



Stafford Area Improvements Norton Bridge Railway Junction

Preliminary Environmental Report Non Technical Summary

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Notice

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Introduction

This Non Technical Summary has been prepared by Atkins for Network Rail in order to aid in the consultation process for a new railway junction at Norton Bridge in Staffordshire. This report provides a brief summary of the Preliminary Environmental Report (PER - Report Reference WW1690-ATK-EN-REP-000002).

Norton Bridge is located approximately five kilometres to the north west of Stafford as shown in Figure 1 below.

Figure 1 – Location of the Scheme

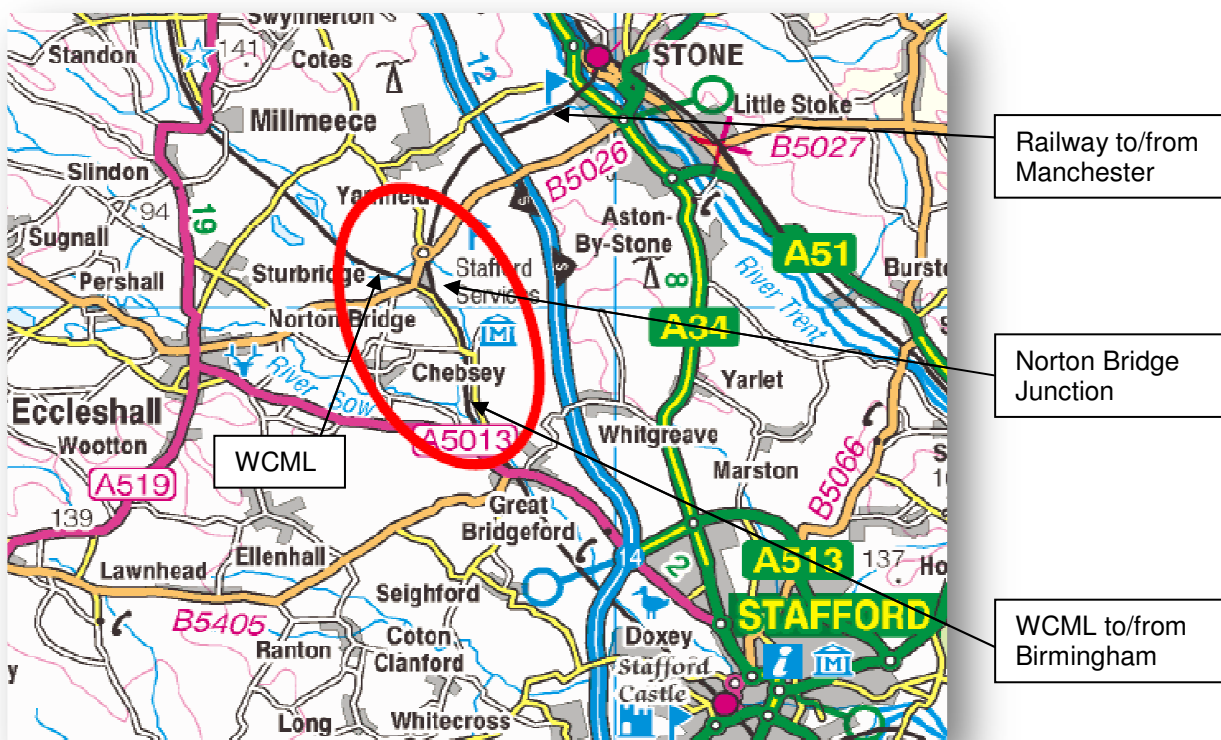


Figure 1 Contains Ordnance Survey data © Crown copyright and database rights 2010

Need for the Scheme

Norton Bridge Junction is a critical junction where trains on the London-Liverpool axis meet trains on the Birmingham-Manchester axis. The current 'flat' junction reduces train speeds and restricts capacity and journey times. Delays caused at Norton Bridge spread to other parts of the network, reducing the performance of train services over a much wider area.

Options Considered

The scheme is still at an early stage but following some early review work three potential options are under detailed consideration. All three options achieve the scheme objectives, which are to overcome delays currently caused by the existing track layout at the junction. During the early part of 2010, other possible options in the Norton Bridge area were discarded, either because they did not meet the appropriate specifications or failed to deliver an enhanced timetable. Options A, B and C – now being consulted on – are the three options that survived this earlier internal scrutiny. All three options include a flyover that takes Birmingham – Manchester traffic over the existing West Coast Main Line (WCML).

