

Sharnal Street Station

The proposed works

We propose to create a new feature/destination station south of Sharnal Street to maximise access into and out of the peninsula. The station will provide both a transport link for those living on the peninsula, reducing reliance on cars as the primary means of transport as well as opening up access to the leisure opportunities within the peninsula to those who do not.

The location of the station has been chosen to integrate with any proposed development around the village of Hoo that may be brought forward pursuant to the new Local Plan.



Figure 18: Aerial view of proposed station

View of the proposed station location with disabled parking close to the station entrance. Barn style station in keeping with the local character and future aspirations for a second platform should stations to the east be developed in the future.



Figure 19: View of station concept option 1

A view of the barn style station set in a station square comprising wavy lines to reflect the nautical nature of the area, and its shortwave radio heritage. This station building is expandable to provide additional facilities as the station patronage increases.

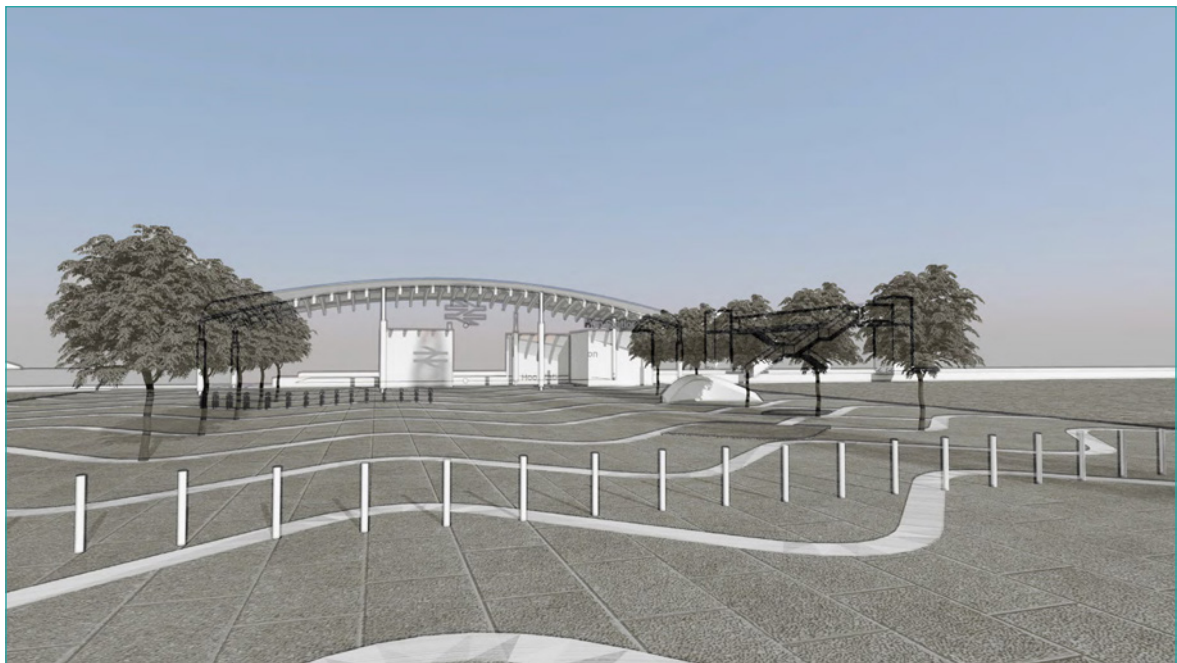


Figure 20: View of station concept option 2

A view of an alternative style station to reflect the airship heritage of the area set in a station square as before.

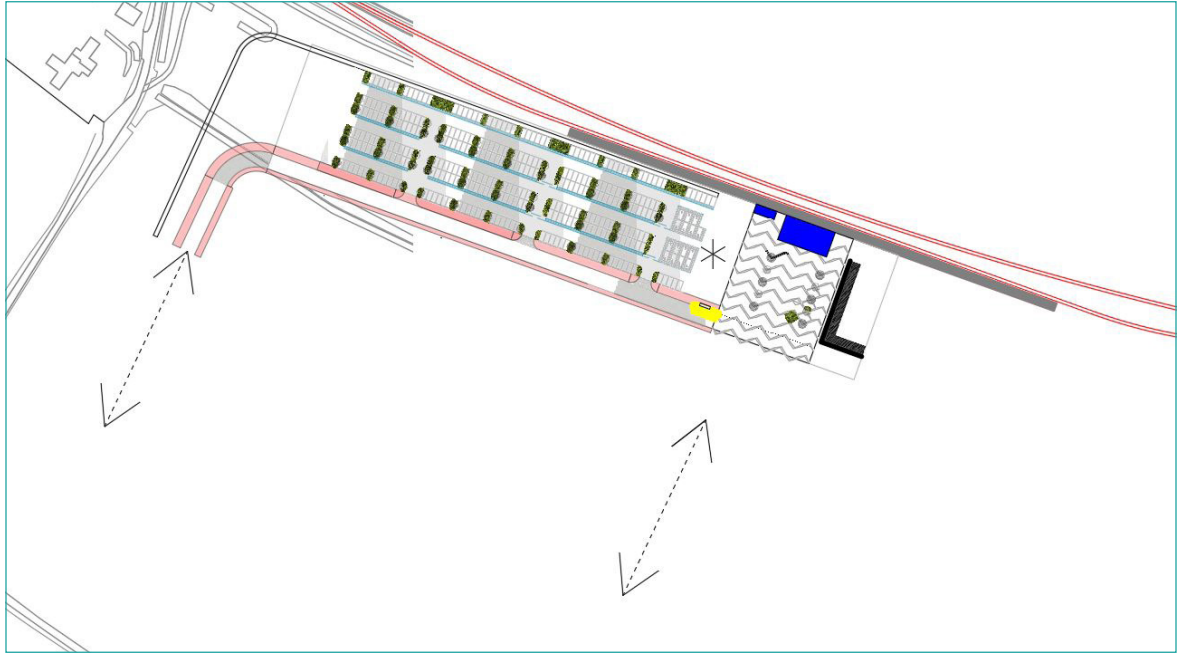


Figure 21: Station general arrangement

A plan showing the location of the station east of Ropers Green Lane between the railway and the brook with two access routes from the south west and cycling/pedestrian route from Ropers Green Lane.

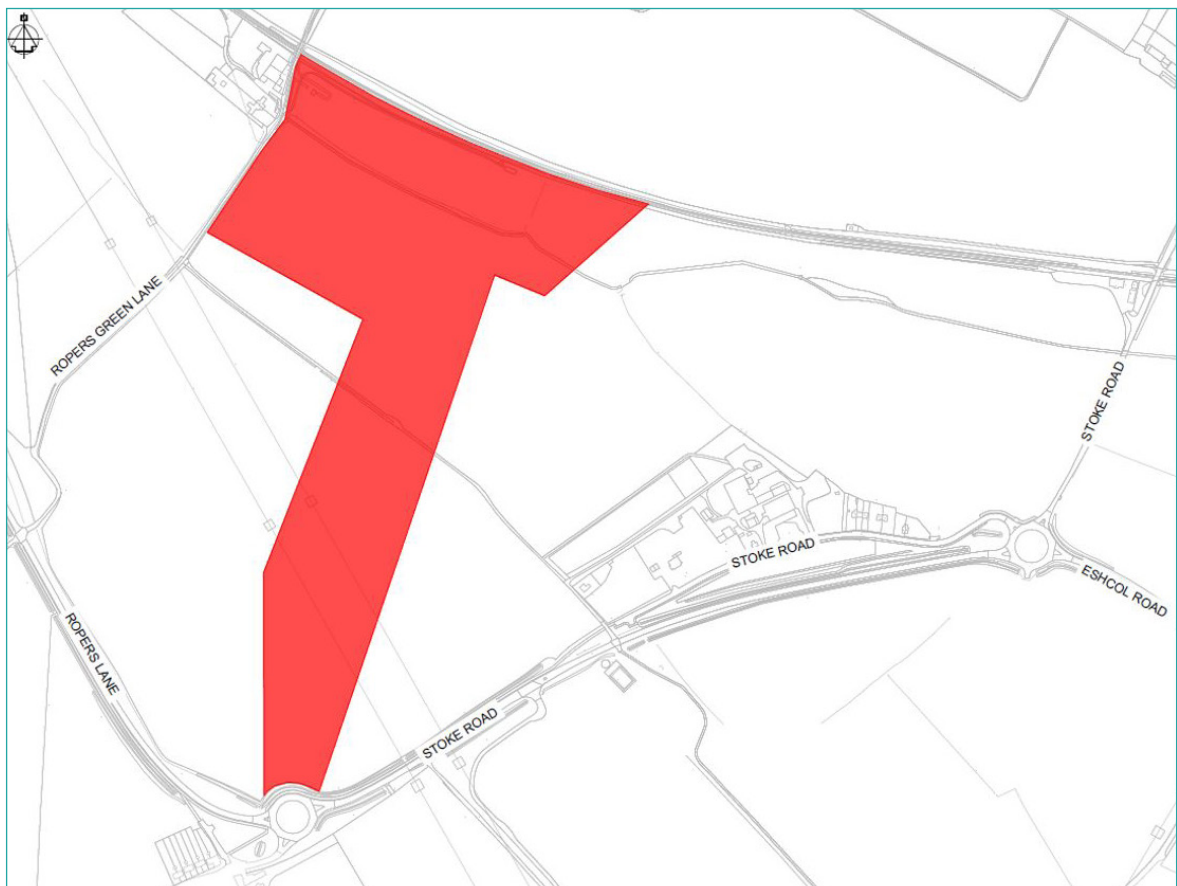


Figure 22: Proposed station location, including land for construction and access

Figure 22 is a plan showing the areas required for the station and access road from Ropers Lane Roundabout including areas for temporary works and construction.

