

ENGINEERING SERVICES REPORT

PUBLIC REALM UPGRADE, KILCULLEN, CO. KILDARE

Kildare County Council

P294

17 January 2022



OCSC

O'CONNOR | SUTTON | CRONIN

Multidisciplinary
Consulting Engineers



ENGINEERING SERVICES REPORT

PUBLIC REALM UPGRADE, KILCULLEN, CO. KILDARE



OCSC

O'CONNOR | SUTTON | CRONIN

Multidisciplinary
Consulting Engineers

NOTICE

This document has been produced by O'Connor Sutton Cronin & Associates for its client, Kildare County Council. It may not be used for any purpose other than that specified by any other person without the written permission of the authors.

DOCUMENT CONTROL & HISTORY

OCSC Job No: P294	Project Code	Originator	Zone Volume	Level	File Type	Role Type	Number	Status / Suitability Code	Revision
	P294	OCSC	XX	XX	RP	C	0002	A1	C02

Rev.	Status	Authors	Checked	Authorised	Issue Date
C02	A1	W Marais	S McGivney	A Horan	17/01/2022
C01	A1	S Donlon	P Raggett	A Horan	06/09/2019

TABLE OF CONTENTS

1	INTRODUCTION	1
	APPOINTMENT	1
	PURPOSE OF THE REPORT.....	1
	STUDY AREA	2
2	TRAFFIC AND TRANSPORTATION.....	4
	DATA COLLECTION AND SURVEY DESCRIPTION	4
	SPEED SURVEY	6
	ACCESSIBILITY.....	9
3	DRAINAGE, FLOODING AND UTILITIES.....	10
	STORM DRAINAGE	10
	UTILITIES.....	13
4	CONCLUSION	14
5	VERIFICATION.....	15

APPENDICES

APPENDIX A	TRAFFIC SURVEY DATA
APPENDIX B	SPEED SURVEY DATA
APPENDIX C	DRAINAGE RECORDS
APPENDIX D	FLOOD MAP

1 INTRODUCTION

APPOINTMENT

O'Connor Sutton Cronin has been appointed as the engineering team member within the integrated design team led by The Paul Hogarth Company to prepare a Part 8 application for upgrades to the public realm landscape within the town of Kilcullen, County Kildare.

PURPOSE OF THE REPORT

This report has been written to accompany the Part 8 Planning Application for this scheme. The report seeks to address the design considerations of the scheme associated with:

- Traffic & Transportation, addressing the volume of traffic and speed of traffic in the study area;
- Drainage, Flooding and Utilities Strategy.

The purpose of this report is to interpret the data obtained from various studies and base data collection (including traffic surveys, as-built information, design proposals) and analyse the potential impacts of the scheme on the town of Kilcullen.

STUDY AREA

The study area for the public realm upgrade is shown in the figure below, with the redline figure shown overleaf.



Figure 1: Study Area

2 TRAFFIC AND TRANSPORTATION

DATA COLLECTION AND SURVEY DESCRIPTION

OCSC managed a procurement process for the selection of a competent traffic surveyor to be engaged by KCC to carry out the survey and data collection information required.

As a result of the competitive process, Idaso Ltd was engaged to carry out traffic counts in the town to obtain data on the traffic volumes, speeds, and parking space utilisation. This data has been used to inform the design development and in the preparation of the Part 8 application.

The objectives of the traffic survey were to obtain accurate data on:

- The traffic volumes within the study area, to allow OCSC to assess the effect of the design decisions on the capacity of the road network within the study area.
- The speed of vehicles using these roads, to allow the designer's take appropriate actions to ensure that the designed layout takes account of the actual speed of vehicles in the area and, if appropriate, seek to modulate the speed of users through design.
- The parking usage statistics, to ensure that the volume of parking available in the area is appropriate for the current utilisation, while also providing a high-quality urban public realm design.

Automated Traffic Counters (ATC) were set up at three strategic locations within the study area to obtain this data. The locations of these ATCs are shown in Figure 1 overleaf.

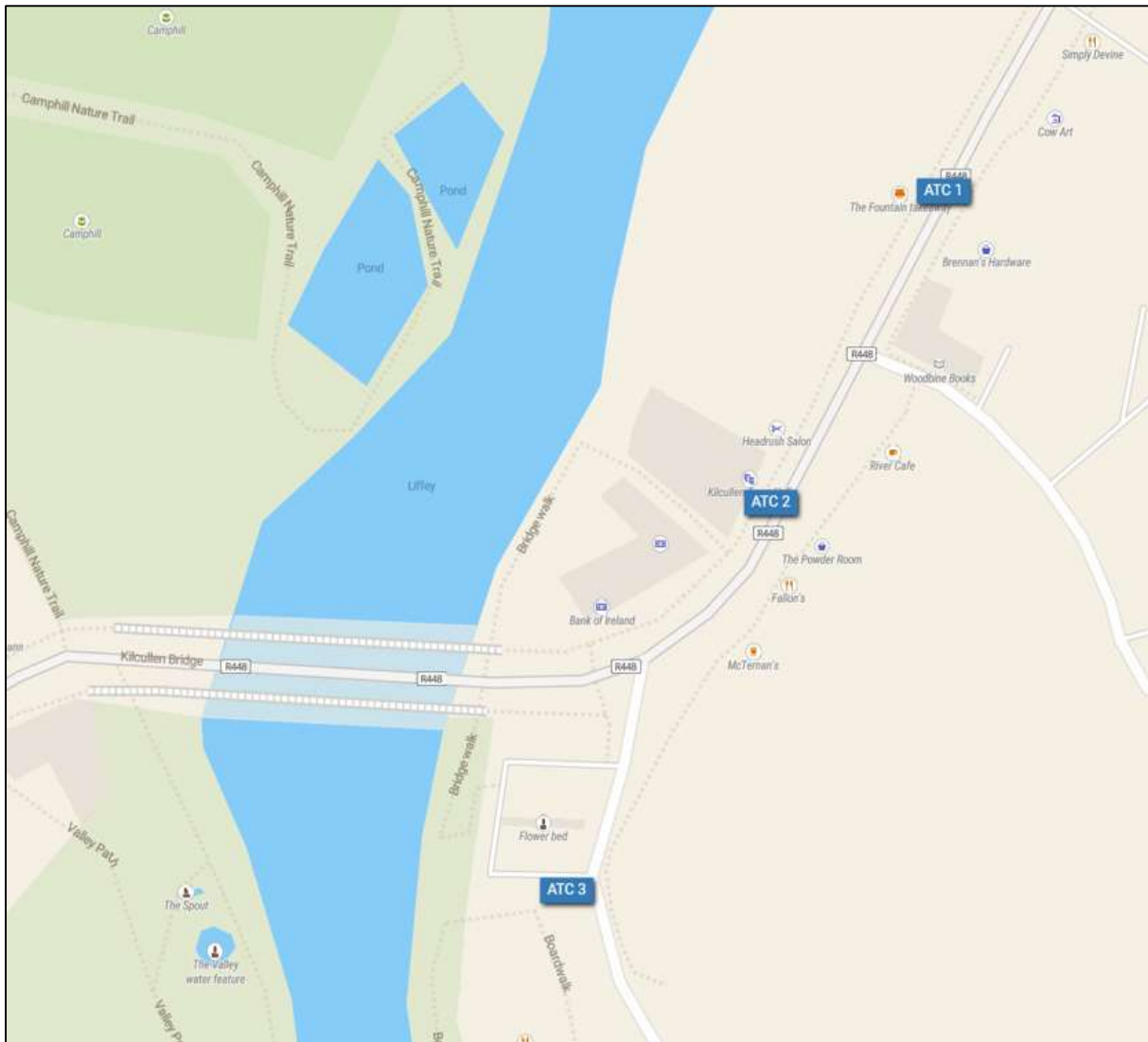


Figure 3: ATC Locations

SURVEY RESULTS

ATC surveys were carried out at these three locations in Kilcullen over 7 days. The ATCs record the total number of vehicles passing each survey point in both directions, broken down into 15 minute periods. The counters also distinguish between the various vehicle types e.g. cars, busses, light goods vehicles etc.

The total 7-day traffic volumes at each location are as below in Table 1. Note the counts are in vehicle numbers. Below is a basic context of each of the traffic count locations and an overview of the counts at each location.

ATC 1: This ATC is located in Kilcullen on the R448 approximately 140m north from Kilcullen Bridge, outside The Fountain Take Away. The road at this location is straight and approximately 7.3m in width with footpaths and buildings on either side.

ATC 2: This ATC is in the centre of Kilcullen, on the R448 opposite the Town Hall, approximately 65m north from the Kilcullen Bridge. The road is approximately 8.5m wide with on-street parking to the west and an adjacent parking bay to the east. The carriageway straightens up here after leaving the bridge

ATC 3: This ATC is located to the southeast of Kilcullen Bridge, opposite The Square. The carriageway at this location is approximately 5.5m with a footpath on both sides and is on a bend in the road approaching the junction with the R448. This road serves The Square and the housing estate to the east, thus seeing much lower daily counts.

ATC Number	Average Daily Totals	
	Northbound	Southbound
ATC 1	4373	3777
ATC 2	4487	3627
ATC 3	333	334

Table 1: ATC Daily Total Counts

The ATC figures show that on weekdays, the Northbound peak hour is 06:00-07:00 and the Southbound is 19:00. This illustrates that many people are commuting to work via this route.

The survey results also show that the percentage of Heavy Goods Vehicles (HGVs) along this route was relatively low at 3.34% of total vehicles.

SPEED SURVEY

Speed surveys were also carried out at each ATC location. Similar to the traffic counts, the speed survey was also carried out over 7 days. The data obtained from the survey breaks the traffic down into 10kph bands, showing the number of cars travelling 30-40kph, 40-50kph etc up to 110-120kph.

Speed surveys are a vital source of information when assessing the need for traffic calming or when deciding on the types of pedestrian crossings to install as part of an effective urban design scheme. The below figures show the 85th percentile speed of traffic passing the survey locations. The 85th percentile speed is used so that the figure is not unduly skewed by a small number of vehicles travelling unusually fast or slow.

