



Stephen Reid Consulting
Traffic and Transportation

Received: 21/07/2023



N59 Oughterard Bridge, Co Galway *Traffic Report on Proposed Signalisation*

For Galway County Council

APRIL 2023



Received: 21/07/2023

Prepared by:

Stephen Reid Consulting Traffic and Transportation Limited
Estuary House, New Street, Malahide, Co Dublin, K36 KH32
+353(0)87 979 3479

stephenreid@stephenreidconsulting.com
www.stephenreidconsulting.com

Received: 21/07/2023

Contents

1 Introduction 3
 1.1 Background 3
 2 Existing Conditions Assessment 5
 2.1 Topographical Survey and Site Visit Assessment 5
 2.2 Existing Traffic Conditions 5
 3 Options Development 6
 3.1 Proposed Traffic Signals and Pedestrian Crossing options 6
 3.2 Preferred Option for Traffic Signals and Pedestrian Provision 6
 3.3 Further Work Considerations 13

Appendices:

Traffic Flow Diagrams

Traffic Count Data

Linsig Modelling Input and Output (AM Peak Hour)

Traffic Quality Audit

SRC drawings

Date	Version	Issue	Checked	Approved
07.03.2023	Revision 0	For GCC/TII Review	SR	SR
19.04.2023	Revision 1	Updated	SR	SR

1 INTRODUCTION

Received: 21/07/2023

1.1 BACKGROUND

This Traffic Report has been prepared by Stephen Reid Consulting Traffic and Transportation on behalf of Galway County Council (GCC) to set out the work undertaken to develop a design proposal for improving the safety of the N59 Oughterard Bridge for all road users and with particular regard for Vulnerable Road Users (VRUs). The bridge is located on the N59 Clifden Road at the western end of Oughterard in County Galway.

The layout of Oughterard has resulted in a situation where most of the town's residential areas and town centre amenities are located on the south side of the Owenriff River, while the primary and post-primary schools are located on the north side of the river.

There are two bridges crossing the river in the town:

- The easternmost bridge is on the Glann Road, to the north of the town centre (approximately 400m north of the town centre via Camp Road). This bridge is wide enough for two-way traffic and has a footpath on both sides. There are access steps down onto a river walkway trail along the north bank to the west of the Glann Road. However, there is no direct connection from this point to the schools to the west of this bridge, which are separated by a field (the distance from the field gate on the northwest side of the river to the western boundary of the National School is 175m).
- The westernmost bridge is on the N59 Clifden Road, and this is a skewed bridge with a tight turn on each end, and a level drop of approximately 2 metres between the south and the north ends. The cross-section between the stone parapets is 5.54 - 5.58 metres wide, with no footpath provision, and while the section spanning the river is approximately 20 metres, the overall length for a pedestrian to walk between the south footpath at the Church access and the north footpath on the Clifden Road is 45 metres (including crossing the N59 west at the corner and the Church car park access. Pedestrians are fully exposed to traffic while making this crossing, and it is noted that this is most acute at times of the day when primary school children (and their parents) and secondary school students are walking to and from the schools to the north east of the bridge via the L1310 Carrowmanagh road (which is compounded by higher volumes of traffic to and from the schools, including several coaches/school buses. In the case of the secondary school students, it is noted that in addition to the morning and afternoon 'school run' periods, some students also walk to/from the town centre to access convenience stores/cafes during their lunch break.

Therefore, the current situation with only one bridge route providing access to the schools (via the N59) requires VRUs to mix with road traffic (both local traffic and National Route through traffic) in an uncontrolled manner and without adequate protection. On the L1310, there is only a short section of footpath on the north side of the bridge, and no footpath from this point to the left turn towards the schools (a further 75 metres walking distance with no footpath).

The result of lack of a safe crossing route without dedicated paths increases the number of school children who are brought to/from the schools by car/coach (increasing the potential for traffic conflict and conflict with those VRUs who are walking or cycling across the bridge) and increasing congestion at the two ends of the bridge as it is difficult for two vehicles to pass in opposite directions.

Receiver: 202303

From on-site observations and survey camera footage, it is noted that when the school buses and other large vehicles using the National Route are turning onto the bridge from the N59 or from the L1310 the drivers have to swing their vehicles wide and use the entire road width between the parapets. Also, buses and coaches exiting from the L1310 have to cross to the wrong side of the road before turning out onto the bridge, while buses turning right into the L1310 from the north end of the bridge overrun the kerbed buildout area to manoeuvre past traffic waiting to exit the L1310 at the stopline.

Forward visibility is compromised by the bridge parapet (although larger vehicles with elevated driver positions can see over the parapet walls at the ends of the bridge).

The site location is identified in Figure 1.1 below.



Figure 1.1: Site Location, N59 Oughterard, Co Galway
(source: <https://trafficdata.tii.ie/publicmultinodemap.asp>)

The initial assessment was to assess options for delivering a protected/segregated pedestrian zone across the bridge, with traffic signals at either side to control traffic movements and facilitate controlled crossing points of the Church access and the N59 (northwest).

2 EXISTING CONDITIONS ASSESSMENT

Received: 21/07/2023

2.1 TOPOGRAPHICAL SURVEY AND SITE VISIT ASSESSMENT

A full topographical survey was undertaken of the bridge area and approach roads at an early point in the study, to determine critical widths and allow for preparation of design options.

The existing conditions and key dimensions are on drawing SRC-286-102 (Rev A).

This was supplemented by a site visit in December 2020 between SRC, GCC project liaison and Traffic Solutions Limited (TSL) who provided input on traffic signals options and implementation.

2.2 EXISTING TRAFFIC CONDITIONS

During the initial assessment period of late 2020 and early 2021, it was noted that some Covid-19 restrictions were in place which would have impacted on traffic conditions and levels of pedestrian activity. The project was temporarily put on hold by Client request in 2021.

The project was reactivated in 2022 and traffic counts were carried out on a weekday during term-time (Tuesday 18th October 2022), as it was considered that activity and daily movements had settled down following the lifting of Covid restrictions.

The full traffic and pedestrian survey data is appended to this report. The traffic counts were undertaken on the N59 junctions at both ends of the bridge and at the junction with Station Road to the south east of the bridge.

From a review of the survey data, it was noted that the key hours for pedestrian and vehicle activity are related to the school day.

The AM peak hour (highest flows through the junctions) occurred at 08.15-09.15, and 89 pedestrians crossed the bridge during this one hour period (80 northbound and 19 southbound pedestrians recorded). Most of the northbound movements were made by school students.

There is a lunchtime peak hour from 13.00-14.00 where secondary school students are walking to/from the town centre and there is also an element of parents picking up Junior Infants from the National School in the hour preceding the main finish time for the National School, with 90 northbound and 70 southbound pedestrians recorded on the bridge (160 pedestrians in total).

The afternoon peak hour occurs from 15.00-16.00 and while there were 44 pedestrian movements across the bridge, this is less concentrated in terms of pedestrian and traffic movements than the AM peak hour (as primary school pupils would have passed through the bridge area before 15.00 so only secondary school students are observed, mostly in the latter part of the hour).

Three school coaches were observed during the AM and PM school run peak periods (these buses make an arrival movement and a departure movement via the L1310 and across the bridge).

The peak hour pedestrian flows and vehicle turning movements are summarised in Diagrams 1-4, appended to this report.

3 OPTIONS DEVELOPMENT

Received: 21/07/2019

3.1 PROPOSED TRAFFIC SIGNALS AND PEDESTRIAN CROSSING OPTIONS

The initial design option had the objective of delivering a protected/segregated zone on the west side of bridge deck (either kerbed or delineated by wands with base units).

Each end would connect to a crossing point which would result in two separate pedestrian crossing locations (across the N59 west at the north end of the bridge, and across the Church access at the south end of the bridge).

The crossing points would be incorporated into a full traffic signal control arrangement with the traffic movements on the N59 westbound and eastbound directions, the exit from the Church and the L1310 Carrowmanagh Road arm all operating in separate traffic stages with a dedicated green time, so that there could be no conflicting movements meeting in the bridge area or at the junction zone at each site.

It was proposed that the traffic signals would be an adaptive system which would be adjust the green times based on real time queuing information on each approach, with the traffic flow and queue information collected from inductive detector loops installed in the road surface that feed back into the traffic signal controller.

The most commonly used system for single junctions or small networks is MOVA (Microprocessor Optimised Vehicle Actuation), which is a fully adaptive traffic control system that is specifically designed to maximise the operational efficiency of traffic signal controlled junctions operating with MOVA.

The MOVA control system would very suitable as it would be fully adaptive to the different levels of pedestrian and traffic and movement demands across the day). For example, there would be times of the day when there is low or no pedestrian demand and if no pedestrian demand is detected (the push button units are not activated by a pedestrian) the next pedestrian stage is not called and the junction 'traffic stages' continue through the cycle.

Under this arrangement the junction would be similar to a staggered crossroads with the bridge deck forming the stagger between the two side roads.

A Road Safety Audit was undertaken on the Stage 1 proposal and the Audit Team recommended that suitable tracking analysis should be undertaken to ensure adequate space within the design to accommodate larger vehicles using the bridge.

Following discussions with GCC, further and more detailed tracking assessments were undertaken of the large coach turning manoeuvres on/off the bridge, with particular attention to the school run bus movements in/out of the L1310 and the right turn from the N59 east onto the bridge.

3.2 PREFERRED OPTION FOR TRAFFIC SIGNALS AND PEDESTRIAN PROVISION

From the foregoing assessment, it was determined that a protected/segregated footpath of could not be achieved to comply with the standard minimum width recommended by the Design Manual for Urban Roads and Streets (DMURS), and a relaxation to a sub-standard width would be impractical as it would be compromised by the swept paths of larger coaches turning on/off the bridge into the L1310 and the N59 east, which meant there would be no effective protection measure where pedestrians could walk across the bridge while one or other of the traffic movements was also presented with a green traffic light allowing drivers to enter the bridge deck area.

Received 21/07/2023

Therefore, in discussions with TII and GCC, it was agreed that a revised version of the design would be developed where the pedestrian crossing would extend between the south and north landing points, with all traffic movements stopped during the pedestrian crossing stage.

An independent Quality Audit (incorporating a Road Safety Audit) was carried out by Traffico on this revised option design. This is appended to the report with the Designer Feedback form completed and signed off.

The proposed layout and signals/ducting requirements are illustrated in drawings SRC-286-101 and SRC-286-102 (both Rev G) and the tracking assessment SRC-286-103 (also Rev G).

This has been modelled using Linsig software for the peak periods of activity using the flows in Diagrams 1-4.

The proposed signal staging and phasing has been developed from reviews with Traffic Solution Limited (TSL) who are a supplier and installer of traffic signals systems including MOVA controlled systems.

It should be noted that the pedestrian stage will have a long green man time (of 35s) with a clearing period from the previous traffic stage and also before the following traffic stage. These clearing periods between the green signal stages for the different traffic or pedestrian movements are known as 'intergreens'.

A traffic signal 'cycle' is the operation of all elements (traffic movements and pedestrian movements) and the time taken to complete this is the cycle time.

This arrangement will necessitate a significant element of every cycle allocated to the pedestrian crossing and the associated safety buffer at each end when there can be no moving traffic to facilitate vehicles clearing the crossing area preceding the green man period and to facilitate pedestrians clearing the crossing area at the end of the green man period (which is effectively the same time as the pedestrian green man time itself).

The signals would have a minimum cycle time which is a combination of the minimum green times allocated to each stage within the cycle and the intergreen periods between each stage, but as a MOVA adaptive system is proposed the cycle time can vary through extending the green light time for some movements and reducing it for others, depending on the real time demand information fed to the controller by the queue detectors.

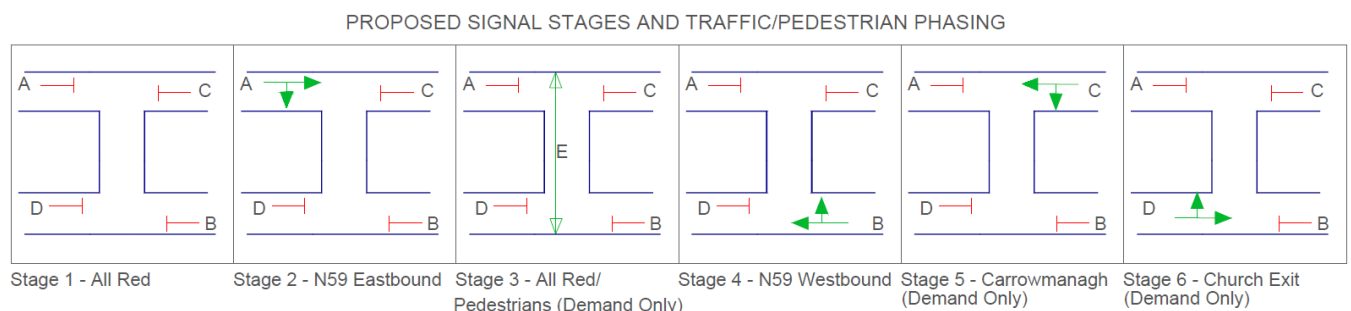


Figure 3.1 Staging Diagram – Demand Only Stage are expected to be called in every cycle during AM peak hour school run conditions.

It is assumed in the AM peak hour model (as a worst-case) that the pedestrian stages are called up for every cycle, as pedestrians arrive at the bridge in a range of singles, small groups and larger platoons.

As a worst-case it is also assumed that the Church arm is called up in every cycle (in reality this is unlikely as the flows out of the Church are low during the peak hours).

Outside of the peak periods when there is a low stopline demand for the L1310 and Church arms, the MOVA controller will allow the signals to bypass these stages when no vehicles are detected on the approach or at the stopline. Similarly, if no pedestrian activity is detected and no demand called on the demand units at the pedestrian dwell zones, the pedestrian stage will not be called up.

In these cases (which will occur for much of a typical day), the MOVA controller will allocate green time primarily to the N59 movements, although this will remain adaptive and will change to include these side arm and pedestrian crossing stages into the cycle whenever demands are detected.

The results of this 'worst-case' scenario for the AM peak school run period with the existing traffic count flows and a pedestrian demand in every cycle have been included in the Linsig report appended to this report.

Due to the length of the pedestrian crossing between the south side kerbline and northside kerbline which results in a long green man period and the commensurate clearing intergreens that are required for safety, it is expected that the peak volume traffic/pedestrian periods will be running with a minimum cycle time of 162s (if all stages are called). In simple terms, the cycle time is each of the green times (see Table 3.1 below, which total 43 seconds, plus the pedestrian stage of 35 seconds, plus the intergreen between each stage) which is why the cycle time is much longer than the 43 seconds minimum green that can be allocated to the traffic movements.

Linsig models output a number of different metrics and results and the key information is 'Degree of Saturation' which identifies the extent to which the particular arm or lane within the junction is at or above practical operating capacity (a Degree of Saturation of 90% would be reasonable in urban areas during peak periods, and above this level the delay and queuing will increase). The Mean Maximum Queue is the length of queue that can form by the end of a red signal for that arm of the junction, and is normally presented in the results in pcu (for reference a pcu = 5.75m, so multiplying the queue by this provides the maximum length of queue back from the stopline on each arm)

The Degree of Saturation and Mean Maximum Queue length (in both pcu and metres) from the Linsig results are summarised in the following table.

Station Road to the east of the traffic signals is modelled as a linked junction operating under priority control (Stopline and sign) and therefore does not have a traffic phase or green time in the traffic signal model.

Link	Traffic Phase	Green time (s)	Degree of Saturation	Mean Maximum Queue (pcu)	Mean Maximum Queue (metres)
N59 East	B	20	131.2%	60.1	345 m
N59 West	A	8	146.1%	35.2	202 m
L1310	C	8	187.8%	61.5	354 m
Church	D	7	10.6%	0.5	3 m
Station Rd	-	-	62.1%	1.7	10 m

Table 3.1 Summary of AM peak hour Linsig Results for Signals with Long Crossing Option

The Mean Maximum Queue lengths are illustrated on an aerial image for the N59 and L1310 arms of the proposed traffic signals (these are measured from the stopline positions taken from the traffic signals design), shown in Figures 3.2, 3.3. and 3.4.

Figure 3.2 illustrates that the MMQ (worst case) on the N59 east would extend back to the Community Centre/Corrib Gym access.

Figure 3.3 illustrates that the MMQ (worst case) on the N59 west would extend back past the Rugby Club access to the parking spaces beside the river.

Figure 3.4 illustrates that the MMQ (worst case) on the L1310 Carrowmanagh Road would extend back to the National School roundabout.

From a review of the existing conditions on site it was observed that there is a heavily queued conditions on the L1310 between the bridge and the schools in both directions during the latter part of the AM peak hour (as there is returning school run traffic and traffic arriving to the schools in this period). As the L1310 has stopline control traffic can exit onto the N59 when there is a gap in the N59 traffic flow but this is limited by the heavy right turn demand entering the L1310 from the bridge, and influenced by pedestrian activity on the bridge crossing to the northernmost kerbline.

The existing queues on the N59 approaches are not significant in the morning peak period, as these movements have priority and currently traffic can pass two-way on the bridge at low speeds (unless there is a coach or HGV turning onto the bridge, which results in vehicles waiting in an informal 'shuttle working' system until the opposing larger vehicle has cleared the bridge.

