

Technical Note No. 3

Project: Aldi Foodstore, Gresford Road, Llay

Title: **Designer's Comments on Stage 1 Road Safety Audit**

Date: October 2020

1.0 Stage 1 Road Safety Audit

- 1.1 An independent Stage 1 Road Safety Audit has been undertaken by Highway Associates and is included as **Appendix A** to this Technical Note. Presented below is a summary of the safety audit findings and the designer's response to each of the problems identified.
- 1.2 Where noted, Cameron Rose Associates are the Traffic Engineering & Transport Planning Consultant for the project.

Problem 3.1.1

LOCATION: Straight Mile – Proposed junction access

SUMMARY: Potential for conflict due to junction layout

Concern is expressed that due to the entry into the car park being very close to the junction, any requirement to give way to enter the car park could result in sudden braking leading to loss of control, the situation could be exacerbated by a following vehicle leading to rear end shunts or queuing traffic on the mainline.

RECOMMENDATION

The internal layout of the car park should be amended so turning traffic does not have to give way to internally circulating car park traffic.

DESIGNER'S RESPONSE

Accepted – Priority amendments within the car park have been arranged so that entering traffic has priority over circulating traffic. Refer to drawing 485-01/GA-11 Rev A presented at **Appendix B** and submitted separately to the planning file as an updated drawing.

Problem 3.1.2

LOCATION: Gresford Road - Proposed Southbound bus stop

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

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 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.

DESIGNER'S RESPONSE

Not Accepted – The location of the bus stop opposite an existing bell mouth does not restrict forward or junction visibility, furthermore the presence of a bus within the bus stop does not give rise to restricted vehicular movements from the residential street. It is therefore considered that the proposed bus stop which will experience limited bus services opposite a small residential street (Fairoaks Crescent); will not give rise to high statistical occurrence of vehicle conflict.

On this matter Mott MacDonald on behalf of Wrexham Council stated on the 27th March 2020:

“The scheme indicates a proposed bus stop on Gresford Road opposite the existing junction with Fairoaks Crescent. It is not normally good practice to site bus stops in such locations where turning conflicts may arise between vehicles turning right from the minor road and a stationary bus. However, it is clear from the scheme proposal that an alternative site for the bus stop is limited within the vicinity of the store.

Turning movements from the minor road are expected to be relatively low and although no bus frequency figures are known they too are expected to be low. The likelihood of turning conflicts from this junction are therefore considered to be low. Should a motorist waiting to turn right from Fairoaks Crescent be impacted by a stationary bus, then it would be expected that the driver would use their own judgement as to when there was a safe opportunity to move and this may involve waiting for the bus to move first.”

On balance it is therefore concluded by all parties that the location of the bus stop is deemed acceptable.

Problem 3.1.3

LOCATION: *Straight Mile*

SUMMARY: *Potential for right turns or hazardous U-turn manoeuvres*

The proposed junction off Straight Mile is left turn in only. Concern is expressed that those traveling from the south west or north west not familiar with the road layout may assume that access to the store is from Straight Mile as this is the main through route. As the junction is left turn in only with geometry to suit, this could lead to injudicious right turn manoeuvres at the junction, leading to kerb strikes or loss of control or potentially hazardous U-turn manoeuvres at the adjacent junction.

RECOMMENDATION

Suitable signage should be put in place to make it clear to motorists of the appropriate access arrangements.

DESIGNER'S RESPONSE

Accepted – Additional route direction signs will be installed on Llay Road and Rackery Lane in advance of the Crown Crossroads identifying the direction to access the proposed Supermarket. Refer to drawing 485-01/GA-11 Rev A presented at **Appendix B** and submitted separately to the planning file as an updated drawing.

Problem 3.2.1

LOCATION: Proposed zebra crossing

SUMMARY: Footway approach alignment could result in conflict

Concern is expressed that by having an in-line footway link to the proposed zebra crossing that pedestrians may be more inclined to walk straight out onto the crossing rather than wait, potentially conflicting with passing traffic.

RECOMMENDATION

A suitable stagger should be provided between the zebra crossing and footway link.