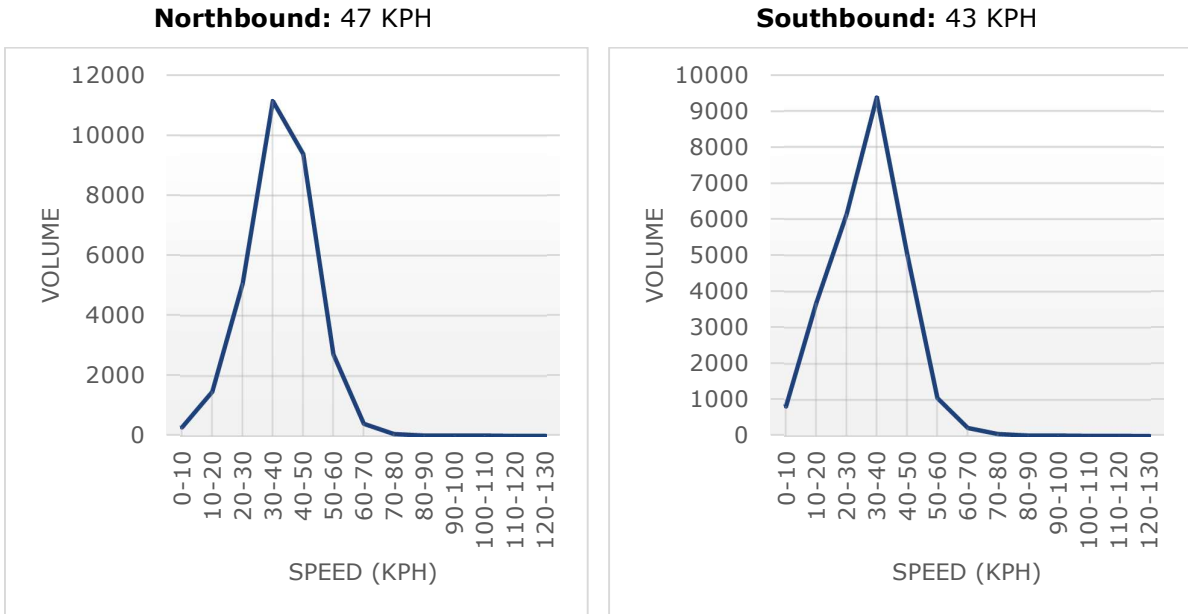


Figure 4: ATC 1 85th Percentile Speed

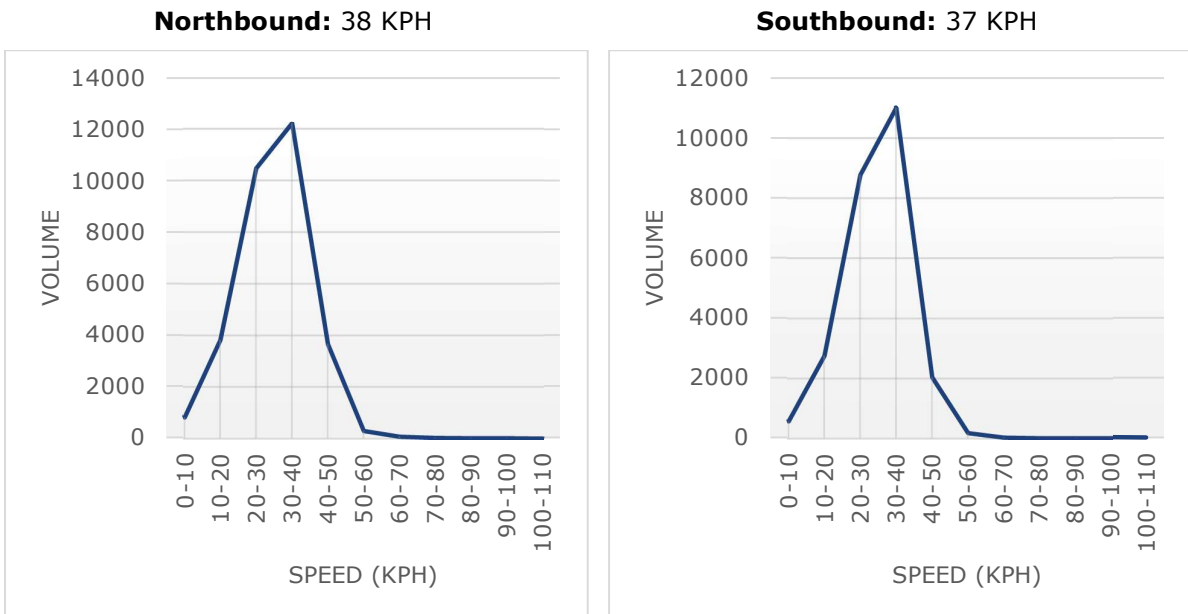


Figure 5: ATC 2 85th Percentile Speed

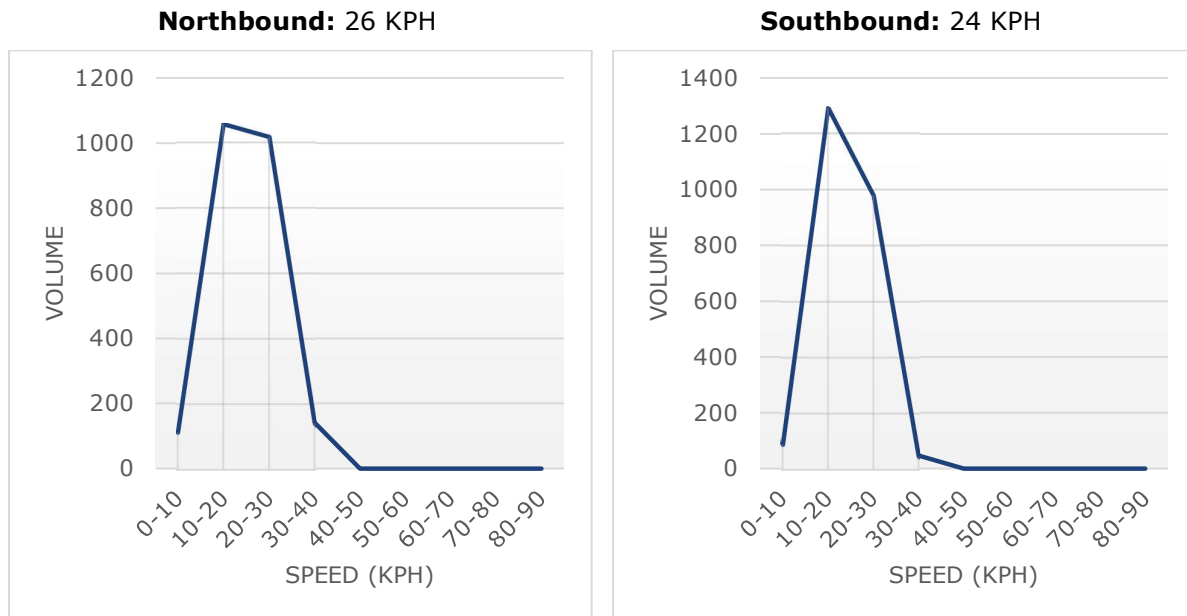


Figure 6: ATC 3 85th Percentile Speed

This shows that the 85th percentile speed on all three ATCs is below the posted speed limit of 50kph. The data showed that at ATC1 and ATC2, the most common speed range in either direction was 30-40kph.

At ATC3, in front of The Square, the most common speed range vehicles were travelling within was 10-20kph, and over the 7 days, no vehicle exceeded 40kph.

On the R448 routes, a small number of vehicles were detected travelling at over 100kph during the survey period. However, these numbers amounted to less than 40 vehicles. Of note, however, is that a cumulative 10.64% of northbound drivers at ATC1 were travelling above the speed limit. DMURS discusses the Road Safety Authority Free Speed Survey results which show that there is a strong relationship between the frequency of design elements that aim to reduce speed and a reduction in the percent of drivers who exceed the posted speed limit. This is shown in the image below.

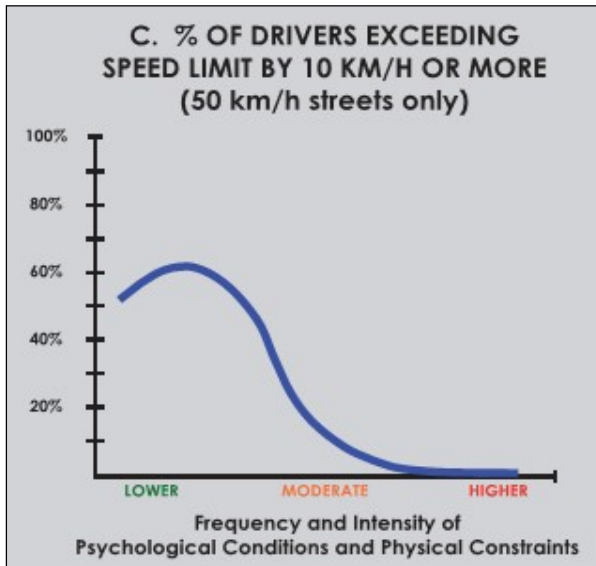


Figure 7: Percent of Drivers Exceeding Speed Limit (Figure 4.5 in DMURS)

This would suggest that some traffic calming measures may be required in future to encourage drivers to reduce speed in this area.

The survey shows that traffic is generally travelling at less than the speed limit through the study area. This is presumably due to the vertical and horizontal road geometry of these approaches which reduces forward visibility, available carriageway width and the built-up nature of the area, with fronting pedestrian activity and on-street parking.

ACCESSIBILITY

The public realm upgrade would include two new pedestrian crossings across the Main Street, one raised, and one flush in relation to the road surface. This would introduce formal places to cross the busy street, improving access and safety for vulnerable road users. There is also the provision for a new footpath and crossing point for pedestrians on the southern side of the Kilcullen Bridge.

It is proposed as part of this scheme to regularise the storm drainage within the area by way of combining the stormwater network through the site area outfalling to the River Liffey and the addition of a form of treatment in line with the principles of the GSDS (by way of a Downstream Defender or similar before the outfall).

FLOOD ASSESSMENT

OCSC has carried out a desktop flood assessment of the study area. OCSC have consulted www.floodinfo.ie, and www.floodinfo.ie. It is noted that the indicative Flood maps for the area are included in Appendix D for the 0.1% Annual Exceedance Percentage (AEP), the 1% AEP and the 10% AEP. There is a historical flooding event from 1993 when the Liffey burst its banks. The OPW reports of that incident are included in Appendix D.

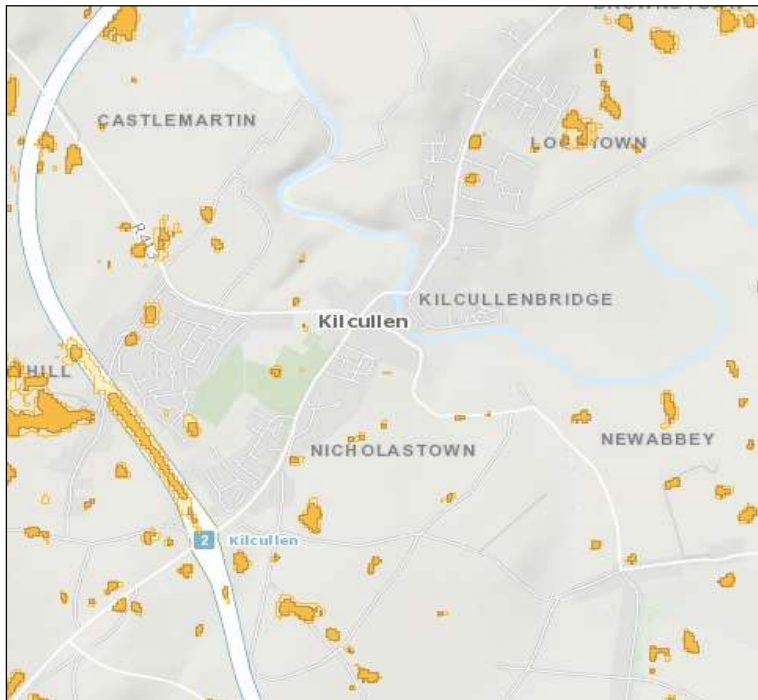


Figure 9: OPW Pluvial flood Risk Mapping (excerpt from myplan.ie)

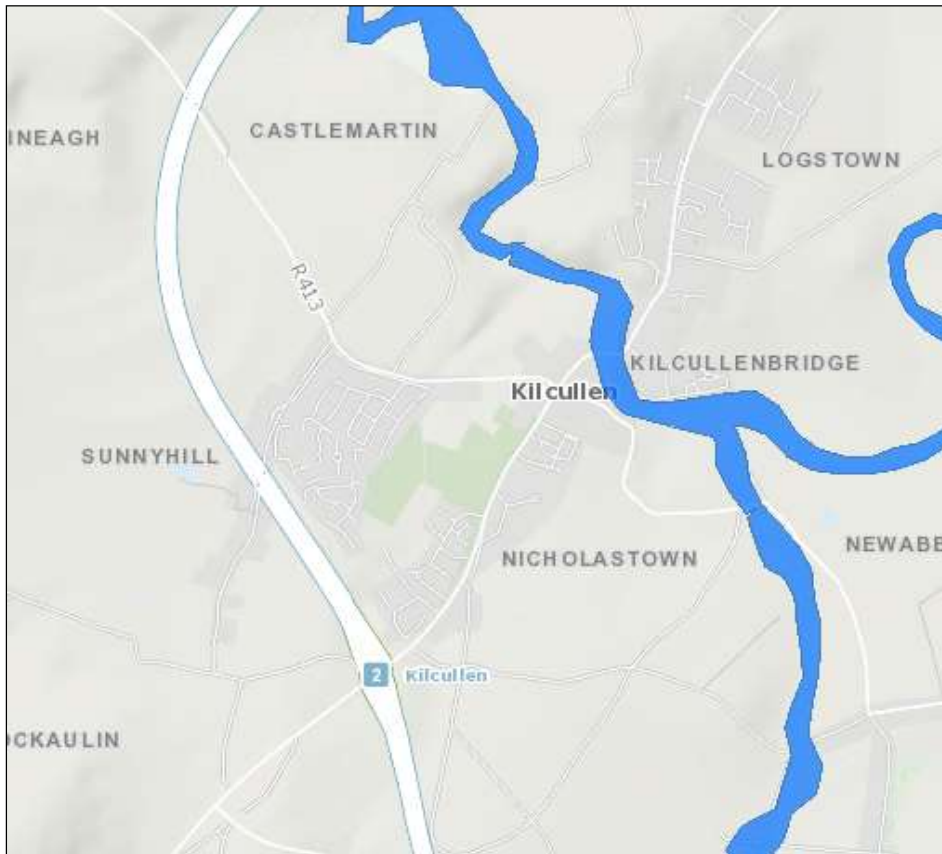


Figure 10: OPW Fluvial flood Risk Mapping 1% AEP (excerpt from myplan.ie)

	Flood Zone A	Flood Zone B	Flood Zone C
Highly Vulnerable Development	Justification Test	Justification Test	Appropriate
Less Vulnerable Development	Justification Test	Appropriate	Appropriate
Water-compatible Development	Appropriate	Appropriate	Appropriate

Table 2: "Appropriateness" Matrix

The existing area and proposed public realm upgrade can be classified as a "less vulnerable development" per Table 3.1 of *The Planning System and Flood Risk Management Guidelines for Planning Authorities*.

UTILITIES

It is a stated aim of KCC that the scheme should achieve a minimisation of clutter. To comply with this aim it has been proposed to underground the existing utilities to the extent feasible within the project extents. With this in mind OCSC has:

- Received existing service drawings from each of the utility owners in the area;
- Informed all utility owners that there is an opportunity to install planned upgrades as part of the public realm scheme;
- Where relevant we will also meet with service owners to discuss the final detail of the network proposals for their services before tender.

4 CONCLUSION

The above-summarised survey data gives information regarding the usage of Kilcullen Town centre and its environs by vehicular traffic. This information can be analysed further to inform specific sections of the Part 8 application as required. The main points would be as follows:

- Speeding in the town does not appear to be a problem, but a moderate number of vehicles exceed the speed limit upon leaving the town to the north;
- The route receives a relatively low level of HGV traffic;
- The proposed public realm upgrade includes improvements for pedestrian priority and accessibility for vulnerable road users;
- The proposed works provide an opportunity to improve water quality by way of treating surface water before entering the watercourse;
- The proposed works will not have any impact on flood risk within the town.

5 VERIFICATION

This report was compiled and verified by:

*Wian Marais BE (US), BE (Hons Transportation) (UP), Professional Engineer (ECSA)
Civil Engineer
O'Connor Sutton Cronin & Associates*



APPENDIX A:
Traffic Survey Data



IDASO

Survey Name: 098 19097 Kilcullen ATC
Site: ATC 1
Location: Main St
Date: 14-May-2019