The station itself will provide an access to a direct link to London to facilitate both work and leisure travel into London with an option to change at Gravesend for services to locations across Medway.

The station could form part of an integrated transport hub for development in the area which could include both cycle routes to the housing and the wider peninsula, and feeder bus routes linking the station with any potential new and existing housing and employment areas.

Initially, a small single platform station will be created, to reflect the expected patronage. But as passenger numbers increase over time, the station could be expanded to include a second platform. The initial station design would provide basic facilities for waiting passengers but could be developed to provide additional facilities in the future.

Walking and cycling

The station is located close to national cycleway feeder route 179 and a new cycleway and pedestrian route is proposed along Ropers Green lane directly into the station giving excellent safe access. Secure cycle storage will be available at the station to encourage cycling.

The inclusion of bus routes into any adjacent residential and employment areas that may be brought forward will position the station as an important transport interchange in the area reducing the reliance on private cars and protecting the local environment.

Construction

The station will be constructed entirely offline using pre-fabricate parts, with all works compounds located within the station footprint and surrounding land.

There will be some works that impact on the existing freight services on the line. These impacts will be managed in consultation with Network Rail and freight operators.

Construction work is likely to take two years to complete, but most of this work will be contained wholly within the development site.

Outside of the land to be used to construct the station, there will be no direct impact on the routes used by residents or the general public. There are no rights of way across the land and all works access shall be from the existing field gates or the new junction from the highway.

Construction traffic will be managed to limit the impact on local residents. It may also be possible to use the existing freight line to bring in bulk materials.

Level crossings

A rail passenger service to Hoo will be electrified using 3rd rail electrification to provide compatibility with the main line, increase the number of trains on the line, and their speed. Consequently, existing footpath and vehicular crossings over the railway will need to be segregated to ensure the safety of users. This can be done either by physical separation (Bridges) or by diversion of the route to an existing crossing. Our current proposals for changes to level crossings are set out below.

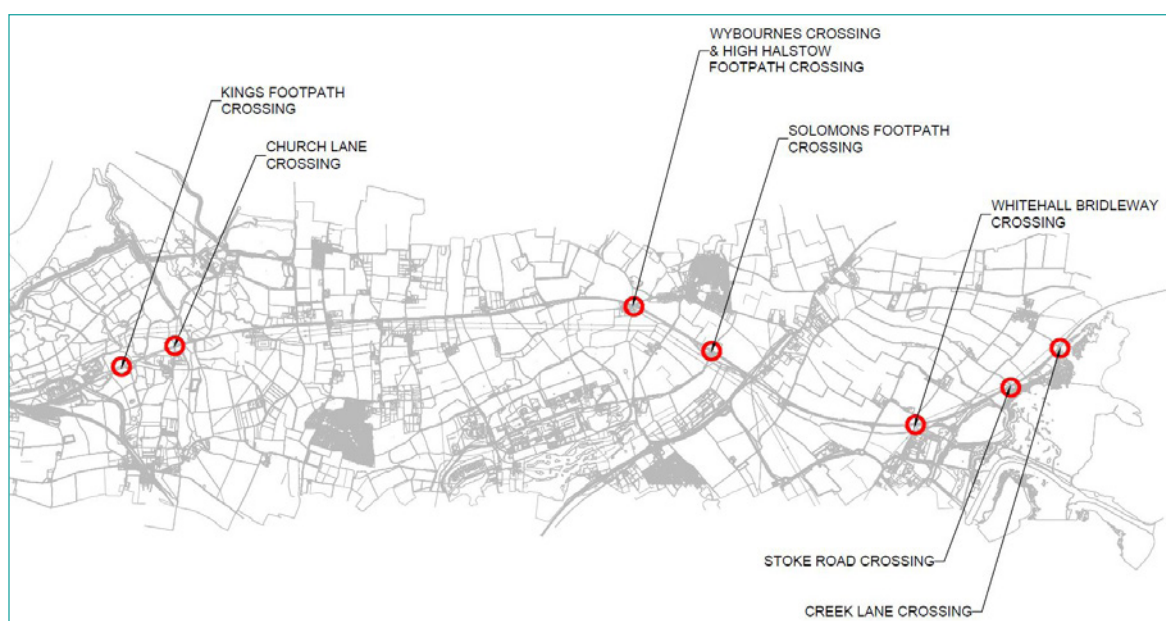


Figure 23 shows the location of public rights of way along the existing Grain Line as listed in the table 1 (below).

Table 1 the table below shows the accesses and public rights of ways that are affected at each crossing:

Crossing	Public Right of Way and existing access reference
Church Lane Crossing	NS 138
Kings Crossing	NS 140
Wybourne & High Halstow Crossing	RS 045 / Wybourne Farm access
Solomon's Crossing	RS 046
Whitehall Bridleway Crossing	RS 108
Stoke Road Crossing	Private access
Creek Lane Crossing	RS 34

Church Street Crossing

There are currently two crossings in the vicinity of Church Street, which lies within Gravesham; a private/farm crossing (NS 138) at Church Street as shown below, and a pedestrian crossing for footpath users to the west (NS 140) which is discussed later in the section titled 'Kings Crossing'.

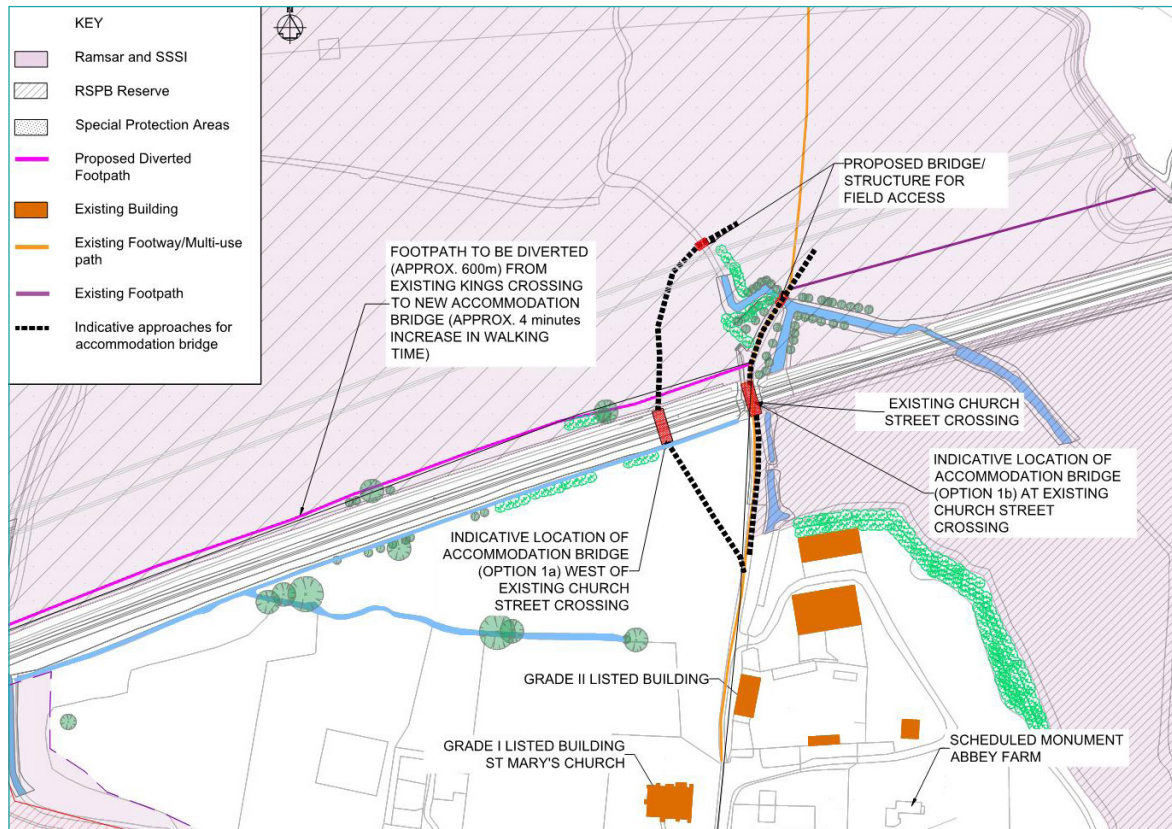


Figure 24: Church Street Crossing

Figure 24 shows the location of a new crossing at either the same location as the existing farm crossing at Church St, or positioned slightly off-line to allow the existing crossing to remain in use while the new crossing is constructed.

