



Sevenairs Consulting Ltd

Spring Lane, Radcliffe, Bury

Road Safety Audit Stage 1

November 2023



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Spring Lane, Radcliffe, Bury – Road Safety Audit Stage 1

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On behalf of

Via Solutions – The Old Coach House, 1 Campbell Street, Pudsey, LS28 6DP

Highway Authority / Overseeing Organisation

Bury Council

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Introduction

Commissioning and Scope

This report results from a Stage 1 Road Safety Audit carried out at the site of an educational development off Spring Lane in Radcliffe, Bury. The audit was carried out at the request of Chris Yarrow, Director, Via Solutions on behalf of the developer of the site.

The Road Safety Audit team membership was as follows:

The Audit Team	Haydn Vernals FCIHT FIHE CMILT MSoRSA Directive 2008/96/EC (Certificate of Competency), Road Safety Team Leader in accordance with GG119
	Sarah Vernals BAHonsQTS NPQH, Road Safety Team Member in accordance with GG119
Audit Observers	None

A site visit took place comprising of the RSA team on Monday 13th November 2023 between 11:30 and 12:00 hours during which the weather was cloudy and the road surface wet. Traffic conditions were moderate and free flowing, with a small number of pedestrians and cyclists observed.

The main project comprises of an educational development replacing an existing Pupil Referral Unit for up to 89 pupils. The new school will have a capacity of approximately 750 pupils. Highway works include a proposal for a CYCLOPS junction, essentially a signal controlled orbital cycle track around a traffic signal-controlled junction. Further works are proposed on the approaches to the junction with an access road into the school site leading to the school and a pupil pick up and drop off facility. The scope of this Road Safety Audit is to review the proposed highways works both on Spring Lane and outside the school.

The audit has been carried out in accordance with the principles of the National Highways document GG 119 Road Safety Audit. A formal Road Safety Audit Brief was provided to the Audit Team. This provided information regarding the site with drawings and a transport statement also provided by e-mail. This was considered by the Audit Team to provide sufficient detail to undertake the appropriate stage of audit.

The audit also comprised of a desk-top study where all documents and plans provided by the Design Team were reviewed. No departures from standard have been brought to the attention of the RSA team with regard to the scheme as designed.

Documents Supplied

- E-mail proposal background
- FS1013-VS-XX-XX-D-H-0010 PO2 – Proposed access and junction
- FS1013-VS-XX-XX-D-H-0011 PO2 – Proposed CYCLOPS Junction
- FS1013-VS-XX-XX-T-H-1004 TAC – Transport Assessment
- 19-1369_CYCLOPS_technical_guide_A4_v3_Hi-Res – Technical Note on CYCLOPS

Terms of Reference

The terms of reference of this Road Safety Audit are as described in the National Highways document GG119 Road Safety Audit. 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 designs to any other criteria. No member of the Audit Team has been directly linked to the scheme design.

Each of the auditors' responses is classified as a 'Problem' that is likely to result in a significant road safety hazard. All comments and recommendations are referenced to the detailed design drawings and the locations have been indicated on the plan at the end of the report.

Where recommendations are made, these do not comprise design decisions, and it remains the responsibility of the Design Team to incorporate any changes into the scheme and consider any interactions between design elements.

Previous Road Safety Audits

The audit team have not been made aware of any previous Road Safety Audits.

Problems Raised at this Stage 1 RSA

PROBLEM – A-01

Location: Spring Lane / Development Access

Summary: Basic Design Principles – Junction choice may increase the risk of collisions involving pedestrians and cyclists, especially those of a secondary school age.

The development brings new secondary school provision to Radcliffe. The school opens in Sep 2024, taking in up to 150 year 7 pupils, then over each successive year, a further 150 year 7 pupils, to give a year 7-11 provision by 2028. The school is the first provision in Radcliffe since 2014, with pupils currently travelling to other secondary provision in Bury. This will ultimately create a large concentration of year 7-11 pupils at school arrival and departure times using the footways around the main access to the school site. This will be coincident in the morning peak with arrivals to the adjacent park and ride tram facility.

The highway proposals include the introduction of a CYCLOPS type facility at the main access to the school development site. The audit team are already familiar with the CYCLOPS concept and were provided with the supporting technical note prepared by TfGM in 2019. A review of the “Bee Network” maps in the TfGM website indicates no facilities currently in Spring Lane. There is some on carriageway provision on Bury Road to the east and a link via Darbyshire Street to the west to the town centre.

