

**HARD INGS ROAD IMPROVEMENTS,  
KEIGHLEY**

**STAGE 1  
ROAD SAFETY AUDIT (RSA)  
&  
DESIGNERS RESPONSE**



Department of Regeneration & Culture  
Planning, Transportation & Highways  
2<sup>nd</sup> Floor, Jacobs Well  
Nelson Street  
Bradford  
BD1 5RW



Department of Regeneration & Culture  
Planning, Transportation & Highways  
2<sup>nd</sup> Floor, Jacobs Well  
Nelson Street  
Bradford  
BD1 5RW



## **RSA CONTENTS**

### **PAGE**

1.0	Introduction	3
2.0	Items Raised at this Stage 1 Road Safety Audit	4
2.1	General	4
2.2	Local Alignment	6
2.3	Junctions	6
2.4	Non-Motorised User Provision	6
2.5	Road Signs, Carriageway Markings and Lighting	8
3.0	Audit Statement	9

### **Appendices**

RSA - Appendix A	List of drawings and documents examined	10
------------------	---	----

## **1.0 INTRODUCTION**

This Stage 1 Road Safety Audit has been carried out at Hard Ings Road, Keighley

The Audit was undertaken at the request of Carole Yeadon provided on 23<sup>rd</sup> February 2015.

Audit Team Members were:-

James Williams  
Kavin Stoddart

The Audit took the form of an examination of the drawings and documents listed in Appendix A to this report, on 26<sup>th</sup> March 2015.

The comments and recommendations of the Audit Team have been recorded using the Stage 1 Road Safety Audit checklist headings from Departmental Advice Note HD 19/03 (see Section 2 of this report).

The Audit team has examined and reported on the road safety aspects of the scheme as presented and has not examined or verified the compliance of the design to any other standards or criteria.

The Audit Team have reviewed the collision data provided that identifies that the most frequent collisions involve conflicts at the Lawkholme Lane / Hard Ings Road junction and Beechwood Roundabout.

The proposed scheme that includes the signalisation of the above junctions will improve safety.

The response to the Audit teams comments and recommendations have been made and are shown under each identified problem.

## **2.0 ITEMS RAISED AT THIS STAGE 1 ROAD SAFETY AUDIT**

### **2.1 GENERAL**

#### **2.1.1 Departures from Standards**

The design team identified a minimum central reserve width of 1.5m over a short length adjacent to the frontage of Fibreline. The Audit Team have no comment

#### **2.1.2 Cross Sections**

No details have been provided by the design team.

#### **2.1.3 Drainage**

No details have been provided by the design team.

#### **2.1.4 Climatic Conditions**

No comment.

#### **2.1.5 Landscaping**

No details have been provided by the design team.

#### **2.1.6 Public Utilities / Services Apparatus**

No details have been provided by the design team.

#### **2.1.7 Lay-bys**

No comment.

#### **2.1.8 Access**

##### **(a) Problem:**

The exit out of the inbound filling station is a "Give Way" within the Hard Ings Road / Lawkholme Lane signalised junction. Conflicts could occur for vehicles wanting to go straight "ahead" or turning "right" out of the filling station.

##### **Recommendation**

Make it a mandatory "left" turn only at exit of filling station.

## Designer's Response

Agreed.

Will investigate the possibility of extending the central reserve to discourage vehicles exiting the filling station from making a right or ahead movement, this will also provide a position to install a mandatory left turn sign post on the central reserve.

Minor alterations to the kerb-line on the exit of the filling station will be considered to encourage vehicles to make a left turn only.

### **2.1.9 Emergency Vehicles**

No comment.

### **2.1.10 Skid Resistance**

No details have been provided by the design team.

### **2.1.11 Future Widening**

No comment.

### **2.1.12 Adjacent Development / Agriculture**

No comment.

### **2.1.13 Fences and Road Restraint Systems**

No details have been provided by the design team.

### **2.1.14 Basic Design Principles**

No comment.

## **2.2 LOCAL ALIGNMENT**

### **2.2.1 Visibility**

No comment.

### **2.2.2 New / Existing Road Interface**

No comment.

### **2.2.3 Vertical Alignment**

No details have been provided by the design team.

## **2.3 JUNCTIONS**

### **2.3.1 Layout**

No comment.

### **2.3.2 Visibility**

No comment.

## **2.4 NON MOTORISED USER PROVISION**

### **2.4.1 Adjacent Land**

No comment.

### **2.4.2 Pedestrians**

#### **(a) Problem:**

No controlled crossing facilities have been proposed at Beechcliffe roundabout in particular Hard Ings Road (West)

#### **Recommendation**

Implement controlled crossing facilities. The background information highlights delays when signalling the exit arms however consideration to a crossing facility further along Hard Ings Road (West) to be assessed.