As indicated in Figure 24 (above), a new single span accommodation bridge is proposed for the private/farm access.

Various proposals for the new bridge, its location and the alignment of the road leading up to it are currently being considered.

Construction of the new bridge will begin with the necessary groundworks. The bridge supports can then be constructed before the installation of the bridge deck. The anticipated duration for the proposed construction works is 12 months. The construction works will take account of the needs of the agricultural and public footpath users of the bridge.

Kings Crossing

Kings Crossing located to the west of Church Street, Gravesham currently provides access across the existing railway for footpath NS 140.

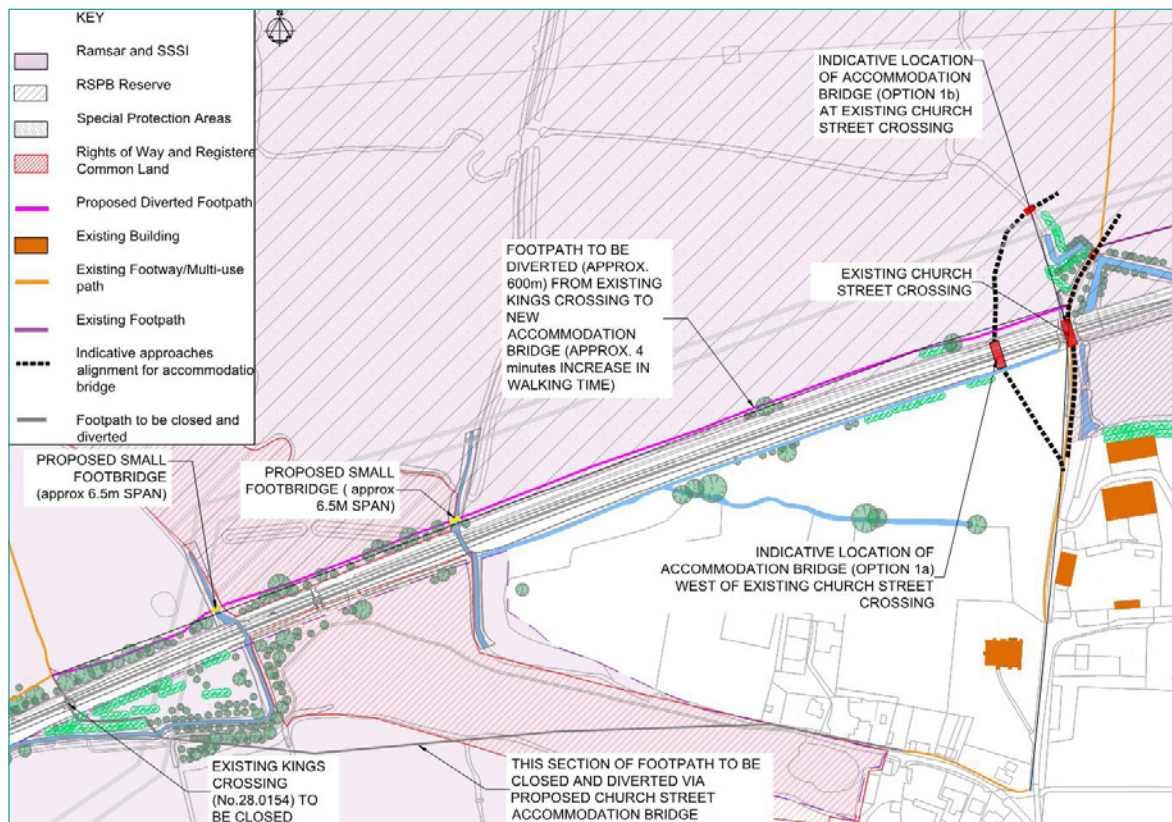


Figure 25: Kings Crossing

Figure 25 shows the crossing and the proposed diversion over the proposed Church St Accommodation bridge some 600m east of the current crossing.

The feasibility of replacing the crossing with a new footbridge has been considered but was discounted on the basis that the structure would be 9m in height overall, and would require support and ramps to provide access for all within the protected Ramsar area. Proposals for various diversion routes were therefore considered. The option which is most appropriate is to close the existing crossing and divert the footpath to the location that is chosen for the new accommodation bridge to the east at Church Street as shown above. Two new small footbridges would be required along the proposed route to cross existing watercourses.

The proposed diversion will increase walking time by less than five minutes.

Wybournes Lane Level Crossing and High Halstow Footpath Crossing

The existing level crossing, located approximately 600m southwest of High Halstow, currently provides private access from Wybournes Lane to the agricultural and residential units south of the railway. The existing footpath RS 045 crossing is situated approximately 50m east of Wybournes Lane Level Crossing.

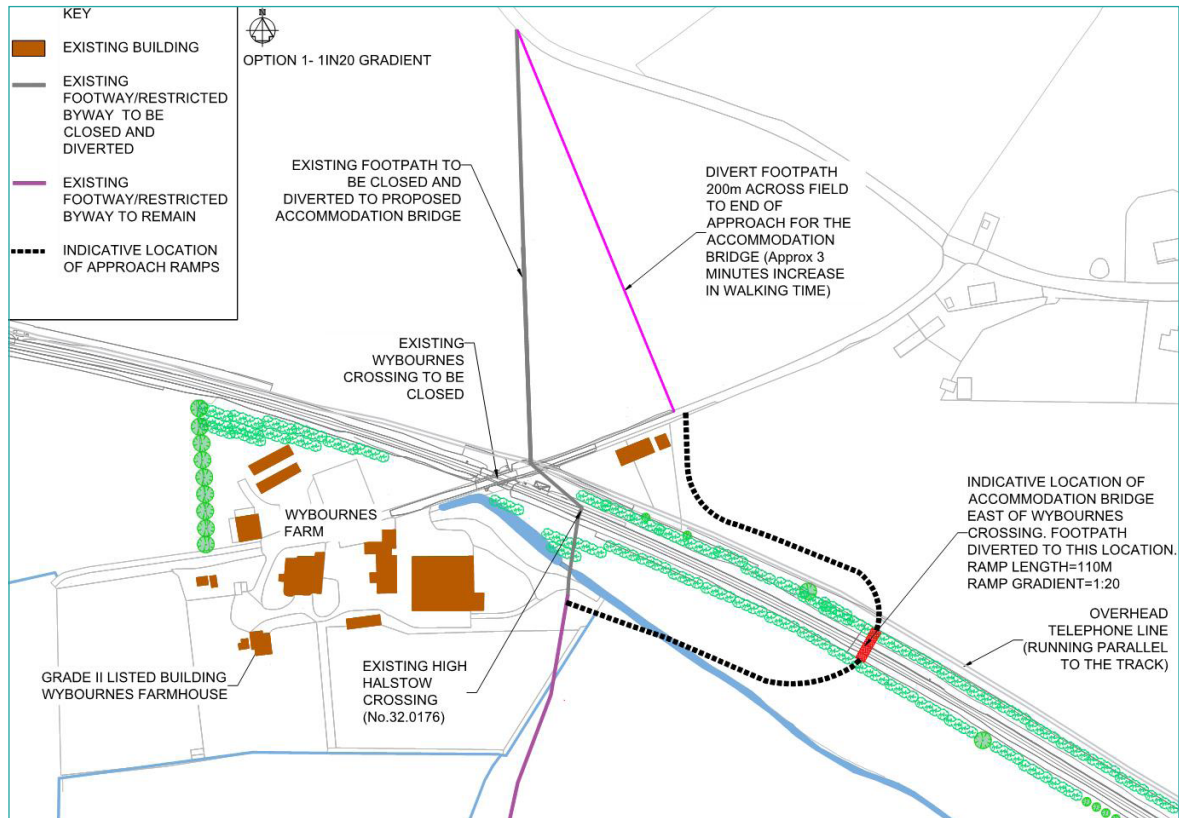


Figure 26 shows the closure of the existing level crossing to Wybournes Farm and a new access route over an accommodation bridge to the east.