There is a concern here that the CYCLOPS facility will form an isolated facility that will be overwhelmed with secondary age school children at times when demand for access to the adjacent park and ride facility will be at peak. This may increase the risk of collisions involving pedestrians and cyclists, especially those of a secondary school age.

RECOMMENDATION

It is recommended that a more traditional approach is taken at this location using shared use footway/cycleway areas and toucan type signal controlled crossings integrated into the development access. This could include a shared use footway/cycleway on the northern side of Spring Lane. This footway/cycleway could link to NCR 6 and A665 to the west and the residential areas to the east including the cycle lanes on Bury Road, which could be enhanced as part of the proposals.

PROBLEM – A-02

Location: Spring Lane / Development Access

Summary: Drainage – Insufficient surface water drainage may increase the risk of slips and falls by pedestrians or cyclists.

At this early stage, no details have been provided on the proposed drainage arrangements. The audit team noted the design has cycle lanes that are likely to be kerbed or have some other form of raised profile that may capture surface water either within the cycle lanes or in areas for pedestrians. This may lead to surface water collecting at low points, with a risk of detritus collecting over time or ice in wintery conditions. Insufficient surface water drainage may increase the risk of slips and falls by pedestrians and cycles in these areas.

RECOMMENDATION

It is recommended that drainage details are provided at the next stage of road safety audit including specifically footway / cycleway levels, contour plans, locations of gullies or linear drainage systems.

PROBLEM – A-03

Location: Spring Lane/Development Access

Summary: Skidding Resistance – Insufficient skidding resistance may increase the risk of collisions involving skidding

The provision of the new junction with pedestrian/cycle crossing facilities will change the site category in terms of the definitions within DMRB CD 236. The existing carriageway surface did not appear to be in a reasonable condition and may need changes to the vertical alignment to accommodate the horizontal geometric changes and traffic signal control. There has been a single serious collision in the vicinity of the proposed junction which would suggest a lower investigatory level here. Commercial vehicle use is expected to be less than 250 cv/lane/day. Insufficient skidding resistance may increase the risk of collisions involving skidding especially in wet or wintery conditions.

RECOMMENDATION

It is recommended that the carriageway on all approaches to and through the proposed junction are provided with a skidding resistance commensurate to DMRB CD 236, Table 3.3a or Table 3.3b based on the relevant site categories and traffic levels.

It is recommended that any new surfacing is done so in full lane widths and the revised crown of the road is located such to avoid the application of any adverse camber.

PROBLEM – A-04

Location: Spring Lane / Park and Ride Exit

Summary: Pedestrians – Crossing arrangement may increase the risk of collisions involving pedestrians

The existing dropped pedestrian crossing of the park and ride exit is to be revised as part of the proposals. This appears to revise the kerbs to form a shorter crossing for pedestrians. However, both the existing and proposed location focuses pedestrians to cross where a vehicle is likely to be waiting prior to entering Spring Lane. This arrangement forces pedestrians to walk around the back or worse, cross in front of a vehicle at the give way line. This arrangement also makes it difficult for users with mobility aids to cross as well as giving a false impression of vehicle use in terms of vehicles exiting on both sides of the central refuge. This crossing arrangement may increase the risk of collisions involving pedestrians

RECOMMENDATION

It is recommended that the dropped crossing is relocated further into the exit, such that pedestrians and users of mobility aids are directed to cross to the rear of a vehicle at the give way line.

It is also recommended that LOOK LEFT / LOOK RIGHT carriageway marking text is provided.

PROBLEM – A-05

Location: Development Access – Shared use crossing near roundabout

Summary: Pedestrians / Cyclists – Arrangement may increase the risk of collisions involving pedestrians or cyclists

At this early stage, there is no indication of the type of crossing to be provided here. Should priority not be clearly defined to all road users, there may be an increased risk of collisions involving pedestrians or cyclists.

RECOMMENDATION

It is recommended that a zebra crossing or tiger crossing is provided here.

PROBLEM – A-06

Location: Development Access spine road at the pick up / drop off access

Summary: Pedestrians / Cyclists – Arrangement may increase the risk of collisions involving pedestrians or cyclists

The crossing facility at the entry to the pick up / drop off loop does not provide a clear indication of who has priority at this point. At this early stage, the design is perhaps not developed sufficiently to show in the drawings. However, at busy times, this crossing will be used by a significant proportion of children accessing the school site, placing them in direct conflict with vehicles entering and leaving the pick up / drop off loop.