There is AM peak queuing on the N59 to the east of the car parking at the shops to the east of Station Road, as the car parking reduces the effective road width so westbound vehicles have to wait when eastbound traffic is passing the parking area.

In terms of the time it would take for a vehicle to get from the back of a Mean Max Queue on the N59 or on the L1310, it is considered that with the limited green time periods available if the pedestrian demand is called in every cycle it would take several cycles of green light to get to the stopline on each arm.

Received: 21/07/2023

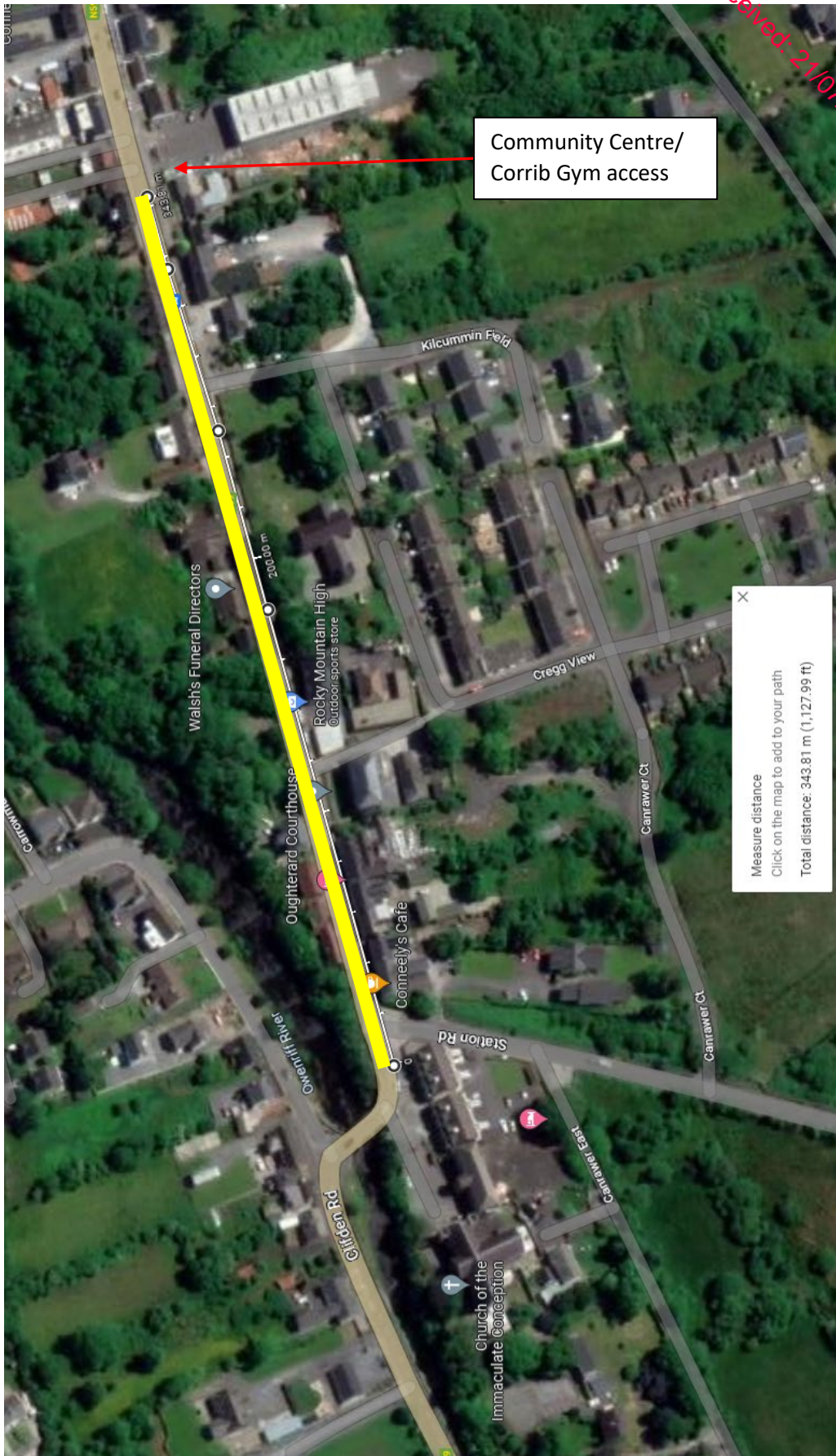
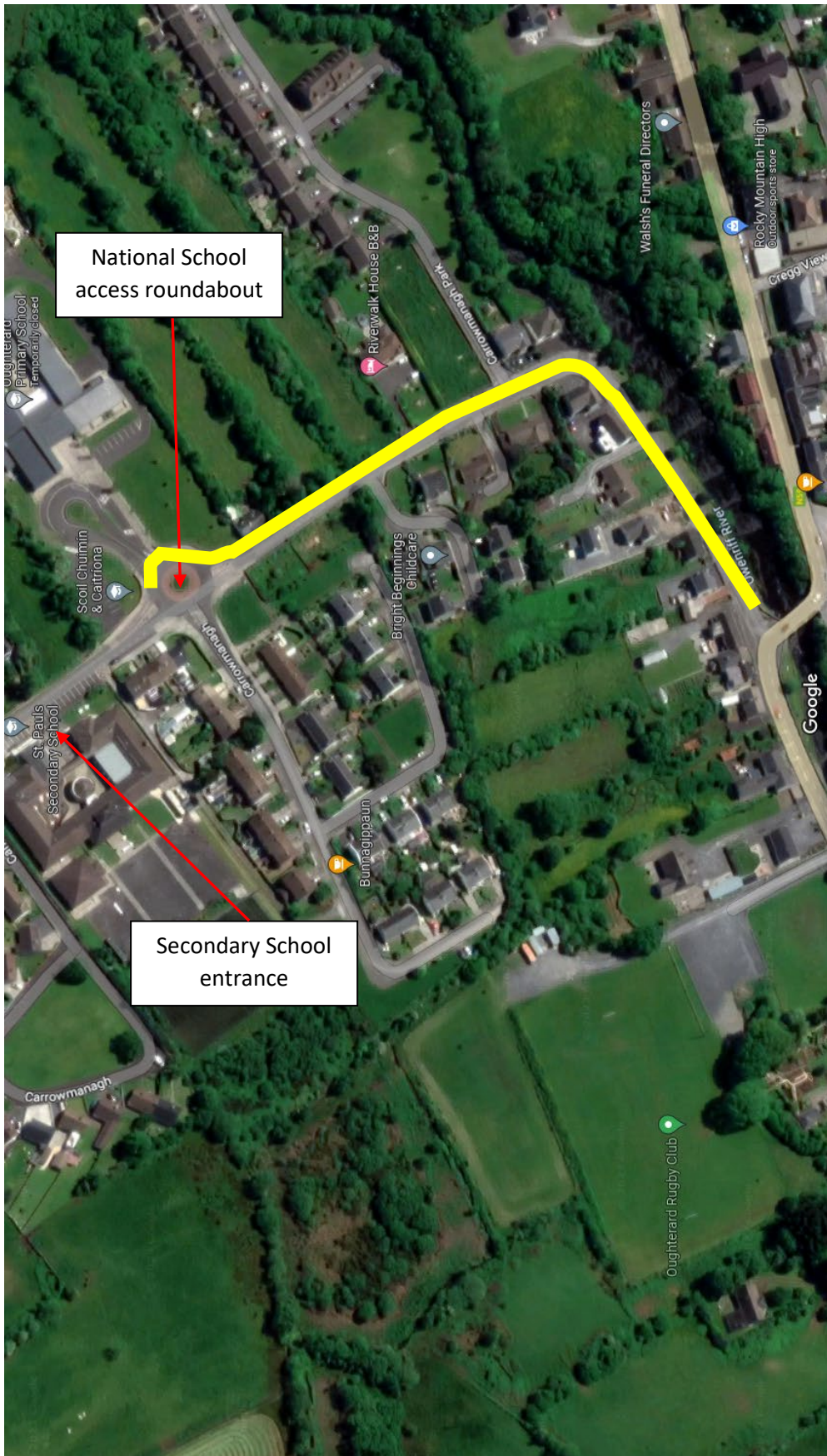


Figure 3.2: Mean Max Queue length during 08.15.09.15 AM peak school run with traffic signals and pedestrian crossing demand each cycle (345 m)

Received: 27/07/2023



Figure 3.3: Mean Max Queue length during 08.15-09.15 AM peak school run with traffic signals and pedestrian crossing demand each cycle (202m)



Received: 21/07/2023

Figure 3.4: Mean Max Queue length during 08.15-09.15 AM peak school run with traffic signals and pedestrian crossing demand each cycle (354m)

Received: 21/07/2023

3.3 FURTHER WORK CONSIDERATIONS

It should be recognised that there is an opportunity for reduced vehicle trips with a safer arrangement for VRUs to use the bridge with a dedicated crossing stage and traffic signals in place, which will reduce the traffic demand and queueing on the N59 east and L1310 arms. This will in turn allow further optimization within the cycle time including further green time allocation to the N59 west, also reducing the queue on that arm.

It is key to the successful delivery and operation of the proposed traffic signal arrangement to obtain a high level of engagement in Active Travel modes for access to/from the schools, with walking and cycling reducing the dependence on relatively short private car journeys into and back from the school zone from the town centre (and possibly also reducing the bus demand). This should be addressed by GCC Active Travel Section and 'championed' by the schools.

While not integral to the success of the traffic signals, it is noted that the lack of footpath (approximately 80m gap) on the L1310 Carrowmanagh Road between the N59 junction and the corner to the east should also be addressed to ensure that VRU pedestrians are walking along that side of the road and not walking along the riverside grassed area on the south side of the road which does not provide for linkage to the northernmost dwell point on the pedestrian crossing on the west side of the N59 to the north of the bridge.

Stephen Reid Consulting Traffic and Transportation
[19.04.2023]



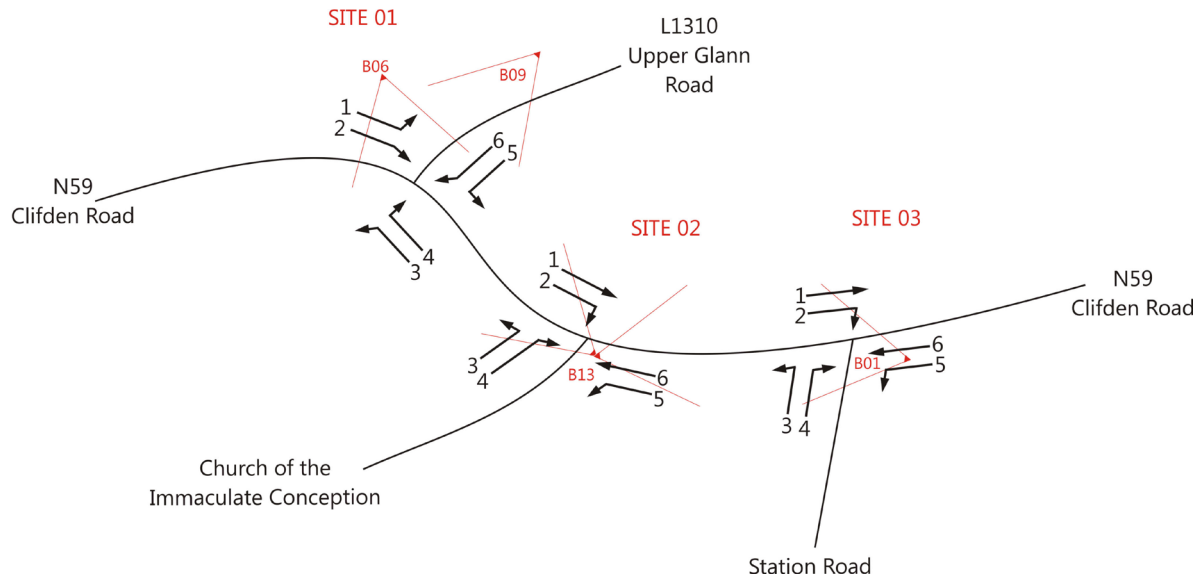
Received: 21/07/2023

Appendices

Traffic Counts

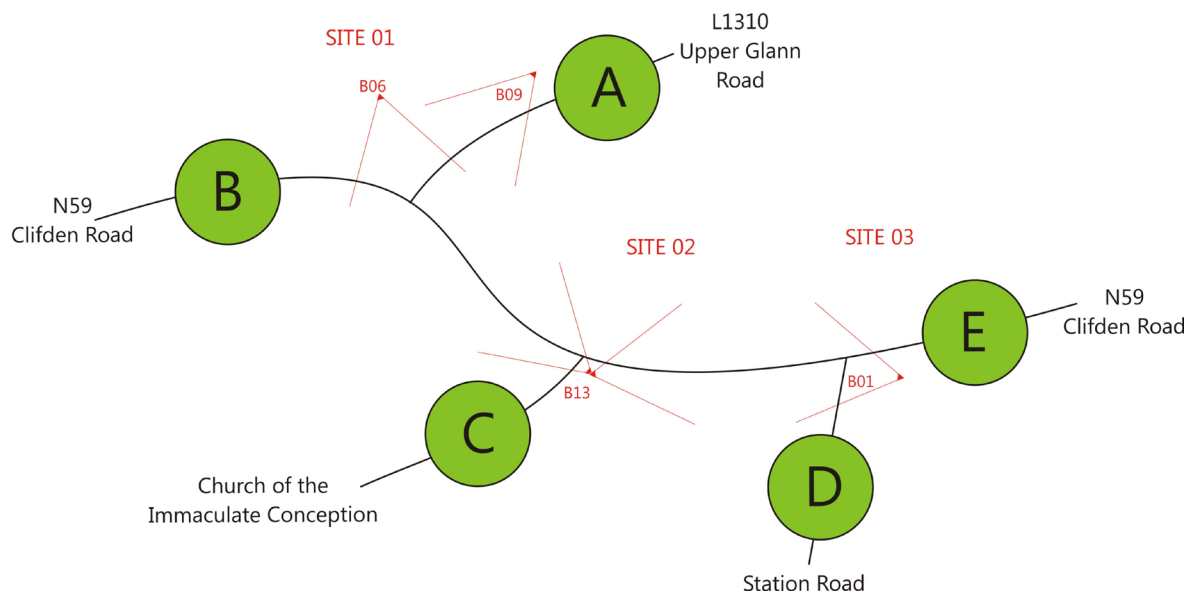
Received: 21/07/2023



Traffic Counts



Pedestrian Counts

Pedestrian Counts



	Job number: TRA/22/253	Job Date: 18 th October 2022	Drawing No: TRA/22/253-01	
	Client: Stephen Reid	Job Day: Tuesday	Author: SPW	

OUGHTERARD BRIDGE TRAFFIC COUNTS
MANUAL CLASSIFIED JUNCTION TURNING COUNTS

OCTOBER 2022 OUGHTERARD BRIDGE TRAFFIC COUNTS
TRA/22/253 MANUAL CLASSIFIED JUNCTION TURNING COUNTS

OCTOBER 2022
TRA/22/253

SITE: 01

DATE: 18th October 2022

01

DATE: 18th October 2022

LOCATION: N59 Clifden Road/L1310 Upper Glann Road

LOCATION: N59 Clifden Road/L1310 Upper Glann Road

DAY: Tuesday

TIME	MOVEMENT 1			MOVEMENT 2			MOVEMENT 3			MOVEMENT 4			MOVEMENT 5			MOVEMENT 6			PCU's Through Junction								
	CYC	LGV	OGV1 OGV2 BUS	TOT	PCU	CYC	CAR	LGV	OGV1 OGV2 BUS	TOT	PCU	CYC	CAR	LGV	OGV1 OGV2 BUS	TOT	PCU	CYC		CAR	LGV	OGV1 OGV2 BUS	TOT	PCU			
07:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	56		
07:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	73	
07:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	74	
07:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	64	
H/TOT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	267	
08:00	0	4	1	0	0	1	6	7	1	22	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	71
08:15	0	11	1	0	0	12	1	10	6	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	128
08:30	0	16	4	0	0	20	20	0	21	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	246
08:45	0	9	1	0	0	10	10	0	22	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	186
H/TOT	0	40	7	0	0	48	49	2	75	15	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	631
09:00	0	1	0	0	0	1	1	0	30	3	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	102
09:15	0	0	0	0	0	0	0	0	25	9	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	92
09:30	0	1	0	0	0	1	1	0	19	6	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	73
09:45	0	1	0	0	0	1	1	0	28	5	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	88
H/TOT	0	3	0	0	0	3	3	0	102	23	4	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	354
10:00	0	3	0	0	0	3	3	0	29	6	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	95
10:15	0	0	0	0	0	0	0	0	26	5	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	77
10:30	0	1	0	0	0	1	1	0	26	4	3	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	104
10:45	0	1	0	0	0	1	1	0	26	5	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	69
H/TOT	0	5	0	0	0	5	5	0	107	20	6	2	4	0	0	0	0	0	0	0	0	0	0	0	0	0	344
11:00	0	2	0	0	0	2	2	0	28	7	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	96
11:15	0	0	0	0	0	0	0	0	21	9	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	78
11:30	0	0	0	0	0	0	0	0	30	8	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	81
11:45	0	3	0	0	0	3	3	0	14	7	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	83
H/TOT	0	5	0	0	0	5	5	0	93	31	8	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	337
12:00	0	1	0	0	0	1	1	0	21	3	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	73
12:15	0	0	0	0	0	0	0	0	14	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	61
12:30	0	1	0	0	0	1	1	0	27	10	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	99
12:45	0	0	0	0	0	0	0	0	11	7	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	69
H/TOT	0	2	0	0	0	2	2	0	73	25	2	2	3	0	0	0	0	0	0	0	0	0	0	0	0	0	302

