

1 1.3 Environmental considerations to the project as a whole

A GRIP 2 environmental appraisal was undertaken in order to identify potential environmental constraints that might affect the development of the project, and to assist in the identification of actions that could be taken to manage these constraints through the ongoing GRIP process.

This appraisal was a high-level assessment based on a desktop study complemented by walkover surveys carried out in June 2019. Details are presented in the Environmental Feasibility Report which includes an Ecology Report and mapping illustrating the environmental constraints. The main environmental considerations are summarised below.

The site area overlaps a series of natural designated sites of international and national importance, including the Thames Estuary and Marshes Ramsar Site and Special Protection Area (SPA), and South Thames Estuary and Marshes Site of Special Scientific Interest (SSSI). These constraints are present in the area of the new Higham Curve, as shown on the figure below and in the Environmental Feasibility Report.



Figure 1: Map showing environmentally sensitive areas on the Isle of Grain

The ecology report has identified potential presence of the following protected species: Great Crested Newt, Bats, Badgers, Breeding Birds, Reptiles, and Water Voles, at the site. As a result, consultation with Natural England and the Local Planning Authority is recommended at the earliest convenience. An Extended Phase 1 Habitat Survey and detailed surveys of protected species should be completed at the appropriate GRIP stage.

Several water bodies will potentially be affected by the works as the Higham Curve is likely to cross the disused Thames and Medway Canal and other drains located in the area. The works associated with the new station will also affect an existing drain. It is also noted that an important section of the route lies within Flood Zone 3, and the Risk of Surface Water Flooding ranges from high to low at several points along the route. Flood Risk Assessments should be carried out from GRIP 3 stage and consultation with the Environment Agency is recommended.

A scheduled monument and several listed buildings are located near the site. These are likely to be affected by the project and therefore, consultation with Historic England and the Local Planning Authority is recommended in order to confirm any issues that should be considered during the next stages of the project.

Several nuisance receptors are located within 200m from the site, including some farms that are close to the railway. These receptors may be affected by dust and noise associated with construction works, as well as by noise from increased train movements. Air quality, and noise and vibration assessments should be carried out in order to address possible constraints during detail design.

Depending on the option chosen for the First Passing Loop and the Higham Curve, a detailed contaminated land study may be required at the next GRIP stage, as evidence of contamination has been found in that area. It is known that there was an asbestos works to the north of the track near to canal bridge.

In relation to Public Rights of Way, several footpaths cross the existing Hoo branch railway. The scheme will need to ensure that public access is maintained and that safe means of crossing the railway are provided.

Finally, it is noted that, depending upon the design options taken forward from this GRIP 2 stage, the project might require an Environmental Impact Assessment (EIA) for consent under EIA Regulations 2017, and might also require to go through a Development Consent Order process.

Opportunities to achieve environmental net gain and sustainable benefits will be sought throughout the design process.

2 2.7 Environmental

Although the railway itself and the existing structures do not form part of the Ramsar site or SSSI areas, the enabling works may impact these environmentally sensitive areas.

The environmentally sensitive areas extend east of Canal Road for approximately 1.5km, north of the railway and partially to the south. The proposed enabling works which can potentially affect these areas are:

- Higham Canal and Cattle Arch bridges, and 6no. culverts
- First potential passing loop location
- Kings footpath crossing
- Church Lane vehicle crossing

Approximately 2.5km of the line, between Canal Road and Buckland Road bridges, as well as the proposed station location lie within Flood Zone 3, which require a Flood Risk Assessment to be carried out.

There are three Grade II listed buildings, one Grade I listed building and a scheduled monument in Church Street which are likely to be affected by the works at Church Street vehicle crossing. The construction of an accommodation bridge may affect the character of the settlement and harm the setting of the buildings as a group. The construction of a bridge to replace Wybournes level crossing may have a similar impact on Wybournes Farm, which is also a Grade II listed building. Therefore, consultations with Heritage England and the Local Authority/Heritage officer shall be undertaken during the next stage of the project, to establish whether a Heritage Agreement is required prior to commencement of works.

Several residences and farms could be affected by noise/vibration and or dust/ poor air quality during construction and, later, by the increase in train movements.

The highways network, most of which consists of narrow country roads, will be affected by an increase in heavy vehicle traffic during the construction period.

