

Non-Technical Summary

March 2021



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Report for – Rother Valley Railway Limited Rother Valley Railway Track Reinstatement Project Non-Technical Summary -2021 Final



Document Version Control

Version	Date	Author	Reviewed by	Reviewed and approved by
1.0	16/05/2014	Tess Murray Emma Devenport		Peter George
2.0	29/5/2014	Tess Murray Emma Devenport		Peter George
3.0	5/3/2021	Robert Slatcher	Victoria Hoskins	Andy Mayes

Report for: **David Gillet**
Rother Valley Railway Ltd.

Main Contributors: **Robert Slatcher**

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Overview

This Scheme would comprise the reinstatement of approximately 3.4km of the former Kent and East Sussex Railway between the B2244 Junction Road and Northbridge Street, Robertsbridge.

An Environmental Impact Assessment (EIA) was originally undertaken in support of a planning application for the Scheme to Rother District Council under the Town and Country Planning Act in 2014. The planning application was granted in March 2017 (RR/2014/1608/P) subject to a number of conditions.

Following planning approval it is necessary for schemes of this type to seek a further permission under the Transport and Works Act. An application under that act was made in 2018 with the Environmental Statement and an Addendum submitted along with other supporting information. The Transport and Works Act Order will provide statutory authority for the railway as a whole, including sections already built (for example the section between Robertsbridge Station and Northbridge Street). It would also authorise the three highway crossings and the temporary and permanent acquisition of land required for the construction and operation of the Proposed Scheme.

Due to the length of time since the initial EIA work was undertaken it has been necessary to revisit the assessment to ensure the findings are still valid. This Non-Technical Summary (NTS) supersedes the original NTS that formed Volume 1 of the 2014 Environmental Statement.

1.0 Introduction

1.1 Purpose of this Document

This NTS summarises the key findings of the assessment of likely significant environmental effects, both beneficial and adverse, of the Rother Valley Railway Track Reinstatement Project (hereafter referred to as “the Scheme”) and the proposed mitigation measures to reduce those effects as far as practicable.

The Scheme comprises the reconstruction of a section of the former Kent and East Sussex Railway (KESR) in order to reinstate the historic link between the main line railway network and the currently restored and operating KESR. Completion of the link will allow visitors to access the railway by rail as an alternative to road which is the only way at present. The main line rail connection will also provide operational flexibility for the railway in relation to the delivery of materials and rolling stock via the railway instead of by road. A consequence of the provision of the main line rail connection is the improved connectivity for inward tourism to the area and this is predicted to generate local jobs in the tourism sector and estimated local economic benefits of c.£17 million over a twelve year period.

1.2 EIA Scoping and Methodology

EIA is a process to identify the likely environmental impacts and effects of development projects. Undertaking an EIA is required under European and UK law for projects of a certain scale or those likely to result in adverse environmental effects.

An ES has been prepared to support an application under the Transport and Works Act 1992, on behalf of Rother Valley Railway Ltd (RVR) and submitted to the Department of Transport.

The ES has been prepared based on the topic assessments agreed with both Rother District Council and the Department for Transport (DfT). A suite of documents that form the environmental appraisal of the project have been produced since 2014 (as shown below), this document summarises the findings of those documents.

2021	Environmental Statement 2021 Update Report Non-Technical Summary - 2021
2020	
2019	
2018	Air Quality Statement
2017	Environmental Statement Addendum- 2017
2016	Environmental Statement Addendum- 2016
2015	
2014	Environmental Statement

1.3 Site Description

The Proposed Scheme is located south of the village of Salehurst between Northbridge Street, Robertsbridge and Junction Road near Bodiam in East Sussex. The entire line of route lies within the High Weald Area of Outstanding Natural Beauty (AONB).

The surrounding area is predominately a mixture of arable and pastoral agricultural land, with areas of woodland to the south of the proposed route. Residential areas within the vicinity of the scheme include the villages of Salehurst and Robertsbridge, which are all located at the western end of the Scheme and Bodiam to the east.

The site includes one main watercourse, the River Rother, which runs broadly parallel with the proposed route, and is crossed by the proposed railway at two locations (see Figure 1).

1.4 Scheme Description

The Scheme comprises the construction of approximately 3.4km of single track railway line on the alignment of the former railway between Northbridge Street, Robertsbridge and the B2244 Junction Road near Bodiam. The section of track is the “missing link” that will enable trains on the KESR to run the full distance between Tenterden in Kent to Robertsbridge in East Sussex. Approximately 2km of the former railway corridor in this area is still largely intact, with the remainder of the route having been reclaimed as agricultural land. An approximately 450m section of the alignment from Junction Road west to the crossing of the River Rother at Austens Bridge has already been cleared and track bed works commenced in 2019.

In addition to the reconstructed railway line, there would also be additional associated works required including three level-crossings on Northbridge Street (Figure 1 – Point A), the A21 (Figure 1- Point B) and the B2244 Junction Road (Figure 1 - Point C), one footpath and one combined footpath and bridleway crossing, two new bridge crossings of watercourses (Figure 1 – Points D and E) and operational track infrastructure, such as signalling.