A new accommodation bridge is being considered to replace the level crossing and adjacent footpath crossing. Due to the proximity of buildings either side of the railway, it is not possible to build the replacement structure on the current alignment of Wybournes Lane. It is therefore proposed to locate the bridge to the east of the existing crossing, bridging over the watercourse and the railway. The new access road deviates from the existing road alignment north of Wybournes Cottages via a new junction. Access to Wybournes Cottages will remain unchanged.

The current footpath would be diverted over the accommodation bridge. The additional travel time of the diverted route would be minimal and anticipated to be less than three minutes.

Diversion via the existing Dux Court Road Bridge, approximately 575m to the east, is not considered feasible as the existing structure is not suitable for pedestrian and equestrian use and would require strengthening works.

Construction of the new bridge would take approximately 12 months.

Solomon's Footpath Crossing

The existing foot crossing is situated approximately midway between Dux Court Road and Solomon's Farm, providing access over the line for footpath RS 046.

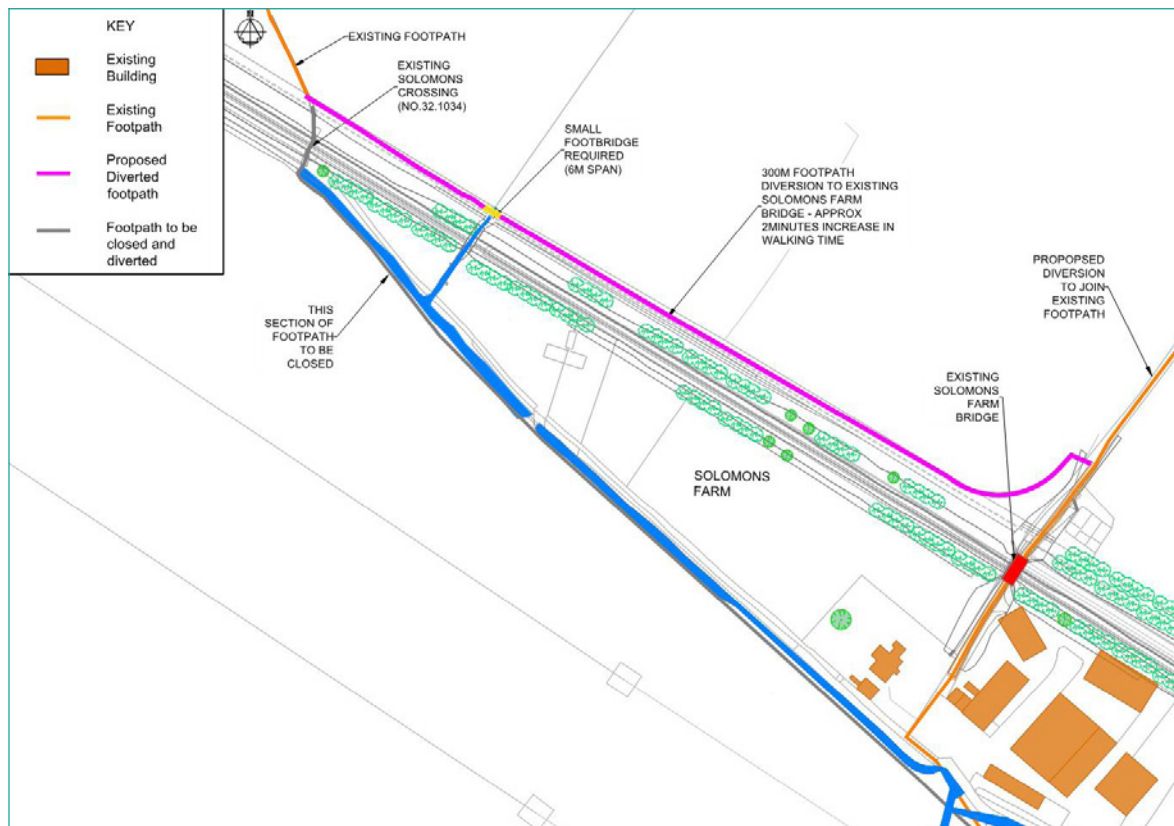


Figure 27: Solomon's Crossing

Figure 27 above shows a proposal for the crossing to be removed and the footpath to be diverted via the existing bridge at Solomon's Farm 300m to the east. The additional travel time of the proposed diversion route will be less than two minutes.

Whitehall Bridleway Crossing

The existing crossing for bridleway RS 108 is currently situated approximately 500m east of Stoke Road bridge over the railway.

It is proposed that the crossing is removed, and a bridleway bridge is installed at the location, with approach ramps following the alignment of the existing bridleway route. The ramps would extend approximately 80m either side of the railway. An alternative proposal also being considered is to construct the new bridge to the west of the current alignment, with approach ramps returning users to the location of the existing crossing.

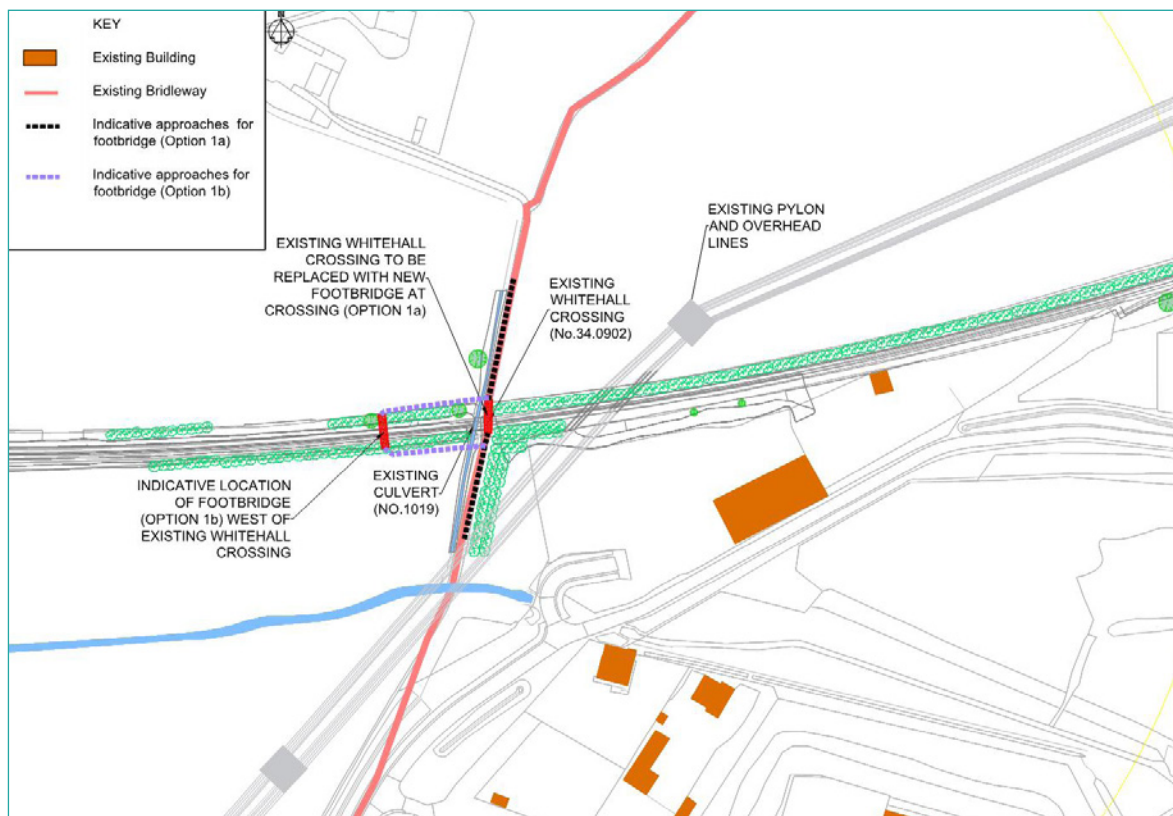


Figure 28: Whitehall Bridleway Crossing

Figure 28 shows how the existing gated bridleway across the track would be replaced with a new equestrian bridge along the same alignment.

This crossing would eliminate the need for horse riders to dismount and open and close gates to cross the railway.

Construction of the new bridge is anticipated to take six months.

Stoke Road Crossing

The existing private/farm track crossing currently lies approximately 275m east of Stoke Road.

A bridge crossing is required here because of the proximity of the new station, and the need to change existing signalling systems to facilitate the train movements that will serve the station. We are investigating other options which may eliminate the requirement for a new crossing at this location.

