



**N21 ADARE PEDESTRIAN SIGNALISED CROSSING**

**FEASIBILITY REPORT**

**JUNE 2018**

**LIMERICK CITY & COUNTY COUNCIL**

## REPORT CONTROL SHEET

**Project Name:** N21 Adare Pedestrian Signalised Crossing

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**Project Phase:**

**Report Title:** Feasibility Report

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## **TABLE OF CONTENTS**

### **Title**

- 1. Introduction**
- 2. Existing Overview**
- 3. Need For This Report**
- 4. Objectives of the Report**
- 5. Survey Findings**
- 6. Observations**
- 7. Recommendation**

## 1. Introduction

This Feasibility Report is prepared for the N21 Adare Signalised Pedestrian Crossing which concerns the proposal to upgrade the existing pedestrian crossing adjacent to Centra in Adare Village to a signalised crossing. Refer to Drawing RS/19/59/0002 of Appendix A showing the scheme and site location.

## 2. Existing Overview

### 2.1. Location Description

The N21 Adare Pedestrian Crossing is located on Main Street Adare on the N21 National Primary Route which is the primary route linking the south west and mid-west of the country as well and as such is a very busy tourist and commuter route.

Adare Village is a busy commercial & community centre serving the immediate hinterland. The village is also a major tourist destination and a destination shopping venue with many craft shops and boutiques.

### 2.2. Existing Road Layout

#### 2.2.1. Road Cross Section

The N21 National Primary Route on the approaches to and through the village Junction is a Single Carriageway consisting of lane width ranging from 3.0m to 3.4m. There is no hard shoulder, and there is parking on both sides of the road. There is a footpath on both sides of the road widths 2.4m to 3m.

### 2.3 Traffic Count Data

2.3.1 Traffic figures recorded at the permanent TII traffic Counter on the N21 at Norbough east of Adare Village is 16643 AADT with a HCV of 4.3 %.

Refer to Appendix B for records of TII Permanent traffic counter data.

### 2.4 Accident Data

2.4.1 Below is a table identifying accident records between Station Rd & Black Abbey Road Junction.

Date	Collison Type	Accident Type
25/10/1996 21:15	Pedestrian	Minor Injury
09/04/2002 16:07	Pedestrian	Minor Injury
10/04/2011 08:00	Rear End	Minor Injury
02/08/2011 15:02	Rear End	Minor Injury
13/01/2013 11:10	Pedestrian	Minor Injury

See Appendix D for Accident Location Map & Collison Type 2008-2018

### 2.5 Pedestrian Count Data

2.5.1 A Pedestrian Count was carried out on the 21<sup>st</sup> March 2018 from 12 noon to 3:15 pm.

The following was recorded:

It was observed that approximately 60% of the pedestrian traffic between the mini roundabout and Black Abbey Road utilised the dedicated pedestrian crossing. All children crossing used the dedicated pedestrian crossing.

It was observed that the slow moving traffic provided plenty of crossing opportunities for pedestrians to cross. No delays time were observed at the pedestrian crossing.

Crossing time on average took 6 secs.

The results of the Pedestrian Survey which was carried out on Main Street West & Main Street East are outlined as follows:

	Adare West @ Pedestrian crossing	Adare West At North & South of Crossing	Adare East from Roundabout to Church
12-12:15	28	10	15
12:15-12:30	37	10	18
12:30-12:45	23	8	15
12:45-13:00	35	12	7
13:00-13:15	32	13	6
13:15-13:30	32	14	20
13:30-13:45	37	9	8
13:45-14:00	22	6	10
14:00-14:15	30	14	12
14:15-14:30	37	14	4
14:30-15:00	15	6	11
15:00-15:15	26	8	5

	Adare West @ Pedestrian crossing	Adult with Pram	Child under 16	Elderly	Disabled
12-12:15	24			3	1
12:15-12:30	25	1		11	
12:30-12:45	16	2	1	3	1
12:45-13:00	29			5	1
13:00-13:15	30			2	
13:15-13:30	29	1	1	1	
13:30-13:45	28			9	
13:45-14:00	19			3	
14:00-14:15	14	1	2	3	
14:15-14:30	25	5	7		
14:30-15:00	11		2	1	
15:00-15:15	21		3	2	

The results of a right turning Traffic Survey carried out in 2014 at Station Road are outlined below:

145 pedestrians crossed the N21 and 106 vehicles turned right out of Station Road onto

the N21 or completed a full loop of the mini roundabout from Rathkeale in a 60 minute period.

This potentially leads to 251 stoppages for the N21 National Road Traffic heading west through Adare Village i.e. 1 every 14.3 seconds.

In addition, 61 vehicles turned right onto Station Road or completed a full loop of the mini roundabout from Limerick in the same 60 minute period adding to congestion for the N21 National Road traffic heading west through Adare Village i.e. 1 every minute.

### **3. Need for this Report**

There are significant traffic delays in Adare Village on a daily basis, culminating in tailbacks some kilometres in length at weekends. A representation was made suggesting that pedestrian movements are contributing to the traffic delays and that signalisation of the pedestrian crossing should be investigated

### **4. Objectives of the Report**

The objective of the report was to examine if signalisation of the pedestrian crossing would alleviate the traffic delays and improve road safety in the Village and in doing so establish the causes of the traffic delays in Adare Village.

### **5. Observations**

There are a number of factors that lead to the significant traffic delays in Adare Village. The efficient flow of the traffic is constrained by a number of contributory factors these are as follows:

- **Capacity – Adare Village is currently carrying inter urban traffic. The road layout is not suitable for this type of traffic and as such the need for a By-Pass has been established. This will divert the inter urban traffic from Adare Village. The Foynes Limerick Road Scheme will deliver this Bypass. A preferred route for this scheme has been selected and this project is now at Preliminary Design Stage.**
- **Turning movements at the junctions with Station Rd and Black Abbey Road impedes the flow of traffic on the N21. A right hand turn lane has been provided to alleviate some of the delays caused by vehicles turning right and this is performing well. However, parking on Black Abbey Rd is causing delays to traffic entering this junction as vehicles are parked right on the junction at times.**
- **The mini roundabout at Station Rd causes vehicles to yield which in turn causes stop start in the traffic flow. In particular HGV's require extra time to accelerate out of the stop/yield position.**
- **On street parking throughout the Village causes stoppages in traffic which in turn amplifies delays. It was observed that there is significant turnover of parking spaces arising from the use of the Post Office, the supermarket, the chemist and other local business'.**

Removal of on street parking would not be recommended at this time as there is not sufficient off street parking to meet the current parking demands.

- Adare Village is a busy visually appealing village with a busy streetscape which offers many distractions to the motorist. This can lead to unnecessary stoppage in traffic flow. In particular, this can be observed when functions are being held in the church & hotel.
- It was observed from the pedestrian survey that a significant amount of people (30%) were crossing the road at locations other than the pedestrian crossing. Pedestrians were not observed to have any difficulty crossing at these locations due to the slow moving nature of the traffic which provided crossing opportunities. Naturally crossing at locations other than the designated spots is not desirable. Pedestrians could be encouraged to cross at the designated locations through the provision of a pedestrian barrier. However, this would not be a desirable situation as would result in the removal of the on street parking.
- To the east of the mini roundabout it was observed that pedestrians were crossing the N21 at a number of locations including the crossing at the Church, at the Dunraven, at the Heritage Centre and at the roundabout.
- TII have been consulted with respect to the signalisation of this crossing and the opinion offered was that no benefit would be accrued from this and would led to further delays.

The signalisation of a pedestrian crossing should only be considered when the pedestrian is experiencing difficulties in finding crossing opportunities in the traffic. Pedestrians or vulnerable pedestrians were not observed having any difficulties at the pedestrian crossing or at other locations they chose to cross.

Currently pedestrians cross when they want to cross and the observed crossing time was 6 secs.

Signalisation will result in additional longer stoppages in traffic and as observed pedestrians will also cross when the opportunity is available to them as currently is the situation. There is no way to encourage people to wait for the green light when there are crossing opportunities provided by the slow moving nature of the traffic.

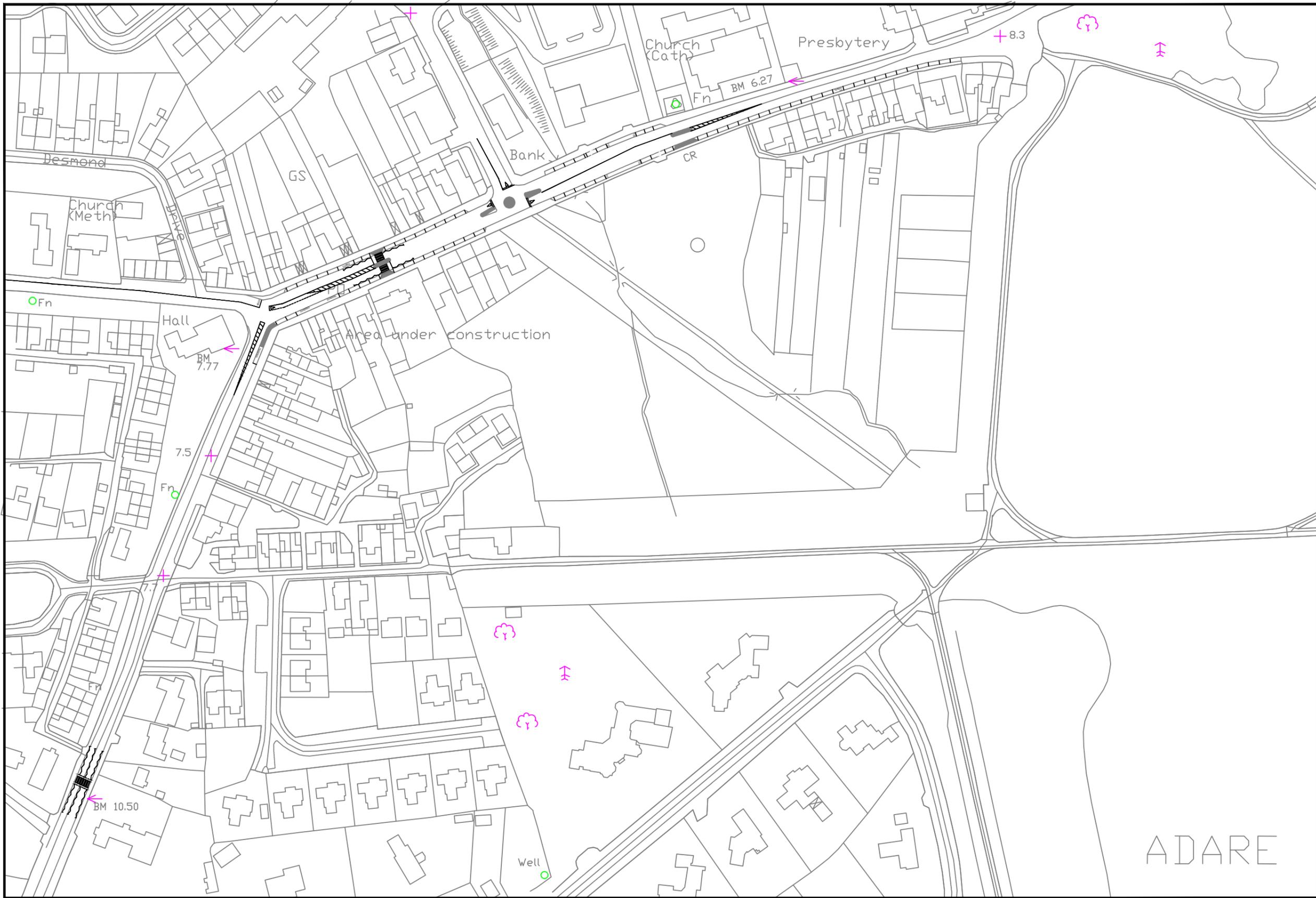
## 6. Recommendation

Pedestrian facilities in Adare Village should be reviewed when Adare Bypass is operational & inter urban traffic is diverted.

Examine the development of additional off street parking in the village and resolve the parking issue at Black Abbey Rd.

A traffic model at the mini roundabout should be carried out. A fully controlled vehicle activated traffic light junction (with pedestrian facilities) at Station Rd/Main Street Adare should be modelled. However signalisation of this junction may have a negative effect on the traffic calming qualities of the junction and increase speeds in the village to an extent that it no longer forgiving to the pedestrian & visitor.

**APPENDIX A**  
**DRAWINGS**



ADARE

**NOTES:-**  
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 SCHEME REQUIRES DETAILED DESIGN TO BE CARRIED OUT INCLUDING TOPOGRAPHICAL SURVEY TO DETERMINE THE EXACT LOCATION OF ROAD LAYOUT FEATURES INCLUDING BOUNDARIES ETC.

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Rev	Description	By	Chk	App	Date
0	ISSUED FOR TENDER				

<b>Project: ADARE PEDESTRIAN CROSSING</b>			
<b>Title: SHEET 1 - EXISTING LAYOUT</b>			
Designed: LCCE	Stage: FEASIBILITY	Drawing No.:	Revision:
Drawn: T.CARMODY	Scale: 1:2,000	RS/19/59/0002	REV 0
Checked: AOS	Date: 21.06.2018		

# APPENDIX B

## TRAFFIC COUNT DATA

Location: C2 > Site Groups > 05 Live > 05 Live

Map of Sites | List of Sites | Search...

Map | Satellite

TMU N21 000.0 S  
N21 Between Adare and M20 Jn, Nouborough, Co. Limerick

	2018	2017	2016
<b>AADT</b>	16643	16965	16537
<b>% HGV</b>	4.3%	4.6%	5.0%
<b>Coverage</b>	46.5%	99.7%	99.7%

Site Data

Transport Infrastructure Ireland  
Parkgate Business Centre  
Parkgate Street  
Dublin 8  
D08 DK10

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12:45  
21/06/2018

## APPENDIX C

### Photographs



**Pic 1. Pedestrian Crossing at Centra N21 Adare**



**Pic 2 View of N21 Main Street Adare towards Killarney**



**Pic 3 View of N21 Main St , Adare towards Limerick Junction with Station Rd.**

# APPENDIX D

## Accidents Locations Map 2008-2018