Figure 1: Scheme overview



A new halt (Figure 1- Point F), which is a minor stopping place, is proposed to be built alongside the railway which would serve the village of Salehurst. There will also be a short section of double track railway that would serve as a passing point for trains travelling in opposite directions, this would be located adjacent west of the B2244 (as shown in Figure 1).

Photo 1 – Looking south east from Church Lane, Robertsbridge towards the proposed alignment



1.5 Alternatives Considered

The EIA is required to assess alternatives to the proposed Scheme where these have been considered. In this instance, the aspiration of RVR has always been to reinstate the former railway alignment and, as such, options for the location and proposed alignment are limited. However, alternatives to level-crossings have been considered. The investigation of crossing options identified that, for a range of technical reasons, a level-crossing presented the most practical solution. Constraints to alternative solutions included:

The creation of steep track gradients either side of the road that would be unacceptable from a safety perspective if the railway were to pass over or under the road;

Passing beneath the road would result in the railway being below the adjacent river level and therefore prone to frequent and significant flooding of the railway. In addition, flooding of the railway would lead to a deposit of silt and the collection of debris along the railway line which would require removal prior to the line re-opening and could cause train safety risks; and

Options to raise or lower the railway in order to separate it from the roads would require significant embankments or cuttings which would have a detrimental impact upon the local landscape, create unacceptable gradients for the track from a safety perspective and would require additional permanent land take. Raising the track would also require extensive construction works to widen existing bridges and culverts.

The 'Do nothing' option would be to leave the railway split into two parts: the main operational railway forming the existing KESR between Tenterden in Kent to just west of Bodiam, and the short section of line from Robertsbridge station to Northbridge Street. The latter has been constructed in the full expectation of completing the reinstatement of the final section of line and will house a carriage shed and stabling for rolling stock. It will also provide a key connection to the mainline rail network which will enable visiting locomotives and rolling stock and materials to be brought directly to the railway rather than by road which can be a complicated and expensive process. As such, without the final section of line the Robertsbridge station would not be viable. Consequently, the 'Do nothing' is not considered to be conducive to the railway's passenger and tourism growth plans.

1.6 Limitations

A number of limitations have influenced the EIA including the availability of data and other information to support the assessments. The limitations fall under three broad categories:

- Access;
- Design detail; and
- Construction detail.

At the time of the original 2014 ES access to third party land on which the Scheme is proposed had been withheld. As such access to the site, particularly for survey work, was restricted to public rights of way only. This presented significant constraints primarily on noise and vibration, ecology, archaeology and cultural heritage and landscape and visual impact studies. As such, a number of assumptions had to be made to ensure a robust assessment could be undertaken and these are addressed under the relevant topics.

The Scheme is a reinstatement of a former section of railway line and when built, will closely replicate what was originally present on the site. As such, the level of design available at present is sufficient to determine all likely significant effects, given that significant sections of the original corridor and embankment are still in-situ.

The detail of construction has not been finalised. All construction information is indicative although largely based on standard construction methods. In order to accommodate this the assessments have sought to consider a worst case scenario for construction related effects to ensure that should any aspect of the construction methodology alter it would not result in an impact greater than that assessed within the ES.

Photo 2 – View of existing section of Track at junction with The Clappers, Robertsbridge



1.7 Consultation

Over the course of the many years, RVR has engaged in a programme of consultation with key businesses, community groups, statutory and non-statutory bodies, and members of the public to disseminate information about the proposed reinstatement of the railway and the benefits it will bring to both the local economy and the wider area. This has included one to one meetings with individuals, presentations to a wide range of groups including the District Council, the three parish councils and holding events at the Robertsbridge Station site to raise awareness and answer questions from the general public.

In preparing the Environmental Statement, other organisations were consulted in order to agree details about the assessment methods employed and to obtain information to better understand the existing baseline environmental conditions in the area. Scoping Opinions were also received from Rother District Council (2013) and the Department for Transport (2017).

Of particular note is on-going consultation with the Environment Agency in relation to updates to the Flood Risk Assessment, Natural England in relation to ecology licences required for works between the B2244 and Austens Bridge and Highways England in relation to the level-crossing on the A21.

2.0 The Proposed Scheme

2.1 Proposed Construction Methodology

The Scheme would be constructed over an estimated 24 month period, commencing in January 2023 (subject to obtaining the necessary consents). Materials would be brought to site by road. There would be three primary temporary access points to the site from the highway network; one at Junction Road B2244 and two off the A21 (east and west side), which have been agreed with Highways England. A secondary access point would be from Church Lane north of the site and would be used to facilitate the construction of a bridge over a watercourse (Bridge shown at point E in Figure 1).

An internal haul road would be constructed on the former track alignment. Parking for construction staff would be provided at the existing RVR compound at Robertsbridge site next to the Robertsbridge train station and at the compound located adjacent to the Junction Road B2244 site access point.

Construction would be carried out during the day, however some night-time work may be required in relation to the construction of the level-crossings in order to minimise the impact on the highway network.