TIME	A => A						A => B						B => A						B => B									
	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU
00:00	0	0	0	0	0	0	0	3	0	0	0	0	3	3	2	0	0	1	0	3	4.3	0	0	0	0	0	0	0
00:15	0	0	0	0	0	0	0	3	2	0	0	0	5	5	4	0	0	0	0	4	4	0	0	0	0	0	0	0
00:30	0	0	0	0	0	0	0	2	1	0	0	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
00:45	0	0	0	0	0	0	0	1	0	0	0	0	1	1	1	1	0	0	0	2	2	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	9	3	0	0	0	12	12	7	1	0	1	0	9	10.3	0	0	0	0	0	0	0
01:00	0	0	0	0	0	0	0	5	0	0	0	0	5	5	3	0	0	0	0	3	3	0	0	0	0	0	0	0
01:15	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	0	0	0
01:30	0	0	0	0	0	0	0	1	0	1	0	0	2	2.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	6	0	1	0	0	7	7.5	4	0	0	0	0	4	4	0	0	0	0	0	0	0
02:00	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:15	0	0	0	0	0	0	0	2	0	0	0	0	2	2	3	0	0	0	0	3	3	0	0	0	0	0	0	0
02:30	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:45	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	5	0	0	0	0	5	5	3	0	0	0	0	3	3	0	0	0	0	0	0	0
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0	6	6	0	0	0	0	0	0	0
03:15	0	0	0	0	0	0	0	0	0	1	0	0	1	1.5	1	0	0	0	0	1	1	0	0	0	0	0	0	0
03:30	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:45	0	0	0	0	0	0	0	4	0	0	0	0	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	5	0	1	0	0	6	6.5	7	0	0	0	0	7	7	0	0	0	0	0	0	0
04:00	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	1	0	0	1	1.5	0	0	0	0	0	0	0
04:15	0	0	0	0	0	0	0	6	0	0	0	0	6	6	1	0	0	0	0	1	1	0	0	0	0	0	0	0
04:30	0	0	0	0	0	0	0	9	1	0	1	0	11	12.3	1	0	0	0	0	1	1	0	0	0	0	0	0	0
04:45	0	0	0	0	0	0	0	4	0	0	0	0	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	20	1	0	1	0	22	23.3	2	0	1	0	0	3	3.5	0	0	0	0	0	0	0
05:00	0	0	0	0	0	0	0	4	0	1	0	0	5	5.5	3	0	1	0	0	4	4.5	0	0	0	0	0	0	0
05:15	0	0	0	0	0	0	0	7	3	1	0	0	11	11.5	2	1	1	0	0	4	4.5	0	0	0	0	0	0	0
05:30	0	0	0	0	0	0	0	26	1	1	0	0	28	28.5	2	1	0	0	0	3	3	0	0	0	0	0	0	0
05:45	0	0	0	0	0	0	0	31	4	1	0	0	36	36.5	4	0	0	0	0	4	4	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	68	8	4	0	0	80	82	11	2	2	0	0	15	16	0	0	0	0	0	0	0
06:00	0	0	0	0	0	0	0	100	18	1	3	0	122	126.4	2	0	1	0	0	3	3.5	0	0	0	0	0	0	0
06:15	0	0	0	0	0	0	0	152	18	10	3	0	183	191.9	10	3	1	0	0	14	14.5	0	0	0	0	0	0	0
06:30	0	0	0	0	0	0	0	179	22	6	0	0	207	210	19	3	2	0	0	24	25	0	0	0	0	0	0	0
06:45	0	0	0	0	0	0	0	177	17	7	2	1	204	211.1	10	2	1	0	0	13	13.5	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	608	75	24	8	1	716	739.4	41	8	5	0	0	54	56.5	0	0	0	0	0	0	0
07:00	0	0	0	0	0	0	0	145	12	3	0	0	160	161.5	21	0	3	0	1	25	27.5	0	0	0	0	0	0	0
07:15	0	0	0	0	0	0	0	130	17	0	2	0	149	151.6	20	1	1	2	0	24	27.1	0	0	0	0	0	0	0
07:30	0	0	0	0	0	0	0	139	10	3	0	0	152	153.5	25	5	5	0	0	35	37.5	0	0	0	0	0	0	0
07:45	0	0	0	0	0	0	0	116	13	4	0	0	133	135	45	1	0	0	0	46	46	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	530	52	10	2	0	594	601.6	111	7	9	2	1	130	138.1	0	0	0	0	0	0	0
08:00	0	0	0	0	0	0	0	163	5	1	0	0	169	169.5	55	2	5	0	0	62	64.5	0	0	0	0	0	0	0
08:15	0	0	0	0	0	0	0	129	1	2	0	0	132	133	55	7	3	0	0	65	66.5	0	0	0	0	0	0	0
08:30	0	0	0	0	0	0	0	88	4	2	0	0	94	95	92	4	2	2	0	100	103.6	0	0	0	0	0	0	0
08:45	0	0	0	0	0	0	0	82	3	2	0	0	87	88	47	2	3	1	1	54	57.8	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	462	13	7	0	0	482	485.5	249	15	13	3	1	281	292.4	0	0	0	0	0	0	0
09:00	0	0	0	0	0	0	0	120	7	1	0	0	128	128.5	48	6	2	0	0	56	57	0	0	0	0	0	0	0
09:15	0	0	0	0	0	0	0	82	7	2	0	0	91	92	58	7	2	0	1	68	70	0	0	0	0	0	0	0
09:30	0	0	0	0	0	0	0	88	3	5	0	0	96	98.5	35	5	5	0	0	45	47.5	0	0	0	0	0	0	0
09:45	0	0	0	0	0	0	0	74	6	4	0	0	84	86	36	5	4	0	0	45	47	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	364	23	12	0	0	399	405	177	23	13	0	1	214	221.5	0	0	0	0	0	0	0
10:00	0	0	0	0	0	0	0	73	4	2	0	0	79	80	57	1	4	0	0	62	64	0	0	0	0	0	0	0
10:15	0	0	0	0	0	0	0	67	5	2	1	0	75	77.3	42	5	2	0	0	49	50	0	0	0	0	0	0	0
10:30	0	0	0	0	0	0	0	67	8	1	0	0	76	76.5	36	6	3	0	0	45	46.5	0	0	0	0	0	0	0
10:45	0	0	0	0	0	0	0	50	4	2	1	0	57	59.3	30	5	1	0	0	36	36.5	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	257	21	7	2	0	287	293.1	165	17	10	0	0	192	197	0	0	0	0	0	0	0
11:00	0	0	0	0	0	0	0	54	4	1	0	0	59	59.5	48	4	3	0	0	55	56.5							

08:30	0	0	0	0	0	0	0	85	5	1	0	0	91	91.5	91	2	0	1	0	94	95.3	0	0	0	0	0	0	0	0
08:45	0	0	0	0	0	0	0	74	3	0	0	0	77	77	56	4	1	0	0	61	61.5	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	374	19	8	1	0	402	407.3	249	12	5	2	2	270	277.1	0	0	0	0	0	0	0	0
09:00	0	0	0	0	0	0	0	91	3	3	0	0	97	98.5	58	4	2	0	0	64	65	0	0	0	0	0	0	0	0
09:15	0	0	0	0	0	0	0	72	3	3	1	0	79	81.8	44	3	0	0	1	48	49	0	0	0	0	0	0	0	0
09:30	0	0	0	0	0	0	0	84	1	5	0	0	90	92.5	63	4	2	0	0	69	70	0	0	0	0	0	0	0	0
09:45	0	0	0	0	0	0	0	72	5	3	0	0	80	81.5	59	4	1	0	0	64	64.5	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	319	12	14	1	0	346	354.3	224	15	5	0	1	245	248.5	0	0	0	0	0	0	0	0
10:00	0	0	0	0	0	0	0	51	3	2	0	0	56	57	59	3	5	1	1	69	73.8	0	0	0	0	0	0	0	0
10:15	0	0	0	0	0	0	0	64	5	2	0	0	71	72	55	4	1	0	2	62	64.5	0	0	0	0	0	0	0	0
10:30	0	0	0	0	0	0	0	40	1	1	0	0	42	42.5	45	5	4	0	0	54	56	0	0	0	0	0	0	0	0
10:45	0	0	0	0	0	0	0	34	1	5	0	0	40	42.5	48	3	1	0	0	52	52.5	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	189	10	10	0	0	209	214	207	15	11	1	3	237	246.8	0	0	0	0	0	0	0	0
11:00	0	0	0	0	0	0	0	40	5	1	0	0	46	46.5	42	5	3	1	0	51	53.8	0	0	0	0	0	0	0	0
11:15	0	0	0	0	0	0	0	68	1	0	0	0	69	69	42	0	4	0	0	46	48	0	0	0	0	0	0	0	0
11:30	0	0	0	0	0	0	0	44	2	4	0	0	50	52	46	2	3	0	0	51	52.5	0	0	0	0	0	0	0	0
11:45	0	0	0	0	0	0	0	54	2	4	1	0	61	64.3	59	2	3	1	0	65	67.8	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	206	10	9	1	0	226	231.8	189	9	13	2	0	213	222.1	0	0	0	0	0	0	0	0
12:00	0	0	0	0	0	0	0	67	3	3	1	0	74	76.8	48	7	1	0	0	56	56.5	0	0	0	0	0	0	0	0
12:15	0	0	0	0	0	0	0	70	5	2	0	0	77	78	42	5	2	1	0	50	52.3	0	0	0	0	0	0	0	0
12:30	0	0	0	0	0	0	0	56	6	1	0	0	63	63.5	52	4	1	0	0	57	57.5	0	0	0	0	0	0	0	0
12:45	0	0	0	0	0	0	0	62	2	2	2	0	68	71.6	51	2	6	0	0	59	62	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	255	16	8	3	0	282	289.9	193	18	10	1	0	222	228.3	0	0	0	0	0	0	0	0
13:00	0	0	0	0	0	0	0	51	2	3	0	0	56	57.5	62	5	1	0	1	69	70.5	0	0	0	0	0	0	0	0
13:15	0	0	0	0	0	0	0	51	2	0	0	0	53	53	69	2	2	2	0	75	78.6	0	0	0	0	0	0	0	0
13:30	0	0	0	0	0	0	0	60	3	0	0	0	63	63	63	4	6	0	0	73	76	0	0	0	0	0	0	0	0
13:45	0	0	0	0	0	0	0	60	3	1	0	0	64	64.5	43	1	1	0	0	45	45.5	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	222	10	4	0	0	236	238	237	12	10	2	1	262	270.6	0	0	0	0	0	0	0	0
14:00	0	0	0	0	0	0	0	77	4	1	0	0	82	82.5	64	3	1	1	0	69	70.8	0	0	0	0	0	0	0	0
14:15	0	0	0	0	0	0	0	48	4	1	0	1	54	55.5	71	2	5	0	0	78	80.5	0	0	0	0	0	0	0	0
14:30	0	0	0	0	0	0	0	62	2	1	0	0	65	65.5	71	4	3	0	0	78	79.5	0	0	0	0	0	0	0	0
14:45	0	0	0	0	0	0	0	73	5	0	1	0	79	80.3	51	2	1	0	0	54	54.5	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	260	15	3	1	1	280	283.8	257	11	10	1	0	279	285.3	0	0	0	0	0	0	0	0
15:00	0	0	0	0	0	0	0	59	3	8	1	0	71	76.3	54	3	1	1	0	59	60.8	0	0	0	0	0	0	0	0
15:15	0	0	0	0	0	0	0	68	3	5	0	0	76	78.5	80	7	4	0	0	91	93	0	0	0	0	0	0	0	0
15:30	0	0	0	0	0	0	0	64	1	1	2	0	68	71.1	76	3	5	0	0	84	86.5	0	0	0	0	0	0	0	0
15:45	0	0	0	0	0	0	0	61	2	1	0	0	64	64.5	94	4	7	0	0	105	108.5	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	252	9	15	3	0	279	290.4	304	17	17	1	0	339	348.8	0	0	0	0	0	0	0	0
16:00	0	0	0	0	0	0	0	60	2	1	1	1	65	67.8	73	1	7	0	0	81	84.5	0	0	0	0	0	0	0	0
16:15	0	0	0	0	0	0	0	60	1	4	0	0	65	67	56	0	1	0	0	57	57.5	0	0	0	0	0	0	0	0
16:30	0	0	0	0	0	0	0	52	0	3	0	0	55	56.5	45	3	7	2	0	57	63.1	0	0	0	0	0	0	0	0
16:45	0	0	0	0	0	0	0	57	0	3	0	0	60	61.5	74	1	6	1	0	82	86.3	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	229	3	11	1	1	245	252.8	248	5	21	3	0	277	291.4	0	0	0	0	0	0	0	0
17:00	0	0	0	0	0	0	0	60	1	2	0	0	63	64	57	4	3	0	0	64	65.5	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	61	3	2	0	0	66	67	67	2	5	1	0	75	78.8	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	54	2	2	0	0	58	59	65	1	4	0	0	70	72	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0	72	1	0	0	0	73	73	96	7	2	0	0	105	106	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	247	7	6	0	0	260	263	285	14	14	1	0	314	322.3	0	0	0	0	0	0	0	0
18:00	0	0	0	0	0	0	0	53	1	5	0	0	59	61.5	91	2	4	1	0	98	101.3	0	0	0	0	0	0	0	0
18:15	0	0	0	0	0	0	0	62	4	3	0	0	69	70.5	98	6	3	0	0	107	108.5	0	0	0	0	0	0	0	0
18:30	0	0	0	0	0	0	0	51	2	1	0	0	54	54.5	101	8	6	0	0	115	118	0	0	0	0	0	0	0	0
18:45	0	0	0	0	0	0	0	50	2	1	0	0	53	53.5	76	3	2	0	0	81	82	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	216	9	10	0	0	235	240	366	19	15	1	0	401	409.8	0	0	0	0	0	0	0	0
19:00	0	0	0	0	0	0	0	55	2	2	1	0	60	62.3	81	5	0	0	0	86	86	0	0	0	0	0	0	0	0
19:15	0	0	0	0	0	0	0	51	2	0	0	0	53	53	73	3	0	1	1	78	80.3	0	0	0	0	0	0	0	0
19:30	0	0	0	0	0	0	0	60	1	0																			

