



# **CARLINGFORD PUBLIC REALM SCHEME**

Stage 1 Road Safety Audit



#### **STAGE 1 ROAD SAFETY AUDIT**

Document status						
Status	Revision	Purpose of document	Authored by	Reviewed by	Approved by	Review date
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Approval for issue	
DF	13 April 2023

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## 1 INTRODUCTION

This Stage 1 Road Safety Audit report was prepared in response to a commission from Louth County Council for a Stage 1 Road Safety Audit of the proposed Carlingford Public Realm scheme in Carlingford, Co. Louth

#### 1.1 Audit Team Members

The Road Safety Audit team consisted of:

Team Leader:	
Shane Fanning	BA Civil Eng, BAI, BEng, CEng MIEI, Cert Comp RSA (Transport Infrastructure Ireland RSA Approval Ref. No. SF 259694) Director, Highways & Transportation, RPS
Team Member:	
Declan Collins	B Eng., CEng, MIEI, Cert Comp RSA Transport Infrastructure Ireland RSA Approval Ref. No. DC 219581 Associate, RPS

#### **1.2** Audit Information

The information supplied for this audit is listed in **Appendix A**. The information provided was considered adequate for the purposes of carrying out the road safety audit as requested. No design departures from standards were notified to the Audit Team (AT). Traffic data was provided from Summer 2021, which can be found in **Appendix B**. No collision data was provided to the AT.

The Road Safety Audit comprised of an examination of the site by the Audit team members in daylight on 5<sup>th</sup> April 2023. The weather conditions were wet and rainy with cool temperatures.

This Stage 1 Road Safety Audit has been carried out in accordance with the requirements of TII Publication GE-STY-01024 December 2017 (NRA Standard HD 19) - Road Safety Audits, contained in the Safety (STY) stream of the General (GE) activities pillar of the Transport Infrastructure Ireland (TII) Publications (replaces NRA DMRB).

The proposed scheme has been examined and this report identifies matters that may have an adverse effect on road safety. It has not been examined or verified for compliance with any other standards or criteria. Matters affecting road safety in this report are identified as problems and are considered to require action in order to improve the safety of the project and minimise the potential for collisions.

A Road Safety Audit Feedback Form is provided in **Appendix C** which lists the problems identified and this Form requires completion by the Design Team Leader. If any of the Problems in this report are not accepted, a written response is required, stating reasons for non-acceptance. Observations made in this report are intended as information only and a written response is not required.

# 2 SCHEME DETAILS

#### 2.1 Background / Proposed Scheme

The scheme will involve carrying out public realm enhancements to Carlingford Town centre, consisting of but not limited to;

- Upgrade of footpath materials and widths to give greater comfort to pedestrian traffic;
- Traders Facilities
- Upgrade of traffic and pedestrian management within the town to give greater emphasis to pedestrians and create a clear hierarchy that puts pedestrians before vehicular traffic within the town centre This will be achieved by reducing road carriageway widths, widening footways, creating shared surfaces and inclusion of tactile paving at crossing points;
- Traffic calming ramps and pedestrian crossings;
- Demolition of existing toilet block and construction of a new one;
- Resurfacing of existing pavements;
- New railings, bollards to discourage illegal parking;
- Bicycle parking;
- Street furniture including bins and seats;
- New trees and vegetation;
- New signage and an evaluation of existing signage with an aim to remove unnecessary signage or relocate signage;
- New/replacement of functional street lighting. New feature lighting in the form of strip lighting to be introduced to some pedestrian areas and tall feature lights will be used in a functional manner at the civic and park areas. There are no proposals to light historic buildings in order to reduce negative impact on bats;
- Public lighting and functional lighting will include, where necessary, shielding to avoid unnecessary light spill that may have a negative effect on the ecology within the area;
- Removal of some existing car parking and provision of 63 car parking spaces i.e. a reduction (by 57 no. spaces) in car parking within the town centre area;
- Removal of existing tennis courts and associated walls;
- New utility services/upgrading of existing services (if required), including watermains, foul, storm and water drainage, ESB services, WiFi and Broadband and also the undergrounding of existing overhead cables where possible.