Table 3.1 shows the indicative construction programme for the Scheme. Typical construction activities would include:

- Enabling works (site preparation);
- Earthworks (embankment construction);
- Structures (construction of bridges and culverts);
- Level-crossing construction; and
- Installation of rails and signalling.

Table 2.1 Outline Construction Programme (Subject to the timely granting of the necessary consents)

Date	Activity
January / February 2023	Establish Site compound and access points
April / July 2023	Construction of bridge 12
April / July 2023	Construction of bridge 6
August 2023	Start of embankment earthworks
November 2023	Start of culvert construction
December 2023 / February 2024	Creation of track sub-base for use as haul route
March / June 2024	Ballasting
July 2024	Junction Road level-crossing construction
August / November 2024	Installation of signalling equipment
August / November 2024	Installation of track
September 2024	Bridleway level-crossing construction
October 2024	A21 level-crossing construction

2.2 Land Use Requirements

The Proposed Scheme will require approximately 6.3 hectares (ha) of permanent landtake. Approximately 3.4 ha of the land required (54% of the total area required) consists of the former railway corridor, which has remained largely intact since the line was decommissioned.

An additional approximately 1.3 ha will be required on a temporary basis in order to facilitate construction.

2.3 Construction Management

The construction works would be managed through a Construction Environmental Management Plan (CEMP), which is a planning condition attached to the Town and Country Planning permission from 2017.

The CEMP would be developed by the construction project manager or contractor in more detail prior to construction, as more detail of the construction process is finalised and mitigation measures can be made more specific to the activities to be undertaken.

2.4 Scheme Operation

It is the intention of the Kent and East Sussex Railway that the pattern of service will remain in line with that currently provided.

The current level of service varies significantly across the year (the railway would operate on a single day in January; but in the peak month of August the railway would operate every day). The number of operational days varies from year to year (there were 180 timetabled days in 2019 and prior to Covid restrictions 162 timetabled days in 2020).

In general, between April and October, on days when the railway is operational, there would be five return journeys each day. Exceptions to this are occasions when there would be eight return services a day, which are limited in number and usually coincide with, but not limited to, bank holiday weekends.

3.0 Environmental effects

3.1 Introduction

This section describes the impacts that have been identified and assessed as part of the EIA. The likely significant effects that are predicted would result from both the construction and operational phases of the Scheme.

A description of the measures to be implemented in order to avoid or reduce significant effects are provided in the summary for each discipline area. An impact summary table is provided at the end of this section.

3.2 Noise and Vibration

Noise and vibration levels could increase during construction due to an increase in vehicle traffic on local highways and as a result of construction activities. Operational noise and vibration levels could increase due to the reintroduction of train services on the reinstated section of track.

Noise levels around the site have been measured to understand the current conditions in and around the Scheme. Assessment methods were then used to predict the levels of noise generated by construction and the operation of the Scheme and the potential effects on sensitive locations, including local residents.

Construction Effects

The assessment has concluded that there would be no significant off-site noise effects from construction traffic.

The assessment has identified that there will be some temporary construction noise experienced at local residential properties.

A range of measures to reduce noise levels beyond those predicted in the assessment would be delivered through the implementation of the CEMP. These measures will include:

- the selection and use of well-maintained low noise equipment and methods of working and screening of construction works where necessary;
- the proper maintenance of plant and equipment;
- the avoidance of unnecessary revving of engines and percussive piling as far as possible in noise sensitive areas;
- turning off of equipment when not in use; and
- the use of screening e.g. noise barriers and blinds where appropriate.

With these mitigation measures in place, the residual adverse effects are likely to be **minor to moderate adverse** during peak construction activities. However, this would be for very brief periods of time and the effect will be reduced when works are occurring further away from the receptor locations.

Following mitigation, negligible effects are predicted in respect of vibration at the nearest residential properties during the construction phase.

Operational Effects

The operation of the railway is not predicted to result in any significant noise and vibration effects, as such no mitigation measures are considered necessary.

3.3 Air Quality

Air quality effects could occur during construction from road vehicle and equipment emissions, and the generation of dust from the construction of new embankment, stockpiling of soils and excavations for the foundations of new bridge structures.

The assessment has used existing local air quality data to predict the potential change from the construction and operation of the Scheme. No baseline monitoring has been undertaken, as this was not considered necessary, and was agreed with the Environmental Health Officer of Rother District Council.

Construction Effects

Traffic generation over the entire construction period will be very small (around 450 HGV vehicle movements) and which is well below the threshold of 200 additional daily HGV movements above which potential air quality impacts are considered likely to occur. Construction traffic would therefore have no significant effect on local air quality.

There would be potential for the generation of dust, which can be a nuisance, during the construction phase, including from the construction of the new embankment and excavations for the foundation of new bridge structures. Best practice measures would be used on site to reduce the risk of nuisance impacts, such as minimising exposed earthwork surfaces and material stockpiles and dampening down areas during dry periods. If necessary, wheel wash facilities will be provided at site entrances to prevent soil and mud being deposited on the road network.