00:30	0	0	0	0	0	0	0	0	1	0	0	0	1	1	2	1	0	0	0	3	3	0	0	0	0	0	0	0	0
00:45	0	0	0	0	0	0	0	3	1	0	0	0	4	4	3	0	0	0	0	3	3	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	13	2	0	0	0	15	15	17	1	0	1	0	19	20.3	0	0	0	0	0	0	0	0
01:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	2	0	0	0	0	0	0	0	0
01:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	3	3	0	0	0	0	0	0	0	0
01:30	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0
01:45	0	0	0	0	0	0	0	1	0	0	0	0	1	1	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	2	0	0	0	0	2	2	6	1	0	0	0	7	7	0	0	0	0	0	0	0	0
02:00	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:15	0	0	0	0	0	0	0	2	0	1	0	0	3	3.5	2	0	0	0	0	2	2	0	0	0	0	0	0	0	0
02:30	0	0	0	0	0	0	0	1	0	0	0	0	1	1	3	0	0	0	0	3	3	0	0	0	0	0	0	0	0
02:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	2	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	4	0	1	0	0	5	5.5	7	0	0	0	0	7	7	0	0	0	0	0	0	0	0
03:00	0	0	0	0	0	0	0	1	0	0	0	0	1	1	10	0	0	0	0	10	10	0	0	0	0	0	0	0	0
03:15	0	0	0	0	0	0	0	3	0	0	0	0	3	3	1	1	0	0	0	2	2	0	0	0	0	0	0	0	0
03:30	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	2	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	5	0	0	0	0	5	5	13	1	0	0	0	14	14	0	0	0	0	0	0	0	0
04:00	0	0	0	0	0	0	0	2	0	0	0	0	2	2	2	0	1	0	0	3	3.5	0	0	0	0	0	0	0	0
04:15	0	0	0	0	0	0	0	3	0	0	0	0	3	3	2	0	0	0	0	2	2	0	0	0	0	0	0	0	0
04:30	0	0	0	0	0	0	0	11	0	0	0	0	11	11	4	0	0	0	0	4	4	0	0	0	0	0	0	0	0
04:45	0	0	0	0	0	0	0	7	0	0	0	0	7	7	1	1	2	0	0	4	5	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	23	0	0	0	0	23	23	9	1	3	0	0	13	14.5	0	0	0	0	0	0	0	0
05:00	0	0	0	0	0	0	0	5	0	0	0	0	5	5	3	0	1	0	0	4	4.5	0	0	0	0	0	0	0	0
05:15	0	0	0	0	0	0	0	13	0	1	0	0	14	14.5	4	1	0	0	0	5	5	0	0	0	0	0	0	0	0
05:30	0	0	0	0	0	0	0	22	3	2	0	0	27	28	5	1	0	0	0	6	6	0	0	0	0	0	0	0	0
05:45	0	0	0	0	0	0	0	38	3	1	0	0	42	42.5	8	0	0	0	0	8	8	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	78	6	4	0	0	88	90	20	2	1	0	0	23	23.5	0	0	0	0	0	0	0	0
06:00	0	0	0	0	0	0	0	86	5	0	0	0	91	91	6	2	2	1	0	11	13.3	0	0	0	0	0	0	0	0
06:15	0	0	0	0	0	0	0	137	9	1	0	0	147	147.5	8	3	2	0	0	13	14	0	0	0	0	0	0	0	0
06:30	0	0	0	0	0	0	0	148	8	4	1	0	161	164.3	15	2	2	0	0	19	20	0	0	0	0	0	0	0	0
06:45	0	0	0	0	0	0	0	151	6	5	0	0	162	164.5	16	0	2	0	0	18	19	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	522	28	10	1	0	561	567.3	45	7	8	1	0	61	66.3	0	0	0	0	0	0	0	0
07:00	0	0	0	0	0	0	0	134	9	4	1	0	148	151.3	8	1	1	2	0	12	15.1	0	0	0	0	0	0	0	0
07:15	0	0	0	0	0	0	0	135	3	3	0	0	141	142.5	32	2	2	1	0	37	39.3	0	0	0	0	0	0	0	0
07:30	0	0	0	0	0	0	0	142	2	2	0	0	146	147	36	3	3	1	0	43	45.8	0	0	0	0	0	0	0	0
07:45	0	0	0	0	0	0	0	120	4	7	0	0	131	134.5	45	6	2	0	0	53	54	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	531	18	16	1	0	566	575.3	121	12	8	4	0	145	154.2	0	0	0	0	0	0	0	0
08:00	0	0	0	0	0	0	0	129	5	1	1	0	136	137.8	39	4	1	0	0	44	44.5	0	0	0	0	0	0	0	0
08:15	0	0	0	0	0	0	0	123	3	1	0	0	127	127.5	61	3	2	0	0	66	67	0	0	0	0	0	0	0	0
08:30	0	0	0	0	0	0	0	78	1	0	1	0	80	81.3	81	4	2	0	0	87	88	0	0	0	0	0	0	0	0
08:45	0	0	0	0	0	0	0	77	0	4	0	0	81	83	57	3	0	0	0	60	60	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	407	9	6	2	0	424	429.6	238	14	5	0	0	257	259.5	0	0	0	0	0	0	0	0
09:00	0	0	0	0	0	0	0	88	4	3	0	0	95	96.5	48	3	3	0	0	54	55.5	0	0	0	0	0	0	0	0
09:15	0	0	0	0	0	0	0	84	4	0	0	0	88	88	47	6	3	0	0	56	57.5	0	0	0	0	0	0	0	0
09:30	0	0	0	0	0	0	0	72	2	7	0	0	81	84.5	48	4	2	0	0	54	55	0	0	0	0	0	0	0	0
09:45	0	0	0	0	0	0	0	60	0	4	0	0	64	66	38	10	1	0	0	49	49.5	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	304	10	14	0	0	328	335	181	23	9	0	0	213	217.5	0	0	0	0	0	0	0	0
10:00	0	0	0	0	0	0	0	61	2	4	0	0	67	69	44	9	1	0	0	54	54.5	0	0	0	0	0	0	0	0
10:15	0	0	0	0	0	0	0	50	1	0	0	0	51	51	38	2	3	1	0	44	46.8	0	0	0	0	0	0	0	0
10:30	0	0	0	0	0	0	0	63	4	0	0	0	67	67	41	1	0	0	0	42	42	0	0	0	0	0	0	0	0
10:45	0	0	0	0	0	0	0	47	0	1	0	0	48	48.5	41	3	4	2	0	50	54.6	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	221	7	5	0	0	233	235.5	164	15	8	3	0	190	197.9	0	0	0	0	0	0	0	0
11:00	0	0	0	0	0	0	0	45	1	6	0	0	52	55	34	5	2	0	0	41	42	0	0	0	0	0	0	0	0
11:15	0	0	0	0	0	0	0	57	1	4	0	0	62	64	43	1	1	0	0	45	45.5	0	0	0	0	0	0	0	0
11:30	0	0	0	0	0	0	0	57	2	1	0	0	60	60.5	60	5	0	0	0	65	65	0	0	0	0	0	0	0	0
11:45	0	0	0	0	0	0	0	50	2	2	0	0	54	55	58	3	3	0	0	64	65.5	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	209	6	13	0	0	228	234.5	195	14	6	0	0	215	218	0	0	0	0	0	0	0	0
12:00	0	0	0	0	0	0	0	65	1	2	0	0	68	69	56	2	6	1	0	65	69.3	0	0	0	0	0	0	0	0
12:15	0	0	0	0	0	0	0	53	2	2	0	0	57	58	53	4	3	0	0	60	61.5	0	0	0	0	0	0	0	0
12:30	0	0	0	0	0	0	0	58	3	2	0	0	63	64	54	7	4	0	0	65	67	0	0	0	0	0	0	0	0
12:45	0	0	0	0	0	0	0	56	1	2	0	0	59	60	52	3	4	0	0	59	61	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	232	7	8	0	0	247	251	215	16	17	1	0	249	258.8	0	0	0	0	0	0	0	0
13:00	0	0	0	0	0	0	0	52</																					

11:30	0	0	0	0	0	0	0	32	0	1	0	0	33	33.5	39	5	1	1	0	46	47.8	0	0	0	0	0	0	0	0
11:45	0	0	0	0	0	0	0	66	0	1	0	0	67	67.5	49	4	2	0	0	55	56	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	178	3	6	1	1	189	194.3	183	14	4	2	0	203	207.6	0	0	0	0	0	0	0	0
12:00	0	0	0	0	0	0	0	52	1	2	0	0	55	56	62	2	0	0	0	64	64	0	0	0	0	0	0	0	0
12:15	0	0	0	0	0	0	0	70	2	0	0	0	72	72	55	7	2	1	0	65	67.3	0	0	0	0	0	0	0	0
12:30	0	0	0	0	0	0	0	58	1	5	1	0	65	68.8	66	7	1	0	0	74	74.5	0	0	0	0	0	0	0	0
12:45	0	0	0	0	0	0	0	54	0	4	0	0	58	60	63	7	2	1	0	73	75.3	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	234	4	11	1	1	250	256.8	246	23	5	2	0	276	281.1	0	0	0	0	0	0	0	0
13:00	0	0	0	0	0	0	0	63	0	1	0	0	64	64.5	87	5	2	0	0	94	95	0	0	0	0	0	0	0	0
13:15	0	0	0	0	0	0	0	62	3	2	0	0	67	68	71	0	2	2	0	75	78.6	0	0	0	0	0	0	0	0
13:30	0	0	0	0	0	0	0	68	1	1	1	0	71	72.8	72	2	2	0	0	76	77	0	0	0	0	0	0	0	0
13:45	0	0	0	0	0	0	0	80	1	2	0	0	83	84	81	6	0	0	0	87	87	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	273	5	6	1	0	285	289.3	311	13	6	2	0	332	337.6	0	0	0	0	0	0	0	0
14:00	0	0	0	0	0	0	0	58	0	0	0	0	58	58	46	4	3	0	0	53	54.5	0	0	0	0	0	0	0	0
14:15	0	0	0	0	0	0	0	51	0	1	0	0	52	52.5	18	4	0	0	2	24	26	0	0	0	0	0	0	0	0
14:30	0	0	0	0	0	0	0	36	2	4	0	0	42	44	26	1	4	0	0	31	33	0	0	0	0	0	0	0	0
14:45	0	0	0	0	0	0	0	64	0	3	0	0	67	68.5	42	1	5	0	0	48	50.5	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	209	2	8	0	0	219	223	132	10	12	0	2	156	164	0	0	0	0	0	0	0	0
15:00	0	0	0	0	0	0	0	63	0	4	0	0	67	69	30	3	4	0	0	37	39	0	0	0	0	0	0	0	0
15:15	0	0	0	0	0	0	0	48	0	3	0	0	51	52.5	35	2	2	1	0	40	42.3	0	0	0	0	0	0	0	0
15:30	0	0	0	0	0	0	0	29	1	1	0	0	31	31.5	32	5	2	1	0	40	42.3	0	0	0	0	0	0	0	0
15:45	0	0	0	0	0	0	0	44	0	1	0	0	45	45.5	45	3	4	0	0	52	54	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	184	1	9	0	0	194	198.5	142	13	12	2	0	169	177.6	0	0	0	0	0	0	0	0
16:00	0	0	0	0	0	0	0	39	0	4	0	0	43	45	52	2	4	0	1	59	62	0	0	0	0	0	0	0	0
16:15	0	0	0	0	0	0	0	45	0	2	0	0	47	48	68	1	2	0	0	71	72	0	0	0	0	0	0	0	0
16:30	0	0	0	0	0	0	0	43	2	2	0	0	47	48	42	0	4	1	0	47	50.3	0	0	0	0	0	0	0	0
16:45	0	0	0	0	0	0	0	59	0	1	1	0	61	62.8	51	3	3	0	0	57	58.5	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	186	2	9	1	0	198	203.8	213	6	13	1	1	234	242.8	0	0	0	0	0	0	0	0
17:00	0	0	0	0	0	0	0	51	1	0	0	0	52	52	60	2	5	0	1	68	71.5	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	44	1	0	0	0	45	45	67	4	3	1	0	75	77.8	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	47	0	1	1	0	49	50.8	45	2	1	0	0	48	48.5	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0	27	0	0	0	0	27	27	74	2	6	0	0	82	85	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	169	2	1	1	1	173	174.8	246	10	15	1	1	273	282.8	0	0	0	0	0	0	0	0
18:00	0	0	0	0	0	0	0	47	0	1	0	0	48	48.5	93	2	3	0	0	98	99.5	0	0	0	0	0	0	0	0
18:15	0	0	0	0	0	0	0	58	0	0	0	0	58	58	115	3	5	1	1	125	129.8	0	0	0	0	0	0	0	0
18:30	0	0	0	0	0	0	0	55	0	0	0	0	55	55	105	5	5	0	0	115	117.5	0	0	0	0	0	0	0	0
18:45	0	0	0	0	0	0	0	63	3	0	0	0	66	66	68	2	2	0	0	72	73	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	223	3	1	0	0	227	227.5	381	12	15	1	1	410	419.8	0	0	0	0	0	0	0	0
19:00	0	0	0	0	0	0	0	42	1	0	0	0	43	43	62	1	1	1	0	65	66.8	0	0	0	0	0	0	0	0
19:15	0	0	0	0	0	0	0	46	0	2	0	0	48	49	66	4	5	0	0	75	77.5	0	0	0	0	0	0	0	0
19:30	0	0	0	0	0	0	0	53	0	2	0	0	55	56	43	2	1	0	1	47	48.5	0	0	0	0	0	0	0	0
19:45	0	0	0	0	0	0	0	43	0	1	0	0	44	44.5	59	2	0	0	0	61	61	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	184	1	5	0	0	190	192.5	230	9	7	1	1	248	253.8	0	0	0	0	0	0	0	0
20:00	0	0	0	0	0	0	0	41	1	3	0	0	45	46.5	62	0	2	0	0	64	65	0	0	0	0	0	0	0	0
20:15	0	0	0	0	0	0	0	41	2	3	0	0	46	47.5	49	1	4	1	0	55	58.3	0	0	0	0	0	0	0	0
20:30	0	0	0	0	0	0	0	48	0	1	0	0	49	49.5	48	2	0	0	0	50	50	0	0	0	0	0	0	0	0
20:45	0	0	0	0	0	0	0	31	0	0	0	0	31	31	53	0	0	0	0	53	53	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	161	3	7	0	0	171	174.5	212	3	6	1	0	222	226.3	0	0	0	0	0	0	0	0
21:00	0	0	0	0	0	0	0	26	0	0	0	0	26	26	51	0	0	0	0	51	51	0	0	0	0	0	0	0	0
21:15	0	0	0	0	0	0	0	28	1	2	0	0	31	32	39	3	2	0	0	44	45	0	0	0	0	0	0	0	0
21:30	0	0	0	0	0	0	0	36	0	1	1	0	38	39.8	38	0	1	0	0	39	39.5	0	0	0	0	0	0	0	0
21:45	0	0	0	0	0	0	0	34	1	3	0	0	38	39.5	30	0	0	0	0	30	30	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	124	2	6	1	0	133	137.3	158	3	3	0	0	164	165.5	0	0	0	0	0	0	0	0
22:00	0	0	0	0	0	0	0	24	0	0	0	0	24	24	24	2	0	0	0	26	26	0	0	0	0	0	0	0	0
22:15	0	0	0	0	0	0	0	33	1	0	0	0	34	34	37	2	0	0	0	39	39	0	0	0	0	0	0	0	0
22:30	0	0	0	0	0	0	0	16	0	1	0	0	17	17.5	25	1	0	0	0	26	26	0	0	0	0	0	0	0	0
22:45	0	0	0	0	0	0	0	9	0	0	0	0	9	9	21	1	0	0	0	22	22	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	82	1	1	0	0	84	84.5	107	6	0	0	0	113	113	0	0	0	0	0	0	0	0
23:00	0	0	0	0	0	0	0	17	1	0	0	0	18	18	25	1	0	1	0	27	28.3	0	0	0	0	0	0	0	0
23:15	0	0	0	0	0	0	0	9	0	0	0	0	9	9	17	0	0	0	0	17	17	0	0	0	0	0	0	0	0
23:30	0	0	0	0	0	0	0	8	0	0	0	0	8	8	13	1	0	0	1	15	16	0	0	0	0	0	0	0	0
23:45	0	0	0	0	0	0	0	8	0	0	0	0	8	8	13	0	0	0	0	13	13	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0																								