Received: 21/07/2023

OUGHTERARD BRIDGE TRAFFIC COUNTS
MANUAL CLASSIFIED JUNCTION TURNING COUNTS

OCTOBER 2022 OUGHTERARD BRIDGE TRAFFIC COUNTS
TRA/22/253 MANUAL CLASSIFIED JUNCTION TURNING COUNTS

OCTOBER 2022
TRA/22/253

SITE: 03

DATE: 18th October 2022 SITE: 03

DATE: 18th October 2022

LOCATION: N59 Clifden Road/Station Road

LOCATION: N59 Clifden Road/Station Road

DAY: Tuesday

TIME	MOVEMENT 1				TOT	PCU	MOVEMENT 2				TOT	PCU	TIME	CYC	CAR	LGV	OGV1	OGV2	BUS	MOVEMENT 3				TOT	PCU	MOVEMENT 4				TOT	PCU	MOVEMENT 5				TOT	PCU	MOVEMENT 6				TOT	PCU	PCU's Through Junction							
	CYC	CAR	LGV	OGV1			OGV2	BUS	CYC	CAR										LGV	OGV1	OGV2	BUS			CYC	CAR	LGV	OGV1			OGV2	BUS	CYC	CAR			LGV	OGV1	OGV2	BUS				CYC	CAR	LGV	OGV1	OGV2	BUS	CYC
07:00	0	26	11	0	0	1	38	39	0	2	0	0	0	0	2	2	0	1	0	0	0	0	1	1	07:00	0	4	3	0	0	0	0	7	7	0	1	5	0	0	0	0	6	6	0	4	5	0	1	1	13	68
07:15	0	32	11	1	0	0	44	45	0	1	2	0	0	0	1	2	0	2	0	0	0	0	2	2	07:15	0	15	2	2	0	0	0	19	20	0	3	2	0	0	1	6	7	0	8	9	1	1	2	21	101	
07:30	0	35	18	0	0	0	53	53	0	2	2	0	0	0	2	2	0	4	0	0	0	4	4	07:30	0	20	4	0	0	0	0	24	24	0	3	1	0	0	1	5	6	0	8	6	2	0	0	16	106		
07:45	1	19	4	1	0	2	27	29	0	2	0	2	0	0	2	2	0	2	0	0	0	2	2	07:45	0	14	3	1	0	0	0	18	19	0	4	0	0	0	0	4	4	0	26	3	0	1	0	30	87		
H/TOT	1	112	44	2	0	3	162	165	0	6	0	0	0	1	7	8	0	9	0	0	0	9	9	H/TOT	0	53	12	3	0	0	0	68	70	0	11	8	0	0	2	21	23	0	46	23	3	3	3	78	362		
08:00	1	28	6	1	0	0	36	36	0	0	1	0	0	0	1	1	0	1	0	0	0	1	1	08:00	0	12	3	1	0	0	0	17	19	0	2	2	0	0	0	4	4	0	23	1	0	0	0	25	86		
08:15	1	22	5	2	0	1	31	32	0	5	2	0	0	0	7	7	0	9	0	0	0	10	11	08:15	0	10	2	0	0	0	0	12	12	0	5	4	1	0	0	10	11	0	53	11	3	0	3	70	147		
08:30	0	56	6	1	1	2	66	70	0	11	1	0	0	0	12	12	0	21	4	0	0	0	25	08:30	0	9	0	0	0	0	9	9	0	5	6	0	1	0	12	13	3	90	13	0	1	4	111	243			
08:45	0	73	8	0	0	4	85	89	0	16	3	0	0	0	19	19	0	11	1	0	0	12	12	08:45	0	12	3	0	0	0	1	16	17	1	8	3	0	0	1	13	13	1	41	5	2	0	1	50	202		
H/TOT	2	179	25	4	1	7	218	227	0	32	7	0	0	0	39	39	0	42	5	1	0	0	48	49	H/TOT	0	43	8	1	1	1	1	54	57	1	20	15	1	1	1	39	41	4	207	30	6	1	8	256	678	
09:00	0	47	4	1	1	0	53	55	0	1	0	0	0	0	1	1	0	2	0	0	0	2	2	09:00	0	10	0	0	0	0	0	10	10	0	6	3	0	0	0	9	9	0	29	4	2	0	2	37	117		
09:15	0	33	13	1	0	0	47	48	0	2	1	0	0	0	3	3	0	1	1	0	0	2	2	09:15	0	8	5	0	0	0	0	13	13	0	6	4	2	0	0	12	13	0	30	6	2	1	3	42	126		
09:30	0	29	9	0	2	1	41	45	0	2	0	0	0	0	2	2	0	3	1	0	0	4	4	09:30	0	6	2	1	0	0	0	9	10	0	10	4	1	0	0	15	16	0	19	7	2	0	1	29	107		
09:45	0	36	2	2	0	2	42	45	0	1	3	0	0	0	4	4	0	1	0	1	0	2	3	09:45	0	7	5	1	0	0	0	13	14	0	9	2	0	0	0	11	11	0	25	2	3	2	1	33	114		
H/TOT	0	145	28	4	3	3	183	192	0	6	4	0	0	0	10	10	0	7	2	1	0	0	10	11	H/TOT	0	31	12	2	0	0	0	45	46	0	31	13	3	0	0	47	49	0	103	19	9	3	7	141	463	
10:00	0	35	6	1	1	2	45	49	0	2	3	0	0	0	5	5	0	5	2	0	0	7	7	10:00	0	8	5	0	0	0	0	13	13	0	9	3	0	0	0	12	12	0	26	10	2	0	0	38	125		
10:15	0	39	5	1	1	2	48	52	0	0	1	0	0	0	1	1	0	0	1	0	0	1	1	10:15	0	5	3	1	0	0	0	9	10	0	8	4	1	0	0	13	14	0	20	6	4	0	0	30	109		
10:30	0	31	5	3	0	1	40	43	0	1	0	0	0	0	1	1	0	0	0	0	0	0	0	10:30	0	10	1	0	0	0	0	11	11	0	7	3	1	0	0	11	12	0	42	5	3	0	4	54	126		
10:45	1	29	6	1	0	0	37	37	0	3	0	0	0	0	3	3	0	1	0	0	0	1	1	10:45	0	10	2	1	0	0	0	13	14	0	7	3	0	0	0	10	10	0	25	4	2	0	0	31	96		
H/TOT	1	134	22	6	2	5	170	180	0	6	4	0	0	0	10	10	0	6	3	0	0	9	9	H/TOT	0	33	11	2	0	0	0	46	47	0	31	13	2	0	0	46	47	0	113	25	11	0	4	153	455		
11:00	0	33	7	3	0	0	43	45	0	3	2	0	0	0	5	5	0	2	0	0	0	2	2	11:00	0	6	5	0	0	0	0	11	11	0	12	3	0	0	0	15	15	0	32	8	3	0	0	43	122		
11:15	0	30	10	1	0	1	42	44	0	4	0	0	0	0	4	4	0	1	1	1	0	3	4	11:15	0	8	3	1	0	0	0	12	13	0	9	1	0	0	0	10	10	1	21	5	0	1	0	28	29		
11:30	0	38	5	3	0	0	46	48	0	1	3	0	0	0	4	4	0	2	0	0	0	2	2	11:30	0	9	5	0	0	0	0	14	14	0	7	0	0	0	0	7	7	0	29	2	4	0	0	35	37		
11:45	0	25	8	2	0	0	35	36	0	0	1	0	0	0	1	1	0	0	1	0	0	1	1	11:45	0	10	1	0	0	0	0	11	11	0	6	2	0	0	0	8	8	0	34	10	2	0	2	48	108		
H/TOT	0	126	30	9	0	1	166	172	0	8	6	0	0	0	14	14	0	5	2	1	0	0	8	9	H/TOT	0	33	14	1	0	0	0	48	49	0	34	6	0	0	0	40	40	1	116	25	9	1	2	154	444	
12:00	0	28	5	1	1	0	35	37	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	12:00	1	4	4	0	0	0	0	9	8	0	15	1	0	0	0	16	16	2	27	5	1	0	1	31	98		
12:15	0	25	5	0	0	0	30	30	0	0	0	0	0	0	0	0	0	2	1	0	0	3	3	12:15	0	10	3	1	0	0	0	14	15	1	6	5	1	0	0	13	13	1	23	7	0	0	0	31	91		
12:30	0	38	10	0	1	1	50	52	0	1	0	0	0	0	1	1	0	2	1	0	0	3	3	12:30	0	9	4	1	0	0	0	14	15	0	9	4	0	0	0	13	13	1	34	5	2	0	0	43	128		
12:45	0	18	7	1	0	2	28	31	0	1	2	0	0	0	3	3	0	2	0	0	0	2	2	12:45	0	10	2	0	0	0	0	12	12	0	7	5	0	0	0	12	12	0	30	3	1	1	35	37			
H/TOT	0	109	27	2	2	3	143	150	0	2	2	0	0	0	4	4	0	6	3	0	0	9	9	H/TOT	1	33	13	2																							

OUGHTERARD BRIDGE TRAFFIC COUNTS
MANUAL CLASSIFIED JUNCTION TURNING COUNTS

OCTOBER 2022 OUGHTERARD BRIDGE TRAFFIC COUNTS
TRA/22/253 MANUAL CLASSIFIED JUNCTION TURNING COUNTS

OCTOBER 2022
TRA/22/253

SITE: 03

DATE: 18th October 2022

03

DATE: 18th October 2022

LOCATION: N59 Clifden Road/Station Road

LOCATION: N59 Clifden Road/Station Road

DAY: Tuesday

TIME	MOVEMENT 1				MOVEMENT 2				MOVEMENT 3				MOVEMENT 4				MOVEMENT 5				MOVEMENT 6				PCU's Through Junction																								
	CYC	CAR	LGV	OGV1 OGV2 BUS	TOT	PCU	CYC	CAR	LGV	OGV1 OGV2 BUS	TOT	PCU	CYC	CAR	LGV	OGV1 OGV2 BUS	TOT	PCU	CYC	CAR	LGV	OGV1 OGV2 BUS	TOT	PCU		CYC	CAR	LGV	OGV1 OGV2 BUS	TOT	PCU																		
13:00	0	50	5	4	1	2	62	67	0	1	1	0	0	0	2	2	0	2	0	0	0	0	0	2	2	1300	0	8	6	1	0	0	15	16	17	0	48	8	0	0	2	58	60						
13:15	0	19	10	1	1	1	32	35	0	4	0	0	0	0	4	4	0	3	2	0	0	0	5	5	1315	0	7	5	1	0	0	13	14	16	1	35	5	0	0	0	41	40							
13:30	0	39	9	2	0	0	50	51	0	3	0	0	0	0	3	3	0	3	2	0	0	0	5	5	1330	1	5	1	0	0	0	7	6	8	0	21	5	1	1	0	28	30							
13:45	1	26	9	3	0	0	39	40	0	1	1	0	0	0	3	4	0	2	2	0	0	0	4	4	1345	1	9	0	0	0	0	10	9	17	0	40	11	1	0	1	53	55							
H/TOT	1	134	33	10	2	3	183	193	0	9	2	1	0	0	12	13	0	10	6	0	0	0	16	16	H/TOT	2	29	12	2	0	0	45	45	58	1	144	29	2	1	3	180	185							
14:00	0	37	3	1	0	2	43	46	1	2	1	0	0	0	5	5	0	4	1	0	0	0	5	5	1400	0	11	1	0	0	0	12	12	5	0	29	3	0	0	4	36	40							
14:15	1	44	5	2	0	3	55	58	0	4	0	0	0	0	4	4	0	9	1	0	0	10	10	1415	0	4	5	1	0	0	10	11	11	1	42	6	1	0	0	50	50								
14:30	2	40	6	0	0	0	48	47	0	10	2	0	0	0	12	12	0	0	1	0	0	1	1	1430	0	8	1	1	0	0	10	11	11	1	31	3	0	1	0	36	37								
14:45	0	32	5	1	0	0	38	39	0	2	0	0	0	0	2	2	0	2	1	0	0	3	3	1445	0	10	0	0	0	0	10	10	11	11	0	40	7	1	0	0	48	49							
H/TOT	3	153	19	4	0	5	184	189	1	17	4	1	0	0	23	23	0	15	4	0	0	19	19	H/TOT	0	33	7	2	0	0	42	43	40	2	142	19	2	1	4	170	175								
15:00	0	39	7	1	0	1	48	50	0	4	1	0	0	0	5	5	0	1	4	0	0	5	5	1500	1	10	5	2	0	0	18	18	9	11	2	36	5	3	0	1	47	48							
15:15	1	30	2	3	0	0	36	37	0	3	2	0	0	0	5	5	0	2	1	1	0	4	5	1515	0	6	2	0	0	0	8	8	18	0	37	7	1	2	4	51	58								
15:30	0	28	3	1	0	2	34	37	0	1	1	0	0	0	2	2	0	4	2	0	0	6	6	1530	0	7	4	0	0	0	11	11	10	0	45	7	0	0	2	54	56								
15:45	2	75	9	2	0	6	94	100	0	5	1	0	0	0	6	6	0	3	6	0	0	9	9	1545	0	6	5	0	0	0	11	11	16	0	41	9	0	0	3	53	56								
H/TOT	3	172	21	7	0	9	212	222	0	13	5	0	0	0	18	18	0	10	13	1	0	24	25	H/TOT	1	29	16	2	0	0	48	48	51	54	2	159	28	4	2	10	205	218							
16:00	0	52	17	0	0	3	72	75	1	3	0	0	0	0	4	3	0	2	0	0	0	2	2	1600	2	10	3	0	0	0	15	14	15	14	0	18	4	0	0	1	23	24							
16:15	0	20	6	0	0	0	26	26	0	4	2	1	0	0	7	8	0	2	1	0	0	3	3	1615	0	11	3	0	0	0	14	14	16	2	0	0	0	19	18	0	37	6	1	0	2	46	49		
16:30	0	30	10	1	0	2	43	46	0	2	0	0	0	0	3	3	0	2	1	0	0	3	3	1630	0	11	1	1	0	0	13	14	14	1	43	18	1	0	4	67	71								
16:45	0	33	7	1	0	0	41	42	0	1	2	0	0	0	3	3	0	4	0	0	1	5	6	1645	0	10	3	0	0	0	13	13	19	0	30	8	1	0	1	40	42								
H/TOT	0	135	40	2	0	5	182	188	1	10	4	1	0	0	16	16	0	10	2	0	1	13	14	H/TOT	2	42	10	1	0	0	55	54	51	54	2	158	36	6	0	7	188	197							
17:00	0	39	5	1	0	1	46	48	0	3	0	0	0	0	3	3	0	2	0	0	0	2	2	1700	1	15	1	0	0	0	17	16	18	2	0	0	0	21	20	0	40	7	1	0	2	50	53		
17:15	0	31	5	1	0	0	37	38	1	3	0	0	0	0	4	3	0	0	1	0	0	1	1	1715	0	7	2	1	0	0	10	11	10	9	4	0	0	13	13	3	54	14	1	0	0	72	70		
17:30	0	35	9	2	0	1	47	49	0	2	0	0	0	0	2	2	0	5	0	0	0	5	5	1730	0	7	5	0	0	0	12	12	16	16	0	36	14	0	0	1	51	52							
17:45	1	33	4	1	1	0	40	41	0	3	0	0	0	0	3	3	1	9	1	0	0	11	10	1745	1	3	4	1	0	0	9	9	10	10	0	61	9	1	0	0	71	72							
H/TOT	1	138	23	5	1	2	170	175	1	11	0	0	0	0	12	11	1	16	2	0	0	19	18	H/TOT	2	32	12	2	0	0	48	48	47	48	1	138	36	6	0	7	244	246							
18:00	0	72	11	2	0	0	85	86	0	8	0	0	0	0	8	8	0	3	0	1	0	4	5	1800	0	13	3	1	0	1	18	20	19	0	29	7	1	0	1	31	30								
18:15	0	15	6	3	0	0	24	26	0	5	0	0	0	0	5	5	0	4	2	0	0	6	6	1815	0	11	4	0	0	0	15	15	15	0	21	2	0	0	25	26	1	37	8	1	0	49	51		
18:30	0	24	2	0	0	0	26	26	0	2	1	0	0	0	4	5	0	1	1	0	0	2	2	1830	0	10	3	0	0	0	13	13	18	19	0	35	6	1	0	18	19	0	35	6	1	0	42	43	
18:45	1	39	9	1	0	1	51	52	0	1	0	0	0	0	1	1	0	1	0	0	0	1	1	1845	0	10	1	0	0	0	11	11	11	11	1	42	12	0	0	18	18	1	42	12	0	1	56	56	
H/TOT	1	150	28	6	0	1	186	189	0	16	1	1	0	0	18	19	0	9	3	1	0	13	14	H/TOT	0	44	11	1	0	1	57	59	57	59	2	143	33	0	4	80	82	2	143	33	0	4	185	189	
P/TOT	13	1687	340	61	11	47	2159	2242	3	136	39	4	1	0	183	184	1	145	45	5	1	0	197	200	P/TOT	8	435	138	21	1	2	605	613	6	440	138	18	1	6	609	621	20	1616	331	62	12	58	2099	2190