#### **Designer's Response**

The assumption has been made that Hard Ings Road (West) refers to the section of Hard Ings Road between Lawkholme Lane and Beechcliffe roundabout.

Further investigation is required for the introduction of a crossing at this location; however at this stage indications are that this will have an unacceptable impact on operations.

An informal crossing at the Hard Ings Road / Skipton Road roundabout is being considered.

### 2.4.3 Cyclists

#### (a) Problem:

The collision data identifies a number of collisions involving cyclists at the roundabout.

#### Recommendation

Reduce the central island of the roundabout to implement a shared two-way cycle and pedestrian footway at the western footway to link the proposed shared footway at Keighley Retail Park and pedestrian facility as discussed in 2.4.2. Implementation of a shared two-way cycle and pedestrian footway on the Eastern side of the roundabout to link into proposed facilities inbound.

#### Designer's Response

The collision data for the previous 5 years shows there have been 2 cyclists involved in accidents at the Beechcliffe roundabout, and each of these were due to a motor vehicle failing to stop at the Giveaway line on the approach to the roundabout and hitting the cyclists on the circulatory carriageway. Signalising of the roundabout will eliminate this type of collision from occurring.

Further to the above the comments have been noted; however below is a commentary of why a shared two-way cycle and pedestrian footway can not be implemented in the area recommended.

The central island of the Beechcliffe roundabout has already been reduced in the proposed design by 2 metres to increase lane widths on the circulatory carriageway to aid the passage of HGV's onto Hard Ings Road (west).

The footway and carriageway on the exit arm from the Beechcliffe roundabout onto Hard Ings Road (outbound) can not be widened as this section is constructed partly on a bridge and therefore is bound by the constraints as discussed in the options report. The lane widths can not be reduced as these are required for HGV turning manoeuvres.

Cycle facilities have primarily been provided for the less experienced cyclists by providing the shared two-way cycle and pedestrian footway on the outbound side from the Bradford Road roundabout up to the Keighley Retail Park. A Toucan crossing is proposed on Hard Ings Road located between Lawkholme Lane and Byrl Street, which would allow both pedestrians and cyclists to cross. A two way shared facility will also be provided on the inbound side of Hard Ings Road between the proposed Toucan crossing and Royd Way. This would provide a cycle route to join Hard Ings Road and

the existing cycle route along Royd Ings Avenue through the tunnel under the A629 dual carriageway, leading to the Skipton Road area.

The section between Keighley Retail Park and Beechcliffe roundabout has not been proposed as a shared two-way cycle and pedestrian footway because we would not be able to provide the adequate widths as stated above.

Cyclists who choose not to use the facilities directing them to Royd Ings Avenue and carry on cycling on Hard Ings Road (outbound) beyond the Keighley Retail Park will have to rejoin the carriageway near the Keighley Retail Park. This would be a sensible place to have the cyclist rejoin the carriageway. It should be noted that this section of carriageway is will remain unchanged as the existing layout. The circulatory carriageway lanes on the Beechcliffe roundabout will be made wider which will benefit cyclists giving them space and manoeuvrability through the junction.

#### **2.4.4 Equestrians**

No comment.

### **2.5 ROAD SIGNS, CARRIAGEWAY MARKINGS AND LIGHTING**

#### **2.5.1 Signs**

No details have been provided by the design team.

#### **2.5.2 Lighting**

No details have been provided by the design team.

#### **2.5.3 Poles and Columns**

No details have been provided by the design team.

#### **2.5.4 Road Markings**

No details have been provided by the design team.



**3.0 AUDIT STATEMENT**

We certify that we have examined the drawings and documents listed in the Appendices to this report for the purpose of identifying any feature of the design that could be modified to improve the safety of the scheme. Issues that we have identified are contained within this report together with recommendations for consideration by the design team.

No member of the audit team has been involved in the design of this scheme.

**Audit Team**

Signed ..... Date .....  
Name: ██████████

Signed ..... Date .....  
Name: ██████████

## **RSA - APPENDIX A**

### **List of Drawings and Documents Examined**

- Road Safety Audit Brief
- Road Safety Audit Brief (HD19/03)
- Collision data plan
- Collision report
- Work Instruction
- Junctions Options Report (West Yorkshire + Transport Fund Project Board)
- Options Appraisal Report (West Yorkshire + Transport Fund Project Board)
- Constraints drawing TDG/HDB/102582/MS-1B
- Beechcliffe Roundabout Junction Option-J1 signal controlled roundabout TDG/HDB/102582/OPT-J1.
- Link Option 5 Composite Design (Part Dual) TDG/HDB/102582/OPT-L5C
- Phase 1A – Link Option 1 Do Nothing – Base Plan TDG/HDB/102582/OPT-L1B