22:30	0	0	0	0	0	0	0	16	0	0	0	0	16	16	19	1	0	0	0	20	20	0	0	0	0	0	0	0	0
22:45	0	0	0	0	0	0	0	19	0	0	0	0	19	19	16	0	0	0	0	16	16	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	83	1	1	0	0	85	85.5	102	2	0	1	0	105	106.3	0	0	0	0	0	0	0	0
23:00	0	0	0	0	0	0	0	12	0	0	0	0	12	12	17	0	1	0	0	18	18.5	0	0	0	0	0	0	0	0
23:15	0	0	0	0	0	0	0	18	0	0	0	0	18	18	15	2	1	0	0	18	18.5	0	0	0	0	0	0	0	0
23:30	0	0	0	0	0	0	0	12	0	0	0	0	12	12	32	2	0	0	0	34	34	0	0	0	0	0	0	0	0
23:45	0	0	0	0	0	0	0	9	1	0	0	0	10	10	20	1	0	0	0	21	21	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	51	1	0	0	0	52	52	84	5	2	0	0	91	92	0	0	0	0	0	0	0	0
24 TOT	0	0	0	0	0	0	0	3522	64	80	7	0	3673	3722.1	3553	179	90	14	2	3838	3903.2	0	0	0	0	0	0	0	0



IDASO

Survey Name: 098 19097 Kilcullen ATC
 Site: ATC 1
 Location: Main St
 Date: 19-May-2019

TIME	A => A							A => B							B => A							B => B						
	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU
00:00	0	0	0	0	0	0	0	15	0	0	0	0	15	15	5	2	0	0	0	7	7	0	0	0	0	0	0	0
00:15	0	0	0	0	0	0	0	9	0	0	0	0	9	9	14	0	0	0	0	14	14	0	0	0	0	0	0	0
00:30	0	0	0	0	0	0	0	7	1	0	0	0	8	8	12	1	0	0	0	13	13	0	0	0	0	0	0	0
00:45	0	0	0	0	0	0	0	9	0	0	0	0	9	9	8	0	0	0	0	8	8	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	40	1	0	0	0	41	41	39	3	0	0	0	42	42	0	0	0	0	0	0	0
01:00	0	0	0	0	0	0	0	6	0	0	0	0	6	6	14	0	0	0	0	14	14	0	0	0	0	0	0	0
01:15	0	0	0	0	0	0	0	11	0	0	0	0	11	11	15	2	0	0	0	17	17	0	0	0	0	0	0	0
01:30	0	0	0	0	0	0	0	4	0	0	0	0	4	4	10	0	0	0	0	10	10	0	0	0	0	0	0	0
01:45	0	0	0	0	0	0	0	7	0	0	0	0	7	7	8	0	0	0	0	8	8	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	28	0	0	0	0	28	28	47	2	0	0	0	49	49	0	0	0	0	0	0	0
02:00	0	0	0	0	0	0	0	10	0	1	0	0	11	11.5	3	4	0	0	0	7	7	0	0	0	0	0	0	0
02:15	0	0	0	0	0	0	0	5	0	0	0	0	5	5	4	1	0	0	0	5	5	0	0	0	0	0	0	0
02:30	0	0	0	0	0	0	0	3	0	0	0	0	3	3	6	0	0	0	0	6	6	0	0	0	0	0	0	0
02:45	0	0	0	0	0	0	0	1	0	0	0	0	1	1	5	0	0	0	0	5	5	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	19	0	1	0	0	20	20.5	18	5	0	0	0	23	23	0	0	0	0	0	0	0
03:00	0	0	0	0	0	0	0	1	0	0	0	0	1	1	6	1	0	0	0	7	7	0	0	0	0	0	0	0
03:15	0	0	0	0	0	0	0	4	2	0	0	0	6	6	2	0	0	0	0	2	2	0	0	0	0	0	0	0
03:30	0	0	0	0	0	0	0	5	0	1	0	0	6	6.5	4	0	0	0	0	4	4	0	0	0	0	0	0	0
03:45	0	0	0	0	0	0	0	1	0	1	0	0	2	2.5	5	0	0	0	0	5	5	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	11	2	2	0	0	15	16	17	1	0	0	0	18	18	0	0	0	0	0	0	0
04:00	0	0	0	0	0	0	0	2	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15	0	0	0	0	0	0	0	1	0	0	0	0	1	1	1	0	0	0	0	1	1	0	0	0	0	0	0	0
04:30	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	1	0	0	1	1.5	0	0	0	0	0	0	0
04:45	0	0	0	0	0	0	0	1	0	0	0	0	1	1	2	0	0	0	0	2	2	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	5	0	0	0	0	5	5	3	0	1	0	0	4	4.5	0	0	0	0	0	0	0
05:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	5	5	0	0	0	0	0	0	0
05:15	0	0	0	0	0	0	0	5	0	0	0	0	5	5	3	1	0	0	0	4	4	0	0	0	0	0	0	0
05:30	0	0	0	0	0	0	0	3	0	0	0	0	3	3	3	0	0	0	0	3	3	0	0	0	0	0	0	0
05:45	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	9	0	0	0	0	9	9	11	1	0	0	0	12	12	0	0	0	0	0	0	0
06:00	0	0	0	0	0	0	0	5	0	1	0	0	6	6.5	4	0	0	0	0	4	4	0	0	0	0	0	0	0
06:15	0	0	0	0	0	0	0	3	0	0	0	0	3	3	2	1	0	0	0	3	3	0	0	0	0	0	0	0
06:30	0	0	0	0	0	0	0	9	0	1	0	0	10	10.5	4	0	0	0	0	4	4	0	0	0	0	0	0	0
06:45	0	0	0	0	0	0	0	7	0	0	0	0	7	7	1	1	1	0	0	3	3.5	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	24	0	2	0	0	26	27	11	2	1	0	0	14	14.5	0	0	0	0	0	0	0
07:00	0	0	0	0	0	0	0	8	1	0	0	0	9	9	4	0	0	0	0	4	4	0	0	0	0	0	0	0
07:15	0	0	0	0	0	0	0	20	0	0	0	0	20	20	8	1	0	0	1	10	11	0	0	0	0	0	0	0
07:30	0	0	0	0	0	0	0	15	0	0	0	0	15	15	8	0	0	0	0	8	8	0	0	0	0	0	0	0
07:45	0	0	0	0	0	0	0	9	0	0	0	0	9	9	9	1	0	0	0	10	10	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	52	1	0	0	0	53	53	29	2	0	0	1	32	33	0	0	0	0	0	0	0
08:00	0	0	0	0	0	0	0	15	1	0	0	0	16	16	11	0	0	0	0	11	11	0	0	0	0	0	0	0
08:15	0	0	0	0	0	0	0	27	0	0	0	0	27	27	17	0	0	0	0	17	17	0	0	0	0	0	0	0
08:30	0	0	0	0	0	0	0	21	1	0	0	0	22	22	19	2	0	1	0	22	23.3	0	0	0	0	0	0	0
08:45	0	0	0	0	0	0	0	14	0	2	0	0	16	17	14	0	0	0	0	14	14	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	77	2	2	0	0	81	82	61	2	0	1	0	64	65.3	0	0	0	0	0	0	0
09:00	0	0	0	0	0	0	0	13	0	0	0	0	13	13	15	0	1	0	0	16	16.5	0	0	0	0	0	0	0
09:15	0	0	0	0	0	0	0	14	0	0	0	0	14	14	23	1	0	0	0	24	24	0	0	0	0	0	0	0
09:30	0	0	0	0	0	0	0	28	0	0	0	0	28	28	22	0	0	0	0	22	22	0	0	0	0	0	0	0
09:45	0	0	0	0	0	0	0	29	0	0	0	0	29	29	33	2	0	0	0	35	35	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	84	0	0	0	0	84	84	93	3	1	0	0	97	97.5	0	0	0	0	0	0	0
10:00	0	0	0	0	0	0	0	36	2	1	0	0	39	39.5	27	1	1	0	0	29	29.5	0	0	0	0	0	0	0
10:15	0	0	0	0	0	0	0	33	1	1	0	0	35	35.5	34	0	0	0	0	34	34	0	0	0	0	0	0	0
10:30	0	0	0	0	0	0	0	30	0	0	0	0	30	30	34	0	0	0	0	34	34	0	0	0	0	0	0	0
10:45	0	0	0	0	0	0	0	50	0	0	0	0	50	50	50	3												



IDASO

Survey Name: 098 19097 Kilcullen ATC
 Site: ATC 2
 Location: Lower Main St
 Date: 14-May-2019

TIME	A => A							A => B							B => A							B => B						
	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU
00:00	0	0	0	0	0	0	0	2	0	0	0	0	2	2	4	0	0	1	0	5	6.3	0	0	0	0	0	0	
00:15	0	0	0	0	0	0	0	2	0	1	0	0	3	3.5	4	0	0	0	0	4	4	0	0	0	0	0	0	
00:30	0	0	0	0	0	0	0	3	0	0	0	0	3	3	2	0	0	0	0	2	2	0	0	0	0	0	0	
00:45	0	0	0	0	0	0	0	1	0	0	0	0	1	1	4	1	0	0	0	5	5	0	0	0	0	0	0	
H/TOT	0	0	0	0	0	0	0	8	0	1	0	0	9	9.5	14	1	0	1	0	16	17.3	0	0	0	0	0	0	
01:00	0	0	0	0	0	0	0	6	0	0	0	0	6	6	3	1	0	0	0	4	4	0	0	0	0	0	0	
01:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3	0	0	0	0	0	0	
01:30	0	0	0	0	0	0	0	1	0	1	0	0	2	2.5	1	0	0	0	0	1	1	0	0	0	0	0	0	
01:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	2	0	0	0	0	0	0	
H/TOT	0	0	0	0	0	0	0	7	0	1	0	0	8	8.5	9	1	0	0	0	10	10	0	0	0	0	0	0	
02:00	0	0	0	0	0	0	0	2	0	0	0	0	2	2	2	0	0	0	0	2	2	0	0	0	0	0	0	
02:15	0	0	0	0	0	0	0	2	0	0	0	0	2	2	4	0	0	0	0	4	4	0	0	0	0	0	0	
02:30	0	0	0	0	0	0	0	1	0	0	0	0	1	1	1	0	0	0	0	1	1	0	0	0	0	0	0	
02:45	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	
H/TOT	0	0	0	0	0	0	0	6	0	0	0	0	6	6	7	0	0	0	0	7	7	0	0	0	0	0	0	
03:00	0	0	0	0	0	0	0	1	0	0	0	0	1	1	14	1	0	0	0	15	15	0	0	0	0	0	0	
03:15	0	0	0	0	0	0	0	0	0	1	0	0	1	1.5	2	0	0	0	0	2	2	0	0	0	0	0	0	
03:30	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	
03:45	0	0	0	0	0	0	0	5	0	0	0	0	5	5	0	0	0	0	0	0	0	0	0	0	0	0	0	
H/TOT	0	0	0	0	0	0	0	7	0	1	0	0	8	8.5	16	1	0	0	0	17	17	0	0	0	0	0	0	
04:00	0	0	0	0	0	0	0	1	0	0	0	0	1	1	1	0	1	0	0	2	2.5	0	0	0	0	0	0	
04:15	0	0	0	0	0	0	0	6	0	0	0	0	6	6	1	0	0	0	0	1	1	0	0	0	0	0	0	
04:30	0	0	0	0	0	0	0	10	0	0	0	0	10	10	1	0	0	0	0	1	1	0	0	0	0	0	0	
04:45	0	0	0	0	0	0	0	4	0	0	0	0	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	
H/TOT	0	0	0	0	0	0	0	21	0	0	0	0	21	21	3	0	1	0	0	4	4.5	0	0	0	0	0	0	
05:00	0	0	0	0	0	0	0	4	0	1	0	0	5	5.5	3	0	1	0	0	4	4.5	0	0	0	0	0	0	
05:15	0	0	0	0	0	0	0	9	2	1	0	0	12	12.5	4	1	1	0	0	6	6.5	0	0	0	0	0	0	
05:30	0	0	0	0	0	0	0	29	0	0	0	0	29	29	1	1	0	0	0	2	2	0	0	0	0	0	0	
05:45	0	0	0	0	0	0	0	36	0	0	0	0	36	36	6	1	1	0	0	8	8.5	0	0	0	0	0	0	
H/TOT	0	0	0	0	0	0	0	78	2	2	0	0	82	83	14	3	3	0	0	20	21.5	0	0	0	0	0	0	
06:00	0	0	0	0	0	0	0	114	8	3	0	0	125	126.5	2	2	0	0	0	4	4	0	0	0	0	0	0	
06:15	0	0	0	0	0	0	0	169	8	4	1	0	182	185.3	7	3	1	1	0	12	13.8	0	0	0	0	0	0	
06:30	0	0	0	0	0	0	0	198	14	2	0	0	214	215	9	1	2	0	0	12	13	0	0	0	0	0	0	
06:45	0	0	0	0	0	0	0	190	8	5	1	0	204	207.8	10	2	0	0	0	12	12	0	0	0	0	0	0	
H/TOT	0	0	0	0	0	0	0	671	38	14	2	0	725	734.6	28	8	3	1	0	40	42.8	0	0	0	0	0	0	
07:00	0	0	0	0	0	0	0	157	8	2	0	0	167	168	13	3	2	1	1	20	23.3	0	0	0	0	0	0	
07:15	0	0	0	0	0	0	0	144	10	1	1	0	156	157.8	21	2	2	1	1	27	30.3	0	0	0	0	0	0	
07:30	0	0	0	0	0	0	0	150	4	2	0	0	156	157	26	5	4	0	0	35	37	0	0	0	0	0	0	
07:45	0	0	0	0	0	0	0	138	9	4	0	0	151	153	43	2	1	0	0	46	46.5	0	0	0	0	0	0	
H/TOT	0	0	0	0	0	0	0	589	31	9	1	0	630	635.8	103	12	9	2	2	128	137.1	0	0	0	0	0	0	
08:00	0	0	0	0	0	0	0	169	3	1	0	0	173	173.5	44	6	2	0	1	53	55	0	0	0	0	0	0	
08:15	0	0	0	0	0	0	0	137	1	3	0	0	141	142.5	51	4	3	0	0	58	59.5	0	0	0	0	0	0	
08:30	0	0	0	0	0	0	0	108	1	5	0	0	114	116.5	54	7	2	0	0	63	64	0	0	0	0	0	0	
08:45	0	0	0	0	0	0	0	92	2	1	0	0	95	95.5	36	5	4	1	1	47	51.3	0	0	0	0	0	0	
H/TOT	0	0	0	0	0	0	0	506	7	10	0	0	523	528	185	22	11	1	2	221	229.8	0	0	0	0	0	0	
09:00	0	0	0	0	0	0	0	133	2	3	0	0	138	139.5	41	7	1	1	0	50	51.8	0	0	0	0	0	0	
09:15	0	0	0	0	0	0	0	94	1	2	0	0	97	98	49	5	1	0	0	55	55.5	0	0	0	0	0	0	
09:30	0	0	0	0	0	0	0	102	0	6	0	0	108	111	37	5	4	1	0	47	50.3	0	0	0	0	0	0	
09:45	0	0	0	0	0	0	0	88	2	0	0	0	90	90	37	7	4	0	0	48	50	0	0	0	0	0	0	
H/TOT	0	0	0	0	0	0	0	417	5	11	0	0	433	438.5	164	24	10	2	0	200	207.6	0	0	0	0	0	0	
10:00	0	0	0	0	0	0	0	79	2	2	0	0	83	84	57	3	4	1	0	65	68.3	0	0	0	0	0	0	
10:15	0	0	0	0	0	0	0	65	2	1	0	0	68	68.5	46	3	2	0	0	51	52	0	0	0	0	0	0	
10:30	0	0	0	0	0	0	0	73	5	2	0	0	80	81	36	8	5	1	1	51	55.8	0	0	0	0	0	0	
10:45	0	0	0	0	0	0	0	48	3	2	1	0	54	56.3	37	6	2	0	0	45	46	0	0	0	0	0	0	
H/TOT	0	0	0	0	0	0	0	265	12	7	1	0	285	289.8	176	20	13	2	1	212	222.1	0	0	0	0	0	0	
11:00	0	0	0	0	0	0	0	63	2	4	1	0	70	73.3	48	7	2	0	0	57	58	0	0	0	0	0	0	
11:15	0	0	0	0	0	0	0	58	1	2	0	0	61	62	63	6	5	0	0	74	76.5	0	0	0	0	0	0	
11:30	0	0	0	0	0	0	0	51	2	2	0	0	55	56	38	6	2	1	0	47	49.3	0	0	0	0	0	0	
11:45																												