DESIGNER'S RESPONSE

Accepted – A staggered pedestrian guard rail arrangement has been incorporated into the footpath design. Refer to drawing 485-01/GA-11 Rev A presented at **Appendix B** and submitted separately to the planning file as an updated drawing.



APPENDICES



APPENDIX A

STAGE 1

ROAD SAFETY AUDIT

**Gresford Road / Straight Mile, Llay -
Proposed Retail Development Access Works
Stage 1 Road Safety Audit**

Prepared by



Distribution List

1. Iain Miller – Cameron Rose
3. File Copy

REPORT NUMBER 2020/CR/1244

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Issue and revision record

Revision	Date	Originator	Checker	Approver	Description
FINAL	15/10/20	N Madhavan	R Sawczyn	L Madhavan	For Issue

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Appendix A: Drawings and documents provided

Appendix B: Plan of items raised by this audit

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1 INTRODUCTION

1.1 This report results from a Stage 1 Road Safety Audit carried out relating to proposals to provide two new access junctions as part of a retail store development. A left turn in off B5102 Straight Mile and an all access priority junction off B5373 Gresford Road, Llay together with pedestrian crossing facilities along Gresford Road and junction improvement measures at the Crown crossroads junction. The audit was carried out during October 2020

1.2 The audit team consisted of:

Team Leader: Naresh Madhavan MCIHT, MSoRSA EU RSA Cert. Comp
Director
Highway Associates

Team Member: Robin Sawczyn BEng MCIHT MSoRSA
Senior Road Safety Engineer
Highway Associates

1.3 The audit took place at the offices of Highway Associates, Chester. The Road Safety Audit was undertaken in accordance with the Road Safety Audit Brief provided by Iain Miller of Cameron Rose. The Road Safety Audit comprised an examination of the documents provided, and these are listed in Appendix A.

The site was visited at the following times/conditions:

Day/Date	Time	Weather Con	Traffic Flow
Wed 14th October 2020	17:00 – 17:40hrs	Dry/Fine	Ave

1.4 The terms of reference for this audit are as given in GG119, Design Manual for Roads and Bridges. The scheme has been examined and this report compiled only with regard to the safety implications for road users of the scheme as presented. It has not been examined or verified for compliance with any other standards or criteria. However, in order 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.

- 1.5 If relevant within this report the generic term “pedestrians” can include walking pedestrians, wheelchair users, dismounted cyclists, the blind, partially sighted, mobility impaired and people with prams or pushchairs. Highway Maintenance Operatives are also included within this term. Where a problem is specific to one or more of these vulnerable groups then appropriate reference will be made in the report.
- 1.6 Any recommendations included within this report should not be regarded as being prescriptive design solutions to the problems identified. They are intended only to indicate a proportionate and viable means of eliminating or mitigating the identified problem, in accordance with GG119, and in no way imply that a formal design process has been undertaken. There may be alternative methods of addressing a problem which would be equally acceptable in achieving the desired elimination or mitigation and these should be considered when responding to this report.
- 1.7 This Road Safety Audit makes allowance for the fact that strategic decisions on matters such as route choice, junction type, standard of provision and approved Departures from Standards already reflect an appropriate balance of a number of factors including road safety.
- 1.8 The Audit Team have not been made aware of any possible geometric departures or relaxations from standards.
- 1.9 The reader is reminded that a Road Safety Audit is not limited to the new works alone where there are features that are considered by the Audit Team to affect the general safety in the area. Section 3 of this report lists ‘Problems’ identified from the drawings and as a result of the site visit relating to the proposed changes to the highway layout that are directly, or indirectly, related to the area (e.g. features/matters within the proposed works or immediate surrounds which the Audit Team feel should be brought to the attention of the Designer or other organisations even though they might not pose an immediate risk associated with the proposed works), and which are considered by the Audit Team to warrant attention under the subject proposals, generally by the maintaining authority. On occasions there are more sensitive issues or issues that fall outside the audit brief but which are of such a nature that Auditors feel should be specifically brought to the attention of the authorities - such issues, if they arise, are usually dealt with in detail in separate correspondence.

