



STAGE 1 ROAD SAFETY AUDIT

Pedestrian Facilities
Land at South Side
Steeple Aston, Oxfordshire

Engineering, Design and
Surveying Consultants

from inception to completion

Prepared for: Rectory Homes
Ref: TR8171225/GT/018
Issue 1: 5 November 2019

Document History

Issue	Date	Description	Prepared By	Checked By
1	5 Nov 2019	Issued to the Design Organisation (Tim Foxall - Glanville)	G Turner	P Whitehead

Glanville

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Cornerstone House
62 Foxhall Road
Didcot
Oxfordshire OX11 7AD

Offices also at:

3 Grovelands Business Centre
Boundary Way
Hemel Hempstead
Hertfordshire HP2 7TE

Telephone: 01235 515550

Telephone: 01442 835999

postbox@glanvillegroup.com
www.glanvillegroup.com

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1.0 Introduction

- 1.1 This report forms an independent Stage 1 Road Safety Audit carried out on off-site highway works associated with a proposed residential development on land at South Side, Steeple Aston, Oxfordshire. The Audit was carried out at the request of Tim Foxall, representing the Design Organisation (Glanville Consultants) and the developer (Rectory Homes) and on behalf of the Overseeing Organisation (Oxfordshire County Council).

The Audit Team membership was as follows:

Road Safety Audit Team Leader

P.A. Whitehead BSc CEng MICE MCIHT
Associate Director, Glanville Consultants

Road Safety Audit Team Member

G. Turner BEng MSoRSA
Principal Engineer, Glanville Consultants

- 1.2 The terms of reference of the Audit are as described in GG119 'Road Safety Audit' which form part of the Design Manual for Roads and Bridges. The Audit Team has examined and reported only on the road safety implications for users of the scheme as presented. The scheme has not been examined or verified for compliance with any other standards or criteria. However, in order to clearly explain a safety problem or a recommendation to resolve a safety problem, the Audit Team may on occasion refer to a design standard for information only. Any recommendations or comments made in this report should not be construed as implying that a technical audit of the scheme, as presented, has been undertaken in any respect.
- 1.3 Any recommendations included within this report should not be regarded as being prescriptive design solutions to the safety problem identified. Recommendations are intended only to indicate a proportionate and viable means of eliminating or mitigating the safety problem identified, in accordance with GG 119. The Audit Team recognises that there may be alternative methods for addressing a safety problem which may be equally acceptable in achieving the desired elimination or mitigation and thus such alternatives should also be considered when responding to this report.
- 1.4 Responsibility for the safety of operatives, the public and end users during all stages (typically planning, construction and maintenance) which are required to deliver any of the recommendations included within this report, shall not lie with the Audit Team.
- 1.5 Although a formal Audit Brief has not been issued to the Audit Team they are, nevertheless, satisfied that sufficient information has been provided to enable them to carry out a valid Road Safety Audit.
- 1.6 The Audit Team has had no involvement in any aspect of the scheme design and the Design Organisation (Glanville Consultants) has had no involvement in the Road Safety Audit process, other than to respond to any safety concerns identified.

1.7 The Audit took place in October / November 2019 and comprised examination of the following information:

Drawings

- 8171225/6110 Rev A2 Proposed Pedestrian Facilities with Shared Space
- 8171225/6111 Rev A General Arrangement Site Location
- 8171225/6218 Rev A Swept Path Analysis 12.8m Bus
- 8171225/6221 Rev A Swept Path Analysis Massey Ferguson 7278 Combine Harvester
- 8171225/6222 Swept Path Analysis Car

Supplementary Information

- Interim Stage 1 Road Safety Audit, Ref. TR8171225/GT/009, 7 February 2019 as prepared by the independent Audit Team listed in this Stage 1 Road Safety Audit.

1.8 The site is located on South Side in Steeple Aston, Oxfordshire.

1.9 South Side is an unclassified semi-rural single carriageway broadly lying on an east to west alignment between the A4260 Oxford Road (to the west) and Heyford Road (to the east). At its western end the posted speed limit is 60mph whilst on the immediate outskirts of, and including through Steeple Aston, the posted speed limit is 30mph. Some limited street lighting is provided in the form of lanterns which have been mounted on telegraph poles. A footway is provided on the northern side of South Side to the east of its junction with Water Lane.

1.10 The site currently comprises open grassland which, it is proposed, will be developed to provide 10 residential dwellings including a single vehicular access on to South Side. A separate pedestrian link, also providing access to South Side, is proposed at the eastern end of the site.

1.11 In order to provide improved and safer connectivity between the proposed development and existing pedestrian facilities the Design Organisation has proposed the following measures:

- 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.

1.12 This Road Safety Audit considers only the proposed highway works as described above and does not include a review of any other aspect of the development proposals including any part of the on-site layout.