Received 22/10/2023

TRAFFINOMICS LIMITED

**OUGHTERARD BRIDGE TRAFFIC COUNTS
CLASSIFIED PEDESTRIAN COUNTS**

**OCTOBER 2022
TRA/22/253**

Received: 21/07/2023

SITE: 01

DATE: 18th October 2022

LOCATION: N59 Clifden Road/Oughterard Bridge

DAY: Tuesday

TIME	A TO C					TOT	A TO D					TOT	A TO E					TOT	
	U5	U16	ADULT	OAP	DIS		U5	U16	ADULT	OAP	DIS		U5	U16	ADULT	OAP	DIS		
07:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3
07:30	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	
07:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
H/TOT	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4	0	0	5	
08:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
08:15	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	
08:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	
08:45	0	0	3	0	0	3	0	0	1	0	0	1	0	0	4	0	0	4	
H/TOT	0	0	4	0	0	4	0	0	1	0	0	1	0	0	5	0	0	5	
09:00	0	0	2	0	0	2	1	0	1	0	0	2	0	0	2	0	0	2	
09:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
09:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
09:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
H/TOT	0	0	2	0	0	2	1	0	1	0	0	2	0	0	2	0	0	2	
10:00	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	
10:15	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	
10:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
10:45	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	2	
H/TOT	0	0	0	0	0	0	0	0	1	0	0	1	1	1	2	0	0	4	
11:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11:15	0	0	0	0	0	0	0	0	0	0	0	0	1	6	1	0	0	8	
11:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	
11:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	
H/TOT	0	0	0	0	0	0	0	0	0	0	0	0	1	6	3	1	0	11	
12:00	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	2	
12:15	0	0	1	0	0	1	0	0	0	0	0	0	0	6	1	0	0	7	
12:30	0	0	0	0	0	0	0	0	0	0	0	0	0	27	0	0	0	27	
12:45	0	0	0	0	0	0	0	0	0	0	0	0	0	14	0	0	0	14	
H/TOT	0	0	1	0	0	1	0	0	0	0	0	0	1	47	2	0	0	50	

TRAFFINOMICS LIMITED

**OUGHTERARD BRIDGE TRAFFIC COUNTS
CLASSIFIED PEDESTRIAN COUNTS**

**OCTOBER 2022
TRA/22/253**

Received: 21/07/2023

SITE: 01

DATE: 18th October 2022

LOCATION: N59 Clifden Road/Oughterard Bridge

DAY: Tuesday

TIME	A TO C					TOT	A TO D					TOT	A TO E					TOT	
	U5	U16	ADULT	OAP	DIS		U5	U16	ADULT	OAP	DIS		U5	U16	ADULT	OAP	DIS		
13:00	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
13:15	0	0	0	0	0	0	0	0	0	0	0	0	0	22	0	0	0	0	22
13:30	0	0	0	0	0	0	6	0	4	0	0	10	1	25	1	0	0	0	27
13:45	0	0	0	0	0	0	0	0	0	0	0	0	0	9	1	0	0	0	10
H/TOT	0	1	0	0	0	1	6	0	4	0	0	10	1	56	2	0	0	0	59
14:00	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	2	0	0	2
14:15	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
14:30	0	10	3	0	0	13	0	1	1	0	0	2	0	8	6	0	0	0	14
14:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
H/TOT	0	10	4	0	0	14	0	1	1	0	0	2	0	9	7	2	0	0	18
15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
15:15	0	0	0	0	0	0	0	3	0	0	0	3	0	1	1	0	0	0	2
15:30	0	0	0	0	0	0	0	1	0	0	0	1	0	1	0	0	0	0	1
15:45	0	2	0	0	0	2	0	7	0	0	0	7	0	11	0	0	0	0	11
H/TOT	0	2	0	0	0	2	0	11	0	0	0	11	0	14	1	0	0	0	15
16:00	0	2	0	0	0	2	0	0	0	0	0	0	0	4	0	0	0	0	4
16:15	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2
16:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	0	2	0	0	0	2	0	0	0	0	0	0	0	6	0	0	0	0	6
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	3
17:45	1	0	1	0	0	2	0	1	0	0	0	1	0	1	0	0	0	0	1
H/TOT	1	0	1	0	0	2	0	1	0	0	0	1	0	6	0	0	0	0	6
18:00	0	0	0	0	0	0	0	0	0	0	0	0	0	4	2	0	0	0	6
18:15	0	0	0	0	0	0	0	1	0	0	0	1	0	0	1	0	0	0	1
18:30	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0
18:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	1	1	0	0	2	0	4	3	0	0	0	7
P/TOT	1	15	12	0	0	28	7	14	9	0	0	30	4	150	31	3	0	0	188

TRAFFINOMICS LIMITED

**OUGHTERARD BRIDGE TRAFFIC COUNTS
CLASSIFIED PEDESTRIAN COUNTS**

**OCTOBER 2022
TRA/22/253**

Received: 21/07/2023

SITE: 01

DATE: 18th October 2022

LOCATION: N59 Clifden Road/Oughterard Bridge

DAY: Tuesday

TIME	B TO C					TOT	B TO D					TOT	B TO E					TOT	
	U5	U16	ADULT	OAP	DIS		U5	U16	ADULT	OAP	DIS		U5	U16	ADULT	OAP	DIS		
07:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2
07:45	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0	1	0	0	1	0	2	0	0	0	0	2
08:00	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	4
08:15	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	3
08:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0	0	0	0	0	0	5	2	0	0	0	7
09:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
09:30	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
09:45	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0	1	0	0	1	0	1	1	0	0	0	2
10:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3
10:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3
11:00	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2
11:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2
12:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30	0	0	1	0	0	1	0	0	0	0	0	0	0	0	2	0	0	0	2
12:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	1	0	0	1	0	0	0	0	0	0	0	0	2	0	0	0	2

TRAFFINOMICS LIMITED

**OUGHTERARD BRIDGE TRAFFIC COUNTS
CLASSIFIED PEDESTRIAN COUNTS**

**OCTOBER 2022
TRA/22/253**

Received: 21/07/2023

SITE: 01

DATE: 18th October 2022

LOCATION: N59 Clifden Road/Oughterard Bridge

DAY: Tuesday

TIME	B TO C						TOT	B TO D						TOT	B TO E						TOT
	U5	U16	ADULT	OAP	DIS	TOT		U5	U16	ADULT	OAP	DIS	TOT		U5	U16	ADULT	OAP	DIS	TOT	
13:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
13:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
13:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
13:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
H/TOT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
14:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
14:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	
14:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
14:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	
H/TOT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	2	
15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	
15:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	
15:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	
15:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
H/TOT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	3	
16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	2	
16:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
16:30	0	0	1	0	0	1	1	0	0	1	0	0	1	0	0	0	0	0	0	0	
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
H/TOT	0	0	1	0	0	1	1	0	0	1	0	0	1	0	2	0	0	0	2	2	
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
H/TOT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	3	
18:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
18:15	0	0	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	
18:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
18:45	0	0	0	0	0	0	0	0	0	1	0	0	1	0	3	0	0	0	3	3	
H/TOT	0	0	1	0	0	1	1	0	0	1	0	0	1	0	3	0	0	0	3	3	
P/TOT	0	0	3	0	0	3	3	0	0	4	0	0	4	0	13	18	0	0	31	31	

TRAFFINOMICS LIMITED

**OUGHTERARD BRIDGE TRAFFIC COUNTS
CLASSIFIED PEDESTRIAN COUNTS**

**OCTOBER 2022
TRA/22/253**

Received: 21/07/2023

SITE: 01

DATE: 18th October 2022

LOCATION: N59 Clifden Road/Oughterard Bridge

DAY: Tuesday

TIME	C TO A					TOT	C TO B					TOT
	U5	U16	ADULT	OAP	DIS		U5	U16	ADULT	OAP	DIS	
07:00	0	0	0	0	0	0	0	0	0	0	0	0
07:15	0	0	0	0	0	0	0	0	0	0	0	0
07:30	0	0	0	0	0	0	0	0	0	0	0	0
07:45	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0	0	0	0	0
08:00	0	0	0	0	0	0	0	0	0	0	0	0
08:15	0	4	0	0	0	4	0	0	0	0	0	0
08:30	2	11	4	0	0	17	0	0	0	0	0	0
08:45	0	3	4	0	0	7	0	0	1	0	0	1
H/TOT	2	18	8	0	0	28	0	0	1	0	0	1
09:00	0	1	0	0	0	1	0	0	0	0	0	0
09:15	0	0	0	0	0	0	0	0	0	0	0	0
09:30	0	0	0	0	0	0	0	0	0	0	0	0
09:45	0	0	1	0	0	1	0	0	0	0	0	0
H/TOT	0	1	1	0	0	2	0	0	0	0	0	0
10:00	0	0	1	0	0	1	0	0	0	0	0	0
10:15	0	0	0	0	0	0	0	0	0	0	0	0
10:30	0	0	0	0	0	0	0	0	0	0	0	0
10:45	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	1	0	0	1	0	0	0	0	0	0
11:00	0	0	0	0	0	0	0	0	0	0	0	0
11:15	0	0	1	0	0	1	0	0	0	0	0	0
11:30	0	0	0	0	0	0	0	0	1	0	0	1
11:45	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	1	0	0	1	0	0	1	0	0	1
12:00	0	0	0	0	0	0	0	0	0	0	0	0
12:15	0	0	0	0	0	0	0	0	0	0	0	0
12:30	0	0	0	0	0	0	0	0	0	0	0	0
12:45	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0	0	0	0	0

TRAFFINOMICS LIMITED

**OUGHTERARD BRIDGE TRAFFIC COUNTS
CLASSIFIED PEDESTRIAN COUNTS**

**OCTOBER 2022
TRA/22/253**

Received: 21/07/2023

SITE: 01

DATE: 18th October 2022

LOCATION: N59 Clifden Road/Oughterard Bridge

DAY: Tuesday

TIME	C TO A					TOT	C TO B					TOT
	U5	U16	ADULT	OAP	DIS		U5	U16	ADULT	OAP	DIS	
13:00	0	0	0	0	0	0	0	0	0	0	0	0
13:15	0	0	0	0	0	0	0	0	0	0	0	0
13:30	0	3	0	0	0	3	0	0	0	0	0	0
13:45	0	1	1	0	0	2	0	0	0	0	0	0
H/TOT	0	4	1	0	0	5	0	0	0	0	0	0
14:00	0	0	0	0	0	0	0	0	0	0	0	0
14:15	0	0	3	0	0	3	0	0	0	0	0	0
14:30	0	0	0	0	0	0	0	0	0	0	0	0
14:45	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	3	0	0	3	0	0	0	0	0	0
15:00	0	0	0	0	0	0	0	0	0	0	0	0
15:15	0	0	0	0	0	0	0	0	0	0	0	0
15:30	0	0	0	0	0	0	0	0	0	0	0	0
15:45	0	0	1	0	0	1	0	0	0	0	0	0
H/TOT	0	0	1	0	0	1	0	0	0	0	0	0
16:00	0	0	0	0	0	0	0	0	0	0	0	0
16:15	0	0	0	0	0	0	0	0	0	0	0	0
16:30	0	0	0	0	0	0	0	0	0	0	0	0
16:45	0	0	1	0	0	1	0	0	0	0	0	0
H/TOT	0	0	1	0	0	1	0	0	0	0	0	0
17:00	0	0	2	0	0	2	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	2	0	0	2	0	0	0	0	0	0
18:00	0	0	2	0	0	2	0	0	0	0	0	0
18:15	0	0	0	0	0	0	0	0	0	0	0	0
18:30	0	0	0	0	0	0	0	0	0	0	0	0
18:45	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	2	0	0	2	0	0	0	0	0	0
P/TOT	2	23	21	0	0	46	0	0	2	0	0	2

TRAFFINOMICS LIMITED

**OUGHTERARD BRIDGE TRAFFIC COUNTS
CLASSIFIED PEDESTRIAN COUNTS**

**OCTOBER 2022
TRA/22/253**

Received: 21/10/2023

SITE: 01

DATE: 18th October 2022

LOCATION: N59 Clifden Road/Oughterard Bridge

DAY: Tuesday

TIME	D TO A					TOT	D TO B					TOT
	U5	U16	ADULT	OAP	DIS		U5	U16	ADULT	OAP	DIS	
07:00	0	0	0	0	0	0	0	0	0	0	0	0
07:15	0	0	0	0	0	0	0	0	0	0	0	0
07:30	0	0	0	0	0	0	0	0	0	0	0	0
07:45	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0	0	0	0	0
08:00	0	0	0	0	0	0	0	0	0	0	0	0
08:15	0	0	0	0	0	0	0	0	0	0	0	0
08:30	1	1	1	0	0	3	0	0	0	0	0	0
08:45	0	3	0	0	0	3	0	0	0	0	0	0
H/TOT	1	4	1	0	0	6	0	0	0	0	0	0
09:00	0	0	0	0	0	0	0	0	1	0	0	1
09:15	0	0	0	0	0	0	0	0	1	0	0	1
09:30	0	0	0	0	0	0	0	0	0	0	0	0
09:45	0	0	1	0	0	1	0	0	1	0	0	1
H/TOT	0	0	1	0	0	1	0	0	3	0	0	3
10:00	0	0	0	0	0	0	0	0	0	0	0	0
10:15	0	0	0	0	0	0	0	0	0	0	0	0
10:30	0	0	0	0	0	0	0	0	0	0	0	0
10:45	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0	0	0	0	0
11:00	0	0	0	0	0	0	0	0	0	0	0	0
11:15	0	0	0	0	0	0	0	0	0	0	0	0
11:30	0	0	0	0	0	0	0	0	0	0	0	0
11:45	0	0	2	0	0	2	0	0	0	0	0	0
H/TOT	0	0	2	0	0	2	0	0	0	0	0	0
12:00	0	0	0	0	0	0	0	0	0	0	0	0
12:15	0	0	1	0	0	1	0	0	0	0	0	0
12:30	0	0	0	0	0	0	0	0	0	0	0	0
12:45	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	1	0	0	1	0	0	0	0	0	0

TRAFFINOMICS LIMITED

**OUGHTERARD BRIDGE TRAFFIC COUNTS
CLASSIFIED PEDESTRIAN COUNTS**

**OCTOBER 2022
TRA/22/253**

Received: 21/07/2023

SITE: 01

DATE: 18th October 2022

LOCATION: N59 Clifden Road/Oughterard Bridge

DAY: Tuesday

TIME	D TO A					TOT	D TO B					TOT
	U5	U16	ADULT	OAP	DIS		U5	U16	ADULT	OAP	DIS	
13:00	0	0	0	0	0	0	0	0	1	0	0	1
13:15	0	1	0	0	0	1	0	0	0	0	0	0
13:30	2	0	2	0	0	4	0	0	0	0	0	0
13:45	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	2	1	2	0	0	5	0	0	1	0	0	1
14:00	0	0	0	0	0	0	0	0	0	0	0	0
14:15	3	0	2	0	0	5	0	0	0	0	0	0
14:30	0	0	0	0	0	0	0	0	0	0	0	0
14:45	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	3	0	2	0	0	5	0	0	0	0	0	0
15:00	0	0	0	0	0	0	0	0	0	0	0	0
15:15	0	0	0	0	0	0	0	0	0	0	0	0
15:30	0	1	0	0	0	1	0	0	1	0	0	1
15:45	0	3	0	0	0	3	0	0	0	0	0	0
H/TOT	0	4	0	0	0	4	0	0	1	0	0	1
16:00	0	0	0	0	0	0	0	0	0	0	0	0
16:15	0	0	0	0	0	0	0	0	0	0	0	0
16:30	0	0	0	0	0	0	0	0	0	0	0	0
16:45	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0	0	0	0	0
17:00	0	0	0	0	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0	0	0	0	0
18:00	0	0	0	0	0	0	0	0	0	0	0	0
18:15	0	0	0	0	0	0	0	1	0	0	0	1
18:30	0	0	2	0	0	2	0	0	0	0	0	0
18:45	0	0	1	0	0	1	0	0	0	0	0	0
H/TOT	0	0	3	0	0	3	0	1	0	0	0	1
P/TOT	6	9	12	0	0	27	0	1	5	0	0	6

