

Rother Valley Railway

**Rother Valley Railway Level
Crossing - A21(T) Robertsbridge
Bypass**

Stage 1 Road Safety Audit

RSA1.2

Rev B | 17 January 2014

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

Ove Arup & Partners Ltd
Central Square
Forth Street
Newcastle-upon-Tyne NE1 3PL
United Kingdom
www.arup.com

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Document Verification

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		Name	Chris van Lottum	Steve Wells	Steve Wells		
		Signature					
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1 Introduction

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 the A21(T) Robertsbridge Bypass, 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 10th October 2013. The Audit Team visited the site together on Friday 18th 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.

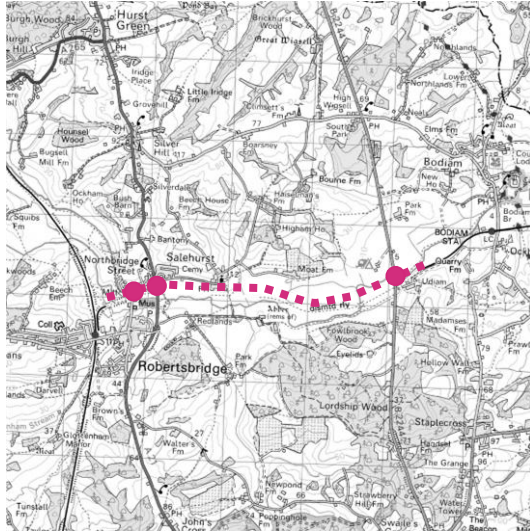
All problems and recommendations identified by this audit are referenced to the design drawings and the locations have been indicated on the attached plan.

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.

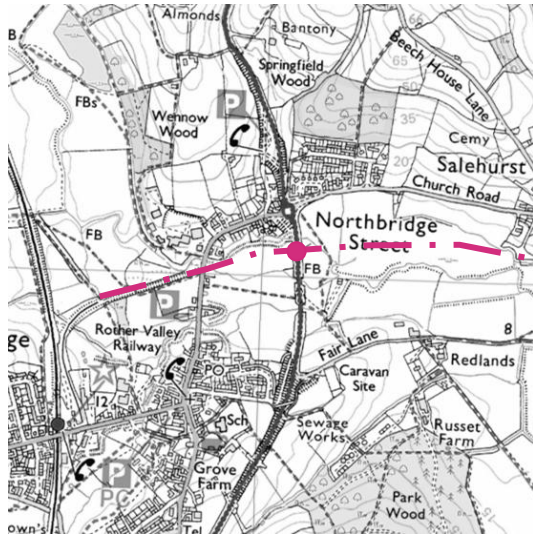
1.2 Project Description

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 A21(T) Robertsbridge Bypass Level Crossing. The other two crossings are discussed in separate reports.

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.

The preliminary design drawing does not identify the proposed location of the relocated speed limit transition. As a result, it has not been possible to assess the appropriateness of the revised location, during the Audit.

2 Stage 1 Road Safety Audit

The Recommendations below are numbered as follows:

STAGE . AUDIT NUMBER . RECOMMENDATION NUMBER

- Location:** A21(T) Northbridge Street roundabout
- Summary:** Queuing at the level crossing could block the roundabout leading to injudicious manoeuvres and road user conflicts.
- Description:** The projected queue lengths at the level crossing are likely to reach the A21(T) Northbridge roundabout, blocking turning movements.



IMG_2965.jpg

Blocking on the circulatory carriageway of a roundabout can lead to significant frustration for drivers on the side roads, not included in the main queue. This can lead to drivers trying to force their way around the junction, resulting in circulatory collisions.

- S1.2.1 Recommendation:** Introduce 'yellow box' or 'KEEP CLEAR' markings to, as far as possible, maintain the turning movements at the roundabout.
-

- Location:** A21(T) Robertsbridge Bypass, northbound
- Summary:** Multiple traffic signs leading to distraction, missed warnings and road user collisions.
- Description:** There are a number of existing traffic signs on the northbound approach to the A21(T) Northbridge Street roundabout, including direction signing, warning signing, and tourist signs.



IMG_2985.jpg



IMG_2977.jpg

The proposed level crossing layout does not consider the existing traffic signing or the effect of the proposed level crossing signing on the existing signing. This could lead to drivers missing some signs and the warnings they portray leading to a range of conflicts and/or collision types.

- S1.2.2 Recommendation:** A comprehensive review of the existing signing on the A21(T) should be incorporated into the detailed design of the level crossing including visibility splays to the various signs to demonstrate there will be no masking.
-

- Location:** A21(T) Robertsbridge Bypass, north of proposed crossing
- Summary:** Unlit hazard in lighting transition leading to shunt or crossing collisions.
- Description:** The level crossing is proposed some 40m from the end of the existing street lighting system on the approach to the A21(T) Northbridge Street roundabout. It is not proposed to light the level crossing.



IMG_2984.jpg

Some drivers' eyes can take several seconds to adjust from lit to unlit conditions, and vice versa. A hazard such as a level crossing or queue located within that transition distance could result in shunt type collisions or a collision at the crossing itself.

- S1.2.3 Recommendation:** Extend the street lighting system to the south side of the level crossing in order to adequately light the hazard.

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

3 Road Safety Audit Statement

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

Audit Team Leader

Chris van Lottum MEng, MCIHT, MSoRSA

Senior Engineer

Arup

Central Square, Forth Street,
Newcastle upon Tyne, NE1 3PL



17 January 2014

Audit Team Member

Tom Corke BEng, MSc, CEng, MICE, MCIHT, MSoRSA

Senior Engineer

Arup

The Arup Campus, Blythe Gate, Blythe Valley Park,
Solihull, B90 8AE

Figures



Figure 1 Location of Recommendations

Appendix A

Documents and Drawings

A1 Documents and Drawings

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)

Title	Reference	Revision
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)

Title	Reference	Revision
Rother Valley Extension – A21 – Level Crossing Details	A21-LC-01	A