9, Section 9.14).

Mitigation and Residual Impacts

6.5.4 The reduction of the worksite to the south of the railway will result in the removal of the significant impact previously identified in the main ES on residents at the southern end of Southwold Spur. This is shown on Map W15(iii) of the AP2 ES mapping volume (AP2a).
6.5.5 The enlarged Hollow Hill Lane to Dog Kennel Bridge worksite is within the original zone of visual influence for the original works and this extension of worksite will not result in any additional significant adverse impacts in addition to those already reported in the main ES (Volume 3, Chapter 9, Section 9.14, paragraphs 9.14.11 to 9.14.13). There will be no other changes to impacts on visual amenity previously reported in the main ES for this route window.

Impacts on the Green Belt

6.5.6 Like the existing Hollow Hill Lane, the realigned road will be in the Green Belt. As the new road will be built to modern standards it will be wider than the existing road, taking a larger area of Green Belt.

6.5.7 Policies to protect Green Belt are contained in Planning Policy Guidance Note 2: Green Belts (PPG2: Green Belts, January 1995), Regional Planning Guidance for the South East (RPG 9, March 2001), the Berkshire Structure Plan 2001–2016 (adopted July 2005) and the Slough Local Plan (adopted March 2004). PPG 2 states that “The fundamental aim of Green Belt policy is to prevent urban sprawl by keeping land permanently open; the most important attribute of Green Belts is their openness”.

6.5.8 PPG2 sets out the types of development that are appropriate in the Green Belt. Engineering operations are considered inappropriate development unless they maintain the openness of the Green Belt and do not conflict with the purposes of including land in the Green Belt.

6.5.9 Although it occupies a larger area than the current road, the realigned road will have no greater impact on the openness of the Green Belt and, in addition, it does not conflict with any of these purposes of the Green Belt as set out in PPG2. Consequently, it is not inappropriate development and as such is not contrary to Green Belt policy.

Impacts on Ecology

Baseline

6.5.10 The revised Hollow Hill Lane and Dog Kennel Bridge worksite contains no vegetation types additional to those reported in the main ES (Volume 3, Chapter 9, Section 9.14).

6.5.11 Surveys undertaken in 2005 identified three trees with moderate bat roost potential, as well as the presence of slow-worm and grass snake in the revised worksite close to Chequer Bridge.

Mitigation and Residual Impacts

6.5.12 Of the many bat emergence surveys undertaken elsewhere on the Crossrail route, none has identified roosting bats in similar locations, and it is therefore statistically unlikely that roosting bats are present here. Prior to construction, surveys will be undertaken, and if roosting bats are found, routine mitigation as set out in the main ES (Volume 6a, Appendix B1) will prevent significant impacts.
6.5.13 There will be temporary and permanent loss of reptile habitat within the revised Hollow Hill Lane to Dog Kennel Bridge worksite giving rise to a requirement for translocation prior to works. Routine mitigation described in the main ES (Volume 6a, Appendix B1) will prevent any significant residual impact on reptiles in this route window.

6.5.14 In summary, the revised worksite location will not generate any significant temporary or permanent impacts to ecology, additional to those already reported within the main ES.

**Impacts on Traffic and Transport**

*Baseline*

6.5.15 Market Lane is an unclassified road passing beneath the Great Western Main Line (GWML) about 1 km east of Langley station. The road is subject to a statutory speed limit of 30 mph, and passes beneath the railway in a north–south direction by means of a rail underbridge that accommodates a narrow single carriageway. The road has no facilities for pedestrians.

*Market Lane looking north towards Chequer Bridge*

6.5.16 Immediately to the north of the railway, where Market Lane becomes Hollow Hill Lane, there is a sharp bend in the road alignment. Hollow Hill Lane is subject to the national speed limit of 60 mph for a rural single carriageway road.
6.5.17 The full baseline assessment is described in the main ES (Volume 3, Chapter 9, Section 9.11).

Mitigation and Temporary Residual Impacts

Worksites

6.5.18 Due to the change in construction methodology, the Chequer Bridge gas pipeline diversion worksite to the southeast of the bridge will be reduced in extent. The Hollow Hill Lane to Dog Kennel Bridge worksite will be extended to the north.

6.5.19 The location of the access point will not change from that reported in the main ES but it is anticipated that access points to the worksite extension west of Hollow Hill Lane will be located at the northern and southern ends. Access points are shown on Map W16/15(iv) of the AP2 ES mapping volume (AP2a).

6.5.20 There are no new significant impacts as a result of the additional access points or the revised worksite boundaries.

Diversions

6.5.21 For the bridge and road realignment works it is expected that a total road closure will be required at Chequer Bridge for approximately 17 weeks. During road closures a diversion route will be signed via the B470 Langley Park Road. The diversion is shown on Map W16/15(iv) of the AP2 ES mapping volume (AP2a). The maximum diversion length will be approximately 1.5 km. The diversion length does not constitute a significant impact to vehicle occupants.

6.5.22 From an analysis of junction counts it is expected that some 700 vehicles could be affected by the road closure in the morning peak hour and approximately 1,650 vehicles during the morning peak period (0700–1000). Drivers will adjust their journeys over the wider network and it is not considered likely that all these vehicles will divert to Langley Park Road. For example, many drivers to the east will find it more convenient to divert via Thorney Lane South.

6.5.23 Similar diversions will be required for cyclists and pedestrians but observations suggest that the numbers using Market Lane/Hollow Hill Lane are very low and no new significant impacts are predicted.

Construction Traffic

6.5.24 The construction methodology has changed from that assessed in the main ES, as a result there will be increased lorry numbers for the new road construction, but decreased lorry numbers as the major gas and oil pipeline diversions will no longer be required. Overall, it is likely that there will be a slight increase in the lorry numbers set out in the main ES, but no change to peak movements. No new significant impact will therefore arise.
Mitigation and Permanent Residual Impacts

6.5.25 The realignment of Hollow Hill Lane will improve visibility for drivers and will be expected to provide a major improvement in road safety, although this will not constitute a significant impact.

6.6 Summary

Eliminated Significant Impacts

- Visual Amenity: As a result of the amendment, the significant adverse impact on visual amenity for residents at the southern end of Southwold Spur as previously identified in the main ES will be eliminated.

6.6.1 There are no other changes to the significant impacts as reported in the main ES for Route Window W15 as a result of the amendment (Volume 3, Chapter 9, Section 9.14).