TRAFFINOMICS LIMITED

**OUGHTERARD BRIDGE TRAFFIC COUNTS
CLASSIFIED PEDESTRIAN COUNTS**

**OCTOBER 2022
TRA/22/253**

Received: 21/10/2023

SITE: 01

DATE: 18th October 2022

LOCATION: N59 Clifden Road/Oughterard Bridge

DAY: Tuesday

TIME	E TO A					TOT	E TO B					TOT
	U5	U16	ADULT	OAP	DIS		U5	U16	ADULT	OAP	DIS	
07:00	0	0	0	0	0	0	0	0	0	0	0	0
07:15	0	0	0	0	0	0	0	0	0	0	0	0
07:30	0	0	0	0	0	0	0	0	0	0	0	0
07:45	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0	0	0	0	0
08:00	0	2	1	0	0	3	0	0	2	0	0	2
08:15	0	18	0	0	0	18	0	0	0	0	0	0
08:30	2	5	2	0	0	9	0	1	0	0	0	1
08:45	1	3	1	0	0	5	0	0	0	0	0	0
H/TOT	3	28	4	0	0	35	0	1	2	0	0	3
09:00	0	0	0	0	0	0	0	0	0	0	0	0
09:15	0	0	0	0	0	0	0	0	1	0	0	1
09:30	0	1	0	0	0	1	0	0	0	0	0	0
09:45	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	0	1	0	0	0	1	0	0	1	0	0	1
10:00	0	0	0	0	0	0	0	0	0	0	0	0
10:15	0	0	0	0	0	0	0	0	0	0	0	0
10:30	0	0	0	0	0	0	0	0	0	0	0	0
10:45	0	0	1	0	0	1	0	0	1	0	0	1
H/TOT	0	0	1	0	0	1	0	0	1	0	0	1
11:00	0	2	0	0	0	2	0	0	0	0	0	0
11:15	0	2	1	0	0	3	0	0	0	0	0	0
11:30	0	0	0	0	0	0	0	0	0	0	0	0
11:45	1	0	1	0	0	2	0	0	0	0	0	0
H/TOT	1	4	2	0	0	7	0	0	0	0	0	0
12:00	0	0	0	1	0	1	0	0	0	0	0	0
12:15	0	0	1	0	0	1	0	0	0	0	0	0
12:30	0	1	0	0	0	1	0	2	0	0	0	2
12:45	0	3	0	2	0	5	0	5	0	0	0	5
H/TOT	0	4	1	3	0	8	0	7	0	0	0	7

TRAFFINOMICS LIMITED

**OUGHTERARD BRIDGE TRAFFIC COUNTS
CLASSIFIED PEDESTRIAN COUNTS**

**OCTOBER 2022
TRA/22/253**

Received: 21/10/2023

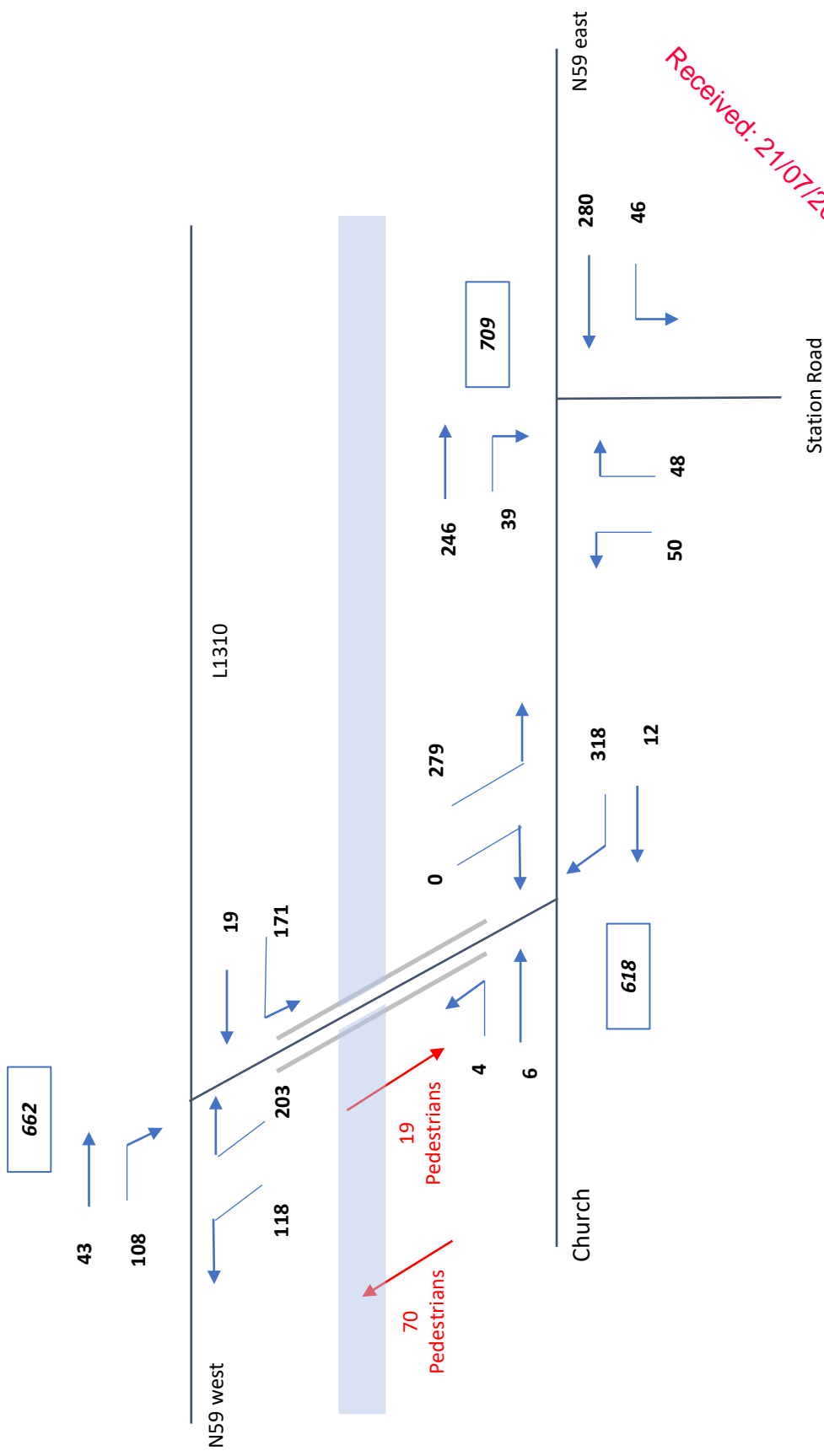
SITE: 01

DATE: 18th October 2022

LOCATION: N59 Clifden Road/Oughterard Bridge

DAY: Tuesday

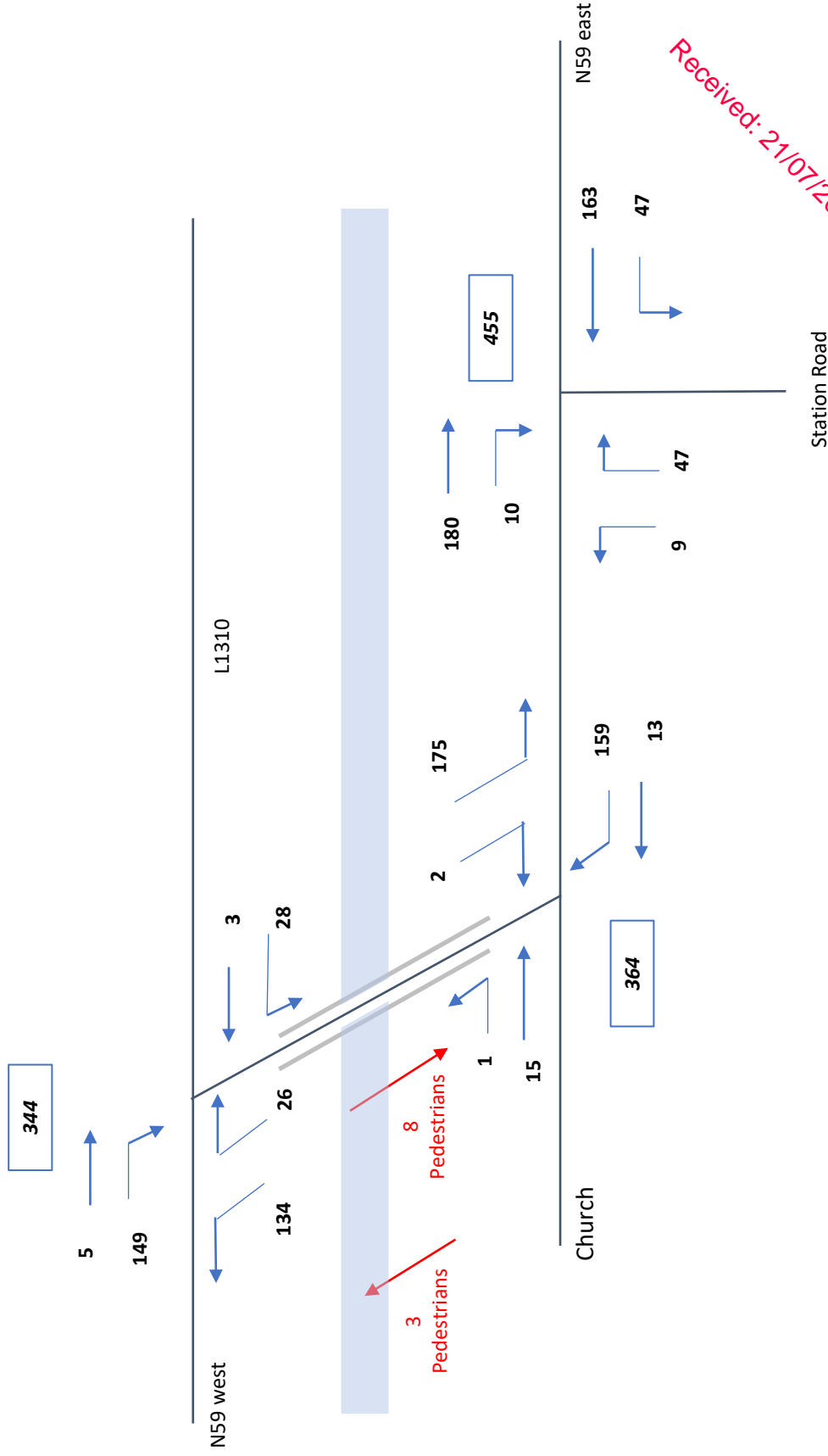
TIME	E TO A					TOT	E TO B					TOT
	U5	U16	ADULT	OAP	DIS		U5	U16	ADULT	OAP	DIS	
13:00	0	26	1	1	0	28	0	0	0	0	0	0
13:15	0	7	2	0	0	9	0	2	0	0	0	2
13:30	1	15	1	0	0	17	0	0	0	0	0	0
13:45	0	22	1	0	0	23	0	0	0	0	0	0
H/TOT	1	70	5	1	0	77	0	2	0	0	0	2
14:00	0	7	0	0	0	7	0	0	0	0	0	0
14:15	0	19	2	0	0	21	0	4	0	0	0	4
14:30	1	2	2	0	0	5	0	3	0	0	0	3
14:45	1	2	2	1	0	6	0	1	1	0	0	2
H/TOT	2	30	6	1	0	39	0	8	1	0	0	9
15:00	0	0	0	0	0	0	0	0	3	0	0	3
15:15	0	0	0	0	0	0	0	1	0	0	0	1
15:30	0	0	0	0	0	0	0	0	0	0	0	0
15:45	0	0	0	1	0	1	0	2	0	0	0	2
H/TOT	0	0	0	1	0	1	0	3	3	0	0	6
16:00	0	0	0	0	0	0	0	0	0	0	0	0
16:15	0	0	0	0	0	0	0	0	0	0	0	0
16:30	0	0	1	0	0	1	0	0	0	1	0	1
16:45	0	3	1	0	0	4	0	0	0	0	0	0
H/TOT	0	3	2	0	0	5	0	0	0	1	0	1
17:00	0	0	1	0	0	1	0	0	2	0	0	2
17:15	0	1	1	0	0	2	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0	1	0	0	1
17:45	0	1	0	1	0	2	0	0	0	0	0	0
H/TOT	0	2	2	1	0	5	0	0	3	0	0	3
18:00	0	2	0	0	0	2	0	0	1	0	0	1
18:15	0	1	3	0	0	4	0	0	0	0	0	0
18:30	0	1	1	0	0	2	0	0	0	0	0	0
18:45	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	0	4	4	0	0	8	0	0	1	0	0	1
P/TOT	7	146	27	7	0	187	0	21	12	1	0	34



Received: 21/07/2023

Surveyed Tuesday 18th October 2022
flows in pcu/hr
Junction inflow in boxes

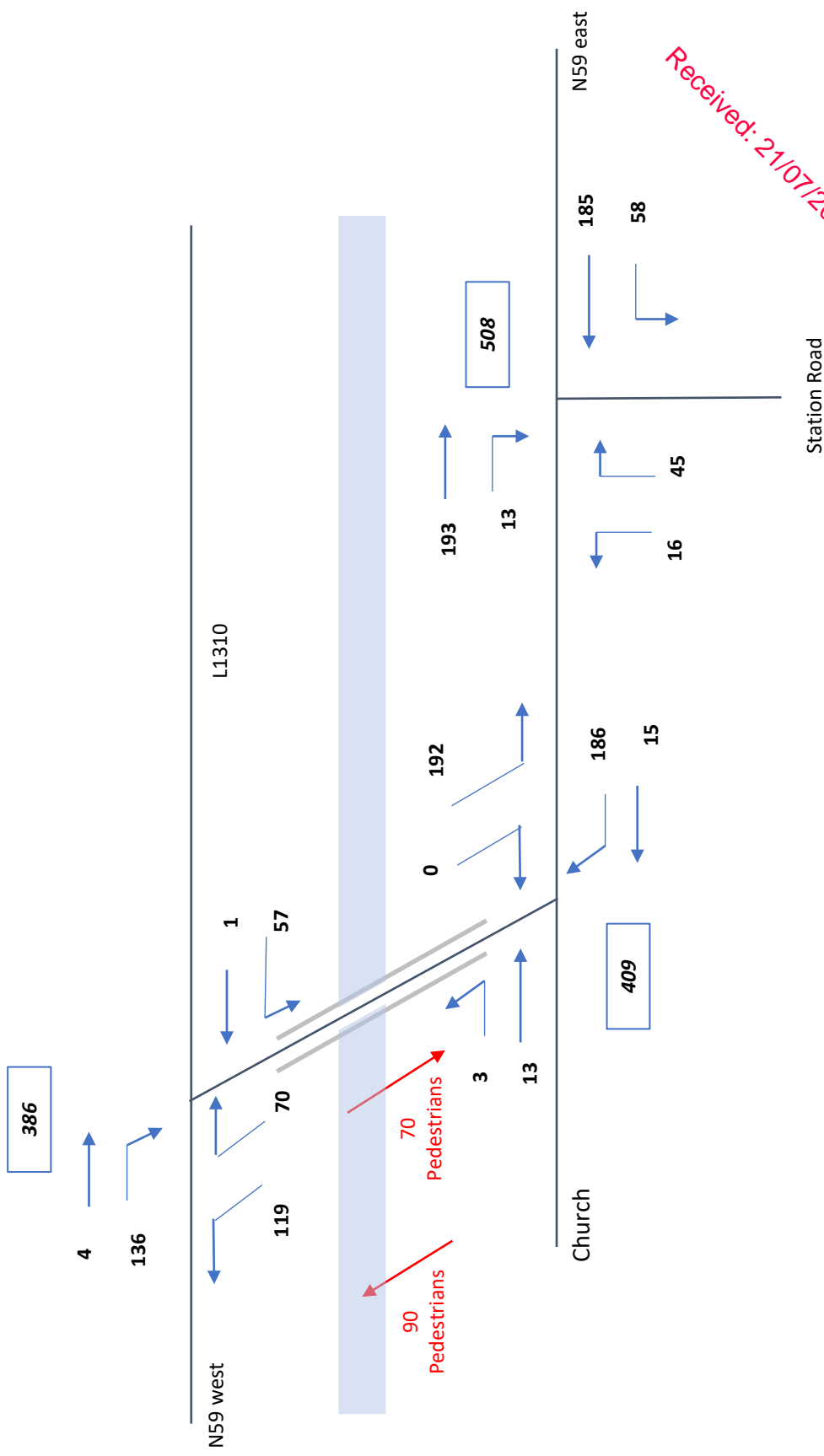
Diagram 1: 2022 Weekday AM Peak Hour 08.15-09.15