2 ITEMS RAISED BY PREVIOUS AUDITS AND REPORTS

- 2.1 It is understood no previous road safety audits have been undertaken in relation to this scheme.

3 ITEMS RAISED BY THIS AUDIT

3.1 General

3.1.1 PROBLEM

LOCATION: Straight Mile – Proposed junction access

SUMMARY: Potential for conflict due to junction layout

Concern is expressed that due to the entry into the car park being very close to the junction, any requirement to give way to enter the car park could result in sudden braking leading to loss of control, the situation could be exacerbated by a following vehicle leading to rear end shunts or queuing traffic on the mainline.

RECOMMENDATION

The internal layout of the car park should be amended so turning traffic does not have to give way to internally circulating car park traffic.

3.1.2 PROBLEM

LOCATION: Gresford Road - Proposed Southbound bus stop

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

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 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.

3.1.3 PROBLEM

LOCATION: Straight Mile

SUMMARY: Potential for right turns or hazardous U-turn manoeuvres

The proposed junction off Straight Mile is left turn in only. Concern is expressed that those traveling from the south west or north west not familiar with the road layout may assume that access to the store is from Straight Mile as this is the main through route. As the junction is left turn in only with geometry to suit, this could lead to injudicious right turn manoeuvres at the junction, leading to kerb strikes or loss of control or potentially hazardous U-turn manoeuvres at the adjacent junction.

RECOMMENDATION

Suitable signage should be put in place to make it clear to motorists of the appropriate access arrangements.

3.2 Non-Motorised Road User Provision

3.2.1 PROBLEM

LOCATION: Proposed zebra crossing

SUMMARY: Footway approach alignment could result in conflict

Concern is expressed that by having an in-line footway link to the proposed zebra crossing that pedestrians may be more inclined to walk straight out onto the crossing rather than wait, potentially conflicting with passing traffic.

RECOMMENDATION

A suitable stagger should be provided between the zebra crossing and footway link.

3.3 Road Signs and Markings

No comments at this stage

3.4 Lighting and Signals

No comments at this stage

3.5 Landscaping

No comments at this stage

3.6 Protective Aids

No comments at this stage

3.7 Surface Characteristics and Drainage

No comments at this stage

4 AUDIT TEAM STATEMENT

We certify that this Audit has been carried out in accordance with the guidelines in GG119.

AUDIT TEAM LEADER

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Signed:



Date:

15/10/20

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Signed:



Date:

15/10/20

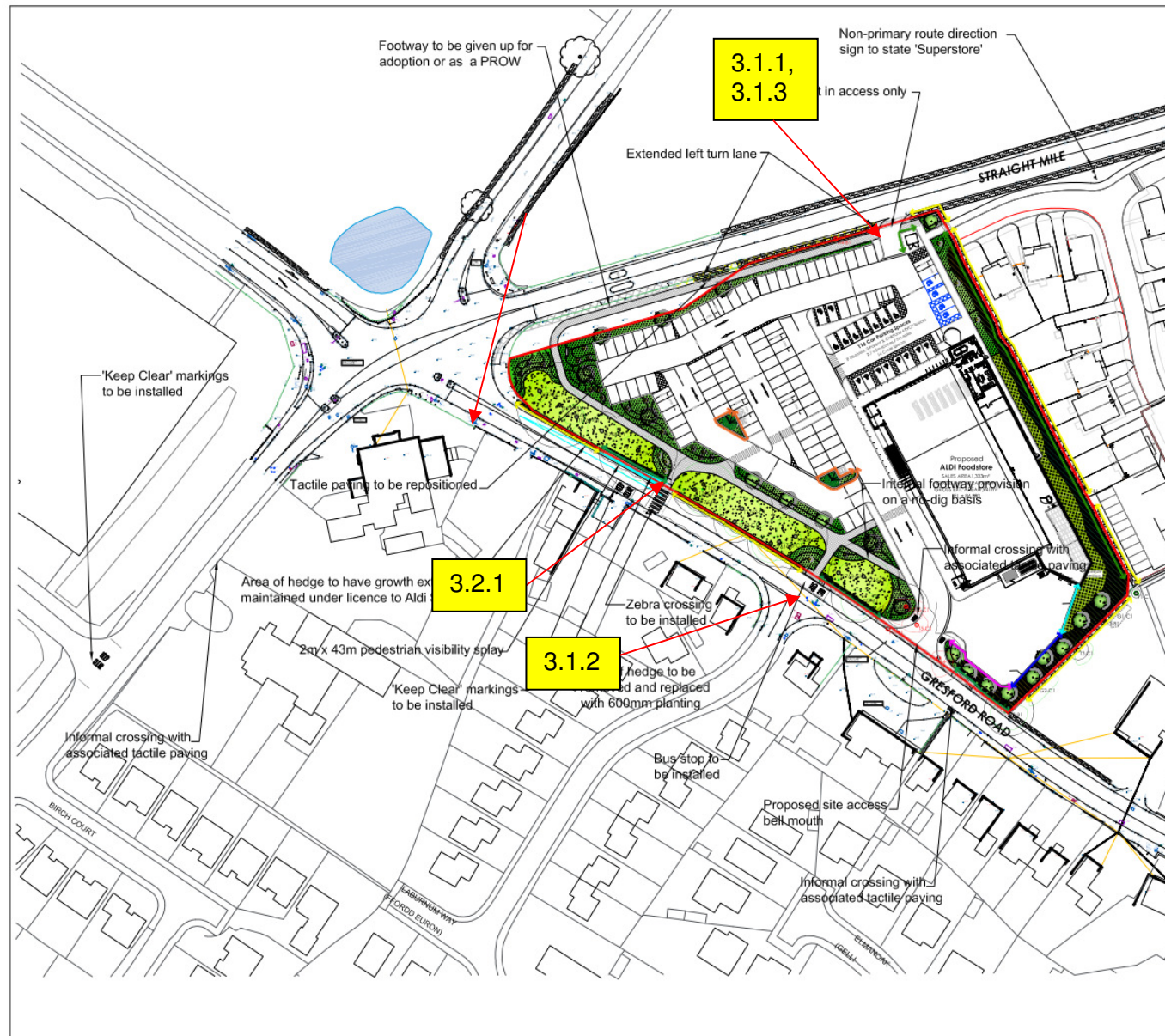
APPENDIX A

DRAWINGS AND DOCUMENTS PROVIDED

DRAWING NUMBER OR REFERENCE	TITLE	DATE
-	RSA1 Brief	07/10/20
486-01/TA01 A	Transport Assessment	-
406-01/ATR-04	Track Plot Analysis	01/10/20
406-01/GA-11	Site Access Arrangement – Prelim Design	01/10/20
406-01/GA-12	Site Access Arrangement – Visibility Splays Prelim Design	01/10/20

APPENDIX B

PLAN OF ITEMS RAISED BY THIS AUDIT



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Follow any figured dimensions - do not scale. IF IN DOUBT ASK.

This drawing has been prepared for feasibility purposes and does not represent a construction plan. All design aspects to be confirmed at the appropriate detailed design stage.

Revision History		Date
A	desc	date a
B	desc	date b
C	desc	date c
D	desc	date d
E	desc	date e
F	desc	date f
G	desc	date g
H	desc	date h
I	desc	date i
J	desc	date j

10 King Street Newcastle-under-Lyme Staffordshire ST7 5EL 01782 527020 www.cameronrose.co.uk			
client:		Aldi Stores Limited	
project:		Gresford Road Llay	
drawing title:		Site Access Arrangement # Off-Site Highway Works Preliminary Design	
scale(s): 1/750	date: 01/10/20	drawn by: UM	checked: CAB
drawing number: 456-01/GA-11		status: Information	
xrefs:		rev: -	

