

P e l l F r i s c h m a n n

Land off Shaw Lane, Carlton, Barnsley

Associated Highway Improvements –
Stage 1 Road Safety Audit

February 2023

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Executive Summary

Site Name	Land off Shaw Lane, Carlton, Barnsley
Location	Shaw Lane, Carlton, Barnsley
Summary	This report presents the result of a Stage 1 Road Safety Audit carried out on highway improvement works to accommodate a new development

1 Introduction

This report results from a Stage 1 Road Safety Audit of proposed highway improvements provided as part of a proposed residential development located to the north of Shaw Lane, Carlton, Barnsley.

The Audit Team membership was as follows:

- David Spaul, an Associate employed by Pell Frischmann at Wakefield (Team Leader); and
- Usman Khan, a Senior Transport Planner employed by Pell Frischmann at Wakefield.

The Audit took place during February 2023. The Audit comprised an examination of documents provided by the Designer, which are listed in Appendix A. The Audit team also visited the site between 10.35am and 11.45am on Tuesday 14 February 2023. The weather was dry and misty with hazy sunshine. The road surface was slightly damp.

The terms of reference of the audit are as described in the Design Manual for Roads and Bridges GG 119 'Road Safety Audit' document. 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 safety problem or the recommendation to resolve a problem, the Audit Team may on occasion have referred to a design standard for information only. Any audit comments should not be construed as implying that a technical audit has been undertaken in any respect.

Any problem that has been identified is described in section 2 of this report and in each case a recommendation is given. The location of each problem is shown in Appendix B.



Figure 1 Site Location with indicative boundary shown in red

The development proposals comprise of approximately 215 residential dwellings with access by means of a new priority junction located on Shaw Lane. The proposals include a new vehicular access and an internal access road. The new road would act as the first phase of a future link road between Shaw Lane and Royston Lane (to the west of the development site) to be constructed in accordance with the adopted Carlton Masterplan Framework. The proposals will also include pedestrian footways and improvements to the junction of Shaw Lane with Church Street and Fish Dam Lane (west of the development site) in order to mitigate against any potential impact of the new development.

The scope of this Road Safety Audit is restricted to the following highway improvement proposals resulting from this development:

- Proposed signalisation of the existing priority junction of Shaw Lane with Church Street and Fish Dam Lane; and
- Proposed new priority 'T' junction on Shaw Lane and associated toucan crossing, providing access to the new development. The toucan crossing is some 40 metres to the west of the new junction.

2 Items raised at this Stage 1 Road Safety Audit

2.1 Problem 1

Location: Junction of Shaw Lane, Church Street & Fish Dam Lane

Summary: The controlled crossing on the north side of the junction conflicts with a private driveway

It is proposed to signalise the existing priority junction where Shaw Lane meets Church Street and Fish Dam Lane. The proposal includes controlled pedestrian crossings on Shaw Lane and Church Street to the east and north side of the junction respectively. On the western side of the junction is a private driveway. The western end of the pedestrian crossing on Church Street will result in the red blister tactile paving being laid within the width of the vehicular crossing across the footway. This will result in a risk to waiting or crossing pedestrians being struck by a vehicle emerging from, or turning into, the driveway. The associated signal pole, supporting the push button and pedestrian indicator, will restrict vehicular access to the driveway making access more hazardous, resulting in the manoeuvre to and from the driveway taking longer and increasing the risk of a sideswipe collision with passing vehicles.



Figure 2 Driveway emerging into junction

Recommendation

It is recommended that the location and orientation of the controlled crossing of Church Street is amended to avoid any conflict with the driveway.