Received: 21/07/2023

Surveyed Tuesday 18th October 2022
flows in pcu/hr
Junction inflow in boxes

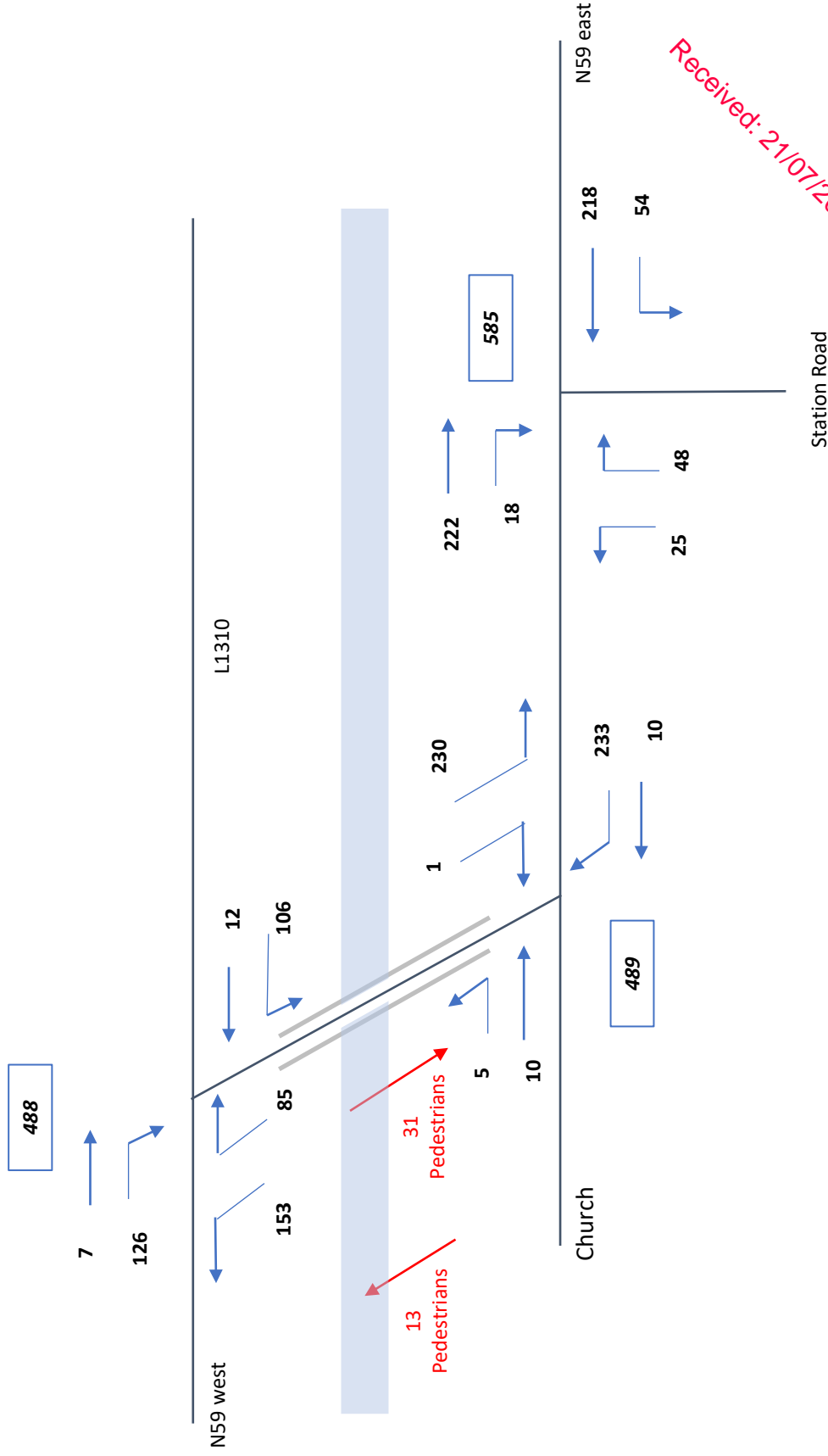
Diagram 2: 2022 Weekday Morning Interpeak Hour 10.00-11.00



Received: 21/07/2023

Surveyed Tuesday 18th October 2022
flows in pcu/hr
Junction inflow in boxes

Diagram 3: 2022 Weekday Lunchtime Peak Hour 13.00-14.00



Received: 21/07/2023

Surveyed Tuesday 18th October 2022
flows in pcu/hr
Junction inflow in boxes

Diagram 4: 2022 Afternoon Peak Hour 15.00-16.00

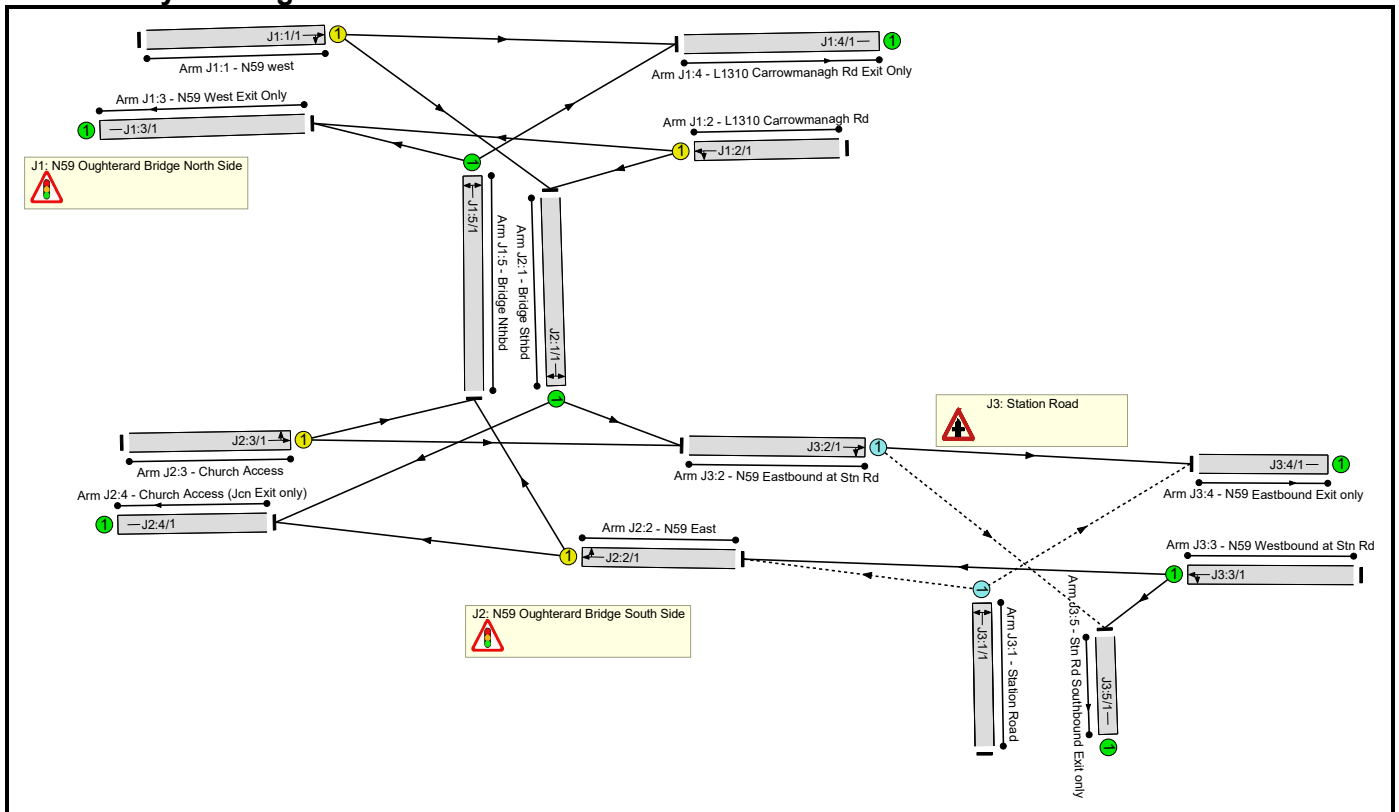
Full Input Data And Results
Full Input Data And Results

User and Project Details

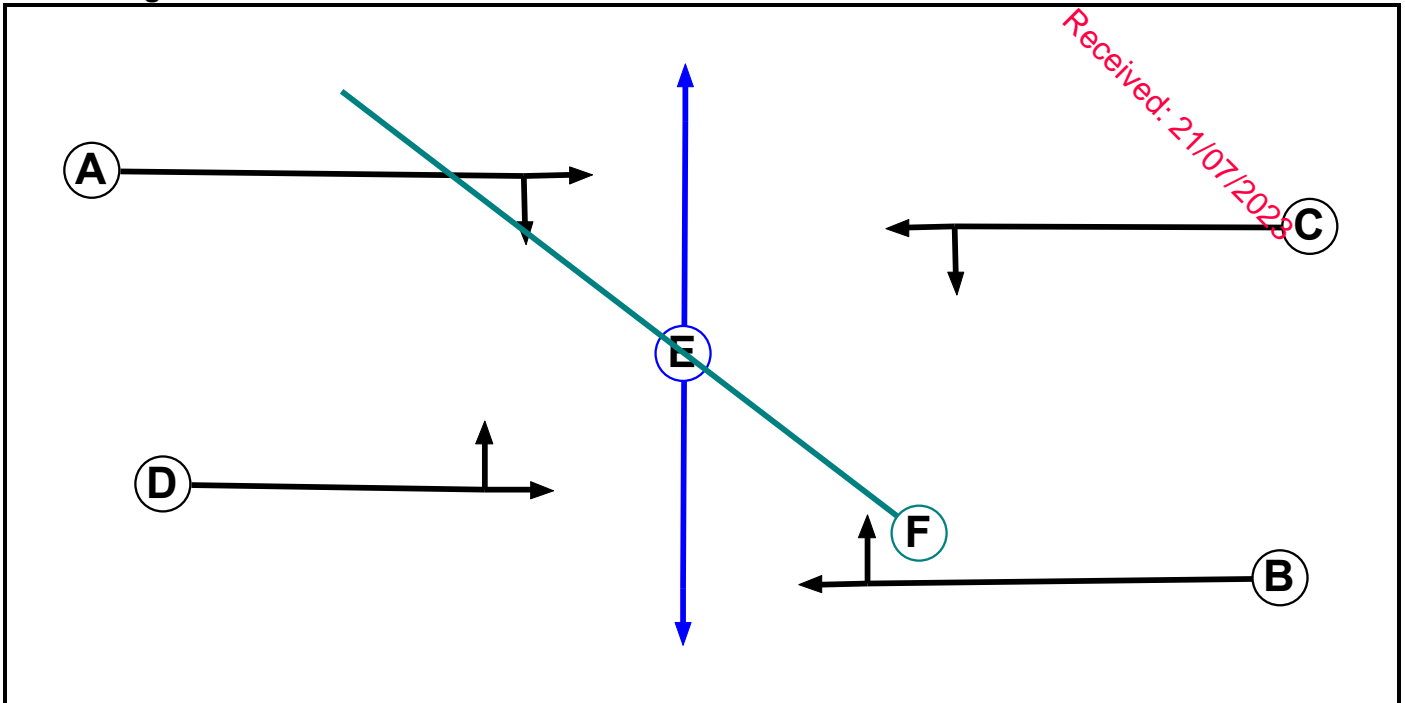
Received: 21/07/2023

Project:	
Title:	
Location:	
Additional detail:	
File name:	Bridge long crossing model_rev1 inc Stn Rd.lsg3x
Author:	
Company:	
Address:	

Network Layout Diagram



Phase Diagram



Phase Input Data

Phase Name	Phase Type	Assoc. Phase	Street Min	Cont Min
A	Traffic		8	8
B	Traffic		20	20
C	Traffic		8	8
D	Traffic		7	7
E	Pedestrian		35	35
F	Dummy		20	20

Phase Intergreens Matrix

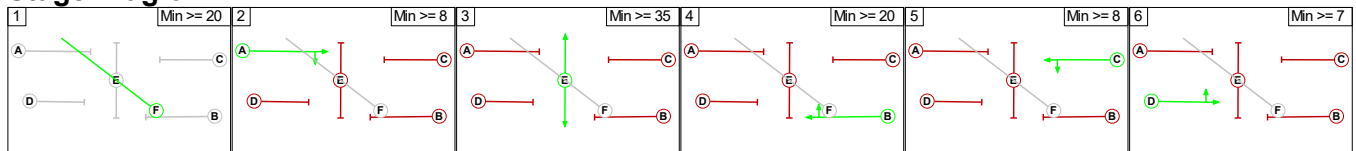
	Starting Phase					
	A	B	C	D	E	F
Terminating Phase	A	12	7	12	18	-
	B	12	12	6	18	-
	C	6	12	12	12	-
	D	12	6	12	12	-
	E	20	20	20	20	-
	F	-	-	-	-	-

Received: 21/07/2023

Phases in Stage

Stage No.	Phases in Stage
1	F
2	A
3	E
4	B
5	C
6	D

Stage Diagram



Phase Delays

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Prohibited Stage Change

	To Stage					
	1	2	3	4	5	6
From Stage	1	2	0	2	2	2
	2	0	18	12	7	12
	3	0	20	20	20	20
	4	0	12	18	12	6
	5	0	6	12	12	12
	6	0	12	12	6	12

Full Input Data And Results

Give-Way Lane Input Data

Junction: J1: N59 Oughterard Bridge North Side

There are no Opposed Lanes in this Junction

Junction: J2: N59 Oughterard Bridge South Side

There are no Opposed Lanes in this Junction

Junction: J3: Station Road

Lane	Movement	Max Flow when Giving Way (PCU/Hr)	Min Flow when Giving Way (PCU/Hr)	Opposing Lane	Opp. Lane Coeff.	Opp. Mvmts.	Right Turn Storage (PCU)	Non-Blocking Storage (PCU)	RTF	Right Turn Move up (s)	Max Turns in Intergreen (PCU)
J3:1/1 (Station Road)	J2:2/1 (Left)	500	0	J3:3/1	1.09	To J2:2/1 (Ahead)	-	-	-	-	-
	J3:4/1 (Right)	500	0	J3:2/1	1.09	All	-	-	-	-	-
				J3:3/1	1.09	To J2:2/1 (Ahead)	-	-	-	-	
J3:2/1 (N59 Eastbound at Stn Rd)	J3:5/1 (Right)	1439	0	J3:3/1	1.09	All	-	-	-	-	-

Received: 21/07/2023

Full Input Data And Results

Lane Input Data

Junction: J1: N59 Oughterard Bridge North Side												
Lane	Lane Type	Phases	Start Disp.	End Disp.	Physical Length (PCU)	Sat Flow Type	Def User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient	Nearside Lane	Turns	Turning Radius (m)
J1:1/1 (N59 west)	U	A	2	3	60.0	Geom	-	3.25	0.00	Y	Arm J1:1 Ahead	12.00
											Arm J2:1 Right	Inf
J1:2/1 (L1310 Carrowmanagh Rd)	U	C	2	3	60.0	Geom	-	3.00	2.00	Y	Arm J1:3 Ahead	Inf
											Arm J2:1 Left	Inf
J1:3/1 (N59 West Exit Only)	U		2	3	60.0	User	1800	-	-	-	-	-
J1:4/1 (L1310 Carrowmanagh Rd Exit Only)	U		2	3	60.0	User	1800	-	-	-	-	-
J1:5/1 (Bridge Nthbd)	U		2	3	6.1	Inf	-	-	-	-	-	-

Receiver: 21/10/2022

Junction: J2: N59 Oughterard Bridge South Side												
Lane	Lane Type	Phases	Start Disp.	End Disp.	Physical Length (PCU)	Sat Flow Type	Def User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient	Nearside Lane	Turns	Turning Radius (m)
J2:1/1 (Bridge Sthbd)	U		2	3	6.1	Inf	-	-	-	-	-	-
J2:2/1 (N59 East)	U	B	2	3	3.0	Geom	-	3.25	0.00	Y	Arm J1:5 Right	Inf
											Arm J2:4 Ahead	Inf
J2:3/1 (Church Access)	U	D	2	3	60.0	Geom	-	3.00	0.00	Y	Arm J3:2 Ahead	Inf
											Arm J1:5 Left	Inf
J2:4/1 (Church Access (Jcn Exit only))	U		2	3	60.0	User	1500	-	-	-	-	-

Full Input Data And Results

Junction: J3: Station Road												
Lane	Lane Type	Phases	Start Disp.	End Disp.	Physical Length (PCU)	Sat Flow Type	Def User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient	Nearside Lane	Turns	Turning Radius (m)
J3:1/1 (Station Road)	O		2	3	60.0	User	1600	-	-	-	-	-
J3:2/1 (N59 Eastbound at Stn Rd)	O		2	3	3.0	User	1800	-	-	-	-	-
J3:3/1 (N59 Westbound at Stn Rd)	U		2	3	60.0	Inf	-	-	-	-	-	-
J3:4/1 (N59 Eastbound Exit only)	U		2	3	60.0	Inf	-	-	-	-	-	-
J3:5/1 (Stn Rd Southbound Exit only)	U		2	3	60.0	Inf	-	-	-	-	-	-

Received: 21/07/2023

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: 'AM peak'	08:15	09:15	01:00	

Scenario 1: 'Scenario 1' (FG1: 'AM peak', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination	
Origin		Tot.	
	Tot.		-

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 1: Scenario 1
Junction: J1: N59 Oughterard Bridge North Side	
J1:1/1	152
J1:2/1	191
J1:3/1	137
J1:4/1	247
J1:5/1	321
Junction: J2: N59 Oughterard Bridge South Side	
J2:1/1	280
J2:2/1	330
J2:3/1	10
J2:4/1	13
Junction: J3: Station Road	
J3:1/1	98
J3:2/1	285
J3:3/1	326
J3:4/1	294
J3:5/1	85