For more details, refer to the Environmental Feasibility Report included in Appendix F.

The options chosen, including the construction method and temporary access routes to individual site locations shall aim to minimise environmental impact.

3 3.8 Environmental

The location for the proposed new station is on private land, currently classified as agricultural land Grade 1 (Excellent). Land purchase will be required, and the impact associated with the change of land use will need to be addressed.

The proposed station location lies within Flood Zone 3, which require a Flood Risk Assessment to be carried out.

Some residences, located approximately 120m north of the railway, could be affected by noise/vibration and or dust/ poor air quality during construction and, later, by the increase in train movements.

The highways network will be affected by an increase in heavy vehicle traffic during the construction period.

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4 4.7 Environmental

Six of the eight options for the Higham Curve are entirely on private land, comprising of undeveloped farmland, coastal and floodplain grazing marsh and small areas of deciduous woodland, most of which are within the Ramsar site and SSSI area, shown in blue on the map below. The proposed works will impact these environmentally sensitive areas.

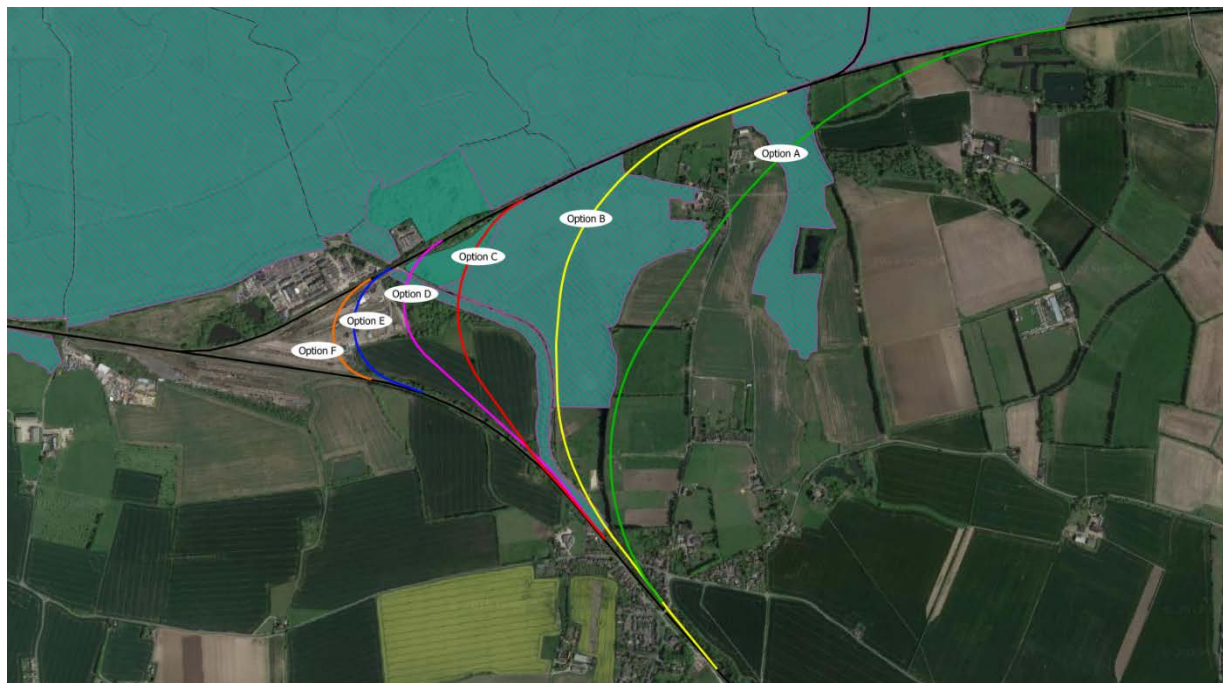


Figure 2: Options A to F for the Higham Curve

Land purchase will be required, and the impact associated with the change of land use will need to be addressed.

A large area lies within Flood Zone 3 and therefore the proposed works will require a Flood Risk Assessment to be carried out.

Depending on the option chosen, the Grade II listed obelisk, located at TQ7094673695 near Canal Road, may be affected by the works. Therefore, consultations with Heritage England and the Local Authority/Heritage officer shall be undertaken during the next stage of the project, to establish whether a Heritage Agreement is required prior to commencement of works.

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