It is proposed to provide a new accommodation bridge to replace the level crossing. Due to the proximity of an electricity pylon on the north side of the railway, it is not possible to build the replacement structure on the current alignment of the private track. It is therefore proposed to locate the bridge to the southwest of the existing crossing. Option 1A forms a new junction with Stoke Road and follows the existing field boundary line, with a new track running parallel to the railway on the southern side of the embankment. Option 1B follows the existing alignment of the track up to the railway, with approach ramps to the bridge running parallel with the track to avoid the overhead power lines.

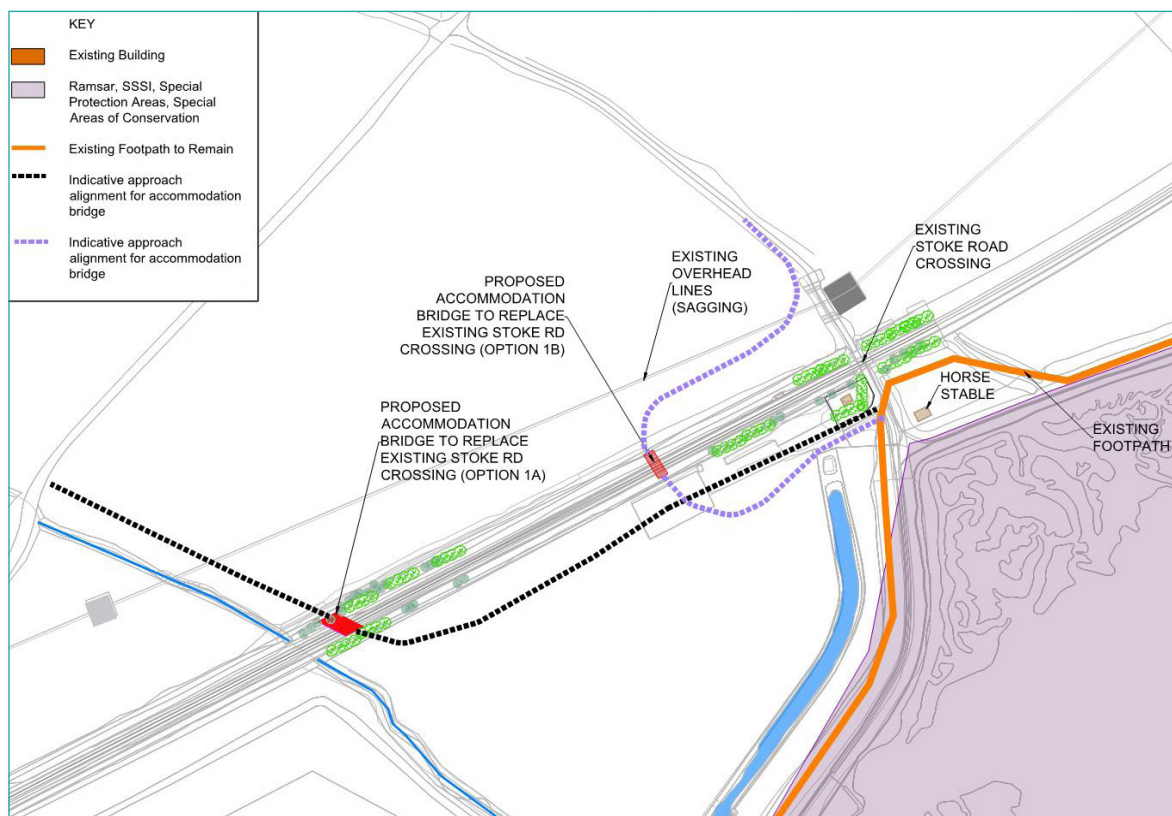


Figure 29: Stoke Road Crossing

Figure 29 shows two possible options for the bridge crossing either via the existing track or via a new approach road to the south. Both routes are constrained by the overhead lines to the north and the creek to the south.

Construction of the new bridge is expected to take approximately 12 months.

The requirement for this crossing is currently still under review.

Creek Lane Crossing

The existing private/farm track and footpath crossing currently lies approximately 375m east of Stoke Road.

A bridge crossing is required here because of the proximity of the new station, and the need to change existing signalling systems to facilitate the train movements that will serve the station. We are investigating other technical options which may eliminate the requirement for a new crossing at this location.

It is proposed to provide a new accommodation bridge to replace the vehicle and pedestrian crossing. Due to the proximity of an electricity pylon and residential buildings on the north side of the railway, and the moorings on the south side, it is not possible to build the replacement structure on the current alignment of Creek Lane. It is therefore proposed to locate the bridge to the southwest of the existing crossing, with approach ramps to the bridge running parallel with the track to avoid the overhead power lines.

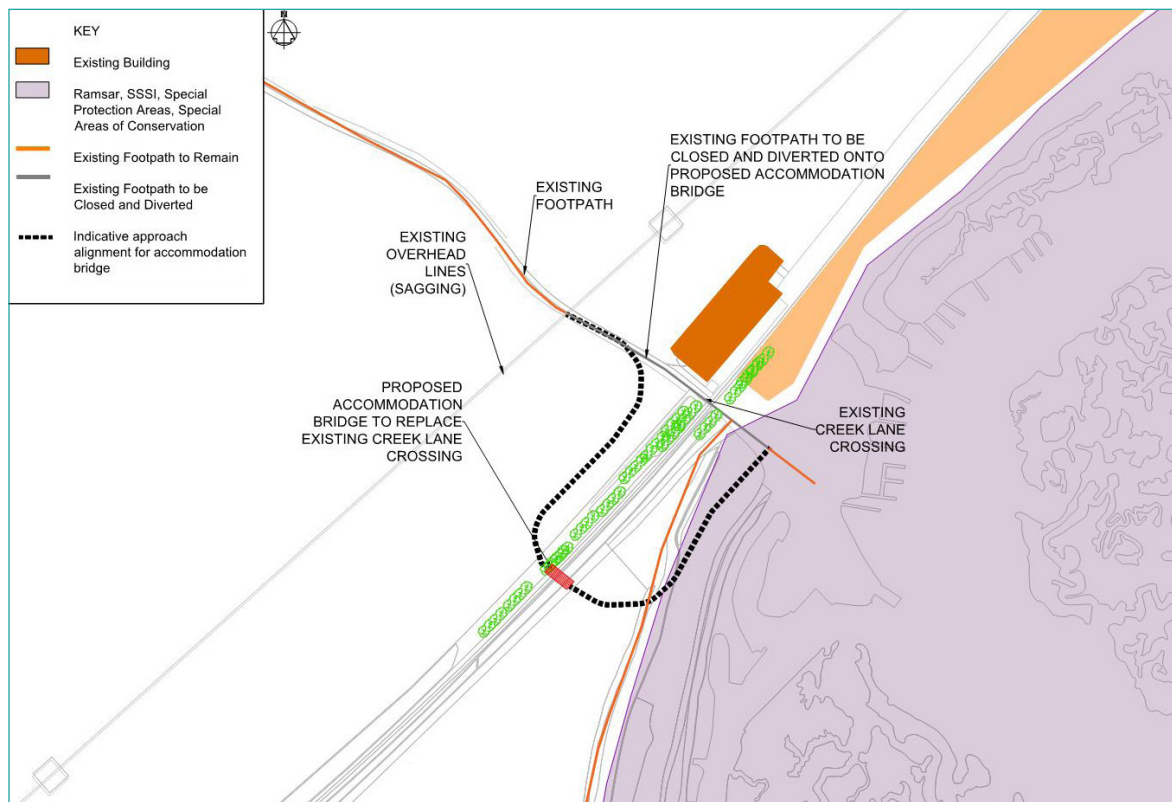


Figure 30: Creek Lane Crossing

Figure 30 shows the bridge crossing from the existing track or via a new approach road to the south. The approach to the bridge is constrained on the north side by the existing overhead lines and to the south by the existing creek.

Construction of the new bridge will take approximately 12 months.

The requirement for this crossing is currently still under review.

2.3 Railway Passing Loops

The proposed works

Key to the works on the line is to provide power for the trains. Several solutions have been considered including battery and hydrogen powered trains, but these have already been discounted due to their requirements for a new form of rollingstock. The proposed solution is therefore to extend the existing third rail electrification system onto the Grain Line.

To create a passenger service whilst maintaining the freight service, it is necessary to install new sections of dual track to allow trains to pass each other.