Received: 21/07/2023

Lane Saturation Flows

Junction: J1: N59 Oughterard Bridge North Side								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J1:1/1 (N59 west)	3.25	0.00	Y	Arm J1:4 Ahead	12.00	28.5 %	1873	1873
				Arm J2:1 Right	Inf	71.5 %		
J1:2/1 (L1310 Carrowmanagh Rd)	3.00	2.00	Y	Arm J1:3 Ahead	Inf	10.0 %	1831	1831
				Arm J2:1 Left	Inf	90.0 %		
J1:3/1 (N59 West Exit Only Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
J1:4/1 (L1310 Carrowmanagh Rd Exit Only Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
J1:5/1 (Bridge Nthbd Lane 1)	Infinite Saturation Flow						Inf	Inf

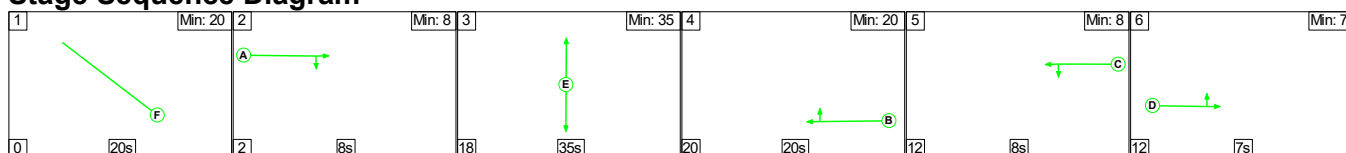
Full Input Data And Results

Junction: J2: N59 Oughterard Bridge South Side								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J2:1/1 (Bridge Sthbd Lane 1)	Infinite Saturation Flow						Inf	Inf
J2:2/1 (N59 East)	3.25	0.00	Y	Arm J1:5 Right	Inf	96.4 %	1940	1940
J2:3/1 (Church Access)	3.00	0.00	Y	Arm J2:4 Ahead	Inf	3.6 %	1915	1915
				Arm J3:2 Ahead	Inf	60.0 %		
J2:4/1 (Church Access (Jcn Exit only) Lane 1)	This lane uses a directly entered Saturation Flow						1500	1500

Junction: J3: Station Road								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J3:1/1 (Station Road Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
J3:2/1 (N59 Eastbound at Stn Rd Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
J3:3/1 (N59 Westbound at Stn Rd Lane 1)	Infinite Saturation Flow						Inf	Inf
J3:4/1 (N59 Eastbound Exit only Lane 1)	Infinite Saturation Flow						Inf	Inf
J3:5/1 (Stn Rd Southbound Exit only Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 1: 'Scenario 1' (FG1: 'AM peak', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram

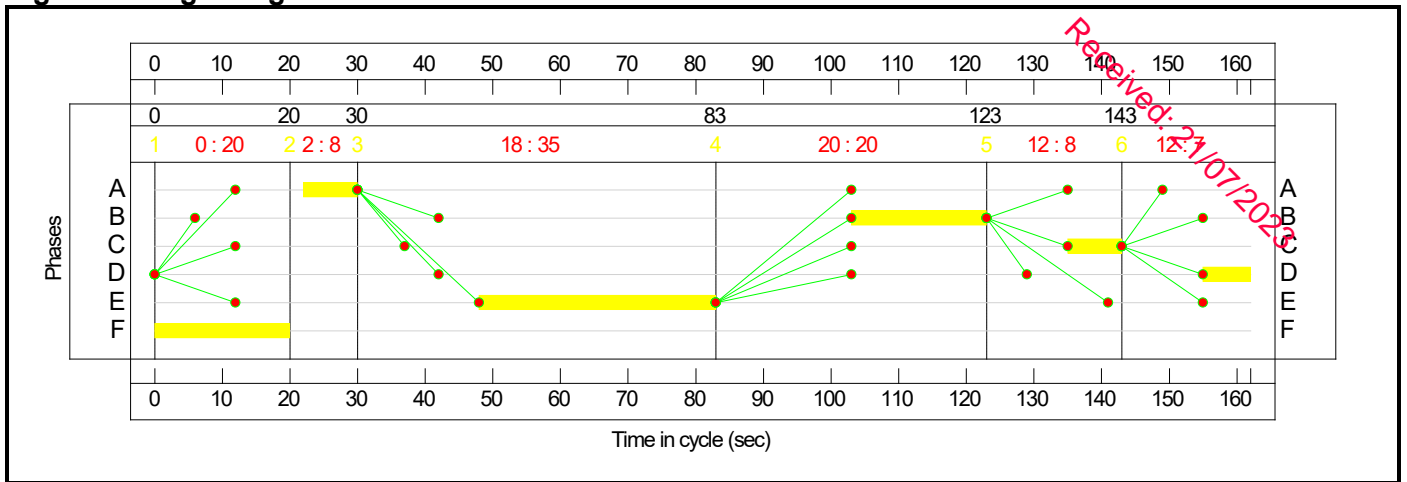


Stage Timings

Stage	1	2	3	4	5	6
Duration	20	8	35	20	8	7
Change Point	0	20	30	83	123	143

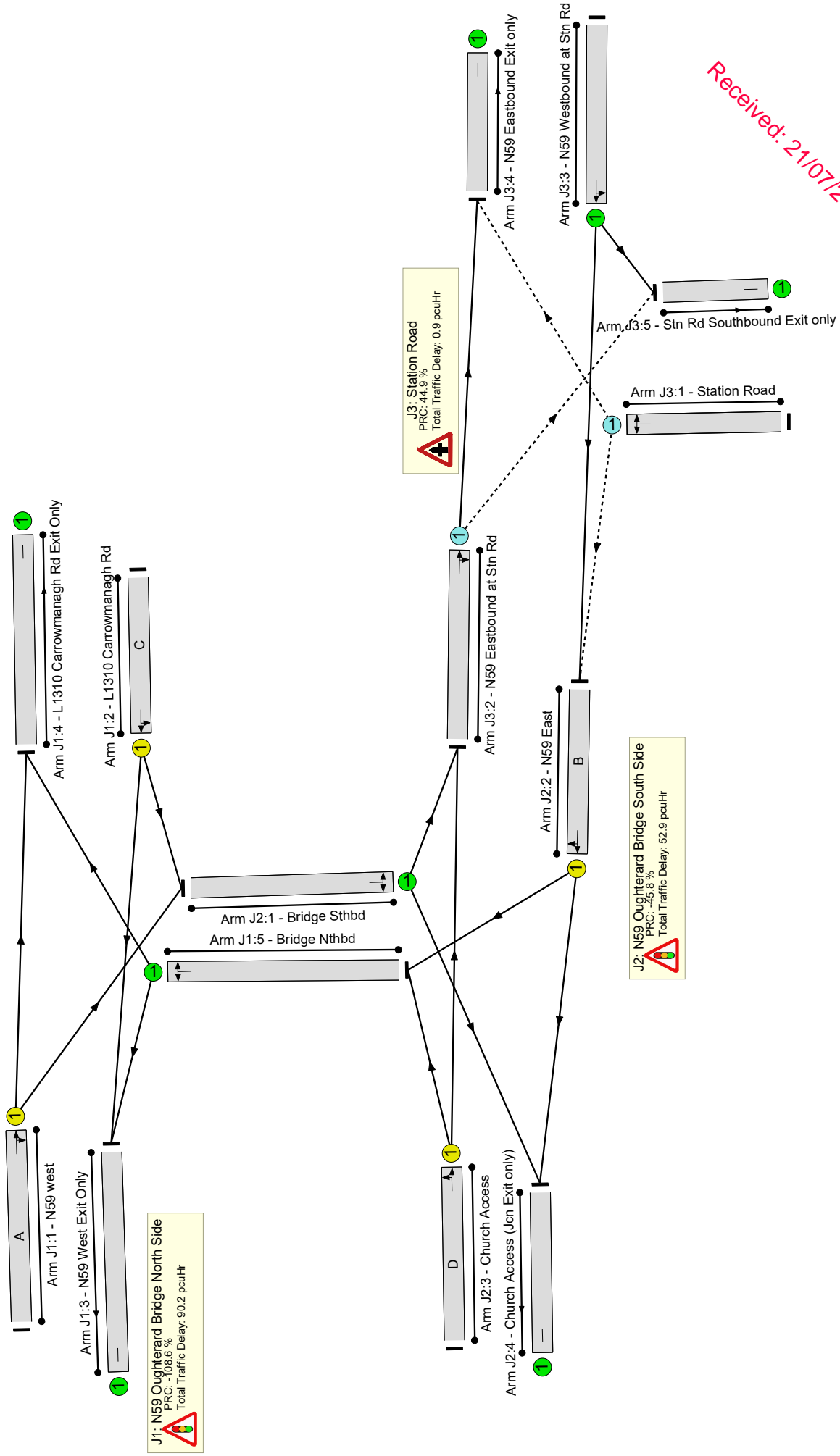
Full Input Data And Results

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Received: 21/07/2023

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	N/A	-	-	-	-	-	-	-	-	-	187.8%
J1: N59 Oughterard Bridge North Side	-	-	N/A	-	-	-	-	-	-	-	-	-	187.8%
1/1	N59 west Ahead Right	U	N/A	N/A	A	-	1	8	-	152	1873	104	146.1%
2/1	L1310 Carrowmanagh Rd Ahead Left	U	N/A	N/A	C	-	1	8	-	191	1831	102	187.8%
3/1	N59 West Exit Only	U	N/A	N/A	-	-	-	-	-	137	1800	1800	5.6%
4/1	L1310 Carrowmanagh Rd Exit Only	U	N/A	N/A	-	-	-	-	-	247	1800	1800	10.3%
5/1	Bridge Nthbd Left Right	U	N/A	N/A	-	-	-	-	-	321	Inf	Inf	0.0%
J2: N59 Oughterard Bridge South Side	-	-	N/A	-	-	-	-	-	-	-	-	-	131.2%
1/1	Bridge Sthbd Left Right	U	N/A	N/A	-	-	-	-	-	280	Inf	Inf	0.0%
2/1	N59 East Right Ahead	U	N/A	N/A	B	-	1	20	-	330	1940	251	131.2%
3/1	Church Access Ahead Left	U	N/A	N/A	D	-	1	7	-	10	1915	95	10.6%
4/1	Church Access (Jcn Exit only)	U	N/A	N/A	-	-	-	-	-	13	1500	1500	0.6%
J3: Station Road	-	-	N/A	-	-	-	-	-	-	-	-	-	62.1%
1/1	Station Road Right Left	O	N/A	N/A	-	-	-	-	-	98	1800	158	62.1%
2/1	N59 Eastbound at Stn Rd Ahead Right	O	N/A	N/A	-	-	-	-	-	285	1800	1651	10.4%

Received: 21/07/2023

Full Input Data And Results

3/1	N59 Westbound at Stn Rd Left Ahead	U	N/A	N/A	-	-	-	-	-	-	326	Inf	Inf	0.0%
4/1	N59 Eastbound Exit only	U	N/A	N/A	-	-	-	-	-	-	294	Inf	Inf	0.0%
5/1	Stn Rd Southbound Exit only	U	N/A	N/A	-	-	-	-	-	-	85	Inf	Inf	0.0%

Received: 21/07/2023

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	269	0	0	30.6	113.4	0.0	144.0	-	-	-	-
J1: N59 Oughterard Bridge North Side	-	-	0	0	0	18.9	71.2	0.0	90.2	-	-	-	-
1/1	152	104	-	-	-	7.2	25.5	-	32.6	773.0	9.8	25.5	35.2
2/1	191	102	-	-	-	11.8	45.7	-	57.4	1082.8	15.8	45.7	61.5
3/1	100	100	-	-	-	0.0	0.0	-	0.0	1.1	0.0	0.0	0.0
4/1	185	185	-	-	-	0.0	0.1	-	0.1	1.1	0.0	0.1	0.1
5/1	246	246	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J2: N59 Oughterard Bridge South Side	-	-	0	0	0	11.6	41.3	0.0	52.9	-	-	-	-
1/1	166	166	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
2/1	330	251	-	-	-	11.4	41.3	-	52.6	574.3	18.8	41.3	60.0
3/1	10	10	-	-	-	0.2	0.1	-	0.3	94.9	0.4	0.1	0.5
4/1	10	10	-	-	-	0.0	0.0	-	0.0	1.2	0.0	0.0	0.0
J3: Station Road	-	-	269	0	0	0.1	0.9	0.0	0.9	-	-	-	-
1/1	98	98	98	0	0	0.1	0.8	-	0.9	32.1	0.9	0.8	1.7
2/1	171	171	171	0	0	0.0	0.1	-	0.1	1.2	0.0	0.1	0.1
3/1	326	326	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	196	196	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	69	69	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
C1										PRC for Signalled Lanes (%): -108.6	Total Delay for Signalled Lanes (pcuHr): 143.00	Cycle Time (s): 162	
										PRC Over All Lanes (%): -108.6	Total Delay Over All Lanes(pcuHr): 144.02		

Received: 21/07/2023

Received: 21/07/2023

N59 Oughterard Bridge Traffic Management & Signals Design

Quality Audit

Stephen Reid Consulting Traffic and Transportation

February 2023

N59 Oughterard Bridge Traffic Management & Signals Design

Received: 21/07/2023

Quality Audit

February 2023

Notice

This document and its contents have been prepared and are intended solely for Stephen Reid Consulting Traffic and Transportation's information and use in relation to N59 Oughterard Bridge Traffic Management & Signals Design.

Traffico assumes no responsibility to any other party in respect of or arising out of or in connection with this document and / or its contents.

Document History

JOB NUMBER: 230011			DOCUMENT REF: 210011PT003_QA_Rev_0			
0	Final Issue	MD	CP	MD	MD	14 Feb 2023
Revision	Purpose Description	Originated	Checked	Reviewed	Authorised	Date

Received: 21/07/2023

Contents

Section

Page

1.	Introduction	2
1.1	Report Context	2
1.2	Details of Site Inspection	2
1.3	The Road Safety Audit Team	2
1.4	Design Drawings Examined as Part of the Audit Process	2
1.5	Quality Audit Content and Compliance	3
2.	Walking, Cycling and Access Audit	4
2.1	Best Practice Guidance	4
2.2	Objectives of the Walking, Cycling and Access Audit	4
2.3	General Accessibility Recommendations	4
2.4	Specific Walking, Cycling and Accessibility Recommendations	5
3.	Stage 1 Road Safety Audit Problems	9
3.1	Problem: Registering the Presence of Traffic Signals	9
3.2	Problem: Crossing Length Leading to Drivers Ignoring Signals	9
3.3	Problem: Signals and Signage Restricting Footpath Width	10
4.	Audit Team Statement	11
4.1	Certification & Purpose	11
4.2	Implementation of RSA Recommendations	11
4.3	Road Safety Audit Team Sign-Off	11
5.	Responding to the Road Safety Audit	12
5.1	How the Designer Should Respond to the Road Safety Audit	12
5.2	Returning the Completed Feedback Form	12

List of Tables

Table 1.1 – Site Inspection Details	2
Table 1.2 – Audit Team Details	2
Table 1.3 – Designers Drawing List	2
Table 2.1 - Walking, Cycling and Access Audit Summary Table	5

List of Figures

Figure 3.1 – Forward Visibility to Primary Traffic Signal for Left Turners	9
Figure 3.2 – Approximate Line of Pedestrian Crossing	9
Figure 3.3 – Narrow Footpath on N59 Westbound Approach	10
Figure 5.1 – Road Safety Audit Sign-Off and Completion Process	12

Appendices

Appendix A	13
A.1 Road Safety Audit Feedback Form	13

Received: 21/07/2022

1. Introduction

1.1 Report Context

This report describes the findings of a Quality Audit associated with N59 Oughterard Bridge Traffic Management & Signals Design.

The Audit has been completed by Traffico Ltd. on behalf of Stephen Reid Consulting Traffic and Transportation.

1.2 Details of Site Inspection

Date	Daylight / Darkness	Weather & Road Conditions
Monday 19 th December 2022	Daylight	Cloudy with damp roads.

Table 1.1 – Site Inspection Details

1.3 The Road Safety Audit Team

The members of the Road Safety Audit Team have been listed following:

Status	Name / Qualifications	TII Auditor Reference No:
Audit Team Leader (ATL)	Martin Deegan BEng(Hons) MSc CEng MIEI	MD101312
Audit Team Member (ATM)	Jason Walsh BEng (Hons) PCert (RSA) CEng MIEI	JW3362499
Audit Trainee (AT)	-	-

Table 1.2 – Audit Team Details

1.4 Design Drawings Examined as Part of the Audit Process

The following drawing(s) were examined as part of the Road Safety Audit (RSA) process:

Drawing No.	Drawing Title	Revision
SRC-286-100	Existing Site Survey	A
SRC-286-101	General Arrangement and Extent of Works	G
SRC-286-102	Proposed Traffic Signals for Shuttle Working Across Bridge & New Footpath Layout	G
SRC-286-103	Autoturn Assessment for Articulated Trucks on N59 & 3 Axle Coach to / from Schools	G

Table 1.3 – Designers Drawing List

Received: 21/07/2020

1.5 Quality Audit Content and Compliance

Procedure and Scope for Quality Audit

This Quality Audit is undertaken in accordance with Section 5.4.2 of the Design Manual for Urban Roads and Streets. The UK Department for Transport Traffic Advisory Leaflet (TAL) 5/11 has also been referred to for guidance.