19:00	0	0	0	0	0	0	0	60	0	0	0	0	60	60	74	1	2	0	0	77	78	0	0	0	0	0	0	0	0
19:15	0	0	0	0	0	0	0	62	2	0	0	0	64	64	64	4	2	1	0	71	73.3	0	0	0	0	0	0	0	0
19:30	0	0	0	0	0	0	0	61	0	0	0	0	61	61	57	3	3	0	0	63	64.5	0	0	0	0	0	0	0	0
19:45	0	0	0	0	0	0	0	53	1	0	0	0	54	54	54	4	0	0	0	58	58	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	236	3	0	0	0	239	239	249	12	7	1	0	269	273.8	0	0	0	0	0	0	0	0
20:00	0	0	0	0	0	0	0	44	1	1	0	0	46	46.5	46	6	0	0	52	52	0	0	0	0	0	0	0	0	0
20:15	0	0	0	0	0	0	0	54	0	0	0	0	54	54	48	5	1	0	0	54	54.5	0	0	0	0	0	0	0	0
20:30	0	0	0	0	0	0	0	41	0	0	0	0	41	41	34	2	0	0	0	36	36	0	0	0	0	0	0	0	0
20:45	0	0	0	0	0	0	0	29	0	1	0	0	30	30.5	41	4	1	1	0	47	48.8	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	168	1	2	0	0	171	172	169	17	2	1	0	189	191.3	0	0	0	0	0	0	0	0
21:00	0	0	0	0	0	0	0	33	0	0	0	0	33	33	45	5	2	0	0	52	53	0	0	0	0	0	0	0	0
21:15	0	0	0	0	0	0	0	33	0	0	0	0	33	33	33	1	0	0	0	34	34	0	0	0	0	0	0	0	0
21:30	0	0	0	0	0	0	0	58	0	1	0	0	59	59.5	27	3	0	0	0	30	30	0	0	0	0	0	0	0	0
21:45	0	0	0	0	0	0	0	44	0	0	0	0	44	44	45	2	0	0	0	47	47	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	168	0	1	0	0	169	169.5	150	11	2	0	0	163	164	0	0	0	0	0	0	0	0
22:00	0	0	0	0	0	0	0	29	0	0	0	0	29	29	30	1	0	0	0	31	31	0	0	0	0	0	0	0	0
22:15	0	0	0	0	0	0	0	16	0	0	0	0	16	16	25	1	0	0	0	26	26	0	0	0	0	0	0	0	0
22:30	0	0	0	0	0	0	0	10	1	0	0	0	11	11	20	2	0	1	0	23	24.3	0	0	0	0	0	0	0	0
22:45	0	0	0	0	0	0	0	14	0	0	0	0	14	14	20	1	0	0	0	21	21	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	69	1	0	0	0	70	70	95	5	0	1	0	101	102.3	0	0	0	0	0	0	0	0
23:00	0	0	0	0	0	0	0	15	0	0	0	0	15	15	6	0	0	0	0	6	6	0	0	0	0	0	0	0	0
23:15	0	0	0	0	0	0	0	4	0	0	0	0	4	4	9	0	0	0	0	9	9	0	0	0	0	0	0	0	0
23:30	0	0	0	0	0	0	0	4	0	0	0	0	4	4	11	3	0	1	0	15	16.3	0	0	0	0	0	0	0	0
23:45	0	0	0	0	0	0	0	5	0	0	0	0	5	5	3	1	0	0	0	4	4	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	28	0	0	0	0	28	28	29	4	0	1	0	34	35.3	0	0	0	0	0	0	0	0
24 TOT	0	0	0	0	0	0	0	5105	150	123	5	0	5383	5451	3210	306	152	24	9	3701	3817.2	0	0	0	0	0	0	0	0



IDASO

Survey Name: 098 19097 Kilcullen ATC
 Site: ATC 2
 Location: Lower Main St
 Date: 15-May-2019

TIME	A => A							A => B							B => A							B => B						
	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU
00:00	0	0	0	0	0	0	0	3	0	0	0	0	3	3	4	0	0	0	0	4	4	0	0	0	0	0	0	0
00:15	0	0	0	0	0	0	0	3	0	0	0	0	3	3	6	0	0	0	0	6	6	0	0	0	0	0	0	0
00:30	0	0	0	0	0	0	0	2	0	0	0	0	2	2	3	0	0	0	0	3	3	0	0	0	0	0	0	0
00:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	2	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	8	0	0	0	0	8	8	15	0	0	0	0	15	15	0	0	0	0	0	0	0
01:00	0	0	0	0	0	0	0	4	0	0	0	0	4	4	5	1	0	0	0	6	6	0	0	0	0	0	0	0
01:15	0	0	0	0	0	0	0	4	0	0	0	0	4	4	3	1	0	0	0	4	4	0	0	0	0	0	0	0
01:30	0	0	0	0	0	0	0	2	0	0	0	0	2	2	3	0	0	0	0	3	3	0	0	0	0	0	0	0
01:45	0	0	0	0	0	0	0	1	0	0	0	0	1	1	2	0	0	0	0	2	2	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	11	0	0	0	0	11	11	13	2	0	0	0	15	15	0	0	0	0	0	0	0
02:00	0	0	0	0	0	0	0	1	0	0	0	0	1	1	1	0	0	0	0	1	1	0	0	0	0	0	0	0
02:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	3	3	0	0	0	0	0	0	0
02:30	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	0	0	0
02:45	0	0	0	0	0	0	0	1	0	0	0	0	1	1	4	0	0	0	0	4	4	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	2	0	0	0	0	2	2	8	0	0	0	0	8	8	0	0	0	0	0	0	0
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14	0	0	0	0	14	14	0	0	0	0	0	0	0
03:15	0	0	0	0	0	0	0	1	0	0	0	0	1	1	2	1	0	0	0	3	3	0	0	0	0	0	0	0
03:30	0	0	0	0	0	0	0	2	0	0	0	0	2	2	1	0	0	0	0	1	1	0	0	0	0	0	0	0
03:45	0	0	0	0	0	0	0	6	0	0	0	0	6	6	0	1	1	0	0	2	2.5	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	9	0	0	0	0	9	9	17	2	1	0	0	20	20.5	0	0	0	0	0	0	0
04:00	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	1	0	0	1	1.5	0	0	0	0	0	0	0
04:15	0	0	0	0	0	0	0	3	0	0	0	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30	0	0	0	0	0	0	0	13	0	0	0	0	13	13	1	1	0	0	0	2	2	0	0	0	0	0	0	0
04:45	0	0	0	0	0	0	0	6	0	0	0	0	6	6	1	0	1	0	0	2	2.5	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	23	0	0	0	0	23	23	2	1	2	0	0	5	6	0	0	0	0	0	0	0
05:00	0	0	0	0	0	0	0	10	0	0	0	0	10	10	3	0	0	0	0	3	3	0	0	0	0	0	0	0
05:15	0	0	0	0	0	0	0	14	0	1	0	0	15	15.5	4	0	2	0	0	6	7	0	0	0	0	0	0	0
05:30	0	0	0	0	0	0	0	29	2	1	0	0	32	32.5	5	2	1	0	0	8	8.5	0	0	0	0	0	0	0
05:45	0	0	0	0	0	0	0	44	1	0	0	0	45	45	2	3	0	0	0	5	5	0	0	0	0	0	0	0
H/TOT	0	0	0																									

13:45	0	0	0	0	0	0	0	59	0	3	0	0	62	63.5	35	3	2	0	0	40	41	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	233	1	12	0	0	246	252	205	15	8	1	1	230	236.3	0	0	0	0	0	0	0	0
14:00	0	0	0	0	0	0	0	76	2	6	0	0	84	87	49	9	2	0	0	60	61	0	0	0	0	0	0	0	0
14:15	0	0	0	0	0	0	0	55	2	4	0	0	61	63	71	5	0	0	0	76	76	0	0	0	0	0	0	0	0
14:30	0	0	0	0	0	0	0	57	2	2	0	0	61	62	58	8	1	0	0	67	67.5	0	0	0	0	0	0	0	0
14:45	0	0	0	0	0	0	0	76	2	2	0	0	80	81	44	6	1	0	1	52	53.5	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	264	8	14	0	0	286	293	222	28	4	0	1	255	258	0	0	0	0	0	0	0	0
15:00	0	0	0	0	0	0	0	68	1	4	0	0	73	75	48	5	2	1	0	56	58.3	0	0	0	0	0	0	0	0
15:15	0	0	0	0	0	0	0	65	1	3	0	0	69	70.5	67	10	4	1	0	82	85.3	0	0	0	0	0	0	0	0
15:30	0	0	0	0	0	0	0	68	1	5	0	0	74	76.5	63	4	4	0	0	71	73	0	0	0	0	0	0	0	0
15:45	0	0	0	0	0	0	0	65	1	2	0	0	68	69	70	11	3	0	0	84	85.5	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	266	4	14	0	0	284	291	248	30	13	2	0	293	302.1	0	0	0	0	0	0	0	0
16:00	0	0	0	0	0	0	0	59	3	2	0	0	64	65	54	4	5	0	0	63	65.5	0	0	0	0	0	0	0	0
16:15	0	0	0	0	0	0	0	61	0	3	0	0	64	65.5	50	0	6	0	0	56	59	0	0	0	0	0	0	0	0
16:30	0	0	0	0	0	0	0	59	1	4	0	0	64	66	19	0	1	0	0	20	20.5	0	0	0	0	0	0	0	0
16:45	0	0	0	0	0	0	0	68	1	0	0	0	69	69	37	2	3	1	0	43	45.8	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	247	5	9	0	0	261	265.5	160	6	15	1	0	182	190.8	0	0	0	0	0	0	0	0
17:00	0	0	0	0	0	0	0	58	1	2	0	0	61	62	50	0	4	0	0	54	56	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	63	0	1	0	0	64	64.5	61	4	4	0	1	70	73	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	61	0	1	0	0	62	62.5	35	2	3	0	0	40	41.5	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0	65	2	5	0	1	73	76.5	79	7	1	1	0	88	89.8	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	247	3	9	0	1	260	265.5	225	13	12	1	1	252	260.3	0	0	0	0	0	0	0	0
18:00	0	0	0	0	0	0	0	67	2	6	0	0	75	78	73	6	4	0	0	83	85	0	0	0	0	0	0	0	0
18:15	0	0	0	0	0	0	0	66	0	2	0	0	68	69	87	8	3	0	0	98	99.5	0	0	0	0	0	0	0	0
18:30	0	0	0	0	0	0	0	52	0	4	1	0	57	60.3	92	9	3	2	0	106	110.1	0	0	0	0	0	0	0	0
18:45	0	0	0	0	0	0	0	53	0	0	0	0	53	53	80	5	3	0	0	88	89.5	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	238	2	12	1	0	253	260.3	332	28	13	2	0	375	384.1	0	0	0	0	0	0	0	0
19:00	0	0	0	0	0	0	0	55	0	1	0	0	56	56.5	76	5	1	0	0	82	82.5	0	0	0	0	0	0	0	0
19:15	0	0	0	0	0	0	0	43	1	0	0	0	44	44	71	4	1	1	0	77	78.8	0	0	0	0	0	0	0	0
19:30	0	0	0	0	0	0	0	53	2	2	0	0	57	58	67	2	0	0	0	69	69	0	0	0	0	0	0	0	0
19:45	0	0	0	0	0	0	0	48	0	0	0	0	48	48	76	6	1	0	0	83	83.5	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	199	3	3	0	0	205	206.5	290	17	3	1	0	311	313.8	0	0	0	0	0	0	0	0
20:00	0	0	0	0	0	0	0	38	0	0	0	0	38	38	64	2	1	0	0	67	67.5	0	0	0	0	0	0	0	0
20:15	0	0	0	0	0	0	0	48	0	1	0	0	49	49.5	60	4	1	0	0	65	65.5	0	0	0	0	0	0	0	0
20:30	0	0	0	0	0	0	0	39	0	1	0	0	40	40.5	52	4	0	0	0	56	56	0	0	0	0	0	0	0	0
20:45	0	0	0	0	0	0	0	34	1	1	0	0	36	36.5	60	7	3	0	0	70	71.5	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	159	1	3	0	0	163	164.5	236	17	5	0	0	258	260.5	0	0	0	0	0	0	0	0
21:00	0	0	0	0	0	0	0	32	0	0	0	0	32	32	62	3	2	0	0	67	68	0	0	0	0	0	0	0	0
21:15	0	0	0	0	0	0	0	37	1	2	0	0	40	41	55	5	2	0	0	62	63	0	0	0	0	0	0	0	0
21:30	0	0	0	0	0	0	0	26	0	1	0	0	27	27.5	30	4	2	0	0	36	37	0	0	0	0	0	0	0	0
21:45	0	0	0	0	0	0	0	18	1	0	0	0	19	19	39	4	0	0	0	43	43	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	113	2	3	0	0	118	119.5	186	16	6	0	0	208	211	0	0	0	0	0	0	0	0
22:00	0	0	0	0	0	0	0	11	1	1	0	0	13	13.5	24	1	0	1	0	26	27.3	0	0	0	0	0	0	0	0
22:15	0	0	0	0	0	0	0	22	1	0	0	0	23	23	22	1	1	0	0	24	24.5	0	0	0	0	0	0	0	0
22:30	0	0	0	0	0	0	0	5	0	0	0	0	5	5	17	1	0	0	0	18	18	0	0	0	0	0	0	0	0
22:45	0	0	0	0	0	0	0	10	0	0	0	0	10	10	17	0	0	0	0	17	17	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	48	2	1	0	0	51	51.5	80	3	1	1	0	85	86.8	0	0	0	0	0	0	0	0
23:00	0	0	0	0	0	0	0	12	0	0	0	0	12	12	12	1	0	0	0	13	13	0	0	0	0	0	0	0	0
23:15	0	0	0	0	0	0	0	12	0	0	0	0	12	12	19	1	1	0	0	21	21.5	0	0	0	0	0	0	0	0
23:30	0	0	0	0	0	0	0	6	0	0	0	0	6	6	12	2	0	0	0	14	14	0	0	0	0	0	0	0	0
23:45	0	0	0	0	0	0	0	8	0	0	0	0	8	8	5	1	0	0	0	6	6	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	38	0	0	0	0	38	38	48	5	1	0	0	54	54.5	0	0	0	0	0	0	0	0
24 TOT	0	0	0	0	0	0	0	4841	151	153	7	2	5154	5241.6	3397	312	137	16	5	3867	3961.3	0	0	0	0	0	0	0	0