2.2 Problem 2

Location: Junction of Shaw Lane, Church Street & Fish Dam Lane

Summary: Vehicles emerging from the driveway into the junction not under signal control

It is proposed to signalise the existing priority junction where Shaw Lane meets Church Street and Fish Dam Lane. On the western side of the junction is a private driveway. The driveway emerges onto the junction with vehicles from the driveway not being under signal control, as a result vehicles may potentially enter the junction at any time. As such, there is a potential conflict with traffic moving through the junction on a green signal or

pedestrians crossing on a green signal resulting in a sideswipe collision or a pedestrian being struck on the crossing.

Recommendation

It is assumed that even if regular users of the driveway may be familiar with the new layout, visitors and deliveries may not be. Use of the driveway is unlikely to require a separate signal. To mitigate risks between an emerging vehicle and others passing through the junction it will be beneficial if the emerging driver can view the signals to choose an appropriate time to enter the junction. It is therefore recommended that far-sided secondary signals are provided which can be also viewed by a driver emerging from the driveway.

2.3 Problem 3

Location: Junction of Shaw Lane, Church Street & Fish Dam Lane

Summary: Stop lines appear to be too close to the controlled crossings

The drawing appears to show the stop lines at the signal-controlled crossing to be too close to the controlled crossing. The proximity of the stop line to the crossing will increase the risk to pedestrians using the crossing of being struck by a vehicle should the driver brake late and over run the stop line on a red signal.

Recommendation

The risk of a pedestrian being struck by a late braking vehicle will be reduced if the stop line is moved further in advance of the crossing. The Traffic Signs Manual (Chapter 6, para 18.1.5) states the stop line must be placed a minimum of 1.7m and normally not more than 3m from the studs (refer to the controlled zone layout in Schedule 14, Part 2, Item 51 of the Traffic Signs Regulations and General Directions 2016). In addition, para 4.2.2 (chapter 6) also states that the stop line should be at least 1.5m in advance of the nearside primary signal, although 2.5m is preferable. It is recommended that the stop line is relocated further from the crossing.

2.4 Problem 4

Location: Junction of Shaw Lane, Church Street & Fish Dam Lane

Summary: HGVs turning left from Shaw Lane may over run the footway to avoid queuing traffic at signals

There is a risk that left-turning HGVs from Shaw Lane could potentially conflict with queuing traffic along Fish Dam Lane, resulting in them encroaching onto the footway at the south-eastern corner and potentially conflicting with pedestrians. Such a manoeuvre may result in injury to pedestrians or a collision with waiting vehicles.

Recommendation

It is recommended that the designer carries out swept path analysis to ensure that the HGV turning manoeuvre can be accommodated within the carriageway and without encroaching into the northbound lane of Fish Dam Lane.

2.5 Problem 5

Location: Shaw Lane west of development access – proposed toucan crossing

Summary: The use of the southern footway by cyclists may lead to conflict with pedestrians

A Toucan crossing is being provided to the west of the proposed site access junction. This will provide a crossing for pedestrians and cyclists from the site to cross onto the southern footway along Shaw Lane. To the west of the toucan crossing the footway width reduces to as little as 700mm measured on site. This footway is insufficiently wide enough to accommodate both users without the potential for collisions between them.



Figure 3 Shaw Lane footway narrowing to 700mm wide west of the proposed toucan crossing

Recommendation

It is recommended that the designer review the route for cyclists to and from the western side of the proposed development.

3 Audit Team Statement

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

AUDIT TEAM LEADER

David Spaul, Associate

Pell Frischmann, G37B Trinity Walk, Market Walk, Wakefield WF1 1QR

Signed:



Dated: 15/02/2023

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Signed:

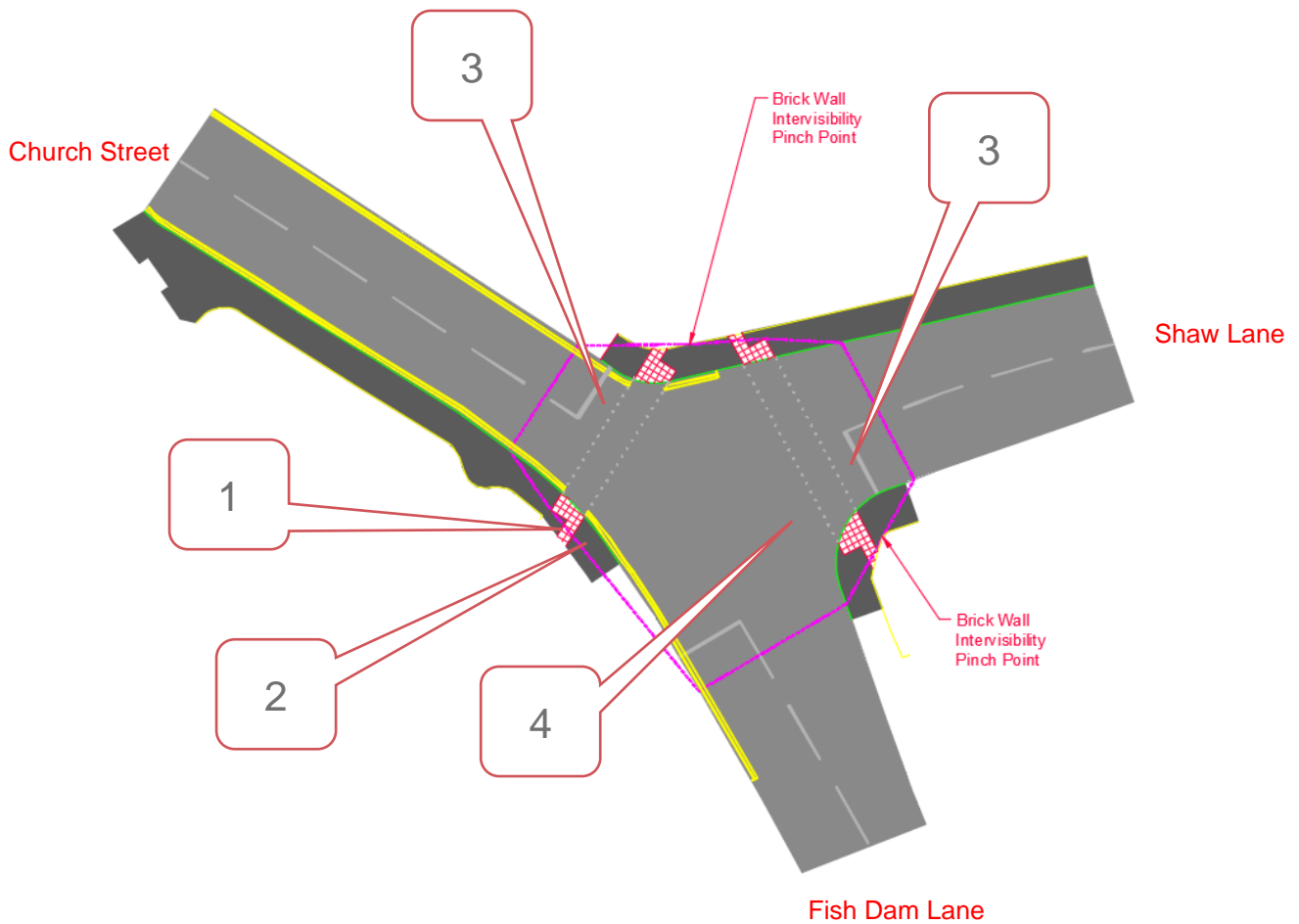


Dated: 15/02/2023

Appendix A Schedule of documents

IPD- Signal Junction Design	DWG file dated 06/02/2023 10:52
IPD- Site Access	DWG file dated 06/02/2023 10:51
102107-PEF-XX-XX-T-000001	Land at Shaw Lane Updated Transport Assessment Revision P01 dated 01/02/2023

Proposed Shaw Lane signalised junction with Church Street and Fish Dam Lane



Proposed development access off Shaw Lane