Operational Effects

As with construction traffic, the number of vehicles resulting from the operation of the railway once opened will be very small and well below the threshold of 1,000 additional daily vehicle movements above which potential air quality impacts are considered likely to occur.

Vehicle traffic emission associated with queuing vehicle at the proposed level-crossings on Northbridge Street, the A21 and B2244 were assessed. The assessment concluded that increased emissions would have a negligible impact.

The potential impacts on air quality from the operation of steam and diesel engines was also considered. The assessment concluded that the operation of the trains would have a negligible impact.

3.4 Landscape and Visual

The landscape assessment has considered the existing quality of the landscape within which the Scheme is located and the potential change to the quality of the landscape as a result of the construction and operation of the Scheme. This includes the potential beneficial effects from the

historic value of the restored railway. The assessment has also considered the visual effects of the Scheme on the views of nearby residential properties and historic structures.

A further key consideration of the assessment is the potential landscape and visual effects of the Scheme on the landscape character and natural beauty of the High Weald Area of Outstanding Natural Beauty.

Construction Effects

The construction phase of the Scheme is predicted to have significant effects on several viewpoints along the dismantled railway. In particular, visual effects are broadly more notable towards the western end of the route where there are more properties in Robertsbridge, Northbridge Street and Salehurst. However, the visual effects of the construction would be temporary in nature.

Operational Effects

The assessment of permanent operational effects on landscape character concluded that the Proposed Scheme would not be significant. The existing landscape has clear existing references to the former railway (e.g. vegetated embankments, bridges etc) and the operational Kent and East Sussex Railway.

During the operational phase, visual impacts will come from the presence of the completed scheme in the landscape. As with the construction phase, visual effects are broadly more notable towards the western end of the Scheme where there are more properties. There is the potential for the Scheme to give rise to significant negative visual effects. These would probably only be experienced along Church Lane looking south at certain points, and only by the highest sensitivity receptors.

It is proposed to plant trees and hedgerows along the railway line as mitigation for landscape impacts. This will be done in close collaboration with the ecology mitigation works. However, despite the planting, it is predicted that landscape impacts will remain and these are considered a residual significant effect, although the level of impact will reduce over time as planting develops and the Scheme blends into the landscape.

3.5 Ecology and Nature Conservation

The ecology assessment has considered the temporary construction and longer-term operational effects on ecological resources. Desk studies and limited field surveys have established the general ecological characteristics of the site, as well as the presence of protected species.

For this project, no direct land access was granted for the 3.4km route for the initial Phase 1 habitat survey or was permitted in order to carry out any Phase 2 protected species surveys. Therefore, the assessment has been based primarily on a desk-based review of publicly available data, observations made from public footpaths and roads, and professional judgement on the likelihood of habitats and protected species being present on the site. On the basis of this review, and by employing a 'precautionary approach' to the assessment which assumes the presence (as opposed to absence) of protected species that could logically be present, it has been assumed that great crested newts, reptiles, birds, bats, dormice, water vole, otter and badgers are likely to be present on the site. The assessment has considered the potential impacts on these species, in larger rather than smaller populations, and the necessity for mitigation measures to be implemented.

Construction Effects

Construction of the railway will result in both temporary and permanent loss of habitats including broadleaved woodland, scrub, hedgerows, ponds and floodplain grazing marsh.

It is anticipated that a number of protected species including the European Protected Species bats, dormouse and great crested newts as well as other species, namely badger, birds, water vole and invertebrate fauna that could be affected.

Many of the impacts identified in the ES are to be managed by the conditions set out in the 2017 Town and Country Planning permission (RR/2014/1608/P). The relevant conditions are:

- a Landscape Ecological Management Plan (LEMP) -Condition 5,
- a Construction Environmental Management Plan (CEMP) -Condition 6,
- a Protected Species Plan (PSP) -Condition 7; and
- an Ecological Constraints and Opportunities Plan that cut across each of the above

The CEMP is used to risk assess construction activities utilising updated survey information to inform appropriate courses of action to mitigate and compensate for any identified impacts. The LEMP supports the outputs of the CEMP mitigation and compensation by providing longer-term management.

This approach has already been successfully implemented on the constructed section from Junction Road (B2244) to Austens Bridge. Surveys have been undertaken for badgers, bats, dormice, great crested newts and reptiles. Mitigation work has included the construction of an artificial replacement badger sett, supervised vegetation and tree clearance, installation of dormouse boxes and planting of woodland and scrub habitat. Where appropriate works have been undertaken under licence from Natural England. It is proposed that the remainder of the route would be delivered using the same best practice approach.

Operational Effects

The main impacts of the Proposed Scheme are associated with the construction phase. Once operational, no significant additional impacts are considered likely to occur. The mitigation proposed for the construction phase is considered sufficient to minimise the risk of impacts once the railway is operational such that these are not considered a significant effect.

3.6 Water Quality, Hydrology and Hydrogeology

The water assessment has considered the construction and operational effects of the Scheme on water quality, flood risk and groundwater resources. The new railway line would pass over the River Rother and Mill Stream and a number of drainage channels in the River Rother floodplain. The route would require two new bridge crossings across the River Rother and a number of culverts for the drainage channels.