This Quality Audit consists of the following audit sections:

- Walking, Cycling and Access Audit – focusing on accessibility requirements of vulnerable road users (and in particular, those with visual or mobility impairments), and on the movement and place function requirements of pedestrians and cyclists
- Road Safety Audit – focusing on issues relating directly to road safety

Procedure and Scope Specific to the Road Safety Audit

The Road Safety Audit has been carried out in accordance with the procedures and scope set out in TII publication number GE-STY-01024 - Road Safety Audit.

As part of the road safety audit process, the Audit Team have examined only those issues within the design which relate directly to road safety.


Compliance with Design Standards

The road safety audit process is not a design check, therefore verification or compliance with design standards has not formed part of the audit process.

Minimizing Risk of Collision Occurrence

All problems described in this report are considered by the Audit Team to require action in order to improve the safety of the scheme and minimise the risk of collision occurrence.

Received: 21/07/2023



2. Walking, Cycling and Access Audit

2.1 Best Practice Guidance

This Quality Audit has been carried out in accordance with general best practice guidance set out within the following documents:

- The Disability Act 2005
- Building Regulations 2000, Technical Guidance Document M – Access for People with Disabilities (Department of the Environment, Heritage and Local Government)
- Buildings for Everyone Access and use for all citizens (National Disability Authority)
- Access Auditing of the Built Environment Guidelines (National Disability Authority)
- Traffic Management Guidelines (Irish Government Publications 2003)
- Guidance on the use of Tactile Paving Surfaces: UK Department for Transport

2.2 Objectives of the Walking, Cycling and Access Audit

The objectives of this Walking, Cycling and Access Audit are as follows:

- To ensure a high level of accessibility to the development site for all vulnerable road users and, for visually and mobility impaired users
- To ensure that the current and future access needs within the scheme are recognised and developed
- To ensure that advantage is afforded to walkers and cyclists at every opportunity

2.3 General Accessibility Recommendations

Following delivery of the Walking, Cycling and Access Audit, the design team should consider all issues raised herein for inclusion into the final design. It is less costly to make the changes now, pre-construction, than later after the scheme has been commissioned.

The client should consider setting up a dedicated access team for the project, responsible for the long-term management of universal access throughout the scheme.

This process should be facilitated by an Access Plan, which is a strategy for improving accessibility developed from the Audit and can ensure that access is an on-going concern and help identify opportunities for change.

The access plan should incorporate planned maintenance programmes, a schedule of works that has been devised to take into account the information in the Audit, processes to allow regular updating of the Audit information and links to maintenance and management procedures.


It should also set out procedures to ensure that when opportunities for access improvement arise, they are recognised.

Received: 21/07/2023



2.4 Specific Walking, Cycling and Accessibility Recommendations

A summary of the design features, together with recommended actions to be taken during the relevant stage of the design or operation of the scheme have been detailed in the following table.

Table 2.1 - Walking, Cycling and Access Audit Summary Table

I.D.	Location	Feature	Action	When
 Recommendations to Encourage Walking				
W1	Footpaths within N59 Oughterard Bridge Traffic Management & Signals Design	Pedestrian provision & universal access	Ensure pedestrian environments are logical, continuous, easy to understand and consistent throughout the scheme.	Design Stage
W2	Pedestrian linkage to local roads	Pedestrian provision – connections to Bus Stops & schools	Provide seamless connections onto the roads to connect with schools and Bus Stops and to encourage uptake for bus travel.	Design Stage
W3	Footpaths serving N59 Oughterard Bridge Traffic Management & Signals Design	Street furniture positioning	Ensure street furniture is carefully positioned to avoid obstruction in footways and to maximise the effective width.	Design & Operational Stages
W4	Footpaths serving N59 Oughterard Bridge Traffic Management & Signals Design	Footpaths and crossing points	Ensure footpaths and crossing points are located on all significant desire lines, where they are safe and convenient to use for all vulnerable road users.	Design Stage
W5	Pedestrian linkage to local roads	Linkage to public roads and footpaths	Access points which cross the works boundary and connect with public thoroughfares should link seamlessly with to accommodate universal access and pedestrian progression to schools and places of worship.	Design & Operational Stages
W6	Pedestrian Route Across Bridge	Pedestrian crossing facilities	The traffic signal phasing should allow sufficient time for pedestrians (including school children and the elderly) to cross the bridge between the segregated footpaths on each side.	Design & Operational Stages

Received: 21/07/2023

I.D.	Location	Feature	Action	When
 Recommendations to Encourage Cycling				
C1	N59 Oughterard Bridge Traffic Management & Signals Design & Monaloe Crescent	Traffic lanes where car and cycling use will be integrated	Appropriate measures should be prescribed which might make it abundantly clear to drivers that the movement of cyclists takes precedence over vehicles. This might be achieved with a gateway treatment, in lane cycle logos or street furniture etc.	Design Stage
C2	Traffic signal control - N59 Oughterard Bridge Traffic Management & Signals Design	Accommodation of cyclists at traffic signal stop lines	Measures which might assists cyclists to make their way to the front of a traffic queue and accumulate in front of vehicles at a red light should be investigated by the Designer. Encouraging cyclists to gather in front of vehicles (and take ownership of the lane) may assist traffic calming for vehicles shuttling across the structure.	Design Stage
C3	Cycle Parking - N59 Oughterard Bridge Traffic Management & Signals Design	Cycle Parking & security	To encourage use and safeguard security, position cycle parking away from isolated areas and close to building entrances which have natural passive surveillance. Consider providing cover over the cycle parking to protect cyclists from the elements where possible.	Design Stage
 Recommendations to Provide for Universal Access & Accessibility				
A1	Footpaths serving N59 Oughterard Bridge Traffic Management & Signals Design	Dropped kerbs & tactile paving	Ensure appropriate dropped kerbs and tactile paving are provided at key crossing points.	Design Stage
A2	Footpaths serving N59 Oughterard Bridge Traffic Management & Signals Design	Universal Access – footpath types and finishes	Ensure consistency in the types of footpath surface utilised and ensure that the surface provides appropriate contrast with the adjacent road pavement.	Design Stage
A3	Footpaths serving N59 Oughterard Bridge Traffic Management & Signals Design	Universal Access – material contrast	Ensure contrasting colours/materials are used to define areas which are meant for sole use by vulnerable road users.	Design Stage

Received: 21/09/2023

I.D.	Location	Feature	Action	When
A4	Footpaths serving N59 Oughterard Bridge Traffic Management & Signals Design	Universal Access – footpaths	Ensure that measures are taken to actively maintain and police errant car parking on footpaths which might impact negatively upon pedestrian progression.	Design Stage & Operational Stage
A5	Footpaths serving N59 Oughterard Bridge Traffic Management & Signals Design	Definition of footpath edges & terminations	Ensure footpath edges are clearly defined and ensure that appropriate termination details are provided when footpaths end.	Design Stage
A6	Footpaths serving N59 Oughterard Bridge Traffic Management & Signals Design	Street Lighting	Ensure public lighting is located where pedestrian movement decisions are required i.e., at crossing points.	Design Stage
A7	External areas - N59 Oughterard Bridge Traffic Management & Signals Design	Drainage gaps	Ensure any break in surface or gap (such as a drainage gully) is no greater than 10mm and is perpendicular to line of travel. Locate drainage features both away from (and up gradient from) crossing points.	Design Stage
A8	External areas - N59 Oughterard Bridge Traffic Management & Signals Design	Drainage / pavement gradients	Ensure access routes are constructed with even and gentle falls to allow proper drainage and prevent the formation of puddles. The cross-fall gradient to any access route should not exceed 1 in 50, except when associated with a dropped-kerb.	Design Stage
A9	External areas - N59 Oughterard Bridge Traffic Management & Signals Design	Obstructions from Street Furniture or landscaping	Ensure street furniture / landscaping do not encroach on the clear width of pathways.	Design Stage
A10	External areas - N59 Oughterard Bridge Traffic Management & Signals Design	Street Furniture – visually impaired	Ensure street furniture contrasts in colour with the surrounding pavement surfaces.	Design Stage

Received: 21/09/2023

I.D.	Location	Feature	Action	When
A11	Car Parking Areas - N59 Oughterard Bridge Traffic Management & Signals Design	Universal access to parking	Ensure car parking is accessible, easy to use, and sufficient parking spaces are provided within a well-designed environment to meet the needs of all end users who might (reasonably) be expected to use them.	Design Stage
A12	Car Parking Areas - N59 Oughterard Bridge Traffic Management & Signals Design	Disabled parking	Ensure location of designated spaces for car users with disabilities (if appropriate) are located as close as possible to the building access points.	Design Stage
A13	Car Parking Areas -N59 Oughterard Bridge Traffic Management & Signals Design	Car park & boundary treatment	Ensure that access to/from parked vehicles is not inhibited by boundary treatments, trees, hedges, street furniture or structural features.	Design Stage

Received: 21/07/2023

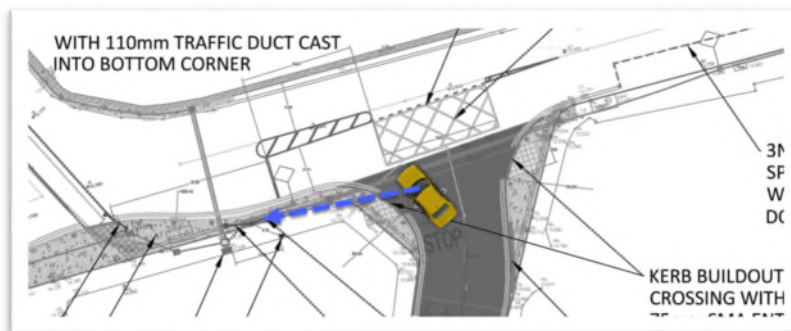
3. Stage 1 Road Safety Audit Problems

3.1 Problem: Registering the Presence of Traffic Signals

Location: Vehicles Turning Left from Station Road to N59 Westbound

The angle of approach for left-turning vehicles from Station Road could result in drivers being offered limited forward visibility to the traffic signals. This could lead to conflicts with vulnerable road users or opposing vehicles on the N59.

Figure 3.1 – Forward Visibility to Primary Traffic Signal for Left Turners



Recommendation

Drivers should be afforded with appropriate forward visibility to the traffic signal heads at this location. This could be coupled with suitable road markings and signage to inform side road drivers that they will be approaching a traffic signal controlled junction.

3.2 Problem: Crossing Length Leading to Drivers Ignoring Signals

Location: Longitudinal Pedestrian Crossing over Bridge Structure

The green time required to service the unusually long pedestrian crossing could lead to unmanageable delays for drivers on the N59 approaches. Frustrated drivers might ignore the red lights, placing pedestrians at risk of conflict with vehicles.

Figure 3.2 – Approximate Line of Pedestrian Crossing



Recommendation

Conspicuous measures which might encourage compliance with the traffic signal operation should be developed by the Designer. Such measures might include robust traffic signage and road markings, vehicle actuation, pedestrian detection, pedestrian count-down signals, enforcement cameras and an education campaign for local stakeholders.

Received: 27/07/2023

3.3 Problem: Signals and Signage Restricting Footpath Width

Location: Areas Where Street Furniture is to be Placed in Narrow Footpaths

If not carefully managed, traffic signals and road signage could further reduce the affective width of footpaths. This could lead to pedestrians stepping into the carriageway without warning.

Figure 3.3 – Narrow Footpath on N59 Westbound Approach



Recommendation

Where pinch points are likely to be created in footpaths, traffic signals and road signage should be carefully relocated to maximise the effective width of the footpath. New street furniture should be positioned away from pinch points, to the rear of the footpath where possible.

Received: 21/07/2023

4. Audit Team Statement

4.1 Certification & Purpose

We certify that we have examined the drawing listed in Chapter 1 of this Report.

Sole Purpose of the Road Safety Audit

The Road Safety Audit has been carried out with the sole purpose of identifying any features of the design which could be removed or modified to improve the road safety aspects of the scheme.

4.2 Implementation of RSA Recommendations

The problems identified herein have been noted in the Report together with their associated recommendations for road safety improvements.

We (the Audit Team) propose that these recommendations should be studied with a view to implementation.

Audit Team's Independence to the Design Process

No member of the Audit Team has been otherwise involved with the design of the measures audited.

4.3 Road Safety Audit Team Sign-Off

Martin Deegan

Audit Team Leader
Road Safety Engineering Team

traffico

Signed: 

Date: 14th February 2023

Jason Walsh

Audit Team Member
Road Safety Engineering Team

traffico

Signed: 

Date: 14th February 2023

Received 21/07/2023

5. Responding to the Road Safety Audit

5.1 How the Designer Should Respond to the Road Safety Audit

The Designer should prepare an Audit Response for each of the recommendations using the Road Safety Audit Feedback Form attached in Appendix A.

When completed, this form should be signed by the Designer and returned to the Audit Team for consideration. See flow-chart following for further description.



Figure 5.1 – Road Safety Audit Sign-Off and Completion Process

5.2 Returning the Completed Feedback Form

The Designer should return the completed Road Safety Audit Feedback Form attached in Appendix A of this report to the following email address:

- Email address: martin@traffico.ie

The Audit Team will consider the Designer’s response and reply indicating acceptance or otherwise of the Designers response to each recommendation.

Triggering the Need for an Exception Report

Where the Designer and the Audit Team cannot agree on an appropriate means of addressing an underlying safety issue identified as part of the audit process, an Exception Report must be prepared by the Designer on each disputed item listed in the audit report.

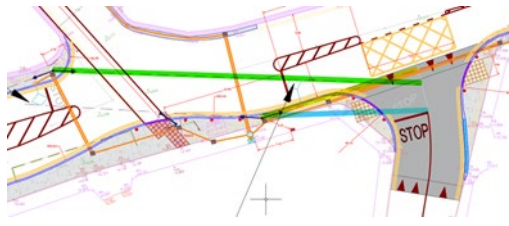
Received: 21/07/2023

Appendix A

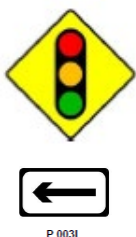
A.1 Road Safety Audit Feedback Form

Received: 21/01/2023

<h1>Road Safety Audit Feedback Form</h1>	
Scheme: N59 Oughterard Bridge Traffic Management & Signals Design.	
Audit Stage: Stage 1 Road Safety Audit	Audit Date: 31 st January 2023

Problem Reference (Section 2)	Designer Response Section			Audit Team Response Section
	Problem Accepted (yes / no)	Recommended Measure Accepted (yes / no)	Alternative Measures or Comments	Alternative Measures Accepted (yes / no)
2.1	Yes	Yes	<p>Forward visibility of the primary and secondary traffic signals has been checked in accordance with TSM Ch.9 and heads aligned so the aspects meet the requirements therein. With regards to the visibility of the traffic signals for traffic exiting from Station Road it is noted that both primary and secondary signal heads are aligned facing the N59 westbound approach, but the angles are shallow enough to afford good visibility for traffic approaching the turnout point onto the N59 from Station Road. To demonstrate this, note below the dashed lines showing TSM visibility alignment (yellow highlighted is primary and green highlighted is secondary). The green highlight line is extended through beyond the 2.5m stopline setback measurement point to the centre of the Station Road, and in addition the blue highlight line shows visibility to the primary from the centreline of the Station road at the proposed setback stopline.</p>  <p>Designer note: the TS installers should check alignment on site and ensure that no additional road signs or cowls on red or amber signal aspects are located</p>	Noted & agreed

Received: 21/8/2023

Problem Reference (Section 2)	Designer Response Section			Audit Team Response Section
	Problem Accepted (yes / no)	Recommended Measure Accepted (yes / no)	Alternative Measures or Comments	Alternative Measures Accepted (yes / no)
			<p>where these could block visibility for traffic exiting from Station Road.</p> <p>A W042 Traffic Signals Ahead sign is to be installed on each of the signalised arm approaches.</p> <p>If viewed as appropriate a sign with a supplementary left pointing arrow plate P003L could be installed on Station Road approaching the N59 junction (see below).</p> <div style="text-align: center;">  <p>P 003L</p> </div>	
2.2	Yes	Yes		
2.3	Yes	Yes	Existing footpath is 1.6m wide to west of the Station Road corner. Proposed kerb buildout increases width to 2.0m (minimum) and there is more than 2.0m clear width from proposed primary signal pole to the boundary wall. There is a redundant pole (previously a no parking sign) which can be removed during the civil works to build out the kerbline and install signal ducting.	Noted with thanks

**The Designer should complete the Designer Response Section above, then fill out the designer details below and return the completed form to the Road Safety Audit Team for consideration and signing.*

Designer's
Name: Stephen Reid

Designer's
Signature:



Date: 01.02.2023

Employer's
Name: Cathal Joyce GCC

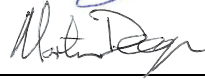
Employer's
Signature:



Date: 07/02/2023

Audit Team's
Name: Martin Deegan

Audit Team's
Signature:



Date: 14 February 2023

Received: 21/07/2023

Received: 21/07/2023

traffico

e: hello@traffico.ie

w: www.traffico.ie