



2402-01-RSADRN02: Technical Note

Project: **Gresford Road/Straight Mile, Aldi Llay**

Title: **Stage 2 Road Safety Audit – Designer’s Response Note**

Date: **22nd July 2021**

1.0 INTRODUCTION

1.1 This Technical Note has been prepared as a formal Designer’s Response Note (DRN) to the independent Stage 2 Road Safety Audit (RSA 2) report prepared by Highway Associates (Report Number: 2021/CRA/1342). This report is in response to the results from the Stage 2 Road Safety Audit carried out relating to proposals to provide two new access priority junctions off B5373 Gresford Road, Llay together with zebra pedestrian crossing facilities along Gresford Road and junction improvement measures at the Crown crossroads junction. The audit was carried out during April 2021. This independent audit was commissioned by Cameron Rose in the role of project manager of the Section 278 process on behalf of the development client, Aldi, in relation to highway works associated with the delivery of the new store at the site of Gresford Road/Straight Mile, Llay. For clarity, Cameron Rose act as the Traffic Engineering & Transport Planning Consultant for the project. Tier Consult are the Civil Engineering Consultant responsible for the detailed construction design for the project highways works.

1.2 The highway works were comprised of:

- The installation of a new store entrance
- The partial removal of the existing footway
- The installation of pedestrian crossings

- The laying of road markings
- The altering of the existing traffic signals
- The altering of the existing street lighting

1.3 The RSA2 was carried out with reference to the following package of information as provided to the audit team, and followed the procedures set out in HD 19/03 of the Design Manual for Roads and Bridges (DMRB).

- 19_2280_65-02_P1 – General Arrangement
- 19_2280_65-03_P1 - Site Clearance
- 19_2280_65-04_P1 – Levels Layout
- 19_2280_65-05_P1 – Pavement Layout
- 19_2280_65-06_P1 – Drainage and Services
- 19_2280_65-07_P1 – Signs and Markings
- 19_2280_65-08_P1 – Construction Details
- 19_2280_65-09_P1 – Risk Management

1.4 The remainder of this report reviews the ‘problems’ identified in the RSA2 report, and sets out the Design Organisation’s agreement or otherwise with the issues raised and, where relevant, details of design amendments proposed to address these matters.

2.0 ISSUES RAISED IN THE STAGE 2 ROAD SAFETY AUDIT

2.1 RSA 2 GENERAL – 3.1.1

Location: Straight Mile – Proposed junction access

Summary: Potential for conflict due to road layout

Problem: Concern is expressed that the small buildout on the west side of the proposed junction leading to the left turn filter lane may not be suitably conspicuous making the junction layout unclear and increasing the risk of kerb strikes which could lead to loss of control.

Recommendation: “Superstore” flag type signage as alluded to within the recommendation for problem 3.3.1 should be installed on the buildout for westbound traffic. Furthermore, edge of carriageway lines should be installed to delineate the junction. In addition, a bi-furcation arrow should be installed to demarcate the start of the left turn lane.

Design Organisation Response: **ACCEPTED**

Signs and Markings drawing updated to reflect the change

2.2 RSA 2 GENERAL – 3.1.2

Location: Gresford Road – Proposed Southbound bus stop

Summary: Waiting buses could increase the risk of overtaking conflict at the junction

Problem: Due to the location of the proposed bus stop being opposite to the junction with Fair Oaks Crescent, concern is expressed that should a bus be waiting at the bus stop that drivers turning left out of the junction may not be expecting an overtaking south eastbound vehicle increasing the potential for head-on collisions.

Recommendation: The bus stop should be relocated to an appropriate position away from the junction.

Design Organisation Response: **REJECTED**

The bus stop location has been agreed at the planning stage and due to the nature of the road there isn't another suitable location within the vicinity of the works for the bus stop to be relocated

2.3 RSA 2 NON-MOTORISED ROAD USER PROVISION – 3.2.1

Location: Straight Mile

Summary: Insufficient Uncontrolled crossing location could result in conflicts

Problem: An existing uncontrolled pedestrian crossing is located between the Crown Crossroads and the left turn-in entrance. Given the posted 50mph speed limit in this location and proximity to likely queuing westbound traffic and multiple traffic lanes, concern is expressed that this could lead to an increased risk of pedestrian conflicts involving crossing pedestrians in this location.