A detailed Flood Risk Assessment (FRA) has been undertaken for the Scheme including modelling of river flows and the predicted extent of flooding of the new railway as well as the potential effects from the construction of new embankments and structures in the floodplain on flood risk upstream and downstream, including to properties in the vicinity. Consideration has also been given to the

potential impacts on water quality in the watercourses as a result of the construction and operation of the new railway, including the provision of new drainage on bridges and embankments.

Construction Effects

There would be no significant effects on the water environment during construction. However, precautions would need to be taken to ensure construction works can pass flood water without obstruction.

With appropriate mitigation to ensure flood flows are not obstructed it is not anticipated that the construction works would have an impact upon flood risk.

Best practice construction methods, as outlined in the Environment Agency Pollution Prevention Guidelines (PPG) and Guidance for Pollution Prevention (GPP), would be implemented through the CEMP (a condition of the existing planning consent) and would ensure pathways for pollutants would be minimised and therefore reduce the risks of pollution to groundwater and surface water bodies.

With the above mitigation measures implemented, the construction phase of the Scheme is predicted to have no significant effects on river water quality and flood risk.

Operational Effects

The Proposed Scheme proposes a combination of floodplain culverts, bridges, and sections of railway track at elevations close to existing ground levels to maintain floodplain flow paths and minimise the impact of the proposed railway on flood risk.

The FRA has shown that the identified key receptors are not affected by an increase in flood water depths because of the Proposed Scheme. Some minor increases in flood water depths are shown on agricultural land within the floodplain. Overall, it has been assessed that the Proposed Scheme will have a neutral effect in relation to flood risk.

The presence of the existing planning conditions (further investigation works for contaminated land and CEMP), and the Environmental Permit system from the Environment Agency for works near the River Rother would ensure the Proposed Scheme implements any required mitigation to avoid detrimental water quality effects during the construction and operational phase of the Proposed Scheme. It has been assessed that the Proposed Scheme will have a neutral effect in relation to water quality.

3.7 Archaeology and Cultural Heritage

The archaeology and cultural heritage assessment considered the potential for the Scheme to directly affect known and previously unidentified items of archaeological interest and the setting of features designated for their cultural heritage value. In agreement with the East Sussex County Archaeologist, desk based studies and a site visit have been used to inform the assessment.

The presence of a significant number of local archaeological designations in the area highlights the fact that the site has archaeological potential.

There are two Ancient Monuments (Site of Robertsbridge Abbey and Bowl Barrow in Wellhead Wood) located within the immediate study area, although the site visit confirmed that only the setting of one, the remains of Robertsbridge Abbey, is likely to be affected the Scheme.

Construction Effects

Temporary land take and construction of the new embankment and related earthworks would potentially result in the permanent loss of unknown archaeological assets but would be compensated for by archaeological work and potential gains in knowledge about the local area and the wider area of the Weald. There would be limited construction activity on previously undisturbed ground and the landscape would be fully reinstated upon completion of the Scheme. The significance of the effect on the setting of archaeological remains is considered to be negligible and insignificant. The significance of the effect on the below-ground archaeological resource is negligible to minor at worst and is also not considered to be significant.

It is expected that the Proposed Scheme will have moderate-to-large adverse effects upon the features and setting of Robertsbridge Abbey during the construction phase.

Operational Effects

There are no known effects on the archaeological resource beyond the construction phase.

The reinstated railway embankment would have an impact on the setting of Robertsbridge Abbey, although this setting impact could reduce over time and the area would eventually return to the state when trains last ran in the 1970s.

It is expected that the Proposed Scheme will have slight-to-moderate adverse effects on Robertsbridge Abbey during the operational phase.

3.8 Transport and Access

The transport and access assessment has considered the effects of construction of the Proposed Scheme on the local highway network including the A21 which is part of the national trunk road network. It has also considered the effect on local rights of way that would require the construction of a crossing of the railway to maintain access.

Construction Effects

The construction phase assessment considered the following elements:

- The operation and safety of construction site access points on to the road network;
- Level-crossing construction;
- Temporary disruption to the PRow network; and
- Traffic impacts due to construction vehicles, delivery of equipment to/ from site and construction staff travelling to site.

The assessment concluded that there would be no significant effects resulting from the construction of the Proposed Scheme on the basis that appropriate measures can be agreed with the highway authorities and implemented. Construction site access design and the management of construction traffic are both conditions of the 2017 Town and Country Planning permission for the project (RR/2014/1608/P), which require written prior approval of the Local Planning Authority.

Operational Effects

The main operational factors that have been taken into account are as follows:

- Impacts of the operation of the extended heritage rail service between Bodiam and Robertsbridge in terms of additional passengers generated and impacts on the wider transport network;
- Impacts of the new vehicle level crossings on the road network at A21, B2244 Junction Road and Northbridge Road; and
- Impacts Bridleway S&R 31.

Condition 26 of the existing planning consent for the Proposed Scheme (RR/2014/1608/P) requires a full Travel Plan to be agreed with the local authority prior to the commencement of operation to manage car parking in Robertsbridge. The Economic Impacts Report¹ estimates c.33 daily vehicles at Robertsbridge when the railway is operational.

Work has been undertaken to demonstrate that there would be no unacceptable impact to the highway network as a consequence of the level-crossings. Condition 26 of the existing planning consent for the Proposed Scheme (RR/2014/1608/P) requires three years of level-crossing queue length monitoring to ensure the validity of those traffic modelling assessments.

In addition, the existing planning consent also precludes closure of the A21 level-crossing during peak travel times (defined as 0700-0900 and 1700 to 1900 Monday to Friday and Bank Holidays). Vehicle traffic queuing at the level-crossings has been considered within the noise and air quality assessments with the conclusion that there would be no significant effects.

Delays associated with PROW use during the operational phase would be temporary, infrequent, and therefore minor in terms of their impact upon pedestrian delay and pedestrian amenity. It is concluded that the operational phase impacts on PROW would not be significant.

3.9 Socio-Economics

Construction Effects

Due to the limited nature of construction proposed, there will be minimal land-take and no requirement for property demolition. Any disruption resulting from construction activities would not only be minimal but also temporary and of short duration. There is also not expected to be any significant disruptions to commuting, shopping trips and leisure trips by local residents. As a result, there are not considered to be any significant adverse impacts on the local economy.

Beneficial effects would occur as a consequence of expenditure on contractors and labour and the resulting in indirect effects through the supply chain.

Operational Effects

The Economic Impacts Report assesses the direct, indirect and induced economic impacts of both the Rother Valley Railway Reinstatement Project (the Proposed Scheme) and the wider Kent and East Sussex Railway (KESR) investment programme that would be unlocked by the completion of

¹ Rother Valley Railway, Economic Impacts Report. Steer (September 2018)

the missing link of the Rother Valley Railway between Bodium and Robertsbridge. The Report concludes that there would be operational phase benefits of £1.1m per year associated with additional visitor spending, additional volunteer spending and operational job creation.

3.10 Land Use and Agriculture

The assessment has focused upon the physical characteristics of land for use by agriculture, the manner in which the land is currently being used and the effect the Proposed Scheme would have upon the agricultural enterprises which would suffer a loss of land. There are three agricultural landholdings that would be directly affected by the construction and operation of the Proposed Scheme. To date, only limited discussions have been possible with the individual landowners to fully understand the nature of their landholding and operations. The assessment has therefore been based on available information and desk-based studies.

No soil surveys have been carried out to confirm the agricultural land quality, however a desk-based assessment has been undertaken based on:

- the Soil Survey of England and Wales soil association maps (1:250,000 scale);
- aerial photography of the site.

The agricultural land classification (ALC) is based on an assessment of the extent to which physical or chemical characteristics impose long term limitations on the use of land. The main groups of factors being climatic (primarily rainfall and temperature; site (gradient, microrelief and flood risk); soil (texture, structure, depth and stoniness); and chemical limitations.

The desk assessment has concluded that the likely agricultural land classification is subgrade 3b or worse, due to a combination of restricted drainage and clayey topsoil textures which together produce a limitation to soil workability. There is little possibility that any of the agricultural land along the route is of best and most versatile quality.

Construction Effects

A total of 7.51 ha of agricultural land will be directly affected by construction of the Proposed Scheme, of which 2.04 ha is required temporarily and would be reinstated. It has been assumed that all the land required from agricultural holdings is Subgrade 3b which is of low quality and low sensitivity. The significance of the effect on agricultural land and soil is therefore slight adverse.

The Proposed Scheme will have both temporary and permanent effects on the following agricultural land holdings:

- Parsonage / Redlands Farm: total of 4.13 ha required during the construction phase and of this 3.12 ha is required in perpetuity, which is less than 3% of the total area farmed and existing land uses will continue. The significance of effect to this landholding is slight to negligible adverse.
- Moat Farm: total of 3.37 ha land is required during the construction phase, of which 2.34 ha is required in perpetuity which is less than 4% of the overall farmed area and existing land uses will continue. The significance of effect to this landholding is slight to negligible adverse.

In both cases above, the significance of effect assumes that access would be maintained to parcels of land in the form five At Level Crossings (ALCs) which seek to improve agricultural links and ensure access to land severed by the Proposed Scheme.

Operational Effects

There will be some long-term impacts on the operation of the individual landholdings - primarily associated with Parsonage Farm - and will arise due to the permanent loss of land. Discussions are required to fully understand the potential impacts and to identify appropriate mitigation measures that can be put in place to minimise or offset them. However, no farming business will be rendered non-viable as a result of the Proposed Scheme and therefore there will be no significant operational effects.

3.11 Human Health

The assessment has considered the potential of the Proposed Scheme to create environmental changes which in turn may generate effects (positive and negative) to human health. The assessment considered the following:

- Access to open space and nature;
- Air quality, noise and neighbourhood amenity
- Accessibility and active travel;
- Social cohesion and inclusive design;
- Minimising the use of resources; and
- Climate change.

The assessment concluded that the Proposed Scheme would result in minor negative effects associated with air quality, noise, neighbourhood amenity and resource use. It also concluded that there would be positive effects associated with access to open space and nature, accessibility and active travel and social cohesion and cohesive design.

3.12 Major Accident Hazards and Disasters

The purpose of this assessment is to consider the vulnerability of the Proposed Scheme to those hazards that have the potential to cause a major event and which could then generate a significant adverse effect on the environment. An initial assessment scoped down the hazards likely to be relevant to the Proposed Scheme to the following:

- Persistent flooding which leads to a landslide/collapse of an embankment resulting in a potential derailment and/or the degradation of sensitive ecological receptors due to siltation of the River Rother and surrounding watercourses;
- High winds leading to a potential derailment as a result of trees and debris being blown onto the route of the Proposed Scheme;
- Loss of life and injury at a level crossing due to a collision between a train and a vehicle(s); and
- Loss of life or injury to train operators and passengers as a result of an explosion in the steam engine, which could lead to a catastrophic fire.

Mitigation for these risks include procedures for managing the danger to the railway from adverse weather and for the maintenance and inspection of the trains. In relation to the level-crossings, an Automated Full Barrier Crossing Locally Monitored (AFBCL) will be used which provides full barrier closure with obstacle detection equipment. The crossings and crossing equipment will be subject to inspections by competent individuals at appropriate time intervals.

The assessment concluded that with the proposed mitigation in place their predicted effects would be negligible.

3.13 Climate Change

This assessment has considered the generation of Greenhouse Gas (GHG) emissions from the Proposed Scheme and consideration of how it can be affected by (and adapt to) a changing climate over its life cycle. It should be noted that the assessment methodology used considers all GHG emissions to be significant regardless of volume.

During site preparation and enabling, the impact of emissions arising from embodied carbon in construction materials and construction plant could be minor adverse and significant in a local context.

In the operational phase, impacts associated with changes to the railway and visitors are expected to be negligible (not significant) given the small amount of extra distance travelled by the trains, maintenance of existing service patterns and the potential for some visitors to now access the railway by connection to mainline rail services.

The Proposed Scheme has sourced most of the track infrastructure from the existing mainline rail network following infrastructure renewals by Network Rail. It is anticipated that this approach to re-use and renewal of materials and equipment would be maintained during the maintenance of the operational scheme, thereby minimising carbon and GHG emissions.

Risk from climate change, and opportunities to adapt to these have been identified, in accordance with the relevant guidance and climate projections. These are already embedded within the scheme through the drainage designs, appropriate ground works and foundations and vegetation planting and management. Changes in climate in the future and any consequential effects from that will be monitored as part of the Proposed Schemes operational management procedures.

3.14 Cumulative Effects

Cumulative effects can be a combination of different effects resulting from one project, for example, the effects of noise, loss of visual amenity and construction traffic all being experienced by the same receptor, such as a cluster (group) of local residents.

Cumulative effects can also be the result of effects from different, unrelated, projects acting in combination and producing a longer-lasting, larger or more intense effect overall. These may be the result of construction activities occurring simultaneously on the Scheme site and another project site. Operational effects could, for example, be the result of operational noise from different sites.

A review of planning applications to identify any potential sites or developments that should be considered in the cumulative effects assessment was undertaken. Such sites include those where developments are currently under construction or those projects not yet built but with planning permission from the council. No relevant applications were identified.

3.15 Monitoring

The 2017 Town and Country Planning permission (RR/2014/1608/P) granted to the Proposed Scheme contained a series of conditions that relate to monitoring that the project must comply with. The planning conditions with monitoring requirements are described below:

- Condition 4- Buffer zone condition: the track shall not be brought into use until a scheme for the retention and management of a buffer zone, to be at least 8m wide between the top of the railway embankment and the top of the riverbank, has been submitted and approved in writing by the Local Planning Authority. Sub-item (d) specifies that the submission should include a management plan for the lifetime of the scheme.
- Condition 5- Ecology Management Condition: no development shall take place until a landscape and ecology management plan and monitoring strategy, including long-term design objectives, management responsibilities and maintenance schedules and a timetable for implementation has been submitted to and approved in writing by the Local Planning Authority.
- Condition 13- Verification Condition: No occupation of any part of the permitted development shall take place until a verification report, demonstrating completion of works set out in the approved remediation strategy and the effectiveness of the remediation, shall be submitted to and approved, in writing, by the Local Planning Authority. The report shall include results of sampling and monitoring carried out in accordance with the approved verification plan to demonstrate that the site remediation criteria have been met.
- Condition 18- Queue Length Monitoring: The developer shall be required to monitor queue lengths for a period of three years from the opening date of full opening.
- Condition 19- Level Crossing Maintenance Plan: No works shall commence on site until an Operational Maintenance Plan has been submitted to and approved in writing by the Local Planning Authority. The Plan is to be reviewed on an annual basis with the Highways Agency, local highway authority and other interested parties to discuss the previous year's operations and to inform the development of the next year's management plan.

The project has already discharged a number of these conditions successfully where relevant to the works undertaken between Junction Road west to the crossing of the River Rother at Austens Bridge.