Parents and guardians in motor vehicles have an increased cognitive load when using these types of facility. They are dealing with masses of young pedestrians whilst keeping focus on the needs of their own child and potentially younger siblings, possibly including toddler/babies, whilst also manoeuvring around other vehicles. Having this arrangement operating as a two-way access further increases that cognitive load and consequentially increases the risk of collisions involving young pedestrians/cyclists crossing.

The audit team acknowledge that a tiger crossing could be provided here, however given that the cyclists are closest to the spine road, they will be the most exposed to vehicles turning into the loop. As such, there may be less risk here providing a simple zebra arrangement if this area is not adopted similar to other low speed school environments or car parks.

Poor clarity of priority at this location may increase the risk of collisions involving pedestrians or cyclists.

RECOMMENDATION

It is recommended that pedestrians and cyclists are given clear priority here.

It is also recommended that the crossing is moved further away from the development access spine road to improve inter-visibility between pedestrians waiting to cross and vehicles turning into the pick up/drop off loop.

It is also recommended that the entry and the exit are separated such as to form a one way in and a separate one way out.

PROBLEM – A-07

Location: Spring Lane / Cycle Egress to the East

Summary: Cycles – Egress onto Spring Lane may increase the risk of collisions involving cyclists

The cycle egress onto Spring Lane on the northern footway, discharges directly onto the main carriageway of Spring Lane. There appears to be no physical protection for cyclists entering the main carriageway or form of segregation onwards through the narrowing that is formed by the bridge that carries the tramway over Spring Lane. This may increase the risk of collisions involving cyclists, especially side swipe type collisions as cyclists emerge.

RECOMMENDATION

It is recommended that the end of the off-carriageway cycle route is extended east into an on carriageway cycle lane along the northern side of Spring Lane, with a kerbed physical protection at the interface. For example LTN 1/20 Figure 9.2.

It is also recommended that the existing bus stop is relocated away from potential conflict points with cyclists.

PROBLEM – A-08

Location: Spring Lane / Cycle Egress to the West

Summary: Cycles – Egress onto Spring Lane may increase the risk of collisions involving cyclists

The cycle egress onto Spring Lane on the southern footway, discharges directly onto the main carriageway of Spring Lane into an area marked for kerbside parking. Although there is a give way at this point and a physical island, cyclists will be squeezed on entry into the westbound carriageway. This arrangement is also convoluted in the context of how cyclists are required to give way to vehicles turning right into the park and ride car park. Beyond here, cyclists may be squeezed between parked vehicles and vehicles heading west. This may increase the risk of collisions involving cyclists, especially side swipe type collisions as cyclists emerge.

RECOMMENDATION

It is recommended that the right turn into the park and ride car park site and cyclists leaving the off-carriageway provision are both signal-controlled.

It is also recommended that an on carriageway cycle lane is extended west to a point beyond the parking provision to facilitate cyclists getting up to road speed. This may require removal or relocation of the existing parking provision.

PROBLEM – A-09

Location: Spring Lane

Summary: Cycles – Width provision for cycles may increase the risk of shunt or side swipe collisions involving this user group.

Details of kerb-to-kerb widths have been provided at the traffic separator island to the west of the junction. At this location, although an off-carriageway facility is provided, cycles are still at risk on the main carriageway from motor vehicles passing too close due to a potential ambiguity of width as they overtake the slower moving cycle. Incompatible width provision for cycles may increase the risk of shunt or side swipe type collisions involving this user group.

RECOMMENDATION

It is recommended that, as per advice in LTN 1/20 Chapter 7, widths between 3.1m and 3.9m may encourage close overtaking by motor vehicles at pinch points and should be avoided.

Audit Team Statement

We certify that this Road Safety Audit has been carried out in accordance with GG119.

Road Safety Audit Team Leader

Signed:



Haydn Vernal FCIHT FIHE CMILT MSoRSA, Directive
2008/96/EC (Certificate of Competency)

Date:

20th November 2023

Sevenairs Consulting Ltd
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Road Safety Audit Team Member

Signed:



Sarah Vernal BAHonsQTS NPQH

Date:

20th November 2023

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Problem Location Plan