Recommendation: Further analysis should be undertaken to assess the need for a crossing on the Straight Mile due to lack of pedestrian activity on the northside of the footway in this location. If a crossing is deemed necessary, it should be relocated to a suitable position outside of any likely conflict areas.

Design Organisation Response: **ACCEPTED**

Crossing and associated paving to be removed, drawings updated to reflect change

2.4 RSA 2 NON-MOTORISED ROAD USER PROVISION – 3.2.2

Location: Gresford Road – Proposed zebra crossing

Summary: Incorrect tactile could result in pedestrian confusion

Problem: Buff coloured tactile paving has been specified for the zebra crossing. This could confuse pedestrians as to the nature of the crossing potentially causing injudicious crossing leading to pedestrian to vehicular conflict.

Recommendation: The buff coloured tactile should be replaced with the correct red coloured tactile.

Design Organisation Response: **ACCEPTED**

Tactile paving amended, drawings updated to suit

2.5 RSA 2 ROAD SIGNS AND MARKINGS – 3.3.1

Location: Gresford Road – Proposed zebra crossing

Summary: Insufficient signage could result in conflicts

Problem: Whilst arrow type stack advanced directions signage has been proposed on all approaches they are not reinforced by flag type signage at the relevant junctions. Without flag type signage it may be unclear as to the appropriate path to travel leading to driver confusion and potential sudden braking conflicts and encouraging errant right turn or U-turn manoeuvres.

Recommendation: Suitable flag type direction signage should be installed at the Crown Crossroads and also on the Straight Mile at the left turn junction.

Design Organisation Response: **ACCEPTED**

Signage added to the Signs and Markings drawing to reflect changes

2.6 RSA 2 LIGHTING AND SIGNALS – 3.4.1

Location: Gresford Road - Proposed zebra crossing

Summary: Insufficient luminance could result in crossing conflicts

Problem: Whilst some street lighting is provided along Gresford Road, it is deemed to be insufficient in consideration of the proposed zebra crossing. Insufficient night-time luminance could increase the risk of drivers failing to sufficiently appreciate crossing pedestrians resulting in vehicle to pedestrian conflicts on the crossing.

Recommendation: Ensure adequate street lighting is installed for the zebra crossing.

Design Organisation Response: **ACCPETED**

At the time of the RSA being carried out a Street Lighting layout had not been provided. Street Lighting design has now been carried out which provides adequate lighting at the zebra crossing

2.7 RSA 2 SURFACE CHARACTERISTICS AND DRAINAGE – 3.7.1

Location: Gresford Road – Proposed zebra crossing

Summary: Insufficient skid resistance could lead to conflicts.

Problem: A PSV of 65 has been specified for the proposed surfacing on the approaches to the zebra crossing. This is deemed to be insufficient and could increase the risk of loss of control or failure to give way type conflicts at the crossing.

Recommendation: A minimum PSV of 68 should be provided for the approaches to the crossing.

Design Organisation Response: **ACCEPTED**

PSV amended to 68 on the Signs and Markings drawing

2.8 RSA 2 SURFACE CHARACTERISTICS AND DRAINAGE – 3.7.2

Location: Gresford Road – Southbound approach to zebra crossing

Summary: Service cover location could cause loss of control.

Problem: An existing service cover appears to be located within the likely wheeltrack on the approach to the crossing. Due to the inherent lack of skid resistance afforded cast iron service covers, particularly when wet, concern is expressed that should it be struck particularly under heavy braking, that it could increase the risk of loss of control and potential incursion onto the crossing resulting in vehicle to pedestrian conflict.

Recommendation: An inset type manhole cover should be provided with a surface material that is complimentary in terms of skid resistance to the surrounding surface course.

Design Organisation Response: **ACCEPTED**

Manhole cover to be replaced. Drainage and Services drawing updated to reflect changes

CONCLUSION

- 2.9 The project management team has reviewed the issues and recommendations set out in the Stage 2 Road Safety Audit Report. It is considered that the RSA2 does not identify any material safety concerns that would prejudice the safe delivery and operation of the proposed access scheme.
- 2.10 Where relevant Audit Team recommendations have been incorporated into to amended design drawings. These updated layouts should be utilised as the basis for agreement with the local highway authority.