IDASO

Survey Name: 098 19097 Kilcullen ATC
 Site: ATC 2
 Location: Lower Main St
 Date: 16-May-2019

TIME	A => A							A => B							B => A							B => B						
	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU
00:00	0	0	0	0	0	0	0	6	0	0	0	0	6	6	3	0	0	0	0	3	3	0	0	0	0	0	0	0
00:15	0	0	0	0	0	0	0	4	0	0	0	0	4	4	10	0	0	0	0	10	10	0	0	0	0	0	0	0
00:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	3	3	0	0	0	0	0	0	0
00:45	0	0	0	0	0	0	0	2	1	0	0	0	3	3	1	1	0	0	0	2	2	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	12	1	0	0	0	13	13	17	1	0	0	0	18	18	0	0	0	0	0	0	0
01:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0	0	3	3	0	0	0	0	0	0	0
01:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	3	3	0	0	0	0	0	0	0
01:30	0	0	0	0																								



IDASO

Survey Name: 098 19097 Kilcullen ATC
 Site: ATC 2
 Location: Lower Main St
 Date: 18-May-2019

TIME	A => A							A => B							B => A							B => B						
	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU
00:00	0	0	0	0	0	0	0	6	0	1	0	0	7	7.5	6	0	0	0	0	6	6	0	0	0	0	0	0	
00:15	0	0	0	0	0	0	0	12	1	0	0	0	13	13	11	0	0	0	0	11	11	0	0	0	0	0	0	
00:30	0	0	0	0	0	0	0	5	0	0	0	0	5	5	8	1	0	0	0	9	9	0	0	0	0	0	0	
00:45	0	0	0	0	0	0	0	4	0	0	0	0	4	4	5	0	0	0	0	5	5	0	0	0	0	0	0	
H/TOT	0	0	0	0	0	0	0	27	1	1	0	0	29	29.5	30	1	0	0	0	31	31	0	0	0	0	0	0	
01:00	0	0	0	0	0	0	0	2	0	0	0	0	2	2	2	0	0	0	0	2	2	0	0	0	0	0	0	
01:15	0	0	0	0	0	0	0	2	0	0	0	0	2	2	4	0	0	0	0	4	4	0	0	0	0	0	0	
01:30	0	0	0	0	0	0	0	8	0	0	0	0	8	8	6	1	0	0	0	7	7	0	0	0	0	0	0	
01:45	0	0	0	0	0	0	0	4	0	1	0	0	5	5.5	0	2	0	0	0	2	2	0	0	0	0	0	0	
H/TOT	0	0	0	0	0	0	0	16	0	1	0	0	17	17.5	12	3	0	0	15	15	0	0	0	0	0	0	0	
02:00	0	0	0	0	0	0	0	3	0	1	0	0	4	4.5	3	0	1	0	0	4	4.5	0	0	0	0	0	0	
02:15	0	0	0	0	0	0	0	3	0	0	0	0	3	3	10	0	0	0	0	10	10	0	0	0	0	0	0	
02:30	0	0	0	0	0	0	0	4	0	0	0	0	4	4	5	2	0	0	0	7	7	0	0	0	0	0	0	
02:45	0	0	0	0	0	0	0	3	0	0	0	0	3	3	8	0	0	0	0	8	8	0	0	0	0	0	0	
H/TOT	0	0	0	0	0	0	0	13	0	1	0	0	14	14.5	26	2	1	0	29	29.5	0	0	0	0	0	0	0	
03:00	0	0	0	0	0	0	0	2	0	0	0	0	2	2	6	0	0	0	0	6	6	0	0	0	0	0	0	
03:15	0	0	0	0	0	0	0	1	0	0	0	0	1	1	4	0	0	0	0	4	4	0	0	0	0	0	0	
03:30	0	0	0	0	0	0	0	3	0	0	0	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	
03:45	0	0	0	0	0	0	0	2	0	0	0	0	2	2	3	1	0	0	0	4	4	0	0	0	0	0	0	
H/TOT	0	0	0	0	0	0	0	8	0	0	0	0	8	8	13	1	0	0	14	14	0	0	0	0	0	0	0	
04:00	0	0	0	0	0	0	0	3	0	0	0	0	3	3	1	0	0	0	0	1	1	0	0	0	0	0	0	
04:15	0	0	0	0	0	0	0	1	0	0	0	0	1	1	2	1	0	0	0	3	3	0	0	0	0	0	0	
04:30	0	0	0	0	0	0	0	2	0	0	0	0	2	2	1	0	1	0	0	2	2.5	0	0	0	0	0	0	
04:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	0	0	0	0	
H/TOT	0	0	0	0	0	0	0	6	0	0	0	0	6	6	5	1	1	0	7	7.5	0	0	0	0	0	0	0	
05:00	0	0	0	0	0	0	0	2	0	0	0	0	2	2	3	0	1	0	0	4	4.5	0	0	0	0	0	0	
05:15	0	0	0	0	0	0	0	4	0	0	0	0	4	4	2	1	0	0	0	3	3	0	0	0	0	0	0	
05:30	0	0	0	0	0	0	0	5	0	0	0	0	5	5	6	0	1	0	0	7	7.5	0	0	0	0	0	0	
05:45	0	0	0	0	0	0	0	4	0	1	0	0	5	5.5	2	0	0	0	0	2	2	0	0	0	0	0	0	
H/TOT	0	0	0	0	0	0	0	15	0	1	0	0	16	16.5	13	1	2	0	16	17	0	0	0	0	0	0	0	
06:00	0	0	0	0	0	0	0	9	0	0	0	0	9	9	4	0	0	0	0	4	4	0	0	0	0	0	0	
06:15	0	0	0	0	0	0	0	10	0	1	0	0	11	11.5	5	0	0	0	0	5	5	0	0	0	0	0	0	
06:30	0	0	0	0	0	0	0	7	0	1	0	0	8	8.5	6	0	0	0	0	6	6	0	0	0	0	0	0	
06:45	0	0	0	0	0	0	0	15	0	0	0	0	15	15	5	1	1	0	0	7	7.5	0	0	0	0	0	0	
H/TOT	0	0	0	0	0	0	0	41	0	2	0	0	43	44	20	1	1	0	22	22.5	0	0	0	0	0	0	0	
07:00	0	0	0	0	0	0	0	13	0	1	0	0	14	14.5	11	2	0	0	0	13	13	0	0	0	0	0	0	
07:15	0	0	0	0	0	0	0	33	0	4	2	0	39	43.6	4	2	0	0	0	6	6	0	0	0	0	0	0	
07:30	0	0	0	0	0	0	0	35	1	0	0	0	36	36	10	3	0	0	0	13	13	0	0	0	0	0	0	
07:45	0	0	0	0	0	0	0	29	1	0	0	0	30	30	15	2	0	0	0	17	17	0	0	0	0	0	0	
H/TOT	0	0	0	0	0	0	0	110	2	5	2	0	119	124.1	40	9	0	0	49	49	0	0	0	0	0	0	0	
08:00	0	0	0	0	0	0	0	30	1	2	0	0	33	34	8	1	0	1	0	10	11.3	0	0	0	0	0	0	
08:15	0	0	0	0	0	0	0	47	1	1	0	0	49	49.5	16	2	3	0	0	21	22.5	0	0	0	0	0	0	
08:30	0	0	0	0	0	0	0	46	0	0	1	0	47	48.3	32	3	3	0	0	38	39.5	0	0	0	0	0	0	
08:45	0	0	0	0	0	0	0	33	1	2	0	0	36	37	36	6	0	1	0	43	44.3	0	0	0	0	0	0	
H/TOT	0	0	0	0	0	0	0	156	3	5	1	0	165	168.8	92	12	6	2	112	117.6	0	0	0	0	0	0	0	
09:00	0	0	0	0	0	0	0	42	0	0	0	0	42	42	41	5	0	2	1	49	52.6	0	0	0	0	0	0	
09:15	0	0	0	0	0	0	0	53	1	0	0	0	54	54	47	2	3	0	0	52	53.5	0	0	0	0	0	0	
09:30	0	0	0	0	0	0	0	66	0	0	0	0	66	66	40	3	1	0	0	44	44.5	0	0	0	0	0	0	
09:45	0	0	0	0	0	0	0	52	1	1	0	0	54	54.5	49	1	2	0	0	52	53	0	0	0	0	0	0	
H/TOT	0	0	0	0	0	0	0	213	2	1	0	0	216	216.5	177	11	6	2	1	197	203.6	0	0	0	0	0	0	
10:00	0	0	0	0	0	0	0	62	0	1	0	0	63	63.5	58	5	1	0	0	64	64.5	0	0	0	0	0	0	
10:15	0	0	0	0	0	0	0	63	0	1	0	0	64	64.5	79	5	0	0	0	84	84	0	0	0	0	0	0	
10:30	0	0	0	0	0	0	0	76	0	2	0	0	78	79	55	9	2	0	0	66	67	0	0	0	0	0	0	
10:45	0	0	0	0	0	0	0	76	0	1	0	0	77	77.5	76	6	1	1	0	84	85.8	0	0	0	0	0	0	
H/TOT	0	0	0	0	0	0	0	277	0	5	0	0	282	284.5	268	25	4	1	298	301.3	0	0	0	0	0	0	0	
11:00	0	0	0	0	0	0	0	54	0	1	0	0	55	55.5	70	4	0	0	0	74	74	0	0	0	0	0	0	
11:15	0	0	0	0	0	0	0	63	2	2	0	0	67	68	49	4	2	0	0	55	56	0	0	0	0	0	0	
11:30	0	0	0	0	0	0	0	56	1	7	0	0	64	67.5	56	6	2	1	0	65	67.3	0	0	0	0	0	0	
11:45	0	0	0	0	0	0	0	86	0	1	0	0	87	87.5														

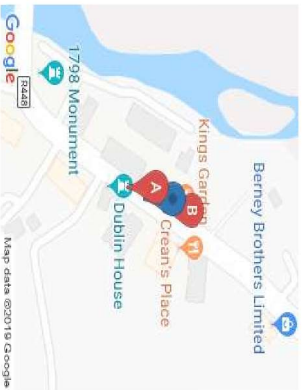


IDASO

Survey Name: 098 19097 Kilcullen ATC
 Site: ATC 3
 Location: Market Square
 Date: 18-May-2019

TIME	A => A							A => B							B => A							B => B						
	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU	CAR	LGV	OGV1	OGV2	BUS	TOT	PCU
00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
00:15	0	0	0	0	0	0	0	2	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	
00:30	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	0	0	
00:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	1	0	0	0	0	
H/TOT	0	0	0	0	0	0	0	2	0	0	0	0	2	2	1	0	0	0	0	0	1	1	0	0	0	0		
01:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
01:15	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	
01:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1	0	0	0	0	0	
01:45	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	0	0	
H/TOT	0	0	0	0	0	0	0	1	0	0	0	0	1	1	1	0	0	0	0	1	1	0	0	0	0	0		
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
02:15	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	0	0	
02:30	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	0	0	
02:45	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	0	0	
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	0		
03:00	0	0	0	0	0	0	0	1	0	0	0	0	1	1	1	0	0	0	0	0	1	1	0	0	0	0	0	
03:15	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	0	0	
03:30	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	0	0	
03:45	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	0	0	
H/TOT	0	0	0	0	0	0	0	1	0	0	0	0	1	1	1	0	0	0	0	1	1	0	0	0	0	0		
04:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2	2	0	0	0	0	0	
04:15	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	0	0	
04:30	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	0	0	
04:45	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	
H/TOT	0	0	0	0	0	0	0	1	0	0	0	0	1	1	2	0	0	0	0	2	2	0	0	0	0	0		
05:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
05:15	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	0	0	
05:30	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	0	0	
05:45	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	
H/TOT	0	0	0	0	0	0	0	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0		
06:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
06:15	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	0	0	
06:30	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	
06:45	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	1	0	0	1	0	1	1.5	0	0	0	0	
H/TOT	0	0	0	0	0	0	0	2	0	0	0	0	2	2	0	0	1	0	0	1	1.5	0	0	0	0	0		
07:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1	0	0	0	0	0	
07:15	0	0	0	0	0	0	0	2	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	
07:30	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	
07:45	0	0	0	0	0	0	0	4	0	0	0	0	4	4	2	0	0	0	0	0	2	2	0	0	0	0	0	
H/TOT	0	0	0	0	0	0	0	7	0	0	0	7	7	3	0	0	0	0	0	3	3	0	0	0	0	0		
08:00	0	0	0	0	0	0	0	2	0	1	0	0	3	3.5	1	0	0	0	0	0	1	1	0	0	0	0	0	
08:15	0	0	0	0	0	0	0	1	0	0	0	0	1	1	3	0	0	0	0	0	3	3	0	0	0	0	0	
08:30	0	0	0	0	0	0	0	6	0	0	0	0	6	6	4	0	0	0	0	0	4	4	0	0	0	0	0	
08:45	0	0	0	0	0	0	0	1	0	0	0	0	1	1	3	0	1	0	0	0	4	4.5	0	0	0	0	0	
H/TOT	0	0	0	0	0	0	0	10	0	1	0	0	11	11.5	11	0	1	0	0	12	12.5	0	0	0	0	0		
09:00	0	0	0	0	0	0	0	6	0	1	0	0	7	7.5	2	0	0	0	0	2	2	0	0	0	0	0	0	
09:15	0	0	0	0	0	0	0	8	1	0	0	0	9	9	3	0	1	0	0	4	4.5	0	0	0	0	0	0	
09:30	0	0	0	0	0	0	0	5	0	0	0	0	5	5	4	0	0	0	0	4	4	0	0	0	0	0	0	
09:45	0	0	0	0	0	0	0	5	0	0	0	0	5	5	2	0	0	0	0	2	2	0	0	0	0	0	0	
H/TOT	0	0	0	0	0	0	0	24	1	1	0	0	26	26.5	11	0	1	0	0	12	12.5	0	0	0	0	0		
10:00	0	0	0	0	0	0	0	5	0	0	0	0	5	5	5	0	0	0	0	5	5	0	0	0	0	0	0	
10:15	0	0	0	0	0	0	0	8	1	0	0	0	9	9	7	0	0	0	0	7	7	0	0	0	0	0	0	
10:30	0	0	0	0	0	0	0	8	0	0	0	0	8	8	7	0	1	0	0	8	8.5	0	0	0	0	0	0	
10:45	0	0	0	0	0	0	0	7	1	0	0	0	8	8	15	0	0	0	0	15	15	0	0	0	0	0	0	
H/TOT	0	0	0	0	0	0	0	28	2	0	0	0	30	30	34	0	1	0	0	35	35.5	0	0	0	0	0		
11:00	0	0	0	0	0	0	0	9	0	0	0	0	9	9	7	0	0	0	0	7	7	0	0	0	0	0	0	
11:15	0	0	0	0	0	0	0	10	0	0	0	0	10	10	6	0	1	0	0	7	7.5	0	0	0	0	0	0	
11:30	0	0	0	0	0	0	0	6	1	0	0	0	7	7	10	0	0	0	0	10	10	0	0	0	0	0	0	
11:45	0	0	0	0	0	0	0	12	0	0	0	0	12	12	14	0	0	0	0	14	14	0	0	0	0	0	0	
H/TOT	0	0	0	0	0	0	0	37	1	0	0	0	38	38	37	0	1	0	0	38	38.5	0	0	0	0 </			