- 1.13 The Audit Team visited the site together on 30 October 2019 between 11.00 and 11.45 hours to review the proposed highway works in context. The weather conditions during this visit were overcast but dry.
- 1.14 Personal injury collision (PIC) data has not been provided for the Audit Team to review. Instead, the Audit Team has interrogated the Thames Valley Police / Hampshire Constabulary Traffweb and Crashmap databases to determine whether there have been any recorded PICs in the vicinity of the site in the last 5 years. This interrogation has confirmed that there have been no recorded collisions on South Side. Furthermore, the Design Organisation has established through consultation with the highway authority that there have been no recorded personal injury collisions on South Side between the site and Water Lane, including the junction itself, between 1 January 2013 and 30 September 2018. Hence, the Audit Team is satisfied that there is no existing accident problem in the vicinity of the site which might be exacerbated by the proposed modifications to the highway.
- 1.15 The Audit Team is not aware, nor has it been notified, of any requirements for a Departure from Standard, pending or otherwise, or Relaxation of Standards applied in connection with the proposed highway works.
- 1.16 No details have been provided in respect of drainage, surfacing or street lighting for the Audit Team to review. It is recommended that these elements are developed during the detailed design and that a Stage 2 Road Safety Audit is undertaken once they have been completed.
- 1.17 All safety problems and recommendations are referenced to the layout drawing at Figure 1.

2.0 Items Resulting from the Stage 1 Road Safety Audit

2.1 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 and east of the proposed build-out 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.



*View from proposed position of give way line
(looking east along south Side)*

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.

2.2 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.

2.3 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-runable, 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.

2.4 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.

2.5 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.



Overhanging vegetation

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.

2.6 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.

2.7 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.

2.8 Problem 8

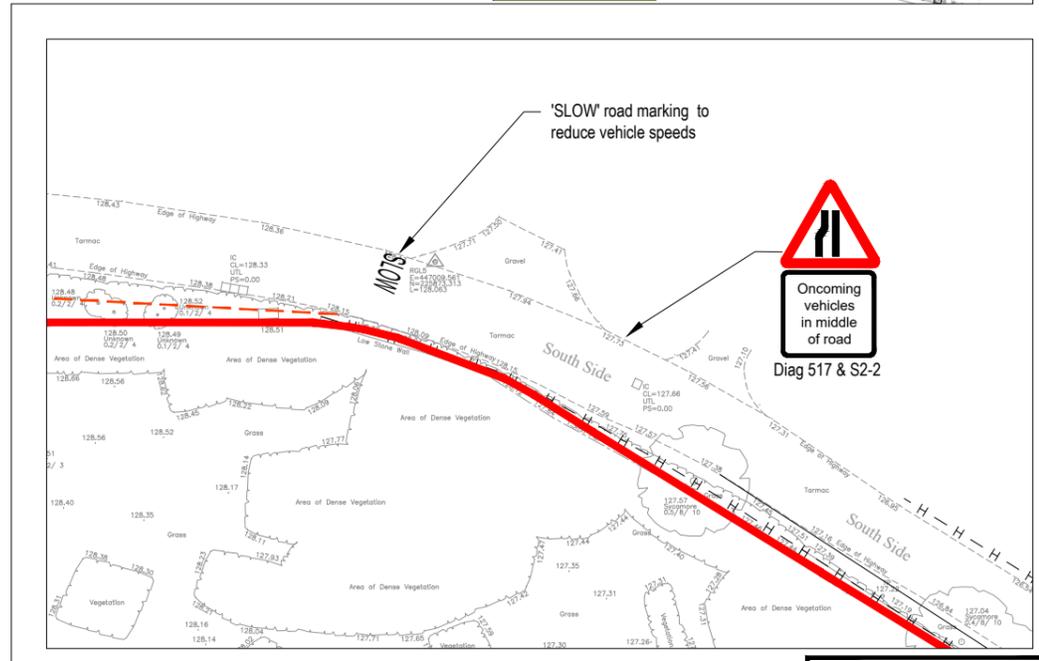
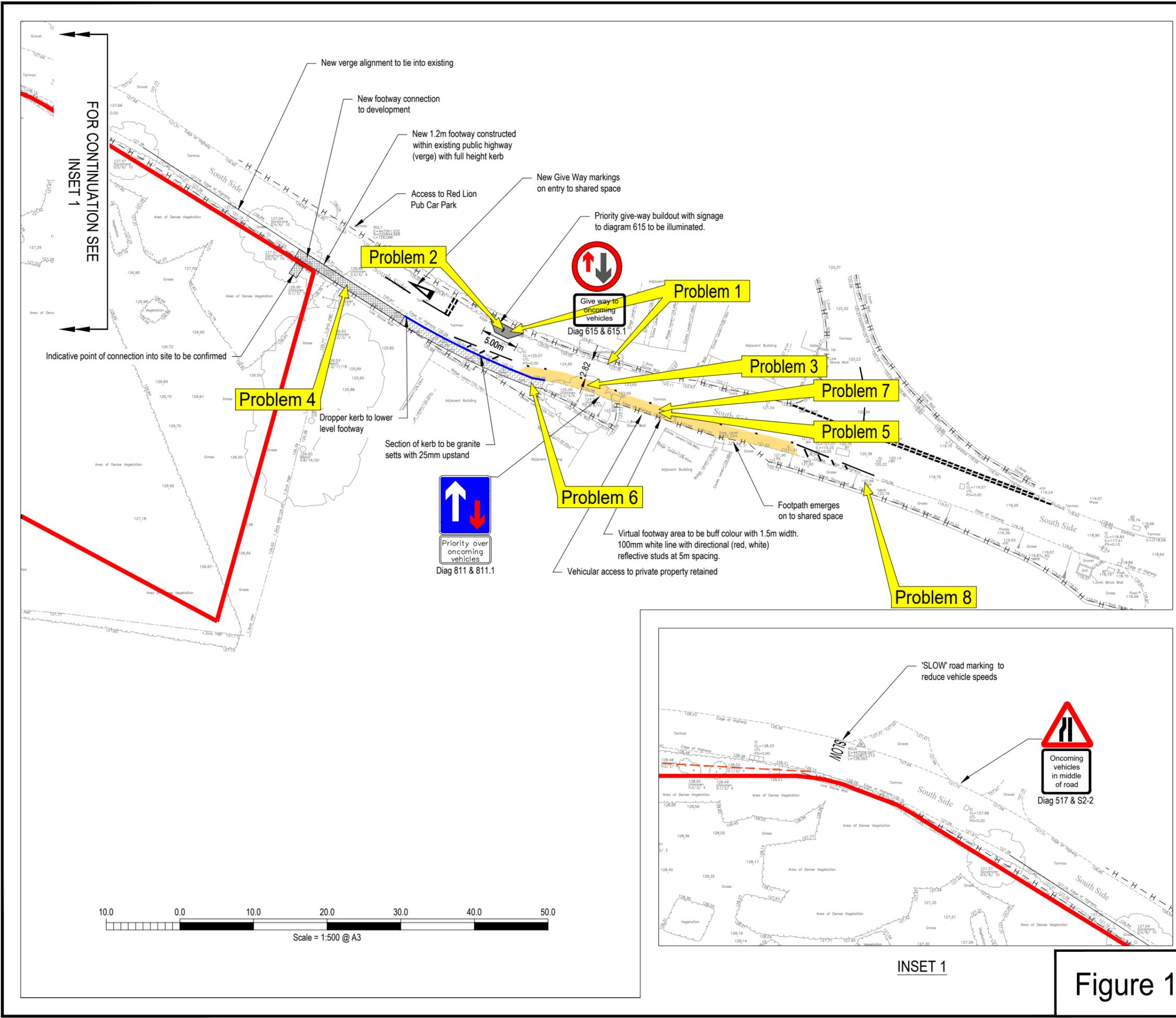
Location: Eastern end of virtual footway.