3.16 Conclusions

An Environmental Impact Assessment of the proposed reinstatement of 3.4km of the former Kent & East Sussex Railway has been undertaken, in accordance with The Environmental Impact Assessment (Miscellaneous Amendments Relating to Harbours, Highways and Transport) Regulations 2017 to The Department of Transport by Rother Valley Railway Limited.

Detailed assessments for each of the agreed environmental topics have been undertaken to identify any potentially significant effects arising from the construction and operational phases of the Scheme.

Mitigation measures have been proposed and committed to by Rother Valley Railway to reduce the effects to acceptable levels.

Whilst there are no defined criteria for the acceptability of development proposals, the nature of the Proposed Scheme is such that, given the predicted impacts and the mitigation measures being proposed, the potential adverse residual effects identified are very limited in nature and extent and are not considered to be of such significance locally, regionally or nationally as to preclude the Scheme from being constructed.

Table 3.1 – Summary of impacts during construction

Topic	Potential Impacts	Mitigation	Impacts after mitigation
Noise and Vibration	Noise and vibration effects on local residential and commercial properties due to construction activity.	Use of best practice construction methods (e.g. screening of works, use of low noise, well maintained equipment, turning off equipment when not in use) delivered through the implementation of the CEMP.	None
Air Quality	Construction dust reducing local air quality.	Use of best practice construction methods (e.g. minimise exposed earthworks, dampen down areas during dry periods) delivered through the implementation of the CEMP.	None
Landscape and Visual	Temporary visual impact as a consequence of construction activities in the landscape.	None	Temporary visual impacts most notably to the western end of the route near residential properties.
Ecology and Nature Conservation	Temporary and permanent habitat loss. Impact to protected species	Reinstatement, replacement and enhancement of habitat. Appropriate mitigation for protected species if required. All mitigation delivered through CEMP, LEMP and Protected Species Plan.	Displacement/ disturbance of bats and birds. Loss of mature trees.
Water Quality, Hydrology and Hydrogeology	Accidental pollution of watercourses and groundwater.	Use of best practice Environment Agency Pollution Prevention Guidelines during construction. delivered through the implementation of the CEMP.	None
Archaeology and Cultural Heritage	Permanent loss of unknown archaeological assets (below ground). Temporary impact on Robertsbridge Abbey as a consequence of nearby construction activities.	Archaeological losses compensated for by archaeological work and potential gains in knowledge about the local area and the wider area of the Weald.	Temporary impact on the features and setting of Robertsbridge Abbey.
Transport and Access	Disruption of the local highway network due to construction traffic and activities.	Construction access design and Construction Traffic Management Plan, approved by the local authority.	None
Socio-economics	None	None	Increased expenditure by construct workers and indirect beneficial effects in the supply chain.

Topic	Potential Impacts	Mitigation	Impacts after mitigation
Land quality and agriculture	Temporary loss of low-quality agricultural land and loss of land from agricultural land holdings due to land acquisition required during construction.	Reinstatement of land required temporarily after construction is completed.	Temporary disruption to operation of land holdings.
Climate Change	Emissions from construction material, construction traffic and operation of construction plant.	Reuse of construction material, local sourcing of material, implementation of a construction traffic management plan and a construction environmental management plan.	Minor vehicle and plant emission generation during construction.
Human Health	Air quality, noise and neighbourhood amenity impacts	Construction activity delivered through CEMP.	None
Major Accident Hazards and Disasters	None	None	None

Table 3.2 – Summary of impacts during operation

Topic	Potential Impacts	Mitigation	Impacts after mitigation
Noise and Vibration	None	None	None
Air Quality	None	None	None
Landscape and Visual	Visual impact due to the presence of the completed Scheme in the landscape.	Landscape mitigation planting in conjunction with ecology habitat mitigation.	Visual impacts on residential properties and local footpaths reducing overtime as mitigation planting develops.
Ecology and Nature Conservation	None	None	None
Water Quality, Hydrology and Hydrogeology	None.	None	None
Archaeology and Cultural Heritage	The built Scheme affecting the setting of Robertsbridge Abbey.	Landscape mitigation planting.	Setting effects remain significant but will decline overtime.
Transport and Access	None	None	None
Socio-economics	None	None	Local economic benefits of visitor and volunteer spending. Potential generation of a limited number of jobs
Land quality and agriculture	Permanent loss of low-quality agricultural land. Severance of and land acquisition from land holdings.	Access to land parcels will be maintained by At Level Crossings (ALCs).	Permanent loss of land from land holdings to be mitigated for in discussion with landowners.

Topic	Potential Impacts	Mitigation	Impacts after mitigation
Climate Change	Emissions from operation of railway (including trains and visitor transportation).	Operational travel plan.	None
Human Health	Air quality, noise and neighbourhood amenity impacts. Access to open space and nature Accessibility and active travel	None	None
Major Accident Hazards and Disasters	Adverse weather impacts Collisions at level-crossings Catastrophic failure of steam train	Implementation of management procedures dealing with adverse weather and the inspection and maintenance of rolling stock and level-crossings. Safe design of level-crossings.	None



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