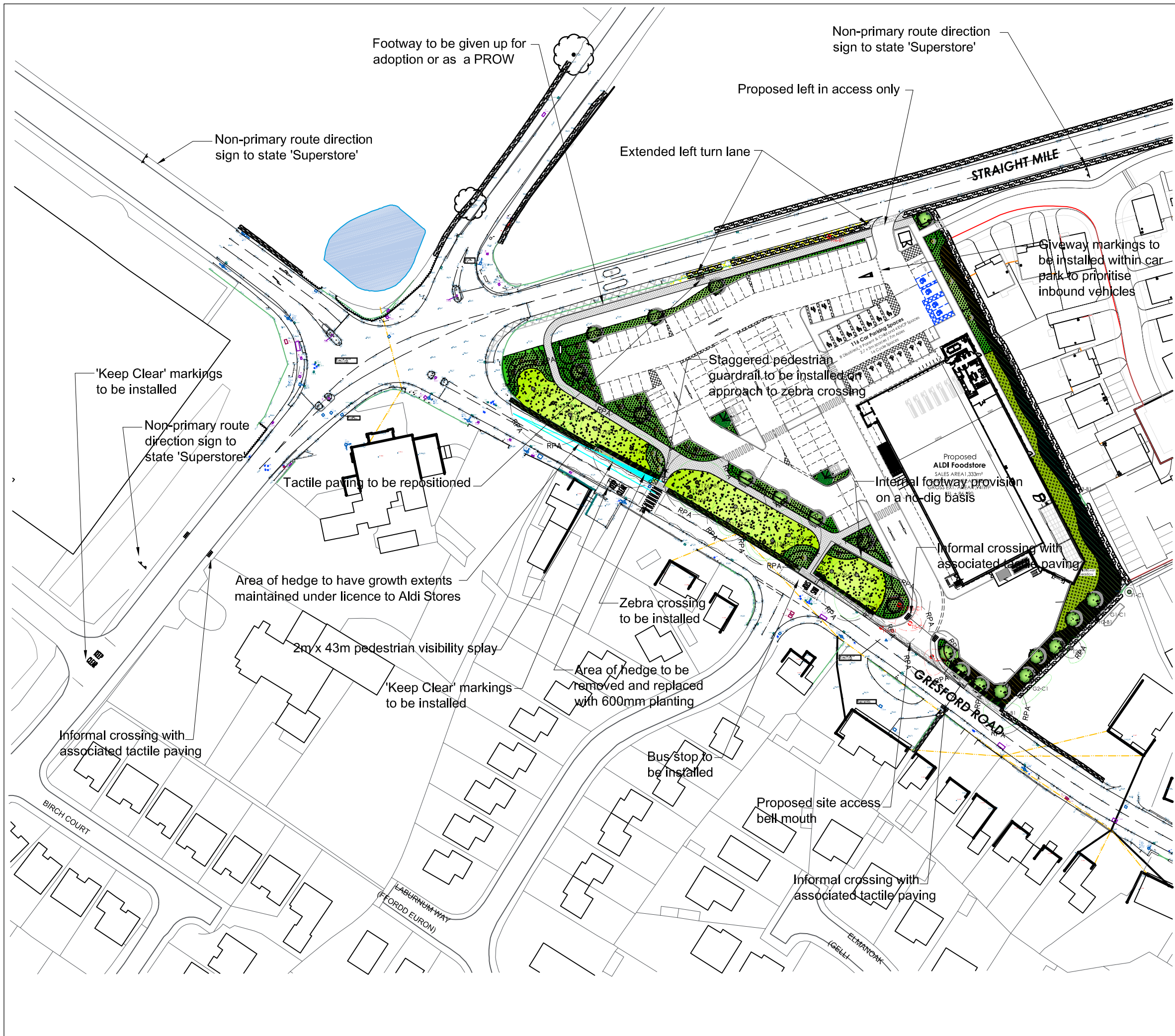
DATE PRINTED:



APPENDIX B

GENERAL ARRANGEMENT DRAWING

486-01/GA-11 REV A



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Revision History		Date
A	Post Stage 1 Road Safety Audit Amendments	16/10/20
B	desc	date b
C	desc	date c
D	desc	date d
E	desc	date e
F	desc	date f
G	desc	date g
H	desc	date h
I	desc	date i
J	desc	date j

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project: Gresford Road Llay

drawing title: Site Access Arrangement & Off-Site Highway Works Preliminary Design

scale(s): 1/750

date: 01/10/20

drawn by: IJM

checked: CAB

drawing number: 486-01/GA-11

xrefs:

status: Information

rev: A

DATE PRINTED: