



Stage 1 Road Safety Audit.  
Church Street Junction Improvements,  
Athlone.

Report



## Stage 1 Road Safety Audit. Church Street Junction Improvements, Athlone.

### Report

JMP Consultants Limited  
10 Victoria Street  
Bristol  
BS1 6BN

T 0117 922 9040

E [forwardthinking@jmp.co.uk](mailto:forwardthinking@jmp.co.uk)

[www.jmp.co.uk](http://www.jmp.co.uk)

Job No. ST17466

Report No. 01

Prepared by PH

Verified JC

Approved by PH

Status Final

Issue No. 01

Date 07 November 2016



## Stage 1 Road Safety Audit. Church Street Junction Improvements, Athlone.

### Report

### Contents Amendments Record

This document has been issued and amended as follows:

Status/Revision	Revision description	Issue Number	Approved By	Date
Draft		01	PH	02/11/2016
Final		01	PH	07/11/2016



## Contents

1	INTRODUCTION.....	1
2	ITEMS RAISED IN PREVIOUS ROAD SAFETY AUDIT(S) .....	4
3	STAGE 1 ROAD SAFETY AUDIT DETAILS .....	5
	Mardyke Street / Mary's Place Junction .....	5
	Church Street.....	7
	Custume Place / Church Street / Northgate Street Junction.....	9
	Northgate Street & junction of Coosan Point / Southern Station Road .....	12
4	AUDIT TEAM STATEMENT .....	17

## Appendices

Appendix A	List of Drawings Examined
Appendix B	Proposed Arrangement Drawings & Location of Safety Problems
Appendix C	Road Safety Audit Feedback Form

# 1 Introduction

- 1.1 This report details the findings of a Stage 1 Road Safety Audit and makes recommendations to improve road safety of the proposed public realm enhancement plan for Church Street in the centre of Athlone Town, Ireland.

## **Project Sponsor**

- 1.2 The Project Sponsor is: Westmeath County Council.

- 1.3 The Design Organisation is:

SYSTRA  
2<sup>nd</sup> Floor, Riverview House,  
21-23 City Quay,  
Dublin,  
Ireland.

## **Audit Team**

- 1.4 The Audit was undertaken by:

**Safety Audit Team Leader:**  
Peter Hill BEng CEng MICE  
Director  
Peter Hill Design Services Limited  
809 Wilmslow Road,  
Didsbury,  
Manchester, M20 2QR

And

**Safety Audit Team Member:**  
James Chequer BA(Hons) DipTP MRTPI  
MCIHT MILT  
Associate  
JMP Consultants Ltd,  
10 Victoria Street  
Bristol, BS1 6BN

## **Background**

- 1.5 The overall objective of the scheme is to create a calm environment, with a sense of place, with ease of access for all and which contributes to the economic vitality of the town.
- 1.6 Various options to achieve this have been investigated by the designers for Church Street including, retaining two-way traffic flow, one-way eastbound, one-way westbound and full pedestrianisation of Church Street.
- 1.7 The results of these investigations determined that the one-way westbound option for Church Street performed the best, with reduced delays on town bridge and along Northgate Street.
- 1.8 As part of the preferred scheme highway improvement works have been proposed along Church Street, at the 2 junctions at either end of Church Street and at the existing mini-roundabout junction on Northgate Street.
- 1.9 Signal timing changes are also proposed at a fourth junction, but as these improvements do not involve any physical works to the highway layout, or change to the driver behaviour, this junction is not included within this audit report.

1.10 The proposals audited in this report therefore include the following:

- The highway changes to provide a one-way westbound traffic flow along Church Street;
- The Mardyke Street / Pump Lane / St Mary's Place junction;
- The Custume Place / Church Street junction; and
- The Coosan Point Road / Northgate Street / Southern Station Road junction.

#### Information Provided for Audit

1.11 The Audit Team was not informed of any Departure from Standards within the proposed highway design reviewed as part of this audit.

1.12 The Audit comprised an examination of the following documents, provided prior to the site visit.

Document ref/date	Document Title
300263 Dated 06/10/2016	Enhancement Works to Church Street, Athlone Traffic Assessment Technical Summary
WCC-CS-JCT-001 Rev A	Church Street, Athlone Junction Improvements
WCC-CS-RS-001 Rev A	Church Street, Athlone Directional Road Signage
WCC-CS-L-001 Rev A	Church Street, Athlone Key Plan
WCC-CS-L-002 Rev A	Church Street, Athlone General Arrangement Plan Sheet 1 of 2
WCC-CS-L-003 Rev A	Church Street, Athlone General Arrangement Plan Sheet 2 of 2

#### Site Visit

1.13 The Safety Audit Team visited the site together during the hours of daylight between 11.30am and 3:30pm on Monday 31<sup>st</sup> October 2016. The weather was overcast and dry during the audit. The carriageway and footways were dry at the time of the site visit.

1.14 Although no actual speed measurements were taken during the audit the observed traffic speeds on all roads included within the audit appeared to be lower than the 50kph speed limit, which was probably due to the town centre nature of the roads, heavy traffic flow and busy pedestrian environment.

1.15 Traffic flows were heavy and consistent in both directions on Church Street during the audit and queuing was observed to occur in various locations along Church Street. Traffic flows were also heavy on Northgate Street and St Mary's Place, although less queuing was observed on these roads.

## Scope of Audit

- 1.16 The Audit has been undertaken in accordance with the principles of NRA Design Manual for Roads and Bridges Standard HD19/15 (NRA DMRB 5.2.2.). The Audit Team has not been involved with the design of this scheme.
- 1.17 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. However, any audit comments should not be construed as implying that a technical audit has been undertaken in any respect.
- 1.18 Furthermore, any recommendations included within this report should not be regarded as being prescriptive design solutions to the problems raised. They are intended only to indicate a proportionate and viable means of eliminating or mitigating the identified problem, in accordance with NRA HD19/15, 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.
- 1.19 It is the Project Sponsor's responsibility to ensure that all problems raised by the Road Safety Audit Team are given due consideration. To assist with this, the Design Team must prepare a Road Safety Audit Response Report to the Road Safety Audit Report.
- 1.20 The Road Safety Audit Response Report will initiate the requirement for an Exception Report(s) where:
- The problem or recommendation have not been accepted in the final Road Safety Audit Response Report and the Project Sponsor agrees with the response; or
  - The Road Safety Audit Response Report accepts a problem and/or recommendation, but the Project Sponsor does not agree with the Road Safety Audit Response Report.

## 2 Items Raised in Previous Road Safety Audit(s)

- 2.1 The Stage 1 Audit Team are not aware of any other road safety audits that have been undertaking on the proposals reviewed within this audit report.



### 3 Stage 1 Road Safety Audit Details

The reference numbers corresponding to the road safety issues highlighted in this section of the report are referenced to the drawings in **Appendix A**.

#### Mardyke Street / Mary's Place Junction

##### 3.1 Problem:

Location: 1 – Angled parking bays on Mardyke Street

Summary: Risk of pedestrians using the crossing being struck by a vehicle reversing out of the parking bays.

Due to the angle of the three parking bays provided at the eastern end of Mardyke Street, vehicles will be encouraged to pull forwards into the parking bays and then reverse out of them when leaving. Due to the close proximity of the parking bays to the uncontrolled crossing reversing vehicles will have to cross the pedestrian crossing and this will increase the risk of a vehicle striking a pedestrian on the crossing.

Recommendation:

It is recommended that either: a) the parking bays are angled in the opposite direction, so vehicles will drive past the parking bays before reversing into them, allowing them to drive out of them in a forward gear so vehicles do not need to reverse over the pedestrian crossing area; or b) the angled parking bays be removed and replaced with two parallel parking bays on Mary's Place and one parallel parking bay on Mardyke Street, which again will remove the need for any vehicles to reverse over the pedestrian crossing area.

##### 3.2 Problem:

Location: 2 – Signage J3-P1 on Mary's Place.

Summary: Narrow footway, insufficient space to provide signage and maintain clearance to the carriageway, increased risk of signage being struck by large vehicles.

At the proposed location of the sign the footway is narrow and buildings abut the back of the footway preventing the signage being moved away from the carriageway. Due to the size of the proposed signage it does not look possible to provide the signage in the location shown without overhanging the carriageway increasing the risk of the signage being struck by a large vehicle. The size of the sign would also require two posts, which will also block the narrow footway which may force pedestrians to step into the carriageway to avoid the sign posts and increasing the risk of being struck by a vehicle.

Recommendation:

It is recommended that the location of the signage is moved further northwards on Mary's Place to the end of the building line where additional space is available to provide the signage whilst maintaining sufficient lateral clearance to the edge of the carriageway. The sign posts should also be positioned so they do not obstruct the footway.

3.3

**Problem:**

Location: 3 – Eastern and western end of Mardyke Street.

Summary: Narrow entrance and exit, risk of large vehicles over running footways and striking a pedestrian.

The proposals narrow the existing carriageway at both ends of Mardyke Street and the radii at the junctions are also reduced. Large service and / or refuse vehicles may have difficulty in entering and leaving Mardyke Street without over running the footways increasing the risk of striking a pedestrian.

Recommendation:

It is recommended that the swept path of all large vehicles that need to enter and leave Mardyke Street is checked to ensure they can undertake the turning movements at both ends without over running the footways.

3.4

**Problem:**

Location: 4 – Western end of Mardyke Street on Church Street.

Summary: Existing controlled pedestrian crossing removed increasing the risk of pedestrian being struck trying to crossing Church Road.

There is an existing controlled pedestrian crossing opposite the exit from the shopping centre which is being removed by the parking laybys shown on the proposals. During the site visit this facility was observed to be heavily used with a strong desire line between the shopping centre exit on the northern side of Church Street going towards the south east, where another retail area exists south of Mary's Place. If the existing controlled facility is not re-provided to the east of the new parking laybys on this major desire line this will increase the risk of pedestrians being struck by a vehicle while attempting to cross Church Street at times of heavy traffic flow.

Recommendation:

It is recommended that the controlled pedestrian crossing facility is re-provided to allow pedestrians to safely cross Church Street.

## Church Street

3.5

**Problem:**

Location: 5 – All bollards provided along Church Street.

Summary: Lack of contrasting band, risk to visually impaired pedestrians.

Numerous steel bollards are proposed along Church Street to control vehicle and demark the safe footway areas where raised tables have been provided. It is not clear if the proposed bollards will incorporate a contrasting coloured strip to help identify them to visually impaired pedestrians. If the bollards do not contain a contrasting coloured strip it will be difficult for visually impaired pedestrians to see the bollards and this will increase the risk of them waking into them, or tripping over them, causing the pedestrian an injury.

Recommendation:

It is recommended that all proposed bollards have a strip of contrasting colour around them to help visually impaired pedestrians see the bollards.

3.6

**Problem:**

Location: 6 – The Bawn.

Summary: Narrowing of junction and carriageway with bollards, risk of large vehicles striking bollards.

The existing carriageway and junction area at The Bawn is being reduced in width with the introduction of a raised table and bollards to identify the limits of where vehicles should proceed. The area provided to access The Bawn looks very tight and vehicles may struggle to enter and exit The Bawn without striking the bollards around the junction area.

Recommendation:

It is recommended that the swept path of all vehicles that are anticipated to access The Bawn are checked to ensure they can safely enter and leave The Bawn within the new carriageway space provided for them.

3.7

**Problem:**

Location: 7 – Griffith Street and Friary Lane.

Summary: Large level difference creating either a steep area of footway or a drop increasing the risk for pedestrians entering or crossing these side roads.

There is current large level differences at the back of the footway between these side road and Church Street. In some location pedestrian guard rail has been provided to protect pedestrians from these. In the proposed layout dropped kerbs have been shown in these areas, which will either require a very steep section of footway on Church Street, or a steeper section of the side road to bring the exiting road up to the same level. If the gradients are too steep on either the side roads approaching Church Street, or on the Church Street footway this will increase the risk to pedestrians, especially mobility impaired pedestrians, from falling or slipping in icy or wet conditions.

**Recommendation:**

It is recommended that the levels on the footways do not exceed a maximum of 1 in 12 over short distances and preferable be no greater than 1 in 20.

**3.8 Problem:**

**Location:** 8 – Friary Lane, Lloyd's Lane and Preaching Lane.

**Summary:** No warning tactile paving provided, increased risk of visually impaired pedestrians being struck by a vehicle.

Dropped kerbs have been provided at all of the above junctions along Church Street, but no warning tactile paving has been provided to tell visually impaired pedestrians that they are about to enter the carriageway of the side road. This will increase the risk of a visually impaired pedestrian stepping into the path of a vehicles and being struck when crossing one of these side roads.

**Recommendation:**

It is recommended that blister tactile paving is provided at all side road crossing locations to warn visually impaired pedestrians of the presence of a side road.

**3.9 Problem:**

**Location:** 9 – Friary Lane, Preaching Lane and Church Street side road past the church.

**Summary:** No signage or road markings to warn drivers of the new one-way system, risk of vehicles turning the wrong way increasing the risk of head on collisions.

The existing road markings and signage on the side roads accessing the new one-way system do not warn drivers that a new one-way system is in operation and that the turning movements at the junctions are restricted. If signage and road markings are not provided this will increase the risk of vehicles turning the wrong way and attempting to travel eastwards along Church Street increasing the risk of a head-on collision.

**Recommendation:**

It is recommended that signage is provided on the side road and any conflicting road markings or signage is removed to warn driver of the restricted movements at the junction and that they can now only travel in a west bound direction along Church Street.

## Custume Place / Church Street / Northgate Street Junction

3.10

**Problem:**

Location: 10 – Northern side of Church Street.

Summary: Planters may obstruct small children, increasing the risk of them stepping into path of car and being struck and also increase the risk of pedestrians becoming stuck between a vehicle and the carriageway increasing the severity of injury if struck.

There are 4 proposed planters along the northern side of Church Street that abut directly up to the edge of the running carriageway. The height of the planters is not shown on the drawings, but seating is shown on some sides of the planters indicating that they could be of sufficient height to hide small children from approaching vehicles increasing the risk of them stepping out into the carriageway and being struck by a vehicle.

The planters also increase the risk of a pedestrian becoming trapped or stuck between the planter and a vehicle travelling along Church Street, or turning out of Bridge Street, increasing the risk and severity of any collision of this type that occurs.

The western most planter will also obstruct the intervisibility zone at the signal junction increasing the risk of a vehicle turning northwards towards Northgate Street and striking a pedestrian on the crossing.

Recommendation:

It is recommended that the planters are set back from the carriageway edge by 800mm and the row of tactile paving with inset bollards is continued along the edge of the carriageway to allow some space for children to be seen before entering the carriageway and to provide some protection to pedestrians from becoming trapped between the planters and a vehicle.

The height of the western most planter should be checked to ensure that it does not obstruct the intervisibility zone at the signal junction and moved or lowered if required.

3.11

**Problem:**

Location: 11 – Loading bay on Custume Place.

Summary: Risk of service vehicles over running tactile paving area striking a pedestrian.

The proposed loading bay on Custume Place is located directly west of and adjacent to the waiting area for the controlled pedestrian crossing. Service vehicles pulling into the loading bay may over run the waiting area increasing the risk of striking a pedestrian.

There is also an inconsistency between the drawings over the layout provided at the eastern end of the loading bay.

Recommendation:

It is recommended that a bollard, or other similar piece of street furniture, is provided to the west of the pedestrian crossing between the crossing and the loading bay to prevent service vehicles from over running the footway in this area. The drawings should also be amended to show a consistent layout for the eastern end of the loading bay to ensure the desired layout is provided on site.

3.12 **Problem:**

Location: 12 – All stop lines at the junction.

Summary: Only 2m provided between stop lines and stud markings, risk of pedestrians on crossing being within the blind spot of large vehicles and being struck.

The drawings show the distance between the stop lines at the junction and the stud markings of the pedestrian crossings is only 2m. Large vehicles have a blind spot in front of them due to the height of the driver position and if a large vehicle is stopped at the stop line a pedestrian using the crossing could be hidden from view and within this blind spot. This will increase the risk of a pedestrian using the crossing from being struck by a large vehicle.

Recommendation:

It is recommended that the distance between the stud markings and the stop lines at the junction are all increased to a minimum distance of 3m.

3.13 **Problem:**

Location: 13 – Northern side of Custume Place.

Summary: Uncontrolled exit from car park into the middle of the junction, increased risk of side swipe collisions and collisions with pedestrians using the controlled crossings.

There is an existing access that serves a pay and display public car park of 8 spaces and also serves as the exit route from a private car parking area to the rear of the bank. This access is uncontrolled and allows vehicles to enter the junction at any time. This lack of control on these vehicles will increase the risk of side swipe collisions with other vehicles passing through the junction on a green phase and increase the risk of pedestrians being stuck when using the pedestrian crossing on a green man phase.

Recommendation:

It is recommended that the existing access to the parking area is controlled by a signal phase and included within the overall signal control of the whole junction to only allow vehicles to enter and leave the access when it will be safe to do so.