The public realm improvements within the Town Centre Area of Carlingford as set out above will result in a reduction of car parking spaces and the change of use of an existing tarmac tennis court area to become a new public realm focal point. To mitigate the potential negative impacts of these changes, LCC are proposing to construct a new car park facility. The proposed car park and associated works are within an area located 550m south east of the Town Centre Area and will include;

- 148 no. car parking spaces, made up of; 8 no. disabled parking bays, 10 no. potential electric car charging parking bays, 9 no. parent and child parking bays and 121 no. standard parking bays, parking bays to be constructed of permeable paving block setts;
- 2 no. new porous asphalt tennis courts, complete with lighting and fencing (approx. 5m high). Tennis court drainage to consist of filter drain system connecting to closed pipe network;
- New gully and pipe drainage network tying into the existing network on Ghan Road;

- New ESB substation, comprising of an above ground steel cabinet of dimensions approx. 2.6m x 2.2m x 2.0m;
- Ducting for communications and electrical services requirements;
- Public lighting where necessary, shielding to avoid unnecessary light spill that may have a negative effect on the ecology within the area;
- Pedestrian network including concrete footpaths connecting to the existing footpath network on the Ghan Road. A linkage to the existing footpath network along the R176 will be provided and a proposed new pedestrian crossing point to provide a continuous linkage for pedestrians into Carlingford town centre from the proposed car park along this route;
- Internal asphalt road network with road markings;
- Bus parking and campervan set down bays; and
- Landscaping.

## 2.2 Location & Description of the Site

The location of the proposed scheme is within the Carlingford Town urban area in Co. Louth. The existing site is within, and adjacent to, the road boundary of the R173/R176 and other local streets, which is a regional road with a posted speed limit of 50km/h on these sections



Figure 2.1 – Location Map

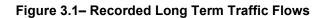
## **3 TRAFFIC INFORMATION**

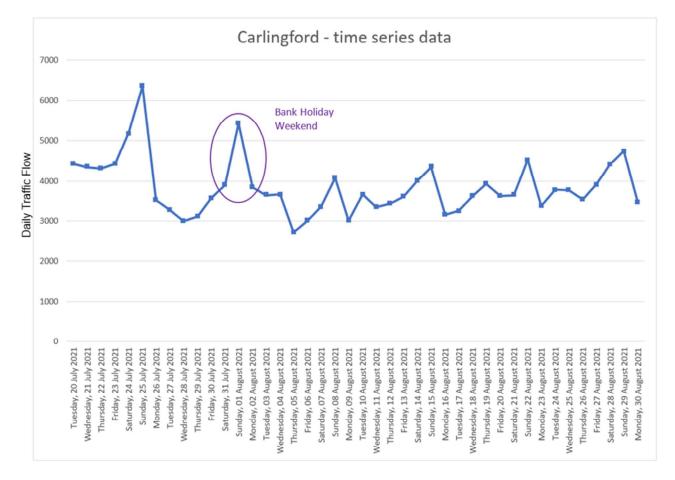
#### 3.1 Traffic Data

The following is an extract of traffic data as recorded from a long-term traffic count carried out over a 6-week period from Friday 20<sup>th</sup> July 2021 to 24<sup>th</sup> August 2021,

Week Beginning	7-Day Average Daily Flow	
Tuesday, 20 July 2021	4649	
Tuesday, 27 July 2021	3731	
Tuesday, 03 August 2021	3353	
Tuesday, 10 August 2021	3652	
Tuesday, 17 August 2021	3710	
Tuesday, 24 August 2021	3946	

A specific traffic data measure was carried out on the August Bank Holiday to capture and measure seasonal challenges to traffic. Further details can be found in **Appendix B**.





## 4 ITEMS ARISING FROM THIS STAGE 1 ROAD SAFETY AUDIT

## 4.1 Problem 4.1

Summary & Location - General Footpath Widths across a number of Locations

It is unclear from the drawings provided what footpath widths are being provided. Judging by the space available on site for the provision of footpaths and traffic lanes, and taking into account lighting columns and street furniture, it appears that some sections of footpath are below the desirable minimum width to cater for all mobility types. This could result in pedestrians, or mobility impaired users entering the carriageway and coming into conflict with vehicular traffic.



Problem 4.1

#### Recommendation

All footpath widths should be of appropriate widths to cater for all types of road users.

## 4.2 **Problem 4.2**

Summary & Location - Sightlines at northern extent due to informal parking

There is large paved area to the north of the green space at the northern extent between the hard shoulder and existing grass kerb, that appears from the design to be retained just outside the extent of the scheme. Informal parking was identified on the day of the site visit, with vehicles pulling into this paved area, which obstructs sightlines for vehicles existing the side-street. This could result in side-impact collisions between exiting vehicles and traffic on the mainline.

#### **STAGE 1 ROAD SAFETY AUDIT**



Problem 4.2

#### Recommendation

Informal parking in this area should be formalised or removed to achieve the required sightlines from the junction.

#### 4.3 **Problem 4.3**

Summary & Location – Priority unclear at junction from R173

It is unclear from the drawings who has priority, pedestrians or vehicular traffic, across the priority junction turning into the village centre from the R173. A lack of clear priority could give rise to conflicts between vehicles and pedestrians.



Problem 4.3

#### Recommendation

Clear priority should be defined at the junction.

#### 4.4 **Problem 4.4**

Summary & Location - Level Difference between Tourist Office and Carriageway, and Bus-stop Status

There is an obvious level difference between the carriageway hardshoulder and the entrance footway to the front of the Tourist Office. The footway is protected by a railing which is not indicated on the drawing provided. There is also a bus stop outside the Tourist Office, and it's unclear from the drawing what the status of the bus stop is.

It is unclear from the drawings how this level difference is being catered for in the design or how the minimum footway widths will be achieved between the entrance footway and the edge of the carriageway. Insufficient footway widths could result in pedestrian or mobility impaired users entering the carriageway and coming into conflict with vehicular traffic.



Problem 4.4

#### Recommendation

Footpath widths should be of appropriate widths to cater for all types of road users and bus stop.

## 4.5 Problem 4.5

Summary & Location - No Provision for Bus Stops outside Tourist Office

There are existing bus stops in place on the R173 outside the Tourist Office. It is unclear from the drawings if bus stops are being retained or provided at defined locations in the proposed scheme. A lack of bus stop facilities could give rise to ad-hoc bus stopping, which could result in potential collisions between buses, traffic and other road users

#### **STAGE 1 ROAD SAFETY AUDIT**



Problem 4.5

#### Recommendation

Appropriately defined provision for bus stops should be provided.

#### 4.6 Problem 4.6

Summary & Location – Widened R173 Carriageway outside Tourist Office

The R173 carriageway outside the Tourist Office and proposed park widens out, and it is unclear from the design what purpose of this is for. This could give rise to unwarranted parking or stopping/pulling in, which could give rise to side-swipe or rear-end collisions on the carriageway.



Problem 4.6

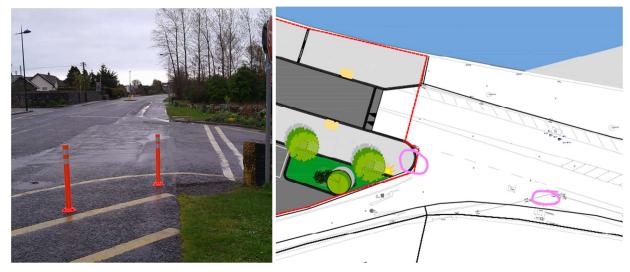
#### Recommendation

Definition of the carriageway width and it's purposes should be clear, and preventative to unwarranted parking or pulling in.

## 4.7 **Problem 4.7**

Summary & Location – Lack of Footpath continuity at the southern extent footpath

The footpath at the southern extent of the PR scheme at the junction with the R176, terminates at the junction without any appropriate crossing facilities to link to the existing footpath on the southern side of this junction, a key desire line linking to the proposed Southern Car Park scheme to the south. A lack of appropriate crossing facilities, dropped kerbs and tactile paving could result in conflicts between pedestrians and traffic, or pedestrian trips or falls.



Problem 4.7

#### Recommendation

Appropriate crossing facilities should be provided at this location.

## 4.8 Problem 4.8

Summary & Location - Lack of Pedestrian Access from PR Car Park to the Park & Footpaths

It appears from the drawings that no pedestrian access or dropped kerbs are being provided from the PR car park to the Park or the adjacent footpaths. This could result in pedestrians, and in particular mobility impaired pedestrians, using the vehicular entrance, and coming into conflict with vehicular traffic.



Problem 4.8

#### Recommendation

Suitable pedestrian and mobility impaired access facilities should be provided from the car park to the Park and footpaths.

#### 4.9 **Problem 4.9**

**Summary & Location –** Inadequate Pedestrian Entrance facilities to south of Park

The rear pedestrian entry/exit to the Park and Play Area is steep and exits down directly onto the Old Quay Lane which has limited refuge space between the wall and the live street, without any appropriate pedestrian crossing facilities. This could give rise to pedestrians, including mobility impaired users, exiting the Park directly into the path of oncoming traffic.



#### Problem 4.9

#### Recommendation

Appropriate footpath protection, crossing facilities, and gradients should be provided to cater for all pedestrian desire lines.

#### 4.10 **Problem 4.10**

Summary & Location – Prevention of Vehicles entering Pedestrian Areas of PR area.

According the drawings, the level of the carriageway and the footpath on the section below are flush – no vertical segregation. During the site visit, quite a number of cars were observed entering the village along this street. It is unclear what definition or measures will be provided to prevent vehicles encroaching on pedestrian areas, and in particular, to prevent vehicles entering the PR area to the north or the Park area to the south behind the Tourist Office and potential unwarranted parking. This could result in conflicts between vehicles and pedestrians.



Problem 4.10

#### Recommendation

Clear definition should be provided to highlight the areas that vehicles can utilise, and prevention measures should be put in place to prevent unwarranted vehicular access to pedestrianised areas.

#### 4.11 Problem 4.11

Summary & Location - Potential Insufficient Width for all users on Newry Street

It is unclear from the drawings if the outdoor dining area on street is being retained or removed, or if the onstreet parking opposite is being retained or removed. Keeping both could result in a lack of sufficient width for all road users, giving rise to potential side-swipe collisions.

#### **STAGE 1 ROAD SAFETY AUDIT**



Problem 4.11

#### Recommendation

Appropriate width for all street elements should be provided.

#### 4.12 **Problem 4.12**

Summary & Location - Swept Path and encroachment to pedestrian areas on Market St.

It appears from the drawings that the footpath and carriageway areas on Market St. are at the same level with no vertical segregation. Given that this street, and the junction with Tholsel St. is quite tight, it is unclear if pedestrian desire lines will be safe from overrun of vehicles onto the paths, particularly at the bend. There also does not appear to be any measures to prevent vehicles entering the pedestrianised Tholsel St. This could give rise to conflicts between pedestrians and vehicles in these areas.



Problem 4.12

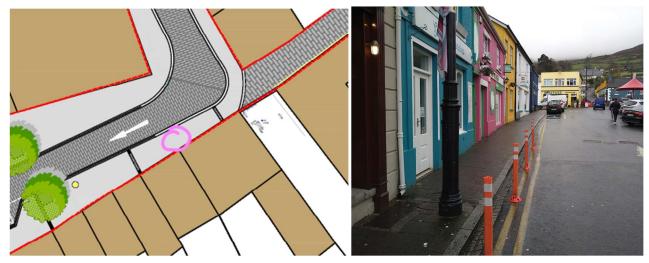
#### Recommendation

Ensure a swept path analysis is carried to determine sufficient space for vehicle to negotiate the streets without encroaching on footpath areas, provide measures to prevent vehicular access onto Tholsel St.

#### 4.13 **Problem 4.13**

Summary & Location – Effective Footpath Width on Market St. due to Lighting Column

It is unclear from the drawings if the existing public lighting columns are being retained or removed/relocated. At this location on Market St. there would appear to be insufficient width for mobility-impaired pedestrians to negotiate around the existing lighting column. This could result in pedestrians entering the carriageway, and coming into conflict with traffic.



Problem 4.13

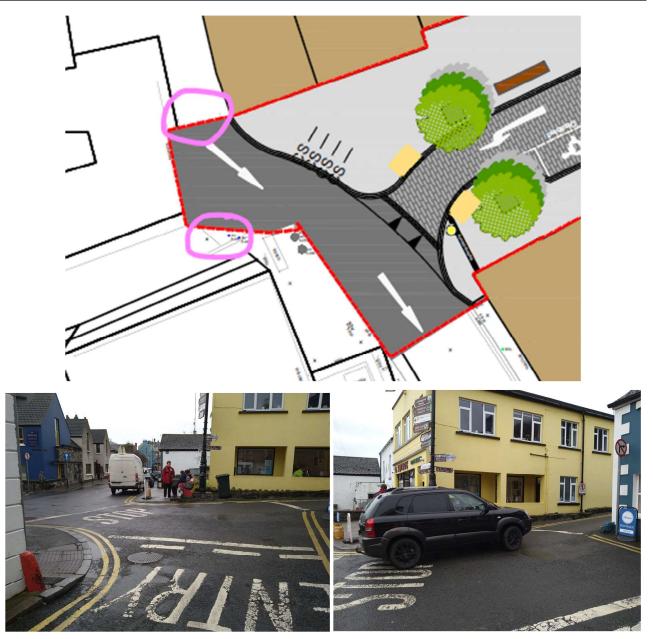
#### Recommendation

Ensure suitable footpath width for all pedestrian users is provided.

## 4.14 **Problem 4.14**

Summary & Location – Junction Operation / Priority at Back Lane / River Lane junction at western extent.

Both the existing arrangement and the proposed arrangement at this junction of Dundalk St. / Back Lane / River Lane is not clear. The proposal is for a one-way traffic flow from both Market St. and Back Lane to Dundalk St. However, it was witnessed on site, traffic driving from Market St. across the junction and west up River Lane. There is also insufficient width for vehicles to pass one another in this area, and the sightlines around the junction are severely restricted. This could give rise to head-on or side-swipe collisions, or conflicts with pedestrian in the area.



Problem 4.14

#### Recommendation

The arrangement of the junction and it's allowable movements should be made clear, and should be safe for all users.

## 4.15 **Problem 4.15**

Summary & Location - Lack of Stop Markings on River Lane

No road marking drawings were provided with the audit. On site there are no Stop Markings on the carriageway at the exit from River Lane. Drivers approaching the junction may misinterpret the existing markings, and may fail to appreciate or stop for traffic coming from Back Lane, resulting in side-swipe collisions.



Problem 4.15

#### Recommendation

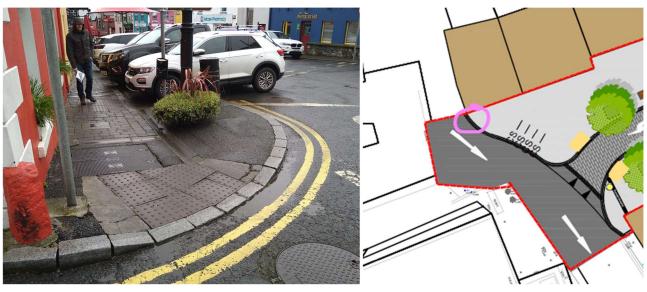
Provision of appropriate road markings in accordance with best practice should be considered on the approach to this junction.

## 4.16 **Problem 4.16**

Summary & Location – No Provision of Dropped Kerb access for Pedestrians from Back Lane.

There is an existing dropped kerb and pedestrian access at the corner of the junction near Back Lane. The design drawings propose to remove this, meaning that any pedestrians, in particular mobility impaired pedestrians coming from Back Lane, will have to travel on the carriageway and into Market St carriageway in order to access the footpaths.

#### **STAGE 1 ROAD SAFETY AUDIT**



Problem 4.16

#### Recommendation

Provide appropriate access to footpaths for all pedestrian types from Back Lane/River Lane

## 4.17 **Problem 4.17**

Summary & Location - No Crossing Facilities provided between Market St. and D. Savage's shop.

No crossing facilities have been provided to cater for pedestrian desire lines between Market St. and Dundalk Street west. This could result in unwarranted crossing and conflicts with vehicles, or pedestrian trips or falls.



Problem 4.17

#### Recommendation

Provide appropriate crossing facilities between Market St. and the area in front of the shop on the Western side of Dundalk Street.

## 4.18 **Problem 4.18**

Summary & Location - No pedestrian demarcation on western aisle of Southern Car Park

Pedestrian pathways have been demarcated in the proposed design for 2 of the 3 aisles in the Southern Car Park, yet none have been provided in the western aisle. A lack of consistency and segregation on this aisle could give rise to collisions between pedestrians and vehicles.



Problem 4.18

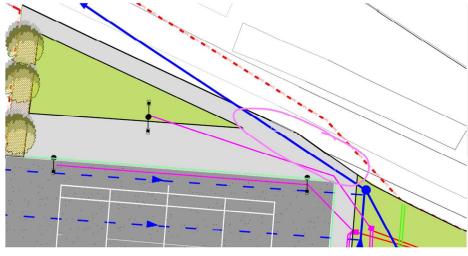
#### Recommendation

Provide pedestrian demarcated pathway on western aisle also.

#### 4.19 **Problem 4.19**

Summary & Location – No dropped kerb access for pedestrians from Ghan Rd to back entrance.

It is unclear if dropped kerb access has been provided for pedestrians entering the tennis courts and back entrance to the Southern Car Park. This could give rise to pedestrian falls.



Problem 4.19

#### Recommendation

Provide dropped kerb access for pedestrians from Ghan Road.

# 5 OBSERVATIONS UNDER THIS STAGE 1 ROAD SAFETY AUDIT

#### 5.1 Observation 5.1

It is unclear if the internal paths within the park area linking to the eastern side, access out onto the footpath along the R173 and parallel parking.



**Observation 5.1** 

## 5.2 Observation 5.2

The desire line between the Harbour Area and the Existing Car Park behind the new park is not catered for.



## 5.3 Observation 5.3

The existing playground is fenced in. It is unclear if the proposed playground is fenced in.



**Observation 5.3** 

## 6 AUDIT STATEMENT

We hereby certify that this Stage 1 Road Safety Audit has been carried out in accordance with TII Publication GE-STY-01024 December 2017 (NRA Standard HD 19). We have examined the site on the 5<sup>th</sup> April 2023 under daylight conditions, and the audit has been carried out with the sole purpose of identifying any features that could be remedied to improve road user safety.

We recommend that the safety problems identified in Section 4 of this report, together with any safety recommendations and other observations be followed up by the appropriate responsible persons and studied for implementation / consideration.

This Audit has been carried out by the persons named below; neither of whom are members of the Design Team for the Works.

Shane Fanning (Audit Team Leader)

Signed: Share Finning

Date: 13/4/23

Declan Collins (Audit Team Member)

Signed: Date: 13/4/23

# Appendix A

List of Drawings/Documents to be Audited

#### Table A.1 – List of Drawings / Documents to be Audited

Drg / Doc No	Title	Rev
2391.1.03	Public Realm Enhancements General Arrangements	P01
MGT0610-DG0006 (Sheet 1)	Southern Car Park & Tennis Courts General Arrangements	P04
MGT0610-DG0006 (Sheet 2)	Southern Car Park & Tennis Courts General Arrangements	P04
MGT0610-DG0006 (Sheet 3)	Southern Car Park & Tennis Courts General Arrangements	P04

# Appendix B

**Traffic Data** 

The following is the traffic data as recorded on the August Bank Holiday to capture and measure seasonal challenges to traffic, two days of the August Bank Holiday weekend, Saturday and Sunday (31/07/2021 and 01/08/2021) were chosen in consultation with Louth County Council to carry out traffic surveys.

These traffic surveys took three different forms,

 A long-term count carried out over 6 weeks from Friday 20<sup>th</sup> July 2021 to 24<sup>th</sup> August 2021 using a Pneumatic tube counter on the R173 at the below location;

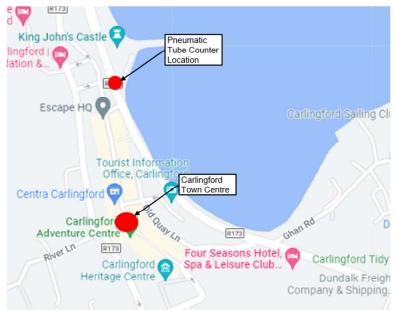


Figure B1 – Location of Long-Term Survey

Automatic Number Plate Recognition Surveys carried out on Saturday 31/07/2021 and Sunday 01/08/2021 at the below locations noted in red below. This survey was carried out to measure the time taken for vehicles to travel between the points shown below in both directions. This type of survey is useful to measure congestion based on duration of travel; and

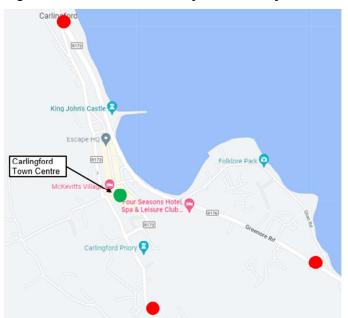


Figure 3-3 Location of Journey Time Survey

3. Video Junction Turning Counts carried out on Saturday 31/07/2021 and Sunday 01/08/2021 at the below locations noted in red below.

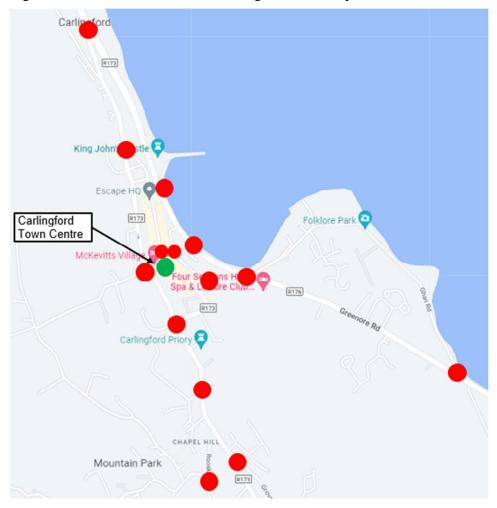


Figure 3-4 Location of Junction Turning Count Survey

#### Analysis of Long-Term Existing Traffic Data (Pneumatic Tube Counter)

The weekly average daily flow of traffic as extracted from the pneumatic tube counter is shown in the below Table;

Week Beginning	7-Day Average Daily Flow	
Tuesday, 20 July 2021	4649	
Tuesday, 27 July 2021	3731	
Tuesday, 03 August 2021	3353	
Tuesday, 10 August 2021	3652	
Tuesday, 17 August 2021	3710	
Tuesday, 24 August 2021	3946	

This information was further broken down to determine the daily traffic flow. This was done so the busiest day of the week could be determined and is shown graphically in **Figure 3-5** below;

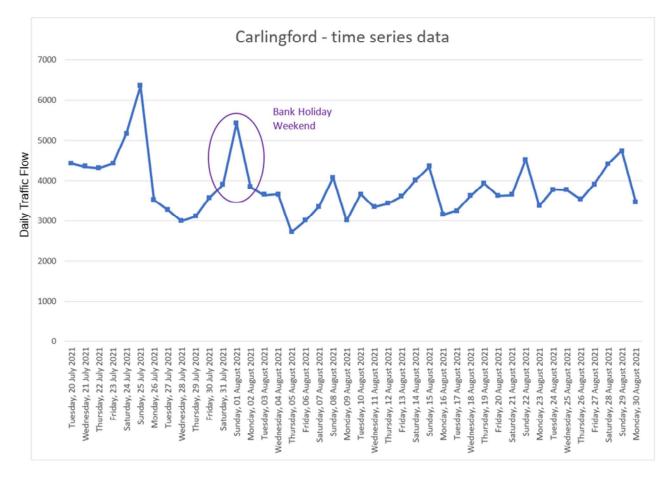


Figure 3-5 Recorded Long Term Traffic Flows

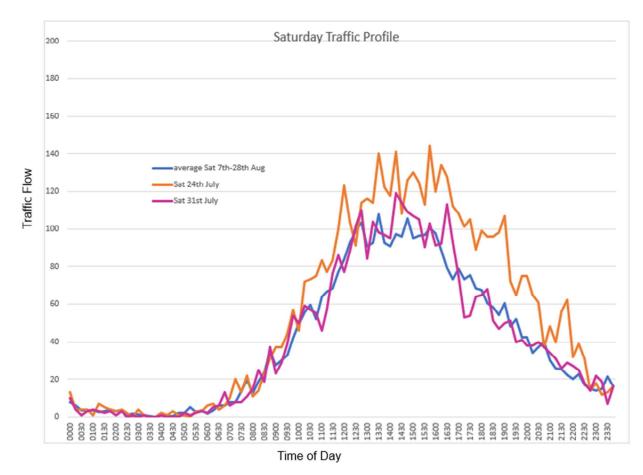
Prior to carrying out the traffic surveys, it was agreed with Louth County Council that the Bank Holiday weekend, would be the most appropriate weekend to capture and measure seasonal traffic patterns. However, from the above graph the weekend prior to the Bank Holiday Weekend recorded a higher traffic volume than the Bank Holiday Weekend. Further investigation was carried out to determine the cause of this anomaly and it was discovered that a sailing regatta was held that same weekend. Due to the irregularity of this type of event, the Bank Holiday Weekend is still considered to be an appropriate weekend to measure seasonal challenges to traffic. The Bank Holiday Weekend recorded a higher volume of traffic than on the four weeks following it. This is illustrated in the below Table.

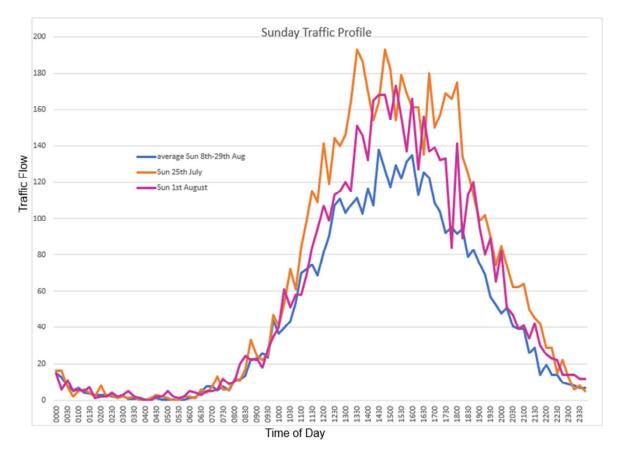
#### Table 3-2 Analysis of Recorded Long Term Existing Traffic Data

Sunday Flow	Flow from 11:00-22:30	Difference
August Average	3902	-19%
Bank Holiday	4805	
Previous Weekend	5739	+19%

Sunday traffic flows later in the month of August did not reach the same as those recorded for the Bank Holiday Sunday. The traffic flows recorded for the Bank Holiday Saturday were typical of those recorded for other Saturdays in July and August. This is illustrated in the graphs shown below in **Figure 3-8**.

Figure 3-6 Recorded Traffic Profiles





The data shown in the above graphs is summarised as follows,

- On a typical Saturday, flows peaked at around 400 vehicles per hour and this level lasted roughly from 12:30 to 16:00.
- On Bank Holiday Saturday, this level lasted a little later until nearly 17:00, with a spike of higher flow at around 14:30.
- On the previous Saturday, flows peaked at around 500 vehicles per hour, and this level lasted roughly from 13:00 to 17:00.
- On a typical Sunday, flows peaked at around 500 vehicles per hour, and this level lasted broadly from 14:30 to 16:30
- On Bank Holiday Sunday, flows peaked at around 650 vehicles per hour, and this level lasted over roughly the same period.
- On the previous Sunday, flows reached around 750 vehicles per hour for short periods and maintained an average flow of around 650 vehicles per hour between 12:30 and 18:30 a six-hour peak. This is increase in traffic flows is thought due to a local sailing regatta which was held that weekend.

# Appendix C

Road Safety Audit Feedback Form

STAGE 1 ROAD SAFETY AUDIT

# **Road Safety Audit Feedback Form**

Scheme: Carlingford Public Realm

Audit Stage: Stage 1 Road Safety Audit

Date Audit Completed: 12/4/23

	To be Co	To be Completed by Designer	er	To be Completed by Audit Team Leader
Problem No. in Report	Problem accepted (Yes/No)	Recommended measure accepted (Yes/No)	Describe alternative measure(s). Give reasons for not accepting recommended measure	Alternative measures or reasons accepted by Auditors (Yes/No)
4.1	Yes	οΝ	Footpath width at Old Quay Lane is unachievable due to pinch point at buildings. The proposed arrangement is a shared surface. There is no existing footpath. Current footpath design is 1m and provides a delineated road carriageway to keep drivers to one side of the shared surface and provides some refuge for pedestrians. Area along Market St. has sufficient width Area to the east of Taaffe's Castle has been omitted from the project	Yes
4.2	Yes	Yes	This is outside of the Works area. LCC to be informed of recommended measures	
4.3	Yes	Yes	Tactile paving to be added at detailed design. Design team will retain a kerb upstand at this point to give clear indication of priority	
4.4	ΝΟ	Νο	Image shown is not of the entrance to the tourist office. Entrance will be retained at side and rear of the building. Levels can be achieved to provide access in the same arrangement as existing	Yes
4.5	Yes	Yes	Bus stop arrangement will remain as existing, where bus blocks the road and pedestrian's elite on to build out area. Road markings will be added during detailed design to show this	
4.6	Yes	Yes	To the north, the existing bus stop arrangement is being retained and to the south of this, the existing on street parking is being retained. Road markings will be added at detailed design to give clear indication of this	
4.7	Yes	Yes	This is outside of the Works area. LCC to be informed of recommended measures	

STAGE 1 R	STAGE 1 ROAD SAFETY AUDIT	' AUDIT		
:	To be Co	To be Completed by Designer	er	To be Completed by Audit Team Leader
Problem No. in Report	Problem accepted (Yes/No)	Recommended measure accepted (Yes/No)	Describe alternative measure(s). Give reasons for not accepting recommended measure	Alternative measures or reasons accepted by Auditors (Yes/No)
4.8	Yes	Yes	Dropped kerbs will be shown clearly at detailed design stage	
4.9	Yes	Yes	This is outside of the Works area. LCC to be informed of recommended measures	
4.10	Yes	Yes	Shared surface will be constructed as per DMURS guidance. Bollards will be provided to prevent unwarranted parking	
4.11	Yes	Yes	Current arrangement is being retained and repaved. No reported issues at this location. LCC to be notified of problem with regards the outdoor dining area	
4.12	Yes	Yes	Shared surface will be constructed as per DMURS guidance. Bollards will be provided to prevent unwarranted vehicular access	
4.13	Yes	Yes	Public lighting will be redesigned at detailed design stage and positioned appropriately	
4.14	Yes	Yes	Road markings will be added at detailed design to give clear indication of priority. LCC to be informed of recommendation of one-way system as this is outside of the works area	
4.15	Yes	Yes	Road markings will be added at detailed design to give clear indication of priority.	
4.16	Yes	Yes	Tactile paving and dropped kerbs to be included in detailed design	
4.17	Yes	Yes	Tactile paving and dropped kerbs to be included in detailed design	

Problem No. in	To be Co Problem	To be Completed by Designer roblem		To be Completed by Audit Team Leader
Report	accepted (Yes/No)	measure accepted (Yes/No)	Describe alternative measure(s), Give reasons for not accepting recommended measure	accepted by Auditors (Yes/No)
4.18	NO	Νο	Pedestrian pathways have been included on sections where traffic flow is one way and therefore sufficient space is available to provide. The area described in this problem is a two-way traffic flow and therefore cannot be provided	Yes (Delineation arrows should be provided in order to define traffic flow directions on all aisles)
4.19	Yes	Yes	Dropped kerbs will be provided at detailed design	
Signed: Date: 14/04/2023	of June 1	Designer	Signed:	Signed: <u>「」」」</u> Employer Date: <u> 7/た/</u> 23

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