

For the attention of The Office of the Rail Regulator  
and  
East Sussex County Council

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5 November 2013

Dear Sirs

## Rother Valley Railway Level Crossing – C18 Northbridge Street, Robertsbridge Stage 1 Road Safety Audit

I have the pleasure of enclosing our Rother Valley Railway Level Crossing – C18 Northbridge Street, Robertsbridge Stage 1 Road Safety Audit report. In addition to the enclosed report the Audit Team noted the following points outwith the remit of the audit. I would be grateful if you would bring these issues to the attention of the Designer and/or Maintainer as appropriate.

### *Additional Comments*

- There is an Environment Agency access situated immediately north of the proposed level crossing site on the north bank of the River Rother. The railway will truncate this access and it is not clear how suitable, safe access to the riparian environment will be maintained.
- It is not clear whether the existing verge width (especially on the eastern side of the road) is able to safely accommodate the required traffic sign infrastructure.



IMG\_2962.jpg



IMG\_2947.jpg

- The drawing provided does not show the extent of the vegetation clearance required in order to provide the appropriate visibility envelope for the level crossing as set out in Railway Principles and Guidance.



IMG\_2947.jpg



IMG\_2940.jpg

- Northbridge road is lit, and the construction of the crossing may necessitate the removal of an existing lighting column, reducing illumination levels. The provision of consistent street lighting levels will need to be addressed in the detailed design.



IMG\_2940.jpg

- The stop line markings to TSRGD diagram 1001 are shown on the incorrect side of the road; i.e. on the exit from the level crossing. These should be shown on the approaches to the level crossing.

If you have any further queries regarding this letter or the enclosed report, please do not hesitate to contact me.

Yours faithfully

Chris van Lottum  
Senior Engineer  
Road Safety Audit Team Leader

Enc

cc Dave Gillett, Rother Valley Railway

Rother Valley Railway

**Rother Valley Railway Level  
Crossing - C18 Northbridge Street,  
Robertsbridge**

Stage 1 Road Safety Audit

RSA1.1

Rev A | 5 November 2013

This report takes into account the particular instructions and requirements of our client.

It is not intended for and should not be relied upon by any third party and no responsibility is undertaken to any third party.




Job number 233104-00

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# Document Verification

# ARUP

<b>Job title</b>		Rother Valley Railway Level Crossing - C18 Northbridge Street, Robertsbridge		<b>Job number</b> 233104-00	
<b>Document title</b>		Stage 1 Road Safety Audit		<b>File reference</b>	
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Rev A	5 Nov 2013	<b>Description</b>	Revised document		
			Prepared by	Checked by	Approved by
		Name	Chris van Lottum	Steve Wells	Steve Wells
		Signature			
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		Name			
		Signature			

Issue Document Verification with Document



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# 1 Introduction

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Arup was appointed by the Rother Valley Railway to conduct a Stage 1 Road Safety Audit on proposals to construct a new automatic locally monitored fully gated level crossing on C18 Northbridge Street, Robertsbridge, East Sussex.

The agreed Audit Team consisted of:

- Mr C van Lottum MEng, MCIHT, MSoRSA
- Mr T Corke BEng, MSc, CEng, MICE, MCIHT, MSoRSA

The audit was undertaken in accordance with the brief submitted to the Audit Team on 10<sup>th</sup> October 2013. The Audit Team visited the site together on Friday 18<sup>th</sup> October 2013; weather conditions at the time of the site visit were bright and the road surface was dry.

A list of information provided to the Audit Team has been included as Appendix A to this Report.

The following information was **not** made available to the Audit Team and as such any specific influence of these details on road user safety has not been considered by this audit:

- Departures from Standard
- Road profiles
- Cross sections
- Drainage
- Landscape
- Public utilities
- Vehicle tracking
- Street lighting
- Surface finishes
- Kerbs
- Road restraint systems
- Road accident history

It is understood that no previous road safety audits have been conducted on this scheme.

This audit has been undertaken in accordance with the Terms of Reference set out in HD19/03 'Road Safety Audit'; and the Audit Team members meet the training and experience requirements set out therein. The Audit Team has examined and reported only on the road safety implications of the scheme as presented and has not examined or verified the compliance of the design to any other criteria. However, to clearly explain a problem or recommendation the Audit Team may occasionally refer to design standards without engaging in technical audit.

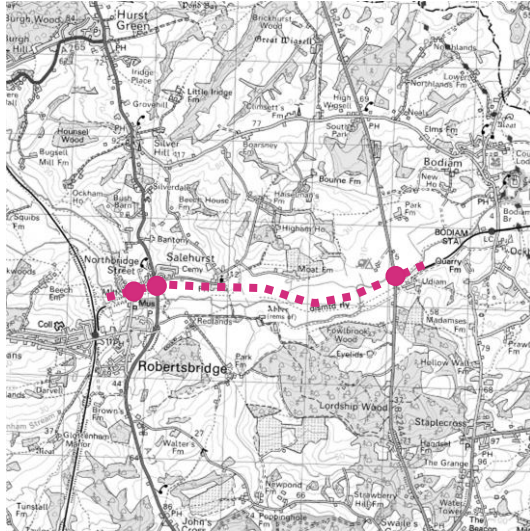
All problems and recommendations identified by this audit are referenced to the design drawings and the locations have been indicated on the attached plan.

Other issues, including safety issues identified during the Audit but excluded from this report by the Terms of Reference, which the Audit Team wishes to draw to the attention of the Audit Project Sponsor are set out in separate correspondence.

Road Safety Audit is based upon a qualitative risk assessment process and there is no measure of the success achieved by any recommendations given herein. Road

Safety Audit cannot guarantee the safe operation of the scheme under consideration in this report as accidents are rare and random events and are largely caused by factors outside the Audit Team's influence, such as driving behaviour and to a lesser extent vehicle condition.

## 1.1 Site Description



### Project Location

The Rother Valley Railway is located between the mainline station at Robertsbridge on the London to Hastings Line and the existing Kent and East Sussex Railway which runs between Tenterden and Bodiam.

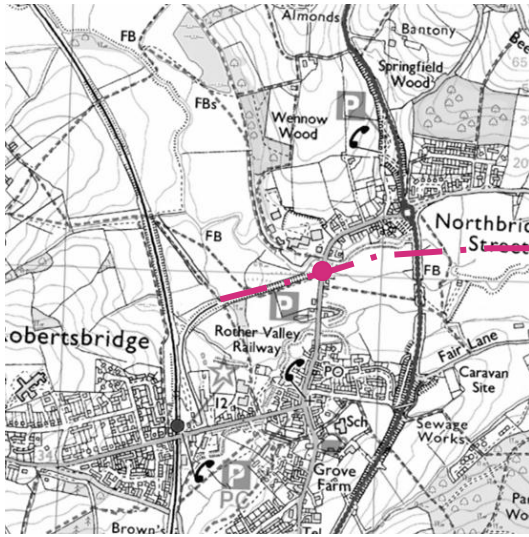
## 1.2 Project Description

The Rother Valley Railway will restore railway transport links between the main line railway system from Robertsbridge Junction to Bodiam and the extant Kent & East Sussex Railway and the attractions it serves.

In addition to the construction of bridges and embankments to cross the flood plain of the River Rother, the railway must incorporate appropriate arrangements for crossing;

- C18 Northbridge Street, Robertsbridge
- A21(T) Robertsbridge Bypass; and
- B2244 Junction Road, Udiam.

## 1.3 Scope of Audit



### Scheme Location

This Road Safety Audit is concerned only with the C18 Northbridge Street, Robertsbridge Level Crossing. The other two crossings are discussed in separate report.

No details of the vertical profile of the railway line in the vicinity of the crossing have been provided, and therefore it is not possible to assess the appropriateness of the proposed warning signs in this regard.



## 2 Stage 1 Road Safety Audit

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The Recommendations below are numbered as follows:

STAGE . AUDIT NUMBER . RECOMMENDATION NUMBER

- Location:** Northbridge Street, southbound approach
- Summary:** Limited forward visibility to level crossing leading to shunt type collisions.
- Description:** The approach to the level crossing is situated on a bend in the road



IMG\_2951.jpg

There is a cottage located close to the road limiting drivers' forward visibility on the bend. In the same location there is on-street residents' parking, which requires traffic to cross the carriageway centreline. This could draw drivers' attention away from downstream hazards such as a stationary queue of vehicles at the level crossing, leading to shunt collisions.

- S1.1.1 Recommendation:** Move the northern-most warning signs to TSRGD Diagrams 770 and 773 to the northern side of the drainage culvert to provide additional advanced warning.
-

- Location:** Northbridge Street, carriageway
- Summary:** Adjacent accesses increase the risk of blocking back at the level crossing.
- Description:** There are a number of accesses close to the proposed level crossing location, not least that of a four hectare industrial development site, which could generate a significant volume of additional traffic movements.



IMG\_2975.jpg



IMG\_2958.jpg

The limited carriageway width and on-street parking could result in traffic waiting on the carriageway by the level crossing and will increase the risk of vehicles queuing over the level crossing, leading to potential vehicle / train conflict.

- S1.1.2 Recommendation:** Introduce a yellow box marking to TSRGD Diagram 1045 to deter traffic from queuing over the crossing.
-

- Location:** Northbridge Street, footways
- Summary:** Insufficient warning for the visually impaired could lead to pedestrian injuries.
- Description:** Footways are provided along both sides of Northbridge Street in the vicinity of the proposed level crossing.



IMG\_2946.jpg

The visually impaired use tactile warning surfaces to identify hazards ahead. A visually impaired pedestrian could enter the level crossing zone without realising the hazardous nature of the environment, placing them at risk of being trapped by the barriers.

- SS1.1.3 Recommendation:** Introduce tactile warning surfaces, in line with national guidelines, on each footway approach to the crossing.

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**End of list of problems identified and recommendations offered in this  
Stage 1 Road Safety Audit**

### **3 Road Safety Audit Statement**

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I certify that this audit has been carried out in accordance with HD19/03.