3.14 **Problem:**  
Location: 14 – Signage J2-P1 on Custume Place.

Summary: Narrow footway with insufficient space to provide sign posts or sign face whilst maintain clearance to the carriageway, increased risk to pedestrians being struck and/or signage being struck by vehicles.

The proposed location of sign J2-P1 is on the footway of the existing bridge where the footway is narrow and the signage would have to have special mounting posts to allow it to overhang the side of the bridge to move to sign away from the carriageway edge. If standard sign posts are provided within the footway then these may obstruct the footway, due to the size of the posts required to hold the proposed sign. Adequate clearance to the sign might not then be provided increasing the risk of pedestrians being struck if they walk within the carriageway around the sign posts or the sign face being struck by a large vehicle.

Recommendation:

It is recommended that the sign posts are designed to ensure that they do not obstruct the footway over the bridge and the sign face can overhang the side of the bridge to ensure sufficient lateral clearance to the edge of the carriageway is provided.

## Northgate Street & junction of Coosan Point / Southern Station Road

3.15

**Problem:**

Location: 15 – Zebra crossing north of Abbey Road.

Summary: Close proximity to Abbey Road, increased risk of pedestrian being struck by a left turning vehicle from Abbey Road.

The proposed Zebra crossing has been located approximately 5m north of the junction with Abbey Road. Drivers turning left from Abbey Road will be looking away from the crossing towards approaching traffic and may not notice a pedestrian stepping onto the crossing. This will increase the risk of a pedestrian being struck on the crossing by a vehicle turning left out of Abbey Road.

Recommendation:

It is recommended that the location of the Zebra crossing is moved further away from the junction of Abbey Road to allow more distance and time for left turning traffic to join Northgate Street and then to see any pedestrian starting to use the Zebra crossing.

3.16

**Problem:**

Location: 16 – Approaches to the Zebra crossing north of Abbey Road.

Summary: Loading bay and lack of Zig-zag markings, risk of visibility splay to crossing being blocked by parked vehicles increasing the risk of pedestrians being struck on the crossing.

The drawings do not show any Zig-zag road markings on the approaches to the Zebra crossing to keep them clear of parked vehicles. If these are not provided then the visibility splay to a waiting pedestrian, or a pedestrian about to start crossing Northgate Road, may become obstructed increasing the risk of approaching drivers not seeing them and increasing the risk of the pedestrian being struck by a vehicle.

The proximity of the loading bay to the Zebra crossing also increases the risk of a large service vehicle blocking the visibility splay to the eastern side of the crossing, again increasing the risk of a pedestrian being struck by a vehicle.

Recommendation:

It is recommended that Zig-zag road markings are provided on the approaches to the Zebra crossing and the offset between the crossing and the loading bay is increased to ensure parked vehicles or a service vehicle within the loading bay do not obstruct visibility to the crossing.



- 3.17 **Problem:**  
 Location: 17 – Zebra crossing north of Abbey Road.
- Summary: No tactile paving provided, risk of confusion at crossing for visually impaired pedestrians increasing the risk vehicle and pedestrian collisions.
- No red blister paving in an 'L' shape has been provided at the Zebra crossing to indicate to visually impaired pedestrians that it is a controlled crossing. This will create confusion between the driver and any waiting pedestrian who may not realise that they have priority over vehicles. This will increase the risk of drivers becoming frustrated if a pedestrian does not start to cross when they stop and then move off at the same time together, increasing the risk of the vehicle striking the pedestrian.
- Recommendation:
- It is recommended that red coloured blister tactile paving in an 'L' shape is provided at the Zebra crossing.
- 3.18 **Problem:**  
 Location: 18 – Eastern side of Northgate Street.
- Summary: Parked vehicles will block southbound lane, increasing risk of head on and side swipe collision.
- The existing parking bays have been removed from the eastern side of Northgate Street and the road central road markings amended to provide a new right turn lane towards South Station Road. No new road markings (double yellow lines) are shown to prevent vehicle from continuing to park on the eastern side of Northgate Street. Parked vehicles in this location would block the southbound traffic lane with vehicles having to encroach into the opposing right turning traffic lane to continue along Northgate Street. This will increase the risk of head on and side swipe collisions between southbound vehicles and right turning vehicles.
- Recommendation:
- It is recommended that double yellow line parking restrictions are provided along the eastern side of Northgate Street to prevent vehicles blocking the traffic lane.
- 3.19 **Problem:**  
 Location: 19 – Stop lines on Northgate Street.
- Summary: Only 2m provided between stop line and stud markings, risk of pedestrians on crossing being within the blind spot of large vehicles and being struck.
- The drawings show the distance between the stop line at the junction and the stud markings of the pedestrian crossing is only 2m. Large vehicles have a blind spot in front of them due to the height of the driver position and if a large vehicle is stopped at the stop line a pedestrian using the crossing could be hidden from view and within this blind spot. This will increase the risk of a pedestrian using the crossing from being struck by a large vehicle.

Recommendation:

It is recommended that the distance between the stud markings and the stop line is increased to a minimum distance of 3m.

3.20 **Problem:**

Location: 20 – Eastern pedestrian crossing on Northgate Street.

Summary: Visibility splay to pedestrian obstructed by stone wall, risk of pedestrian being struck by a vehicle approaching from South Station Road.

The visibility splay from the eastern side of the pedestrian crossing on Northgate Street passes behind the existing stone wall that runs around the eastern side of Northgate Street and into Southern Station Road. A lack of visibility between pedestrians and drivers approaching this crossing will increase the risk of a pedestrian attempting to use the crossing and being struck by a vehicle.

Recommendation:

It is recommended that the existing stone wall is removed and any other obstructions within the visibility splay are also removed to provide unobstructed visibility between drivers and pedestrians at the junction.

3.21 **Problem:**

Location: 21 – Coosan Point Road and South Station Road.

Summary: Obstruction to primary signal head, increased risk of vehicles overshooting the junction and causing a collision with other road users.

The visibility to the primary signal head from both the Coosan Point Road and South Station Road approaches to the junction are obstructed by overgrown vegetation and mature trees. If drivers cannot see the primary signal head on the approach to the junction this will increase the risk of vehicles overshooting the stop lines increasing the risk of causing a collision with other road users.

Recommendation:

It is recommended that the existing trees and overgrown vegetation are removed to provide clear unobstructed forward visibility to the primary signal heads. An additional off-side primary signal head could also be provided on both approaches which would improve the visibility to the junction if the existing trees cannot be removed for environmental reasons.

- 3.22 **Problem:**  
Location: 22 – Hospital exit.
- Summary: No tactile paving at pedestrian crossing, increased risk of visually impaired pedestrians being struck by a vehicle on the crossing.
- The exit from the hospital shows road markings studs and push button units for a controlled pedestrian crossing, but no warning tactile paving to assist visually impaired pedestrians find the push button unit or to warn them of the crossing. A lack of warning will increase the risk of visually impaired pedestrians stepping into the carriageway and being struck by a vehicle leaving the hospital.
- Recommendation:
- It is recommended that red coloured tactile paving is provided in an 'L' shape to warn visually impaired pedestrians of the hospital exit and to guide them to the push button unit.
- 3.23 **Problem:**  
Location: 23 – Central area of junction.
- Summary: Lack of guidance road markings for right turning vehicles, increased risk of head on collisions in the central area of junction.
- No road markings have been provided within the central area of the junction to prevent right turning vehicles from Northgate Street encroaching into the vehicle path of vehicles travelling southwards from Coosan Point Road. A lack of guidance for right turning vehicles will increase the risk of head on and side swipe collisions within the central area of the junction.
- Recommendation:
- It is recommended that some guidance road markings are provided within the central area of the junction to indicate where right turning vehicles should wait to enter Southern Station Road.
- 3.24 **Problem:**  
Location: 24 – Footway connection between Coosan Point Road and Southern Station Road.
- Summary: Steep gradient on footway will increase the risk of pedestrians slipping in icy or wet conditions.
- The existing level difference between Coosan Point Road and Southern Station Road is significant and if a footway is provided around this side of the junction it is likely to be steeper than the recommended maximum gradient of 1 in 12. Footway steeper than 1 in 12 will be difficult and/or impossible for mobility impaired pedestrians to use and will increase the risks to them and also increase the risk of pedestrians slipping in wet or icy conditions.
- Recommendation:
- It is recommended that the footway link between Coosan Point Road and Southern Station Road is not steeper than 1 in 12 and preferably no steeper than 1 in 20. An alternative alignment of the footway using the grass verge area to the north of the junction to provide a ramped arrangement to achieve these gradients for mobility impaired pedestrians could be provided.

3.25

**Problem:**

Location: 25 – Coosan Point Road to Southern Station Road.

Summary: Tight left turn risk of over running footway and/or collisions with vehicles waiting at stop line on Southern Station Road.

The turn from Coosan Point Road to Southern Station Road is very tight and will be difficult for large vehicles to undertake without either over running the footway or the stop line of South Station Road. This will increase the risk to pedestrians using the footway and of collisions between turning vehicles and waiting vehicles on Southern Station Road.

**Recommendation:**

It is recommended that the swept path of all large vehicles that are anticipated to be undertaking this movement to be checked to ensure that they do not over run the footway or the stop line and if necessary the stop line on Southern Station Road and Coosan Point Road be set back to allow the movement to be undertaken safely.

3.26

**Problem:**

Location: 26 – Signs J1-P1, J1-P2 and J1 P3.

Summary: Lack of space and restricted visibility to signage, risk of signage being missed, increased risk of sudden late movements and increased risk of collisions.

The proposed locations of all the above signs have problems will lack of space to provide the sign and also problems with the visibility to the signage. A lack of space for the signage will increase the risk of the signage being struck by a high sided vehicle. A lack of visibility to the sign will increase the risk of drivers missing the information on the sign and undertaking late sudden movements at the junction increasing the risk of causing a collision at the junction.

**Recommendation:**

It is recommended that the locations of all the signage is reviewed to ensure the proposed locations are adequate in terms of space for the sign to be provided and also adequate forward visibility is provided to the sign to allow approaching drivers the time to take in the signs message.

## 4 Audit Team Statement

- 4.1 We certify that we have examined the drawings and other information listed in Appendix A. This examination has been carried out with the sole purpose of identifying any features of the design that could be removed or modified to improve the safety of the scheme. The problems that we have identified have been noted in the report, together with suggestions for improvements which we recommend should be studied for implementation. The road safety audit has been conducted by the persons named below who have had no involvement in the design of the scheme.

### SAFETY AUDIT TEAM LEADER

Name: Peter Hill BEng CEng MICE  
Position: Director  
Organisation: Peter Hill Design Services Limited

Signed:



Date: 07<sup>th</sup> November 2016

Address: 809 Wilmslow Road  
Didsbury  
Manchester M20 2QR

Telephone: 07709 505 414

Fax:

Email: [peterhill.alberici@gmail.com](mailto:peterhill.alberici@gmail.com)

### SAFETY AUDIT TEAM MEMBER

Name: James Chequer BA(Hons) DipTP MRTPI MCHIT MILT  
Position: Associate  
Organisation: JMP Consultants Ltd

Signed:



Date: 07<sup>th</sup> November 2016

Address: 10 Victoria Street,  
Bristol  
BS1 6BN

## Appendix A

### List of Drawings Examined

Job No	Report No	Issue no	Report Name	Page
ST17466	01	01	Stage 1 Road Safety Audit. Church Street Junction Improvements, Athlone.	A1

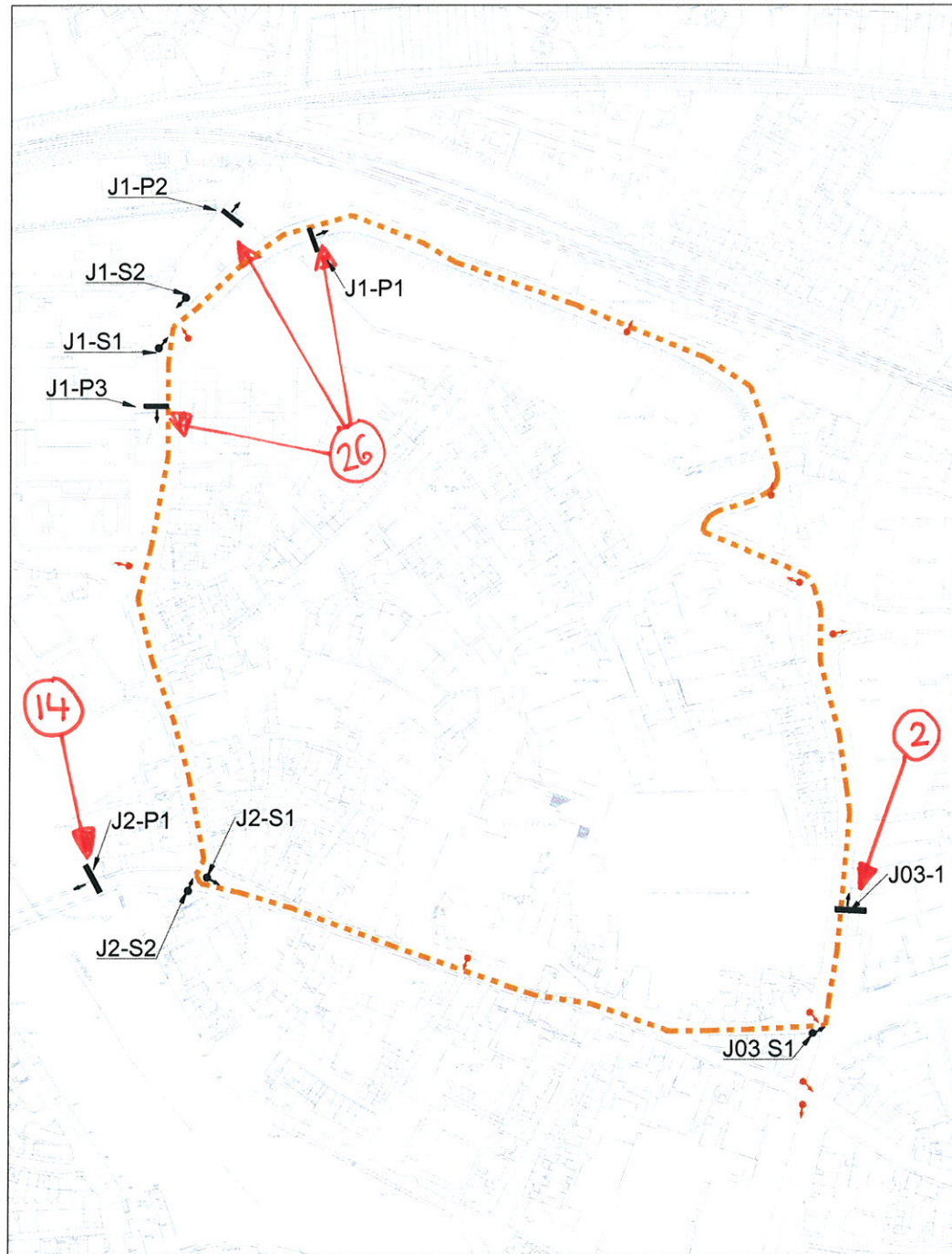
**List of drawings examined**

<b>Project</b>	<b>Title</b>	<b>Drawing Number</b>	<b>Date</b>
Church Street, Athlone	Junction Improvements	WCC-CS-JCT-001 Rev A	Oct 2016
Church Street, Athlone	Directional Road Signage	WCC-CS-RS-001 Rev A	Oct 2016
Church Street, Athlone	Key Plan	WCC-CS-L-001 Rev A	Oct 2016
Church Street, Athlone	General Arrangement Plan Sheet 1 of 2	WCC-CS-L-002 Rev A	Oct 2016
Church Street, Athlone	General Arrangement Plan Sheet 2 of 2	WCC-CS-L-003 Rev A	Oct 2016

### Proposed Arrangement Drawings & Location of Safety Problems

Job No	Report No	Issue no	Report Name	Page
ST17466	01	01	Stage 1 Road Safety Audit. Church Street Junction Improvements, Athlone.	B1

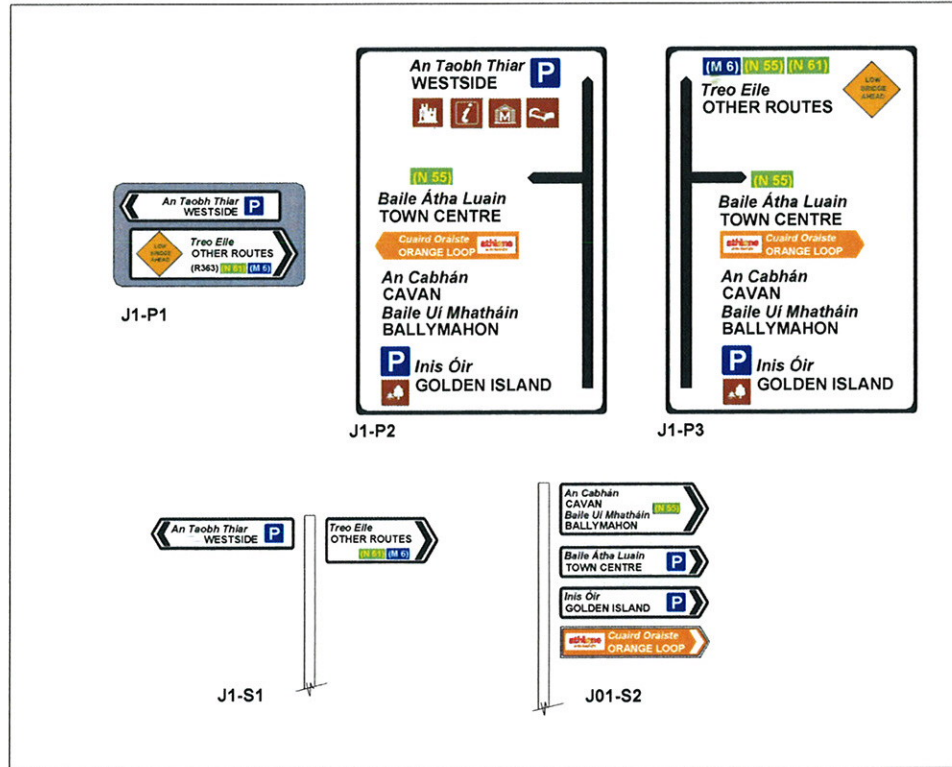




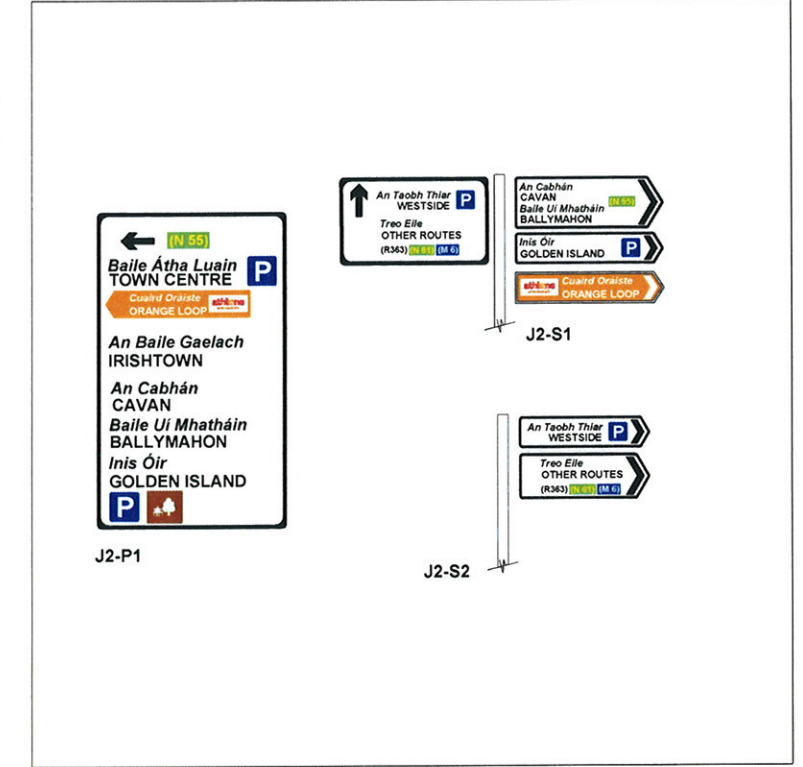
KEY PLAN

- Notes:
1. Do not scale, all measurements and co-ordinates to be checked on site.
  2. All dimensions in millimetres, unless otherwise stated.
  3. Exact location of signage to be agreed on site with Site Engineer.

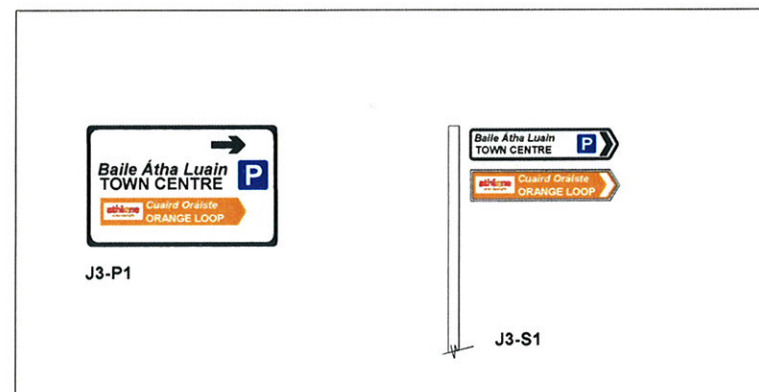
- KEY
- Orange Loop Route
  - Proposed location of Orange Loop Sign
  - Proposed location of Panel
  - Proposed location of Road Sign Post
  - J2-P1 Directional Sign Reference: Junction number-Panel/Sign number



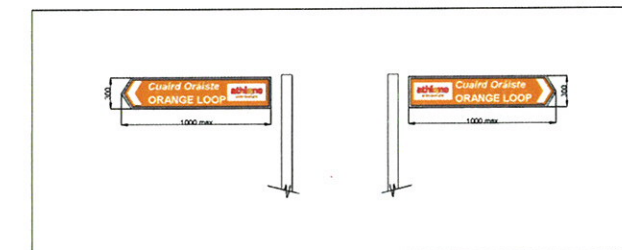
JUNCTION 1 - COOSAN POINT ROAD / NORTHGATE STREET



JUNCTION 2 - CUSTUME PLACE /CHURCH STREET JUNCTION



JUNCTION 3 - PUMP LANE / MARDYKE STREET



PROPOSED ORANGE LOOP SIGNS

## PART VIII PLANNING PROPOSAL

ORDNANCE SURVEY IRELAND REPRODUCED UNDER OS LICENCE No. CCMA-0002 / WESTMEATH COUNTY COUNCIL

Nicholas de Jong Associates  
URBAN DESIGN

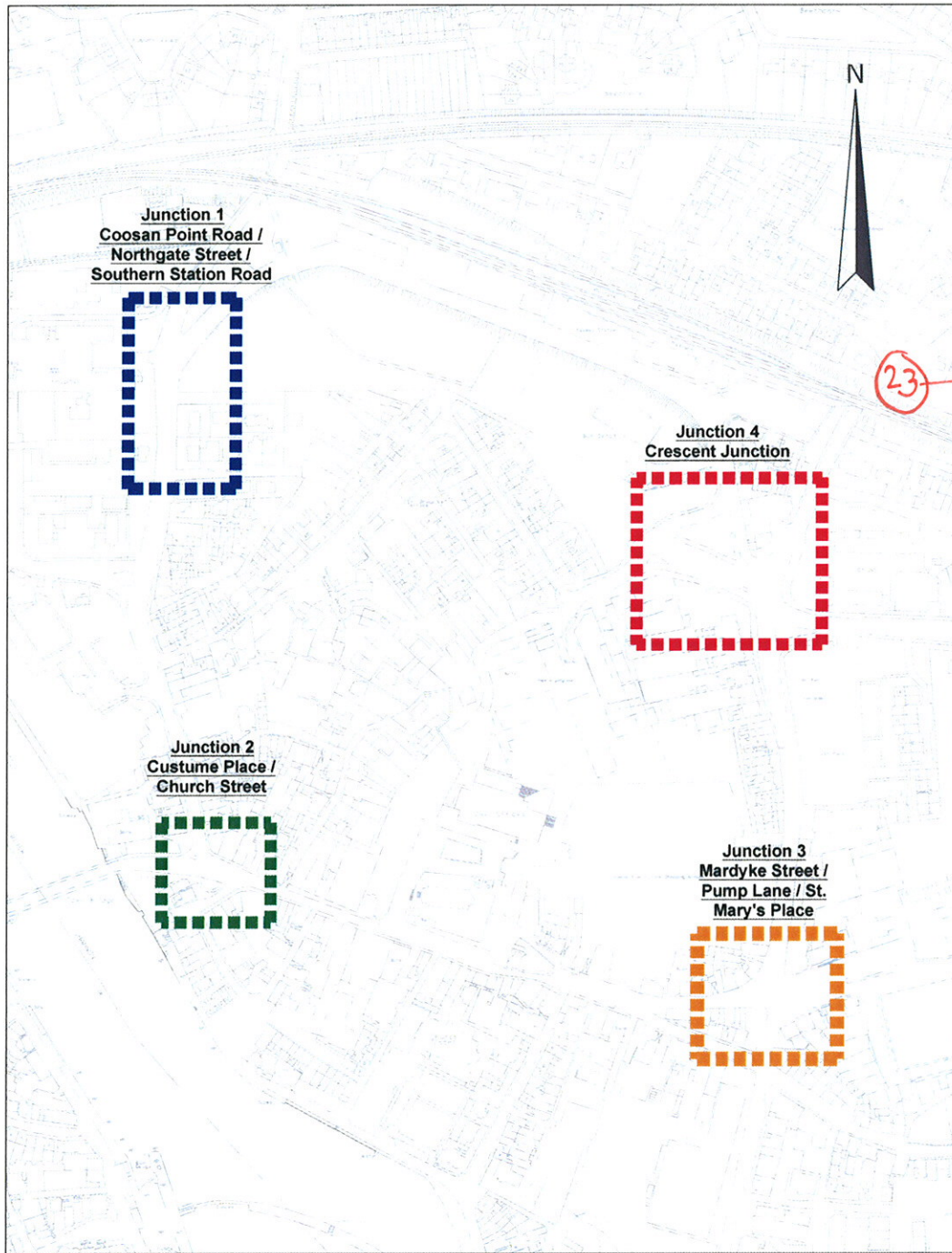


SYSTRA

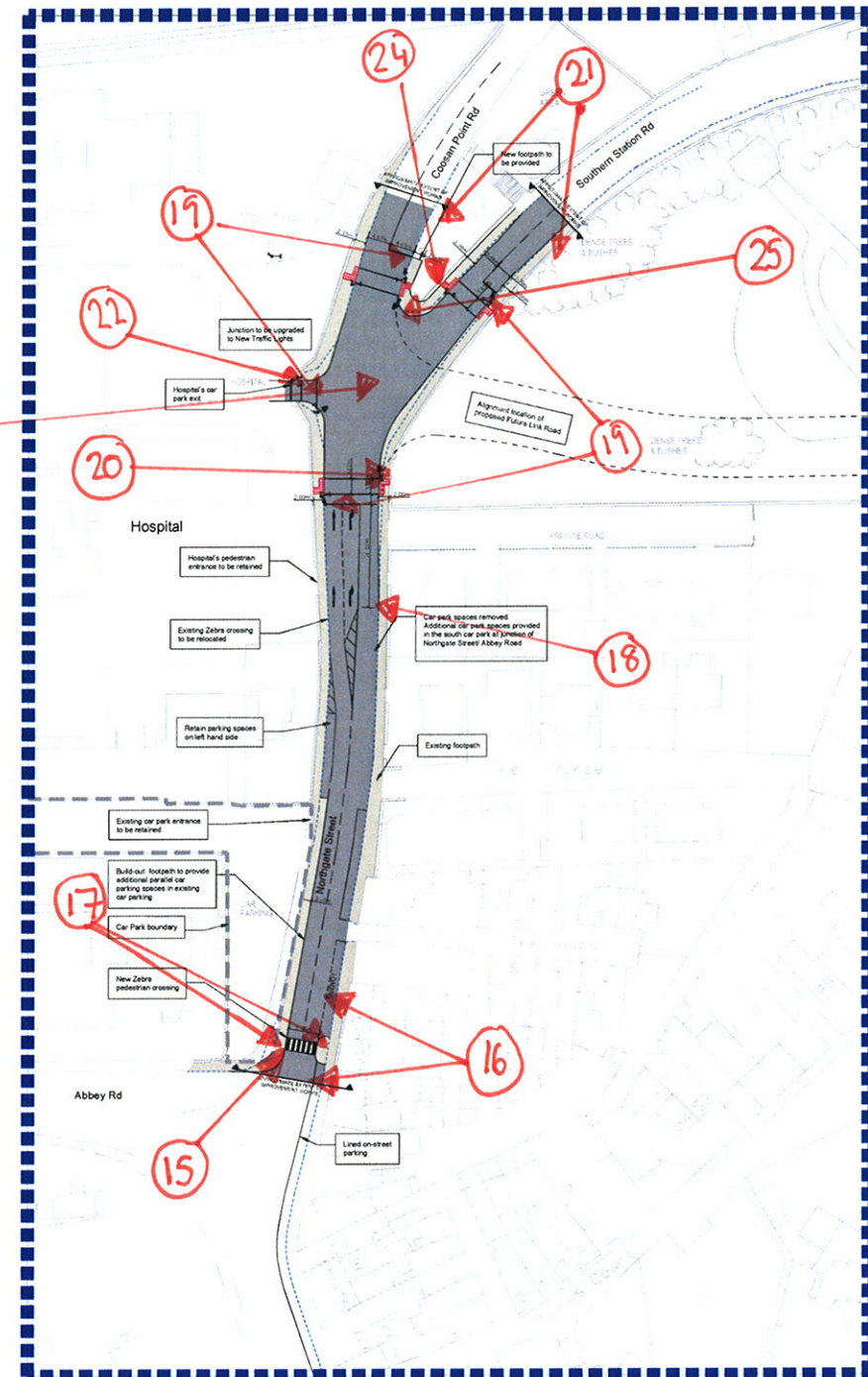
DRAWN :	AMP	STATUS: PART 8		PROJECT:	Church Street, Athlone
CHECKED :	AA	SCALE: NTS@A0	DATE: October 2016	TITLE:	DIRECTIONAL ROAD SIGNAGE
APPROVED :	AA	FORMAT: AutoCAD	CLIENT : Westmeath CoCo	DRAFT	
PROJECT MANAGER :	AMP	This drawing must not be either loaned, copied or otherwise reproduced in whole or in part or used for any purpose without the prior written permission of SYSTRA Ltd.			
				DRAWING NO.	WCC-CS-RS-001
					REV A

REVISION	DATE	DESCRIPTION	DRAWN	CHECKED	APPROVED
----------	------	-------------	-------	---------	----------

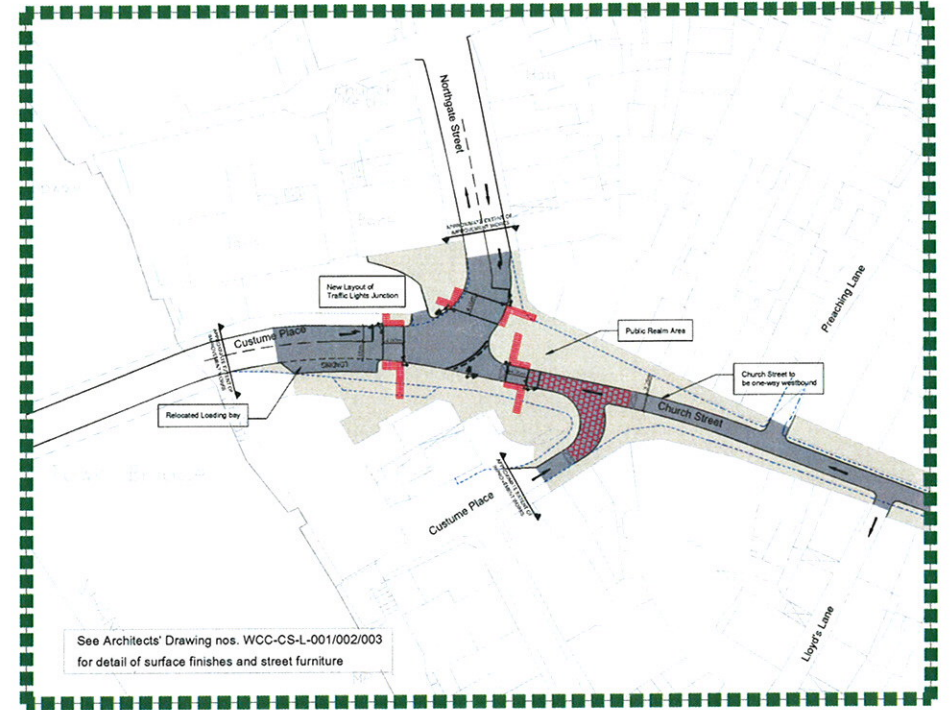




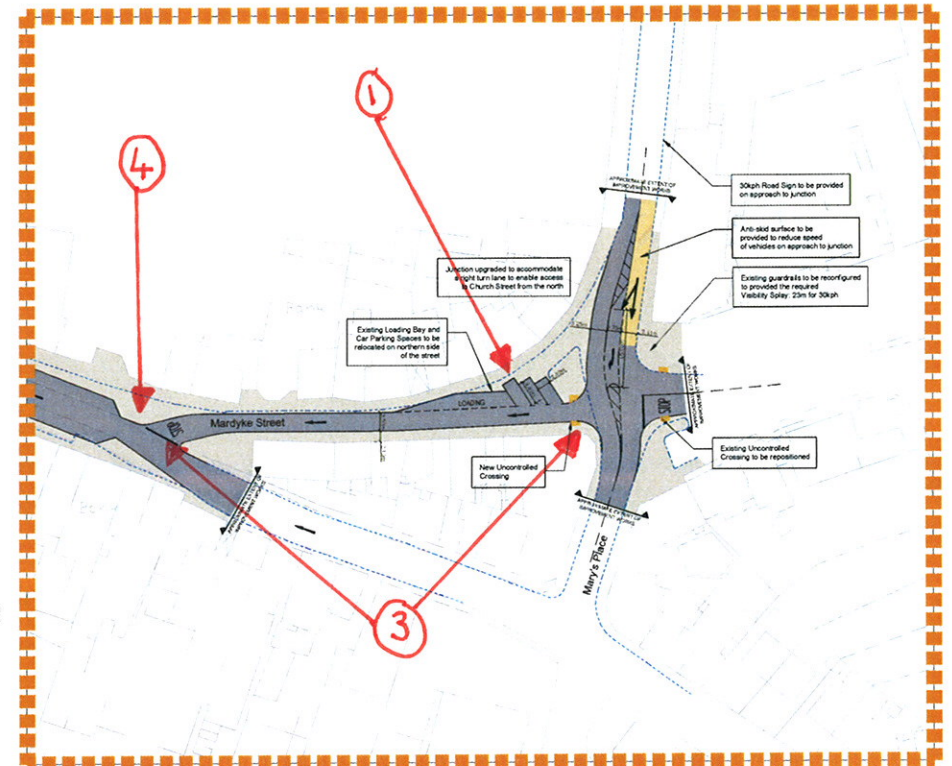
KEY PLAN



COOSAN POINT Rd / NORTHGATE STREET / SOUTHERN STATION Rd JUNCTION



CUSTUME PLACE /CHURCH STREET JUNCTION



MARDYKE STREET / PUMP LANE / ST. MARY'S PLACE JUNCTION

- Notes:
1. Do not scale, all measurements and co-ordinates to be checked on site.
  2. All dimensions in metres, unless otherwise stated.
  3. The location and depth of services to be checked on site prior to commencing any works.
  4. Flush kerbs and tactile paving to be provided at all pedestrian crossings.
  5. Dropped kerbs and vehicle crossover to be provided at all existing vehicle entrances.
  6. Surface drainage works for the proposed scheme to be determined during the Detailed Design Stage in consultation with the Local Authority.
  7. Public Lighting improvements to be prepared during the Detailed Design Stage in consultation with the Local Authority and ESB.
  8. All road signage to be provided in accordance with the Department of Transport "Traffic Signs Manual".
  9. Junction 4 - Crescent Junction to be upgraded to "traffic responsive control". No modifications on existing layout.
  10. For paving materials on Custume Place Junction and Church Street please refer to Architects Drawing no. WCC-CS-L-002

KEY	
	Proposed New Road Surface
	Existing and Proposed Footpath at junction improvement areas
	Proposed Tactile Paving at controlled signalised crossings
	Proposed Tactile Paving at uncontrolled crossings
	Raised Table
	Existing Kerbline
	Proposed Kerbline
	Traffic Signals Head
	Secondary Traffic Signals Head
	Pedestrian Traffic Signals and Push Button

## PART VIII PLANNING PROPOSAL

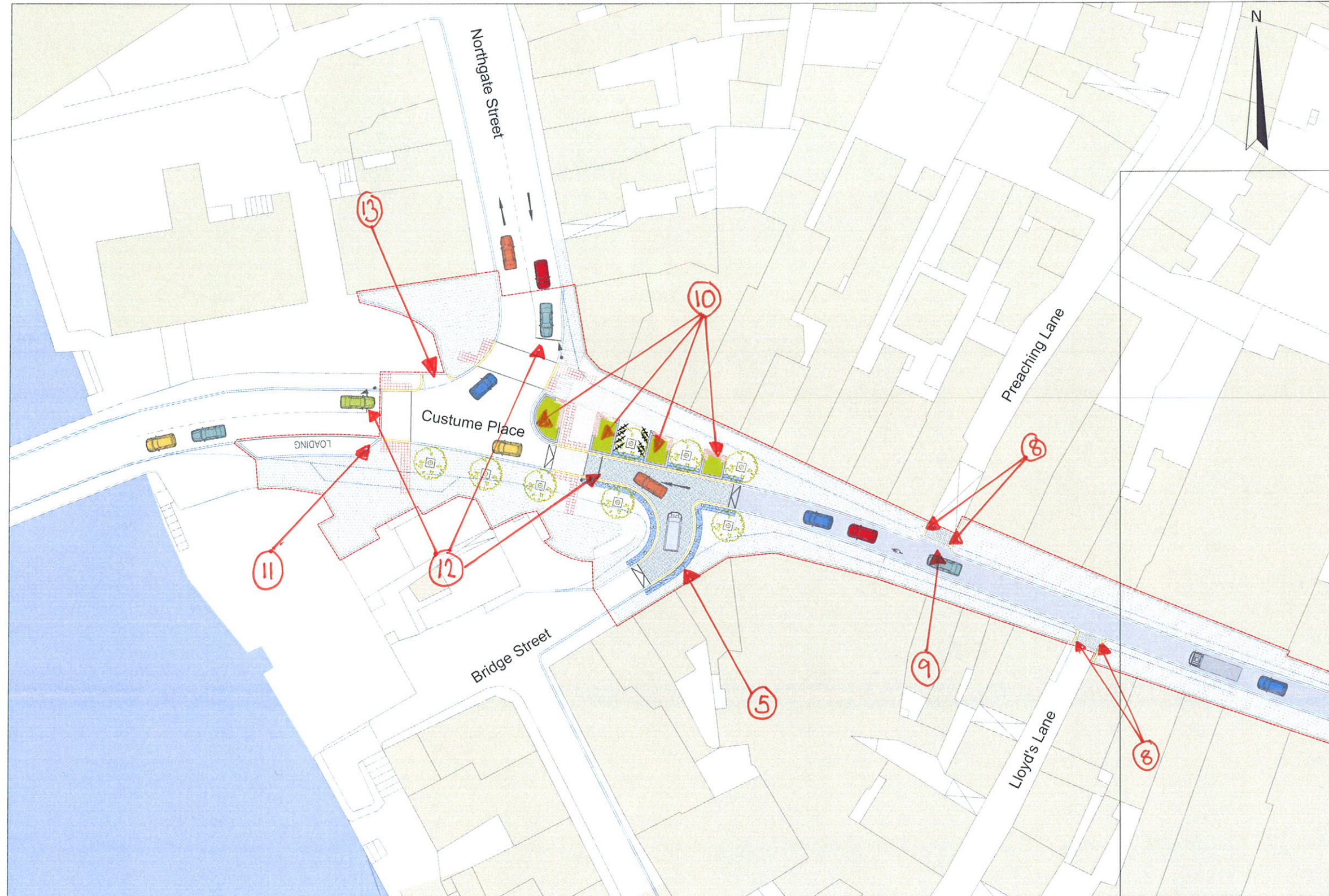
REVISION	DATE	DESCRIPTION	DRAWN	CHECKED	APPROVED

Nicholas de Jong Associates  
URBAN DESIGN  
**SYSTRA**

**WESTMEATH COUNTY COUNCIL**  
Comhairle Chontae na h-Iarmhí

DRAWN : AMP	STATUS: PART 8	PROJECT: Church Street, Athlone
CHECKED : AA	SCALE: 1:500@A0	TITLE: JUNCTIONS IMPROVEMENTS
APPROVED : AA	DATE: October 2016	<b>DRAFT</b>
PROJECT MANAGER : AMP	FORMAT: AutoCAD	
	CLIENT: Westmeath CoCo	DRAWING NO. WCC-CS-JCT-001
This drawing must not be either loaned, copied or otherwise reproduced in whole or in part or used for any purpose without the prior written permission of SYSTRA Ltd.		REV A





- KEY
- Extent of public realm works (approx.)
  - Pedestrian surface Type 1  
Granite slabs, silver-grey, 600x400x80mm th.
  - Pedestrian surface Type 2  
Granite slabs, multi-greys x3 sizes x80mm th.
  - Pedestrian surface Type 3 margin  
Granite setts, cropped top surface 100x200x80mm th.
  - Existing cobbles retained
  - Resin bonded aggregate, buff 6mm
  - Vehicular surface Type 1  
Granite setts, 100x100x100mm th.
  - Vehicular surface Type 2  
Asphalt, exposed aggregate
  - Tactile slabs, blister, 400x400x80mm th.  
PCC buff
  - Tactile slabs, blister, 400x400x80mm th.  
PCC red
  - Tactile slabs, corduroy, 400x400x80mm th.  
Irish Blue Limestone
  - Raised kerb, 125mm riser, 250x900x100mm th.  
Irish Blue Limestone
  - Flush kerb, 250x900x100mm th.  
Irish Blue Limestone
  - Existing kerbline removed
  - Ramp up to raised table
  - Bollards  
Stainless steel
  - Cycle stands  
Stainless steel
  - Raised planter with seating  
Granite-clad, hardwood slats
  - Seat  
Granite supports, hardwood slats
  - Tree with root cell system  
Fastigate hornbeam

REVISION	DATE	DESCRIPTION	DRAWN	CHECKED	APPROVED

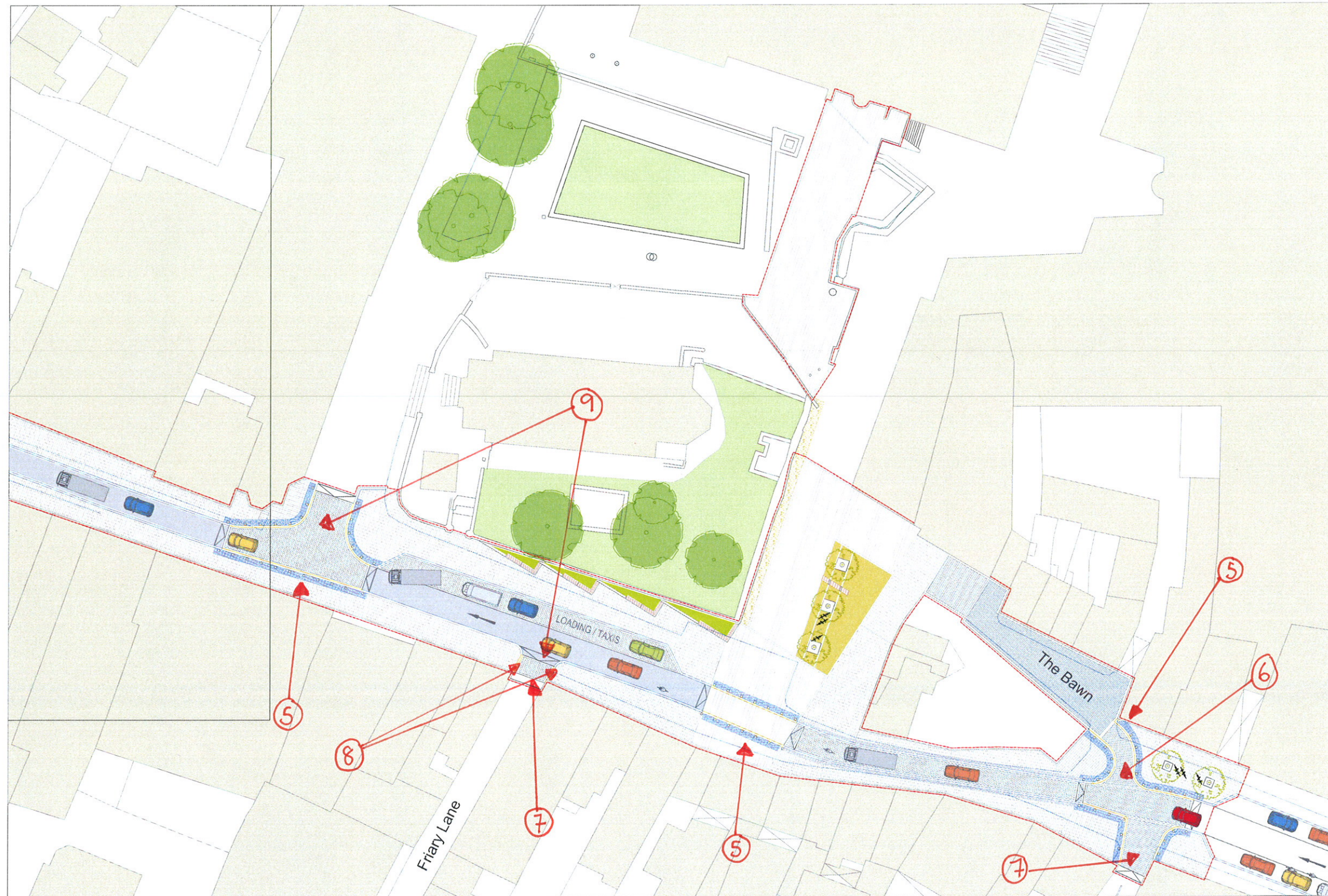
Nicholas de Jong Associates  
URBAN DESIGN  
**SYSTRA**



DRAWN :	HAR	STATUS:	PART 8	PROJECT:	Church Street, Athlone
CHECKED :	NdeJ	SCALE:	1:200@A0	DATE:	October 2016
APPROVED :	NdeJ	FORMAT:	AutoCAD	CLIENT :	Westmeath CoCo
PROJECT MANAGER :	KM	This drawing must not be either loaned, copied or otherwise reproduced in whole or in part or used for any purpose without the prior written permission of MVA.			
				DRAWING NO.	WCC-CS-L-002
					REV. A

TITLE:  
GENERAL ARRANGEMENT PLAN  
Sheet 1 of 2  
**DRAFT**





KEY

- Extent of public realm works (approx.)
- Pedestrian surface Type 1  
Granite slabs, silver-grey, 600x400x80mm th.
- Pedestrian surface Type 2  
Granite slabs, multi-greys x3 sizes x80mm th.
- Pedestrian surface Type 3 margin  
Granite setts, cropped top surface 100x200x80mm th.
- Existing cobbles retained
- Resin bonded aggregate, buff 6mm
- Vehicular surface Type 1  
Granite setts, 100x100x100mm th.
- Vehicular surface Type 2  
Asphalt, exposed aggregate
- Tactile slabs, blister, 400x400x80mm th.  
PCC buff
- Tactile slabs, blister, 400x400x80mm th.  
PCC red
- Tactile slabs, corduroy, 400x400x80mm th.  
Irish Blue Limestone
- Raised kerb, 125mm riser, 250x900x100mm th.  
Irish Blue Limestone
- Flush kerb, 250x900x100mm th.  
Irish Blue Limestone
- Existing kerbline removed
- Ramp up to raised table
- Bollards  
Stainless steel
- Cycle stands  
Stainless steel
- Raised planter with seating  
Granite-clad, hardwood slats
- Seat  
Granite supports, hardwood slats
- Tree with root cell system  
Fastigate hornbeam

REVISION	DATE	DESCRIPTION	DRAWN	CHECKED	APPROVED

Nicholas de Jong Associates  
URBAN DESIGN  
**SYSTRA**

**WESTMEATH COUNTY COUNCIL**  
Comhairle Chontae na h-Iarmhí

DRAWN : HAR	STATUS: PART 8	PROJECT: Church Street, Athlone
CHECKED : NdeJ	SCALE: 1:200@A0	TITLE: GENERAL ARRANGEMENT PLAN
APPROVED : NdeJ	DATE: October 2016	Sheet 2 of 2
PROJECT MANAGER : KM	FORMAT: AutoCAD	DRAWING NO. WCC-CS-L-003
This drawing must not be either loaned, copied or otherwise reproduced in whole or in part or used for any purpose without the prior written permission of MVA.		REV. A

**DRAFT**



## Appendix C

### Road Safety Audit Feedback Form

Job No	Report No	Issue no	Report Name	Page
ST17466	01	01	Stage 1 Road Safety Audit. Church Street Junction Improvements, Athlone.	C1

# ROAD SAFETY AUDIT FEEDBACK FORM

Scheme: Church Street, Athlone

Route: R446 and R915

Audit Stage: 1

Date Audit Completed: 25<sup>th</sup> October – 7<sup>th</sup> November 2016

Paragraph No. in Audit Report	Problem accepted (yes/no)	Recommended measures accepted (yes/no)	Describe alternative measure(s). Give reasons for not accepting recommended measure. only complete if recommended measures is not accepted.	Alternative measures or reasons accepted by auditors (yes/no)
3.1				
3.2				
3.3				
3.4				
3.5				
3.6				
3.7				
3.8				
3.9				
3.10				
3.11				
3.12				
3.13				
3.14				
3.15				
3.16				
3.17				
3.18				
3.19				
3.20				
3.21				
3.22				
3.23				
3.24				
3.25				
3.26				

Signed: \_\_\_\_\_ Designer Date \_\_\_\_\_

Signed: \_\_\_\_\_ Audit Team Leader Date \_\_\_\_\_

Signed: \_\_\_\_\_ Employer Date \_\_\_\_\_