Summary of Potential Environmental Effects

Atkins has been commissioned to carry out a desk based study in order to identify the preliminary environmental impacts associated with the three options from the emerging Norton Bridge Junction project. This report has been produced in order to aid the consultation process as part of the future Infrastructure Planning Commission application and production of an Environmental Statement.

The desk based study includes a review of the report produced by Ove Arup and Partners Ltd, a Landmark Envirocheck Report as well as available web based information from the Environment Agency, Multi Agency Geographical Information for the Countryside, Staffordshire County Council, Stafford Borough Council, Heritage Gateway and Natural England.

Consultation has also been undertaken with the Environment Agency, Natural England, Staffordshire County Council and Stafford Borough Council. Further information on the outcome of the consultations is given below. Additional consultation with statutory authorities as well as the public is planned throughout the project.

The three potential alignments (A, B and C) are located 5km north west of Stafford, at the junction of the West Coast Main Line (WCML) with the Stone Branch Line. A general location plan is included in Appendix A to the PER. The southern end of these alignments extend to just south of Little Bridgeford to the north of the Eccleshall Road; the northern end extends up to just south of the road to Lower Heamies farm. On the Stone Branch the alignments extend to just north of where a tributary of the Meece Brook crosses beneath the track. From south to north the alignments are all to the west of the WCML until Shallowford where alignment C crosses the WCML and runs approximately 250m east of the WCML before joining the Stone branch.

The surrounding area is mainly agricultural land with occasional scattered farm holdings. The main residential areas include Little Bridgeford to the south of the site, Shallowford and Norton Bridge towards the centre of the site and Chebsey approximately 800m west of the site. The River Sow flows north west to south east at the southern end of the site. The Meece Brook flows east across the northern extent of the site, crossing both the WCML and the Stone Branch, before meandering and flowing south on the eastern side of the WCML to Shallowford where it flows under the track and joins the River Sow. Numerous ponds are also present along the length of the proposed alignments.

A plan of the three possible alignments and the environmental constraints identified from the desk study is included in Appendix B to the PER. A summary of the environmental impacts for the scheme is included below.

Traffic and Transportation

The proposed works would have temporary negative impacts on traffic whilst the construction works are undertaken. Some road lowering or raising may be required for the bridges as well as temporary road widening to accommodate construction traffic. In general the increase in construction traffic is likely to have a negative impact on local roads and communities as a number of both heavy goods vehicles (HGVs) and light goods vehicles (LGVs) will be required to bring materials and workers to site. The number of vehicles will depend on the quantity of cut and fill needed for each alignment and the amount of material that is suitable for reuse on site. For alignment A there is potential for the majority of the cut material to be used as fill which would reduce the amount of lorry loads required. Network Rail is investigating the prospects of using rail for the movement of materials which could reduce the number lorries travelling on the local road network.

Air Quality

The proposed alignments are not within an Air Quality Management Area. The rail traffic is mainly electric, which will remain unchanged and therefore will not impact on local air quality. The construction compounds may be located within 150m of properties. There is potential for dust and fumes from plant and equipment

during construction to affect properties close to the compound areas. Other close by sensitive receptors along the alignment may also be impacted by construction. Measures to reduce such impacts will be fully investigated as the scheme progresses.

Noise and Vibration

The proposed alignments pass through largely rural areas. Alignment A passes close to occasional scattered farm holdings, but does not pass close to large populated areas. Alignment B passes close to Norton Bridge and alignment C passes close to Shallowford. All three alignments pass within 300m of a number of sensitive receptors which are mainly residential properties. The new alignments may have a negative impact on these properties both during construction and operation. A number of these properties are already within 50m of the WCML and may be less likely to be exposed to significant increases in noise from the new alignments. In addition, alignment C to the north is in deep cutting which could provide some noise screening. Subject to the findings of the EIA, possible mitigation measures will be explored to help minimise the impacts of the scheme.

Ecology

There are no ecological sites protected by UK or international law within 2km of any of the proposed alignments. Alignment A and B cross the Meece Brook Site of Biological Importance (SBI), part of Yelds Rough SBI, the River Sow and part of the associated Floodplain Grazing Marsh Biodiversity Action Plan (BAP) Habitat. They also intersect a number of ponds and hedgerows. Alignment C crosses the undetermined Grassland BAP habitat within the Meece Brook flood plain, the Meece Brook SBI and alongside the River Sow Floodplain Grazing Marsh BAP habitat. It also may affect a small number of hedgerows along the route. All three alignments would have a negative impact on ecology.