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.



NOTES

- This drawing is to be read in conjunction with all relevant documents and specifications.
- Dimensions are not to be scaled.

Source: RGL Surveys Ltd drawing number RGL-17-2679

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KEY

- H - H - Existing highway boundary
- Virtual footway
- New footway constructed within verge (full height kerb)
- New footway constructed across existing driveways/accesses/property frontage (25mm upstand)
- Site Boundary

A2	Updated following consultation with OCC	17/04/2019	JHeathcote	TF
A1	Updated following site meeting with OCC	10/04/2019	JHeathcote	TF
Rev.	Description	Date	Chkd	

Glanville
 Cornerstone House
 62 Foxhall Road, Didcot
 Oxon, OX11 7AD
 Tel: (01235) 515550 Fax: (01235) 817799
 postbox@glanvillegroup.com www.glanvillegroup.com

Client : **Rectory Homes**

Project : **Land at South Side, Steeple Aston**

Title : **Proposed Pedestrian Facilities with Shared Space**

Project Engineer : J.Heathcote Scale : 1:500 @ A3
 Project Director : T. Foxall Date : March 2019

Status : **PRELIMINARY**

Figure 1

Drawing No. 8171225/6110 Rev A2

Audit Team Statement

The Audit Team has examined the drawings and documents listed in the report with the sole purpose of identifying any feature of the design which could be removed or modified in order to improve the safety of the scheme. The problems identified have been noted in this report, together with associated safety improvements which are recommended for implementation.

We certify that this Road Safety Audit has been carried out in accordance with GG 119.

Road Safety Audit Team Leader

P.A. Whitehead BSc CEng MICE MCIHT
Associate Director
Glanville Consultants

Signed:  ..
Date: 5 November 2019

Road Safety Audit Team Member

G Turner BEng MSoRSA
Principal Engineer
Glanville Consultants

Signed:  ..
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Didcot, Oxfordshire OX11 7AD

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