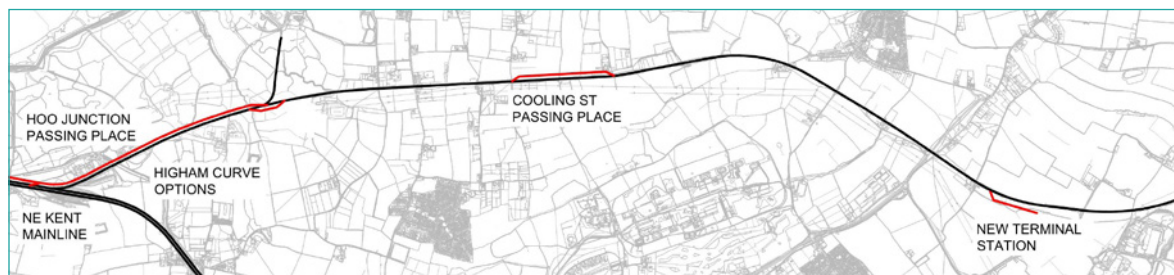


Figure 31

Scheme overview

Figure 31 shows schematically the principal works on the line including dualling of the line at Hoo Junction and Cooling St, and a new terminal station east of Hoo.

To prevent disruption to the main line by the frequent passenger service an additional main line junction is also required.

The Grain Line was originally constructed with some dual track. The land within the existing railway corridor is therefore wide enough to allow for dualling of the track and associated enhancement of the track bed and embankments without the need to acquire adjoining land. All of the original railway structures were also constructed with dual track in mind, but some of these will need enhancement to bring a dual track into service.

Hoo Junction to Cliffe

The section between Hoo Junction and Cliffe Junction is the most congested part of the branch line with interfaces to the main line at Hoo Junction and the private siding at Cliffe Junction.



Figure 32: Hoo Junction to Cliffe Junction overview

Figure 32 shows the dualling of the line from Hoo Junction to Cliffe Junction in schematic form showing the new line on the north side of the existing line except at Cliffe where the deviation is to the south

As noted above a section of dual track is required to enable incoming trains to clear the main line before they are brought to a halt. Because the line carries freight the required dual track runs as far as the canal road bridge.

To enable the freight services to continue to operate on the Cliffe branch, the line though to Cliffe also needs to be dualled. This will ensure the continued services from the quarry and keep HGV movements off the local roads.

To enable dual tracks to be installed the existing bridges will need to be improved to carry the tracks. These works will be carefully managed alongside the proposed works to level crossings to minimise agricultural and pedestrian disruption. The headroom under the bridges will not be reduced.

Cooling St

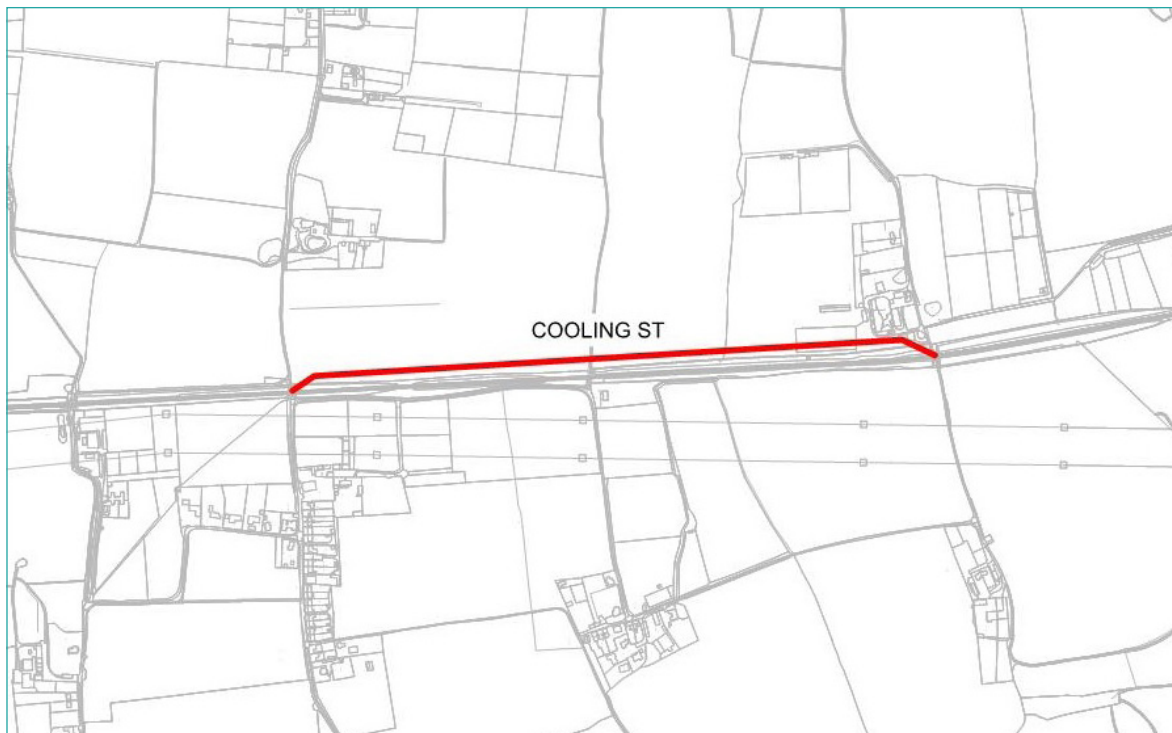


Figure 33: Passing loop at Cooling Street overview

Figure 33 shows in schematic form the dualling of approximately 1000m of line on the north side of the existing line at Cooling Street to create a passing place for trains.

To enable a frequent service to Sharnal Street the passenger trains will need to pass the existing freight services from the Isle of Grain terminal. The site of the former station at Cooling Street has been identified as the most likely location for this loop.

The site has been chosen because east of the proposed location the track rises steeply, and it would be impractical to start or stop a laden freight train on the steep gradient.

There are two small bridges that need to be improved. Currently they are wide enough to carry twin tracks but as they have been unused for a number of years some work will be required to bring them up to current standards prior to bringing them back into service. The headroom beneath the bridges will not be altered.

Construction

The track dualling will generally be undertaken from the existing line with materials obtained from Cliffe Junction and taken directly to site by road or rail.

Where the track bed needs to be widened locally sourced stone can be used and this would be brought in by rail.

The bridge improvements will need to be undertaken from off the track and may require small compounds at each bridge for local storage of materials and to provide site facilities.

It is expected that works to create the passing places will take six months to complete.

Construction traffic will be managed to limit the impact to local residents. It may be possible to the use of the existing freight line to bring in bulk materials.





SEMS Proposals

What SEMS is

SEMS stands for Strategic Environmental Management Scheme (SEMS).

What SEMS involves

Strategic = The aspiration for SEMS is to see the realisation of a continuous network of connected and well managed spaces – for people and for wildlife. Each parcel will be designed to maximise its biodiversity and landscape value and opportunities for both new and improved footpaths.

Environmental = It is all about the environment and more specifically, biodiversity. SEMS will be informed by the findings of the Cumulative Ecological Impact Assessment which will inform the Local Plan and the road and rail proposal, the Natural Character Area study (undertaken by Natural England) and stakeholder expertise and input. Landscape plans will be developed for each of the SEMS parcels which will suggest areas for the planting of trees, scrub and hedges, and the creation of new ponds and wildflower meadows. Together these will contribute to Medway's emerging Green and Blue Infrastructure network and initiatives such as the establishment of Local Nature Restoration Networks and Pollinator Plans.

Management = The SEMS will be actively managed to maximise the benefits for biodiversity alongside access and health and safety interests. SEMS will be wardened by up to three rangers who will operate across the entire SEMS area. They will lead on long term community engagement and site management and monitoring.

Scheme = As a scheme, SEMS will be planned and designed to address the in-direct impact of possible growth on the peninsula's protected habitats. This

impact could include disturbance to wintering, roosting and breeding wetland birds, as indirect impacts on breeding nightingales in the SSSI habitats located at Lodge Hill and Northward Hill.

Developing a draft vision for SEMS

SEMS will be supported by a vision to capture aspirations for landscape, biodiversity, access and long-term management and engagement. This consultation starts the process of defining a local vision that reflects the interests of current communities and path users. The vision will also be informed by the Hoo Development Framework Masterplan and the Hoo and the High Halstow Neighbourhood Plans.

To help thinking about the SEMS visions it is useful to look at the current concept proposal for the Cockham Community Parkland, which is an early part of the SEMS proposals. This has already been subject to consultation with residents of Hoo and other key stakeholders.

A draft vision that is under consideration for the SEMS (based on principles for Cockham Community Parkland) is as follows:

To deliver SEMS objectives through providing connected, new and accessible, public open spaces, which are accessed by local walkers and cyclists for their local journeys to the new train station, to community services, to schools, to work and to leisure services. The open spaces will complement other local initiatives such as Birdwise and the considerations of the High Halstow and the Hoo Neighbourhood Plans and the Local Plan. In northern areas, it will focus on open space and access that complements emerging development proposals and will have a strong focus on the management of land for nightingales. To the south it will be informed by coastal and estuary interests including the needs of wetland birds. Rather than a formal landscape, SEMS will deliver more of a rural landscape of meadows, woods and orchards. The new open spaces will provide recreation opportunities for informal play and picnicking. It will be managed by rangers and free to enter. A Green Bridge will be in place to aid safe access over the Peninsula Way

Figure 34 (below) shows photos of what the vision could look like in reality. This was developed for Cockham Community Parkland, which is part of the SEMS area and could start to be built on the ground from winter 2021/22.



Figure 34

Figure 34 is a diagram showing one central circle with the words Cockham Community Parkland. This is surrounded by eight other circles showing images of a meadow fields, people cycling, people walking, woodland, children playing, a group of people, a bush.

The SEMS vision will need to be supported by a set of what are called design principles. It is important to understand that SEMS is trying to create an accessible zone of open space that connects communities around Hoo and High Halstow; areas that will be great for wildlife and safe for walking and cycling.

This is very different to creating a single country park with its dedicated car park, toilet facilities and visitor centre. SEMS is about a landscape scale plan rather than one specific site. These principles, once developed, will be used to ensure that all of the SEMS areas share some common features.

Figure 35 sets out our ideas on how the new paths and fences built for SEMS could look, and how habitats will come forward.

Vision and Principles - Key Design Principles

Improve Access and Boundaries

- Provide definition to boundaries with fencing and natural barriers such as hedgerows.
- Link into surrounding rights of way (Saxon Shore Way).
- Facilitate access for the immediate community, encouraging walking and cycling but also providing parking spaces.
- Create an inclusive open space with pathways and gates suitable for use by a range of people including wheelchair users.
- Mark entrance points to give the sense of arrival.



Habitats

- Semi-natural landscape with a range of habitat types.
- Enhancement and expansion of woodland with extensive tree planting.
- Protect key habitats - Cockham Wood SSSI.
- Create new hedgerows and pockets of woodland to promote ecological connectivity.
- Establish expanses of species rich neutral grassland or 'hay meadows'.
- Create zones to enhance habitat for targeted fauna and flora species.
- Community orchard.



Figure 35

The designs for the Cockham Community Parkland are currently at a more advanced stage. The principles informing the landscape design of Cockham Community Parkland, as set out below, could be applicable to all SEMS sites.

Passive recreation

- Create walking routes for all, with space for dog walkers to roam free.
- Provide a range of circular walks to suit different abilities, linking back to key arrival points. At least one 2.5km walk.
- Encourage cycling including potentially creating more demanding off-road routes.



Facilities

- Create places for picnicking with tables and benches.
- Places for children to play through natural play facilities.
- Fitness trails blending with the natural landscape.
- Toilet facilities.



Figure 36

The key objectives for Cockham Community Parkland are to:

- 1 Create a substantial public open space of approximately 50 hectares.
- 2 Showcase the peninsula's landscapes.
- 3 Celebrate nature through nurturing existing habitats and creating new ones.
- 4 Provide users with an opportunity to further enjoy views across the River Medway.
- 5 Educate visitors about the importance of the estuary and the need to protect it.
- 6 Provide appropriate visitor facilities including extensive space for passive recreation including space for picnics, play and woodland trails.
- 7 Create a network of safe and attractive routes for dog walkers, walkers and cyclists.
- 8 Design in flexibility for additional visitor facilities to be added in the future such as a local visitor centre.

SEMS and how it links to the Local Plan

The SEMS scheme will contribute to our thinking on how future possible development on the peninsula could avoid, mitigate and compensate for its impact on the area's protected species and habitats.

It is noted also that the HIF road and rail infrastructures will both potentially impact on local ecology. The SEMS is an opportunity to address these impacts in a planned and coordinated approach. The rail and road schemes will be subject to an Environmental Impact Assessment to better understand the role that SEMS could play in mitigating those impacts.

It is important not to confuse SEMS with the delivery of formal outdoor sports and open space (e.g. parks, gardens, amenity, play, allotments and outdoor sport) as associated with any housing applications that may be brought forward on the peninsula. These open spaces are to be designed and delivered when development comes forward. Therefore, the interface between SEMS and any residential development open space provision will need considering to ensure they work together, that paths connect, and the spaces make sense.

When SEMS will be available for you to enjoy

There is still much work to do to plan SEMS. We have thoughts on where the SEMS is required and also the key wildlife habitats to be created but there is still much scope for stakeholder and landowner engagement in the development of the scheme.

As certainty grows, more detailed masterplans will be developed for the SEMS areas to show access routes, parking and landscape and habitat works and planning applications will be brought forward for them. This work will be developed over the next two years. The exception to this is the Cockham Community Parkland area of SEMS which has already been designed, subject to consultation, will be seeking planning permission in early 2021 with a view to starting work on the ground in winter 2021/22. All of the SEMS works will be completed by early 2024.

How any new recreational paths could be delivered

SEMS is keen to enhance and broaden the existing framework of recreational routes and Public Rights of Way (PROW) across the peninsula. We will be asking for input from community and user groups, in addition to stakeholders, to help us define the location and nature of new access routes, including opportunities for multi-user paths.

New access routes for walking and cycling:

SEMS is keen to deliver a new network of paths and cycle ways connecting residents to new and existing open spaces, and where appropriate to schools and other community facilities.

All new access routes delivered through the SEMS programme will be established initially as Permissive Routes rather than be fully adopted as dedicated rights of way. The reason for this is because we feel it is important to test the new access routes (i.e. are they in the right location) prior to establishing them as dedicated rights of way. Once established as dedicated paths then it is a much more complicated process to change their route.

We welcome input from path users and local stakeholders on the location, nature and surfacing of the new access routes. The Local Access Forum will be engaged in developing thinking about new routes.

Unlike the road and rail components of the HIF scheme, the majority of the SEMS components remain in the earlier stages of design and development. The design for the remaining phases of SEMS will be led by a SEMS Manager, who with input from this and other consultations and through working with landowners will complete the design of SEMS.





6 MANAGING ENVIRONMENTAL IMPACTS

Approach

Environmental considerations will underpin the design of each of the proposals. Opportunities to avoid environmental impacts are being explored and, wherever possible, options for embedding mitigation within our designs are being maximised

Environmental Impact Assessments (EIA) will be undertaken for the rail works and the highways works to assess the potential for significant environmental impacts to arise as a result of the proposed improvements. Each assessment will take account of the cumulative effects of the other project and other proposed developments. This EIA work will be informed by transport assessments which will consider the effects of the railway and highway works on the peninsula's transport network.

A Habitat Regulations Assessments (HRA) will also be undertaken to assess the potential impacts of the proposed highway and rail improvements to impact upon protected European sites, including Special Areas of Conservation (SAC), Special Protection Areas (SPA) and Ramsar sites. These European sites are protected under the Conservation of Habitats and Species Regulations 2017 and the HRA will assess the potential for the scheme to impact upon the integrity and conservation status of these sites.

The planning applications for the SEMS proposals will also be accompanied by environmental information about the likely impacts of the scheme.

Where the potential for significant environmental impacts is identified through the EIA and HRA processes, the assessments will identify measures to avoid or mitigate those impacts.

We will engage with statutory and non-statutory environmental groups in respect of assessment methodology used in these assessments and the development of mitigation measures.

Construction

The proposed highway and rail improvements have the potential to result in environmental impacts during the construction phase. Construction phase mitigation requirements will be identified through the EIA process and these will be captured within Construction Environmental Management Plans (CEMP).

The CEMP will describe the measures that will be taken during the construction phase and explain how this will be coordinated across the different interventions. The CEMP will provide details of the legislation and standards that construction activities will comply with and draw together the mitigation measures identified during the EIA process.

Designated sites

The Hoo Junction to Cliffe section of the railway track runs adjacent to a number of designated sites of importance to nature conservation including the South Thames Estuary and Marshes Site of Special Scientific Interest (SSSI), the Thames Estuary and Marshes Ramsar, and the Thames Estuary and Marshes Special Protection Areas (SPA). Potential impacts from constructing the passing loop in this location include disturbance to wintering bird species.

Steps will be taken to minimise impacts to these sites and will include landscape planting and careful timings of works to reduce construction disturbance to bird species.

Habitats

The ecological surveys have identified that some habitats including trees, woodland, improved grassland, arable land, marshy grassland, scrub and hawthorn hedgerow will need to be removed. Wherever possible, these impacts will be kept within the current railway corridor and provisions for habitat replacement and enhancement will be included within the scheme Landscape Plan.