#### **Audit Team Leader**

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Senior Engineer

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Central Square, Forth Street,  
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5 November 2013

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## Figures

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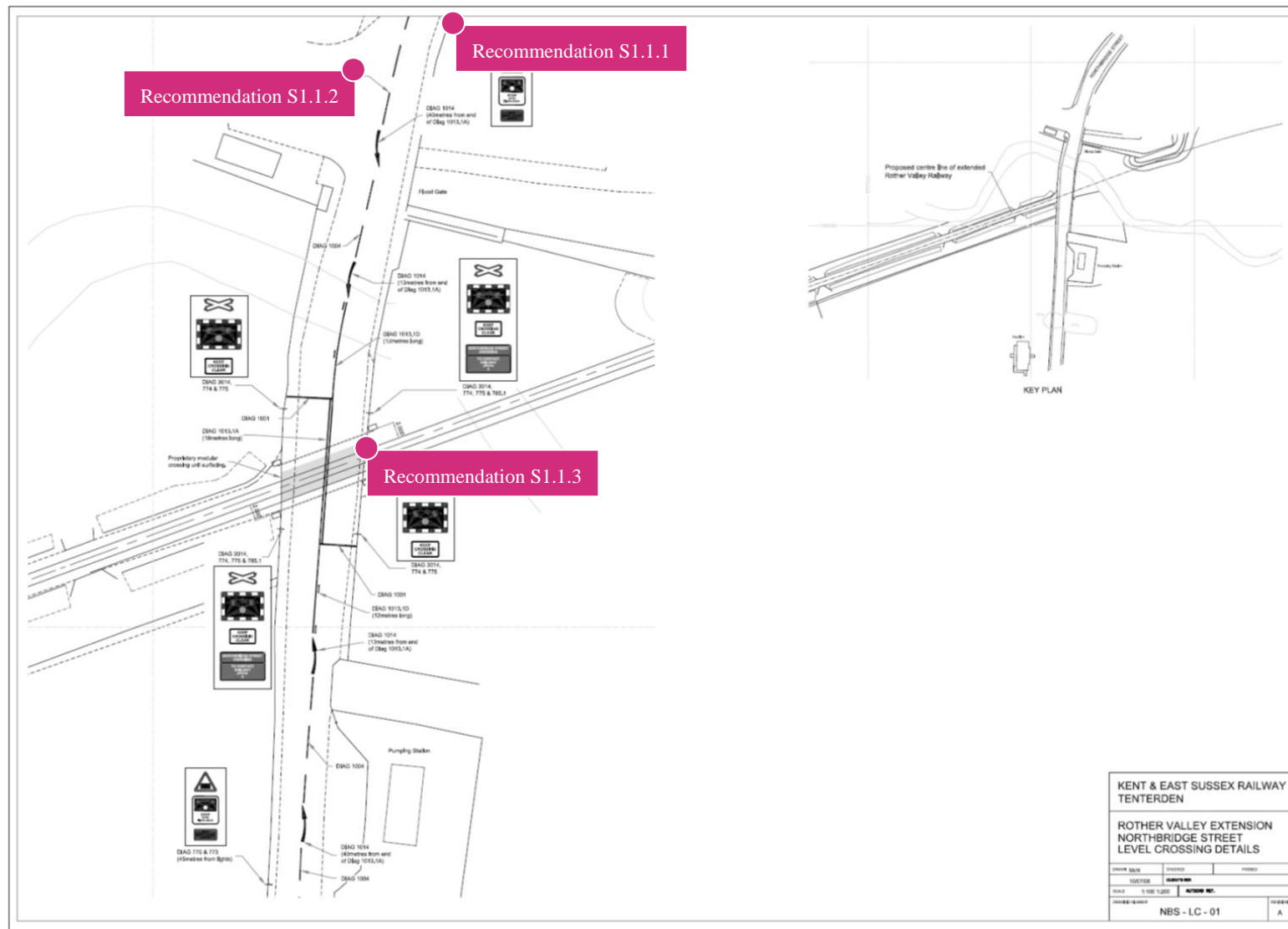


Figure 1 Location of Recommendations

## **Appendix A**

### **Documents and Drawings**

## A1 Documents and Drawings

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The following documents and drawings were supplied to the Audit Team by the Designer and have been examined in the course of conducting this audit.

### A1.1 Document(s)

<b>Title</b>	<b>Reference</b>	<b>Revision</b>
Stage 1 and Stage 2 Road Safety Audit Brief	-	-
Rother Valley Railway A21 Robertsbridge	313090/ITD/ITQ/011	B
Non Motorised User Audit	264223/ ITD/ITQ/126	H
Rother Valley Railway Proposed level Crossings	288755/ ITD/ITW/00	E
Rother Valley Railway A21 Robertsbridge Highways and Traffic Assessment Report	313090/IDT/ITQ/0006	D

### A1.2 Drawing(s)

<b>Title</b>	<b>Reference</b>	<b>Revision</b>
Rother Valley Extension – Northbridge Street – Level Crossing Details	NBS-LC-01	A