There is also potential for a number of legally protected species to be affected by each of the alignments, temporary compound areas and haul roads. Mitigation will be informed by field surveys and could involve the creation of new habitats elsewhere.

Landscape and visual

The proposed alignments do not impact on any nationally designated landscape sites. The landscape character in the area of the new alignment is settled farmlands (both mixed arable and pastoral). The proposed alignment could have a negative impact on the landscape character by the introduction of incongruous landscape elements and the loss of semi natural vegetation especially on the western edge of Yelds Rough in alignment A.

There are a number of residential properties that could experience negative impacts on visual amenity as a result of the proposed alignment. The proposed alignment A is in deep cutting along a large length. Planting and landscaping will be considered during the design to help minimise the impact of the scheme.

Hydrology, Hydrogeology and Flood Risk

The proposed alignments cross the River Sow, Meece Brook and Meece Brook Tributary and also occupy land which is within a floodplain (Flood Zone 3) and are therefore at high risk of flooding. In addition, depending on the extent of the temporary compound areas, some of these may also infringe on Flood Zone 3.

The floodplain retains water during an extreme flood event. If this land were developed for the new track alignment, flood compensation would have to be provided to avoid an increased flood risk elsewhere.

All three alignments are located on areas with groundwater storage capacity. Therefore, there is potential for foundations of bridges and retaining structures to impact on local groundwater flow. Construction may also impact both the surface water and the groundwater from runoff from stockpiled materials or spillages of oils and fuel from plant and equipment.

For alignments A and B there is potential benefit for the proposed embankment to provide flood water storage to manage flood risk downstream. For alignment C instead of providing multiple river crossings and compensatory floodplain storage, a new route of Meece Brook is proposed away from alignment C ensuring

sufficient space for floodplain storage. The alignments are designed to reduce, as far as possible, the numbers of structures within the floodplain.

Heritage

The proposed alignments pass within 250m of Grade II Listed Buildings. Other Listed Buildings are present within 500m of the alignments. These Listed Buildings are not directly impacted by the scheme but the proposed alignments may have a negative impact on their setting. They are all in the vicinity of the WCML and therefore this may decrease the impact.

There are a number of archaeological sites within the vicinity of the proposed alignments. Due to the high frequency of archaeological sites near the site there is potential for unknown archaeological remains to be present in other locations. This will need to be investigated further at single option development stage and appropriate mitigation recommended.

Ground Conditions

The proposed alignments pass mainly through agricultural land but there are potentially contaminated sites which could be affected by the scheme. For alignment A these include a former opencast mineral site (marl pit) and a further former mineral site and a landfill site. For alignment B these include an open-cast mineral site (marl pit), a further mineral site, two landfill sites and a former fuel station. For alignment C this includes an opencast mineral site (marl pit).

There is potential for foundations from the bridges or retaining structures to disturb this potentially contaminated land and impact on sensitive receptors (e.g groundwater). Mitigation measures will depend on further detailed investigations.

Materials and Waste

If a large amount of excavated material is suitable for reuse it will minimise the quantity of new materials that will need importing to site. This would reduce the carbon footprint of the construction as less new material will be required as well as fewer lorry loads required to transport the material to site. In addition if less waste is generated this will also reduce the negative impact as less material will be sent to landfill.

Alignment A involves a deep cutting so a large amount of material will need to be excavated. A similar amount of material is required for the construction of the embankment. If all the material from the cut was reused for the fill this would result in a total of approximately 65,200m³ of material which would require exporting from site. Alignments B and C have a minimal volume of cut compared to the fill required. If all the material from the cut was reused for the fill this would result in a total of approximately 253,000m³ of material which would require importing to site as fill for alignment B and 294,000m³ of material which would require importing to site as fill for alignment C.

Potential Design, Construction and Operation Mitigation

Consistent with Network Rail's sustainability policy, all the impacts identified in this report will be taken into account in the design and options selection process. Environmental design management is an important element of sustainable construction and will help ensure the environmental impacts are taken into account at design stage and that sustainability measures are identified and used to enhance the sustainability performance of the project. As explained under the various sections, Network Rail will seek to reduce the environmental impacts of the scheme as much as possible.