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## PEDESTRIAN FACILITIES, LAND AT SOUTH SIDE, STEEPLE ASTON, OXFORDSHIRE

### RESPONSE TO STAGE 1 ROAD SAFETY AUDIT

#### Introduction

The following is provided in response to Stage 1 Road Safety Audit (Ref. TR8171225/GT/018) dated 5 November 2019, which was undertaken by Glanville Consultants in respect of the proposed delivery of pedestrian facilities at South Side, Steeple Aston, Oxfordshire. The works are proposed to accompany a modest residential development on land to the south of South Side.

The proposed highway works relate to pedestrian facilities and include the following:

- Provision of a new section of kerbed footway (1.2 metres wide) on the southern side of South Side, commencing at the eastern pedestrian link from the development and continuing east over a distance of approximately 18 metres. This is followed by an over-runnable footway continuing east over a distance of approximately 20 metres.
- Provision of a virtual footway (1.5 metres wide) on the southern side of South Side, commencing at the eastern end of the over-runnable footway and continuing east over a distance of approximately 40 metres. Directional red / white reflective studs to be inserted on the northern boundary of this footway.
- Provision of a priority give-way arrangement including a kerbed build-out, road markings and traffic signs, with priority given to all vehicles travelling east to west.

#### Key Personnel

- Graeme Turner - Glanville Consultants (Stage 1 & 2 RSA Team Leader)
- Peter Whitehead - Glanville Consultants (Stage 1 & 2 RSA Team Member)
- Tim Foxall - Glanville Consultants (Director – Design Organisation)
- Tom Hart - Glanville Consultants (Technician – Design Organisation)

#### Audit History

Road Safety Audit TR8171225/GT/018 is the first audit of this scheme. Prior to this, an interim Stage 1 Road Safety Audit (TR8171225/GT/009) of 5 options for the highway works was completed. The findings of this initial audit helped inform the design of the highway works that are subject of this most recent Audit.

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## Matters Arising from Audit TR8171225/GT/018

Throughout this Audit response, where considered appropriate to do so, amendments to the proposed design are illustrated on drawing 8171225/6110 Rev A3.

### Problem 1

Location: Eastbound approach to priority give way and build-out and continuing east.

Summary: Risk of obstructed forward visibility leading to vehicle / vehicle head-on collisions leading to possible personal injury.

The existing nearside hedgerow on the eastbound approach to the proposed priority give way line was noted to partially obstruct forward visibility. This may result in drivers passing the give way line whilst having insufficient sight of on-coming vehicles travelling east to west along South Side. As a result, vehicles travelling west to east may be unable to sufficiently clear the proposed kerbed build-out, giving rise to a risk of either vehicle / vehicle head-on collisions or collisions with the build-out, both with possible personal injury occurring.

### Recommendation

It is recommended that the existing hedgerow is trimmed back along its length at least as far as the highway boundary, if this can be easily defined. Future growth shall be monitored and trimmed as required as part of an on-going maintenance programme. It is also recommended that the build-out is not kerbed but is instead constructed to be fully or part over-runnable thereby providing larger vehicles with additional carriageway width to take avoidance action if required. The proposed sign assembly to be installed within this build-out should be relocated as a result, whilst ensuring that sufficient horizontal clearance is provided.

### *Design Organisation's Response*

Although the Design Organisation considers that forward visibility is currently acceptable (see the photograph in the Safety Audit which demonstrates that a clear line of sight is available from the proposed give way line to a point beyond the limit of the proposed highway works) it is nevertheless accepted that future growth of the hedge could begin to erode this.

As such, it is proposed that the nearside hedgerow on the eastbound approach is trimmed back along its length at least as far as the highway boundary.

For the above reason of there already being adequate forward visibility, it is not considered absolutely necessary to amend the island so as to become half over-runnable. However, the Design Organisation can see that there would be advantages of making the island half-over-runnable, in so much as it would allow vehicles to take 'avoidance action' if necessary, while providing additional room for larger vehicles to manoeuvre. As such, a half over-runnable solution is duly proposed, with commensurate relocation of the associated signage.

Problem 1 is therefore considered to have been fully addressed.

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## Problem 2

Location: Eastbound approach to priority give way.

Summary: Risk of obstructed forward visibility leading to vehicle / vehicle head-on collisions leading to possible personal injury.

