

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 – B2244 Junction Road Stage 1 Road Safety Audit

I have the pleasure of enclosing our Rother Valley Railway Level Crossing – B2244 Junction Road 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

- High traffic speeds and heavy braking for the narrow bridges on Junction Road were observed on site. It is suggested that the designer considers the use of high friction surfacing on the approach to the level crossing.
- It is not clear whether the existing verge width (especially on the western side of the road) is able to safely accommodate the required traffic sign infrastructure.



IMG_3003.jpg



IMG_2999.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_2999.jpg



IMG_3000.jpg

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 - B2244 Junction Road,
Udiam**

Stage 1 Road Safety Audit

RSA1.3

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

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Job title		Rother Valley Railway Level Crossing - B2244 Junction Road, Udiam		Job number		233104-00	
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		Signature					

Issue Document Verification with Document



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Figure 1 Location of Recommendations

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Appendix A

Documents and Drawings

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 B2244 Junction, 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.

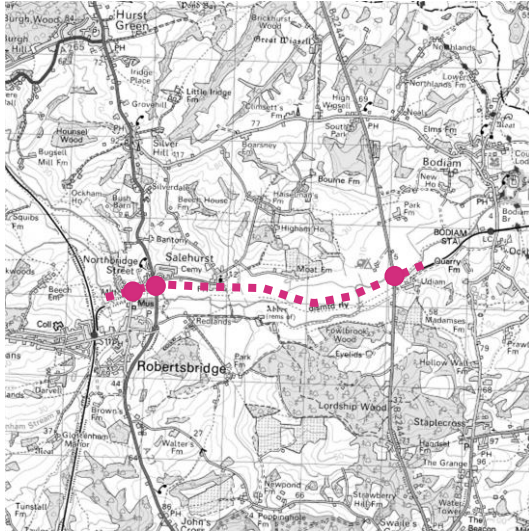
All problems and recommendations identified by this audit are referenced to the design drawings and the locations have been indicated on the attached plan.

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.

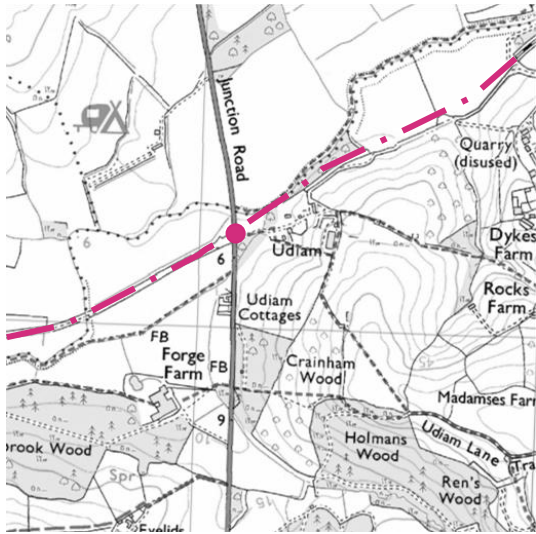
1.2 Project Description

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 B2244 Junction Road, Udiam 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.

2 Stage 1 Road Safety Audit

The Recommendations below are numbered as follows:

STAGE . AUDIT NUMBER . RECOMMENDATION NUMBER

Location: B2244 Junction Road

Summary: Speeding vehicles pose a threat to other road users.

Description: During the site visit, high vehicle speeds were observed along with a high frequency of heavy braking on the approaches to the narrow bridges.

High risk behaviour such as high vehicle speeds and late, heavy braking will result in a higher frequency of collisions due to driver error.

S1.3.1 Recommendation: Reduce the speed limit over this length of the road.

Location: B2244 Junction Road

Summary: Adjacent features increase the risk of blocking back at the level crossing.

Description: There is a private access located close to the proposed level crossing location, in addition to the narrow bridges to the north and south.



IMG_2994.jpg

Turning traffic waiting on the carriageway by the level crossing will increase the risk of blocking back over the crossing leading to potential vehicle / train conflict.

S1.3.2 Recommendation: Introduce a yellow box marking to TSRGD Diagram 1045 to deter blocking back at the crossing.

Location: B2244 Junction Road, bridges

Summary: Multiple traffic signs leading to distraction, missed warnings and road user collisions.

Description: There are a number of existing traffic signs on both the northbound and southbound B2244 in the vicinity of the proposed level crossing, notably those warning drivers of the narrow bridges.



IMG_2991.jpg



IMG_2992.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.

S1.3.3 Recommendation: A comprehensive review of the existing signing on the B2244 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: B2244 Junction Road, bridges

Summary: Pinch points could lead to blocking back at the level crossing.

Description: There are two narrow bridges situated either side of the proposed level crossing site.



IMG_2992.jpg



IMG_2993.jpg

The bridges are too narrow for large vehicles to pass without forcing oncoming traffic to stop. A platoon of half a dozen vehicles could obstruct the crossing leading to potential vehicle / train conflict.

S1.3.4 Recommendation: Establish priority at the narrowings for vehicles driving away from the level crossing.

**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

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5 November 2013

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Figures

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 – Junction Road – Level Crossing Details	NBS-LC-01	A