The Application Site is overlapped by Chattenden Woods and Lodge Hill Site of Special Scientific Interest (SSSI). Chattenden Woods and Lodge Hill SSSI comprises a mosaic of habitats, including ancient and other long-established semi-natural woodland, scrub, and natural grassland.

The existing roads of Woodfield Way (Phase 1), Upchat Road (Phase 1/2) and Longchat Road (Phase 1) bisect the SSSI at its narrowest point between Chattenden (to the south) and Great Chattenden Woods and Cliffe Woods (to the north). No improvement works are currently planned outside of the existing highway boundary and there will be no substantive works to Woodfield Way (Phase 1) within the vicinity of the SSSI area.

Tower Hill to Cockham Wood SSSI is also located approximately 0.4km to the south of Four Elms Hill (within Phase 2 of the project). This SSSI has been designated because it is of both biological and geological interest, containing woodland representative of that on tertiary deposits in Kent and supports a rich insect fauna.

No removal of trees from these SSSI or ancient woodland is currently anticipated. Nevertheless, there is the potential for indirect impacts to the habitat within the Chattenden Woods and Lodge Hill SSSI, as a result of the proposed scheme. We will work closely with Natural England to understand the potential for disturbance and noise impacts to the nationally important nightingale population and other habitats and species, and to ensure that appropriate mitigation measures are put in place.

Other statutory designations for nature conservation within the wider area include:

- Dalham Farm SSSI – approximately 1.4km north-west of Phase 4;
- Medway Estuary and Marshes SSSI, Special Protection Area (SPA) and Ramsar Site – approximately 1.2km to the south of Phase 2 and 1.5km to the south of Phase 4;
- Northward Hill National Nature Reserve (NNR)– approximately 1.6km north-west of Phase 4;
- Medway Estuary Marine Conservation Zone (MCZ) – approximately 650m to the south of Phase 2;
- Northward Hill (RSPB Reserve) – approximately 1.5km to the north-west of Phase 4; and
- North Kent Marshes Environmentally Sensitive Area – approximately 1.7km to the north of Phase 4.

Given their distance, the potential impacts upon these designations are currently thought to be unlikely, although this will be confirmed through ecological assessment work.

We have carried out several surveys to determine which protected animal species could be affected by the scheme. The presence of badgers, bats, great crested newts, nesting and wintering birds, reptiles and water voles have been identified within the scheme extents.

Additional/updated surveys to establish the numbers of protected animal species will be carried out prior to the start of construction, so arrangements/mitigations can be made to find new habitats for them so that they are not affected by the work.

A precautionary approach to any vegetation clearance in respect to breeding birds, hazel dormice, bats, and badgers will be implemented to minimise any adverse impacts on these species' groups.

Protected species

Protected species surveys have identified the presence of badgers, bats, great crested newts, nesting and wintering birds, reptiles and water voles within the scheme footprint.

Badgers are active along much of the existing track and have been identified using the embankments for foraging and building their setts. Construction methods will be put in place to ensure no harm is caused to badgers and further impacts, where identified, will be outlined following finalised design plans.

Construction lighting and additional lighting from the new station has the potential to impact on light sensitive bat species. Steps to minimise these impacts will include careful use of lighting and landscape planting to maintain or create flight lines for foraging bats. Enhancement for bats will be included within the new station such as landscape planting to reduce light spill and integrated bat boxes.

Great crested newts have been identified within ponds close to both sets of passing loops and the proposed curve. The project will work closely with Natural England to obtain a District Level Licence to reduce impacts and provide landscape level mitigation for this protected species.

Nesting bird impacts will be avoided through careful timing of vegetation clearance and the installation of temporary bird boxes during the construction phase, along with permanent features to provide enhancement for nesting birds such as native landscape planting and bird boxes.

Reptile species including grass snake and common lizard have been recorded nearby to both passing loop locations and the proposed curve and therefore steps will be taken during construction to avoid impacts to these species.

Water voles have been identified in the wet ditches within the site boundary. Steps to ensure that disturbance is minimised will be outlined within the Construction Environmental Management Plan which will be produced for entire scheme.

Air quality and noise

The proposed highway and rail improvements have the potential to result in changes in air quality, noise and vibration. As part of the EIA, the design team will investigate the potential for this to result in adverse effects upon human health and upon sensitive habitats, designated sites and protected species within close proximity to the scheme.

The EIA process will assess the potential for temporary changes as a result of planned construction activities and the need for mitigation. This includes the generation of construction dust, increases in vehicle emissions from construction machinery, the potential for increases in noise and vibration from construction activities, such as excavation and piling.

The EIA process will also consider the potential for the planned infrastructure improvements to result in changes to air quality, noise and vibration once they are in operation. This will include impacts associated with changes in the volumes, speed and distribution of rail and highways traffic.

Climate change

The EIA will include an assessment of climate change impacts resulting from the proposed highway and rail improvements. This assessment will include a Greenhouse Gas Assessment which will consider the emission of greenhouse gases emissions from the construction and operation of the schemes. As noted above, this will include an appropriate level of cumulative assessment.

The EIA will also include a Climate Resilience Assessment, which will consider the resilience of the proposed infrastructure improvements in line with future climatic conditions, including changes in wind, precipitation, temperature, sea levels and soil composition.

Landscape and visual effects

Through the EIA process we will consider the Landscape and Visual Effects of the proposed highway and rail improvements. This will include temporary effects that could be experienced during the construction phase and changes that could be experienced during the operation phase of the scheme.

The assessment will consider change to land use, along with the potential for the loss of landscape features that could impact upon the landscape character and could result in adverse effects upon visual receptors, including local residents public rights of way, public open spaces, recreational areas and commercial properties.

Historic environment

The EIA will consider the potential for the proposed highway and rail improvements to result in the impacts upon known heritage assets during both the construction and operation, including scheduled ancient monuments, listed buildings, non-designated assets and historic landscapes. The assessment will consider the potential for direct effects upon these assets as well as the potential for adverse impacts upon their setting.

The EIA will also consider the disturbance or loss of unknown below-ground archaeological remains.

Water environment

The EIA will consider the construction and operational impacts of the proposed infrastructure improvements upon surface waters and ground water resources. Parts of the scheme are located within areas susceptible to flooding, therefore a flood risk assessment will be undertaken to inform the scheme design.

Population and health

The proposed rail and highway infrastructure improvements are located in both urban and rural settings.

The EIA will evaluate the potential for the proposed infrastructure improvements to impact upon land use, private assets, local services, non-motorised users and whether they would result in changes to driver stress, community severance and public transport, during both the construction and operation phases.

Contaminated land

Environmental assessments will assess the potential for the proposed scheme to result in potential pathways whereby contaminants/pollutants could have an impact on sensitive receptors, such as:

- human beings
- watercourses
- aquifers
- designated and non-designated sites, such as Canal and Grazing Marsh, Higham LWS and London Area Greenbelt land, amongst others
- aquatic habitats, including those associated with the Thames Estuary and Marshes Ramsar Site and SPA, and South Thames Estuary and Marshes SSSI
- terrestrial habitats and protected species.

This includes potential impacts associated with former asbestos works that are known to exist within/adjacent to the proposed scheme footprint.





7 Property and landowners

Medway will need to acquire land and rights from private landowners that is required for the project.

Land will also be required for surveys, construction works, including drainage, mitigation, access, maintenance access, utilities diversions and temporary compounds. Where possible and where the land is required only for a temporary use, we will seek to return land to the original landowners.

- Overall approach - we are keen to understand the impact of the scheme on land to ensure effects can be minimised if possible.

We will engage with landowners at the earliest opportunity to understand the impact of our proposals and work together to help minimise these impacts. We will be transparent and open with affected landowners to enable as smooth a process as possible.

- Encourage land interests to engage with the council's appointed land agents BNP Paribas.

It is our objective to seek to acquire these plots by negotiation and work with landowners to ensure any impact on property and land is minimised, however compulsory acquisition powers will be sought to ensure the proposals are able to be delivered, if voluntary agreements are not possible.

BNP Paribas are acting on behalf of the council to acquire land interests required for the scheme.

If you have any queries, please contact Grace Hicks BSc (Hons) MRICS FAAV on 07920 813286 or Alice Stephens BSc (Hons) on 07557 16681.





8 GET INVOLVED

- We would like to hear your views on the proposals and this important opportunity for Hoo.
- To find out more visit: medway.gov.uk/futurehoo or email: futurehoo@medway.gov.uk
- We will publish the results of this initial engagement process spring 2021. As the schemes move forward through their specific planning procedures there will be more opportunities to be involved and provide your feedback.