There is a concern that the proposed assembly comprising signs conforming to diag 615 and 615.1 will obstruct forward visibility for drivers of larger vehicles or SUVs travelling west to east who are likely to be seated in a more elevated position. This may result in drivers passing the give way line whilst having insufficient sight of on-coming vehicles travelling east to west along South Side giving rise to a risk of vehicle / vehicle head-on collisions with possible personal injury occurring.

### Recommendation

It is recommended that the sign assembly is relocated such that forward visibility is not compromised, whilst ensuring that sufficient horizontal clearance is achieved.

### *Design Organisation's Response*

The Design Organisation considers that the mounting height of the signs will be above the driver's eye line, even for those driving larger vehicles with an elevated seating position.

Notwithstanding, as noted above, it is proposed that the island is amended so as to become half over-runnable. This will mean the signs can be moved towards the nearside on the eastbound approach and out of the visibility splay of vehicles approaching the give-way from the west.

Whilst the signs will be nearer to the highway boundary they will still be clear of potentially encroaching vegetation.

Problem 2 is therefore considered to have been fully addressed.

## Problem 3

Location: Proposed narrowing.

Summary: Risk of vehicle / cycle collisions leading to possible personal injury.

The introduction of the virtual footway will locally reduce the carriageway width to 2.82 metres. Whilst the Audit Team accepts that the virtual footway is designed to be over-runnable, there is the potential that some drivers travelling west to east may be reluctant to use this additional width when attempting to overtake a cyclist or will be unable to use it if it is occupied by a pedestrian. There is a similar concern in respect of cyclists travelling in the opposite direction. This gives rise to a risk of collisions with possible personal injury occurring. [Note: Local Transport Note 1/07 (Traffic Calming) recommends that *'Total widths through narrowings of between 2.75 and 3.25 metres should be avoided if no cycle bypass is provided'*.].

### Recommendation

It is recommended that the width of carriageway adjacent to the virtual footway is either increased to a minimum of 3.25 metres (recognising that the width of the adjacent footway may need to undergo a commensurate reduction in width) or the carriageway width is reduced to be no wider than 2.75 metres, thereby discouraging drivers from attempting to pass a cyclist.

### *Design Organisation's Response*

The Design Organisation accepts the Audit Team's recommendation. It is proposed that the carriageway width is reduced to be 2.75 metres at the pinch point, thereby discouraging drivers from attempting to pass a cyclist. This will also mean the virtual footway is slightly wider for pedestrians. To the east of this pinch point the carriageway opens out to be 3.25 metres wide or wider.

Problem 3 is therefore considered to have been fully addressed.

### Problem 4

Location: Over-runnable footway.

Summary: Risk of vehicles colliding with full height kerbing leading to loss of control incidents or injury being caused to vehicle occupants.

A mix of over-runnable and kerbed footway will be provided between the development site and the virtual footway. There is a concern that larger vehicles passing similarly sized vehicles waiting at the priority give way will have to use part of the kerbed footway during this manoeuvre. This may lead to loss of control incidents and / or a risk of injury being caused to vehicle occupants.

### Recommendation

It is recommended that the full length of footway between the development site and the virtual footway is constructed to be over-runnable.

### *Design Organisation's Response*

The Design Organisation does not agree with the Audit Teams observation and does not consider it necessary to adopt their recommendation.

The scheme has been designed using swept path analysis and Glanville drawing 8171225/6218 shows that a bus will be able to pass a car waiting at the give-way line without over-running the full height footway.

Moreover, the levels between the site and the carriageway and the adjacent existing wall of the neighbouring property are such that providing an over-runnable footway over a greater length is not considered practical.

No design changes are therefore proposed to address Problem 4.

### Problem 5

Location: Virtual footway.

Summary: Risk of injury to pedestrians owing to overhanging vegetation leading to personal injury.

Existing vegetation currently overhangs the route of the proposed virtual footway. This will cause obstruction leading to pedestrians having to step into the carriageway giving rise to a risk of vehicle / pedestrian collisions with possible personal injury occurring.

## Recommendation

It is recommended that overhanging vegetation is extensively trimmed back to ensure that the full width of the virtual footway can be used by pedestrians travelling in either direction.

### *Design Organisation's Response*

The Design Organisation accepts the Audit Team's recommendation. It is proposed the overhanging vegetation is extensively trimmed back to ensure that the full width of the virtual footway can be used by pedestrians.

Problem 5 is therefore considered to have been fully addressed.

## Problem 6

Location: Eastern end of over-runnable footway at interface with virtual footway.

Summary: Lack of warning for visually impaired pedestrians leading to a risk of trips or falls with possible personal injury.

Pedestrians with a visual impairment are given no indication of where the over-runnable footway ends, and the virtual footway commences. Furthermore, all pedestrians must transfer to and from both footways via a dropped kerb with a 25mm upstand. There is a concern that an absence of demarcation at the end of the over-runnable footway and the kerb upstand may both give rise to trips or falls with possible personal injury occurring.

## Recommendation

It is recommended that a short length of dropped kerb with an upstand not exceeding 6mm is provided at the eastern end of the over-runnable footway, where pedestrians must transfer to and from the virtual footway and some form of demarcation indicating the end of the over-runnable footway is also provided.

### *Design Organisation's Response*

The Design Organisation accepts the Audit Team's recommendation. A short length of dropped kerb with an upstand not exceeding 6mm is provided at the eastern end of the over-runnable footway.

Two bollards have been added to the design to demarcate the eastern end of the over-runnable footway.

Problem 6 is therefore considered to have been fully addressed.

## Problem 7

Location: Virtual footway.

Summary: Proposed studs potentially leading to confusion with possible personal injury occurring.

In order to demarcate the edge of the virtual footway it is proposed that directional red and white studs are installed. Conventionally white studs are used to indicate a traffic lane or centre of carriageway marking. Hence, their use in this instance may be confusing to approaching drivers giving rise to a risk of pedestrian / vehicle collisions with possible personal injury occurring.

Conventionally red studs are installed to indicate a line which should not be crossed and thus drivers may be reluctant to use the virtual footway when passing other road users travelling in the same direction. This may lead to side swipe collisions with possible personal injury occurring.

#### Recommendation

It is recommended that the edge of the virtual footway is clearly defined which may be through the use of an alternative stud colour that avoids the potential for confusion with its conventional use, or by other means.

#### *Design Organisation's Response*

Notwithstanding the demarcation having been previously agreed by the Highway Authority, the Design Organisation accepts the Audit Team's concerns. It is proposed that the virtual footway is demarcated with a white line to diag 1010 and that studs are omitted.

Problem 7 is therefore considered to have been fully addressed.

#### Problem 8

Location: Eastern end of virtual footway.

Summary: Risk of pedestrian / vehicle collisions leading to personal injury.

The virtual footway terminates at its eastern end such that pedestrians are left exposed with no defined onward route using other existing facilities. The opposite, east to west route is also an issue since there is no defined route guiding pedestrians from existing facilities to the virtual footway. This may lead to confusion and a risk of pedestrian / vehicle collisions with consequent personal injury occurring.

#### Recommendation

It is recommended that appropriate facilities are included as part of these works to allow all pedestrians to transfer between the virtual footway and existing facilities.

#### *Design Organisation's Response*

The Design Organisation has considered the Audit Team's concerns.

The proposed scheme of highway works offers a substantial positive enhancement over the existing arrangement whereby pedestrians are free to walk throughout the narrowest section of South Side, with no mechanism in place to contain vehicle speeds or to direct their onward travel.

The works hereby proposed offer several benefits; speed reduction and a formalised area within which pedestrians can walk. This regularises the situation for pedestrians and drivers alike and therefore substantially enhances highway safety.

The point at which pedestrians emerge from the virtual footway at its eastern end is in reality little different to the existing situation whereby pedestrians may find themselves in the exact same position and therefore the proposed works are arguable no different, save of course for the wider benefit of speed reduction and formalisation noted above which must be taken in the round as being a material benefit.

The matter of onward travel has been discussed on-site with the Highway Authority and the need for further works discounted.

As such it is not considered necessary to address the Audit Team's comments through the inclusion of further works.

No design changes are therefore proposed to address Problem 8.

Design Organisation Statement

On behalf of the Design Organisation I certify that:

The preceding RSA actions constitute our response to the Stage 1 & 2 Road Safety Audit and are submitted to the Overseeing Organisation for approval.

T Hart  
Technician  
Glanville Consultants

Signed  .:

Date: .....12 November 2019.....