APPENDIX B:
Speed Survey Data



IDASO

Survey Name: 098 19097 Kilcullen ATC
Site: ATC 1
Location: Main St
Date: 14 May 2019 — 20 May 2019

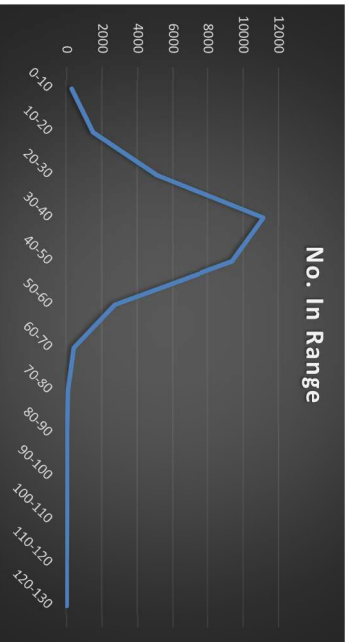
Speed Survey

Cumulative 85% Speed 46 KPH

Northbound (A => B)

No. of Vehicles 30608
 85% Speed 47 KPH

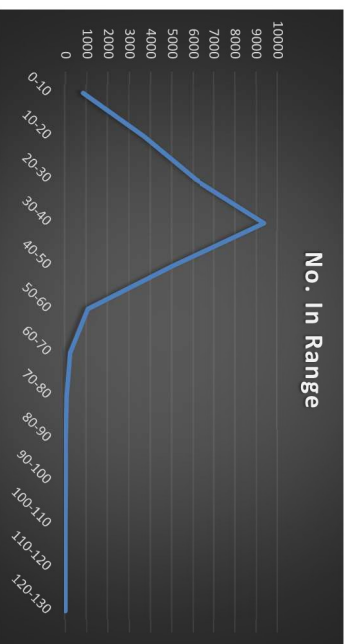
Speed KPH	No. In Range
0-10	288
10-20	1471
20-30	5077
30-40	11137
40-50	9374
50-60	2715
60-70	409
70-80	64
80-90	23
90-100	20
100-110	14
110-120	6
120-130	7

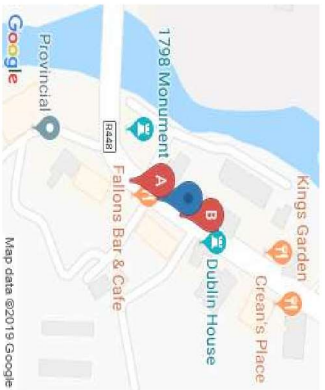


Southbound (B => A)

No. of Vehicles 26442
 85% Speed 43 KPH

Speed KPH	No. In Range
0-10	822
10-20	3683
20-30	6147
30-40	9377
40-50	5028
50-60	1055
60-70	225
70-80	57
80-90	13
90-100	13
100-110	3
110-120	4
120-130	2





IDASO

Survey Name: 098 19097 Kicullen ATC
Site: ATC 2
Location: Lower Main St
Date: 14 May -2019

Speed Survey

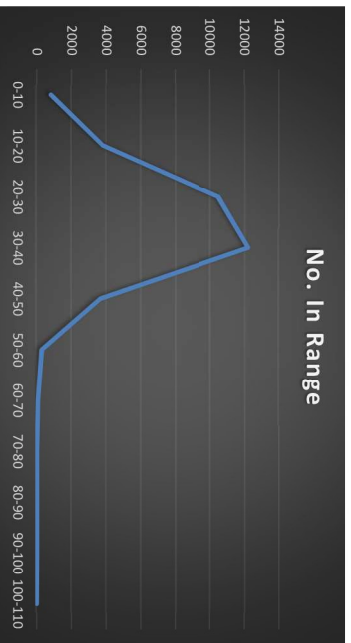
Cumulative 85% Speed

38 KPH

Northbound (A => B)

No. of Vehicles 31407
 85% Speed 39 KPH

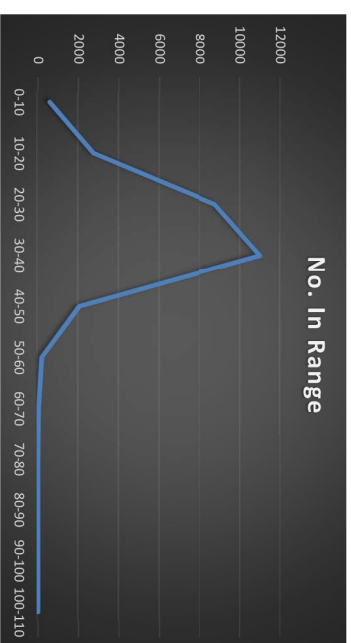
Speed KPH	No. In Range
0-10	819
10-20	3822
20-30	10471
30-40	12219
40-50	3656
50-60	291
60-70	78
70-80	23
80-90	16
90-100	11
100-110	1

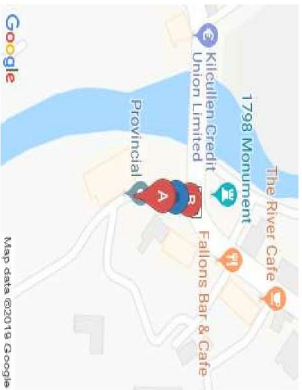


Southbound (B => A)

No. of Vehicles 25392
 85% Speed 37 KPH

Speed KPH	No. In Range
0-10	575
10-20	2750
20-30	8774
30-40	11009
40-50	2041
50-60	182
60-70	29
70-80	13
80-90	10
90-100	9
100-110	0





IDASO

Survey Name: 098 19097 Kicullen ATC
Site: ATC 3
Location: Market Square
Date: 14 May 2019 — 20 May 2019

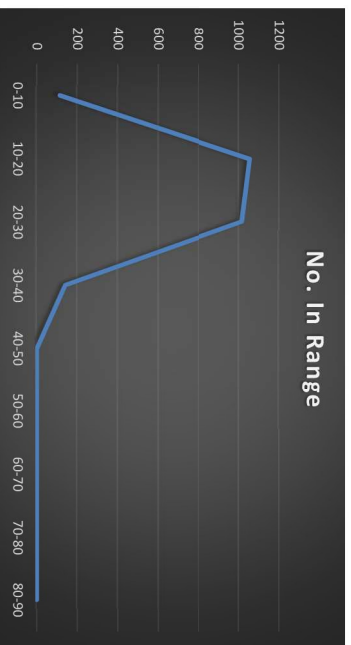
Speed Survey

Cumulative 85% Speed 25 KPH

Northbound (A => B)

No. of Vehicles 2329
 85% Speed 26 KPH

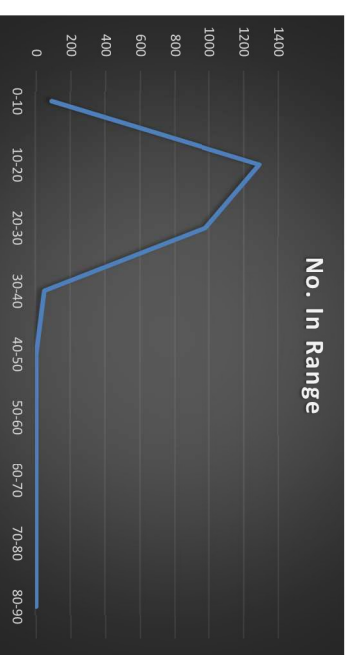
Speed KPH	No. In Range
0-10	114
10-20	1056
20-30	1017
30-40	141
40-50	0
50-60	0
60-70	0
70-80	0
80-90	0



Southbound (B => A)

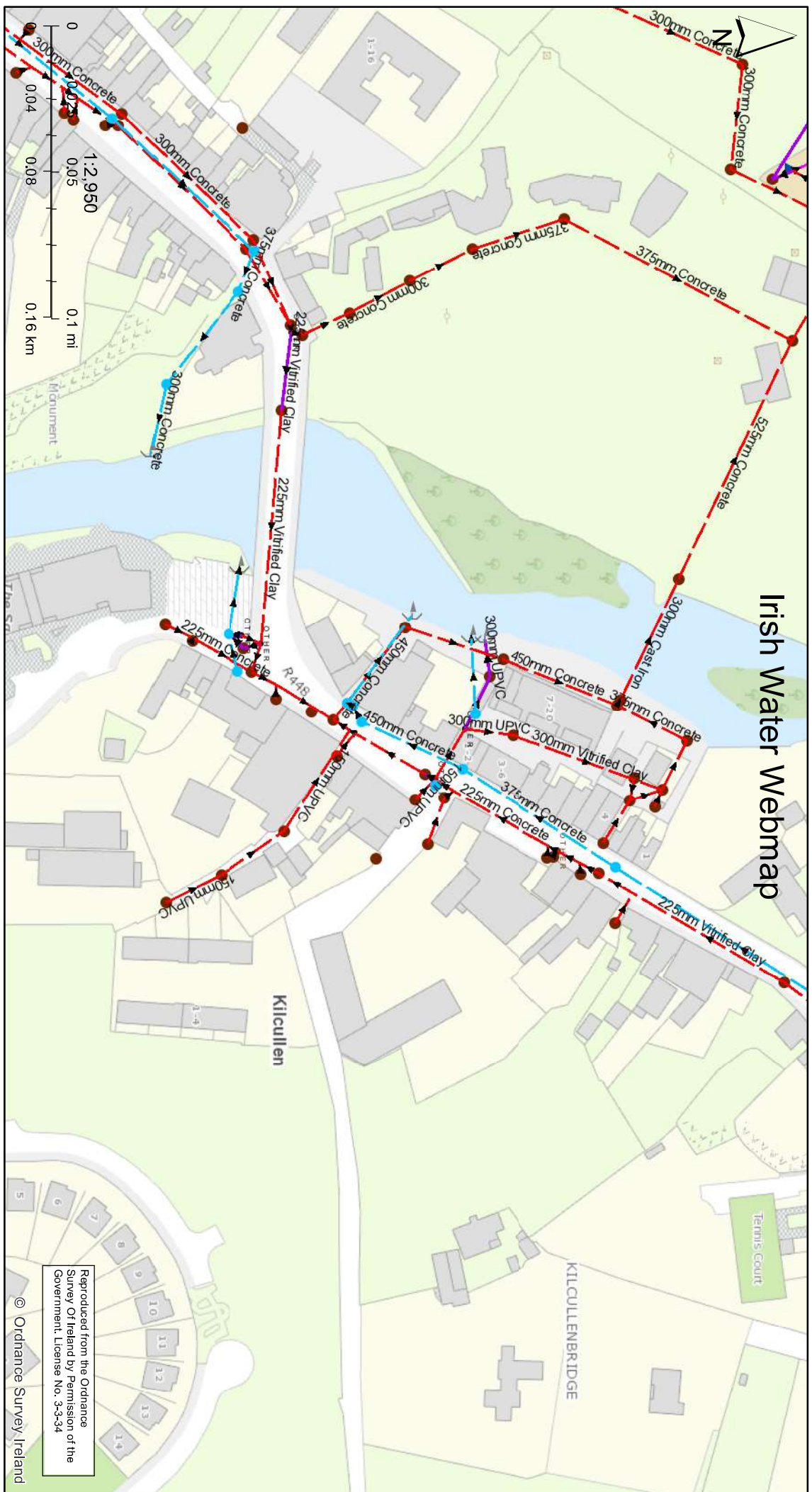
No. of Vehicles 2405
 85% Speed 24 KPH

Speed KPH	No. In Range
0-10	89
10-20	1291
20-30	978
30-40	46
40-50	0
50-60	0
60-70	0
70-80	0
80-90	0



APPENDIX C:
DRAINAGE RECORDS

Irish Water Webmap



Reproduced from the Ordnance Survey of Ireland by Permission of the Government. License No. 3-3-34

© Ordnance Survey Ireland

3/27/2019 8:50:48 AM

© Ordnance Survey Ireland | © Ordnance Survey Ireland |

Legend

Stormwater Gravity Mains (Irish Water Owned)

Surface

Stormwater Gravity Mains (Non-Irish Water Owned)

Surface

Storm Manholes

Cascade

Catchpit

Hatchbox

Standard

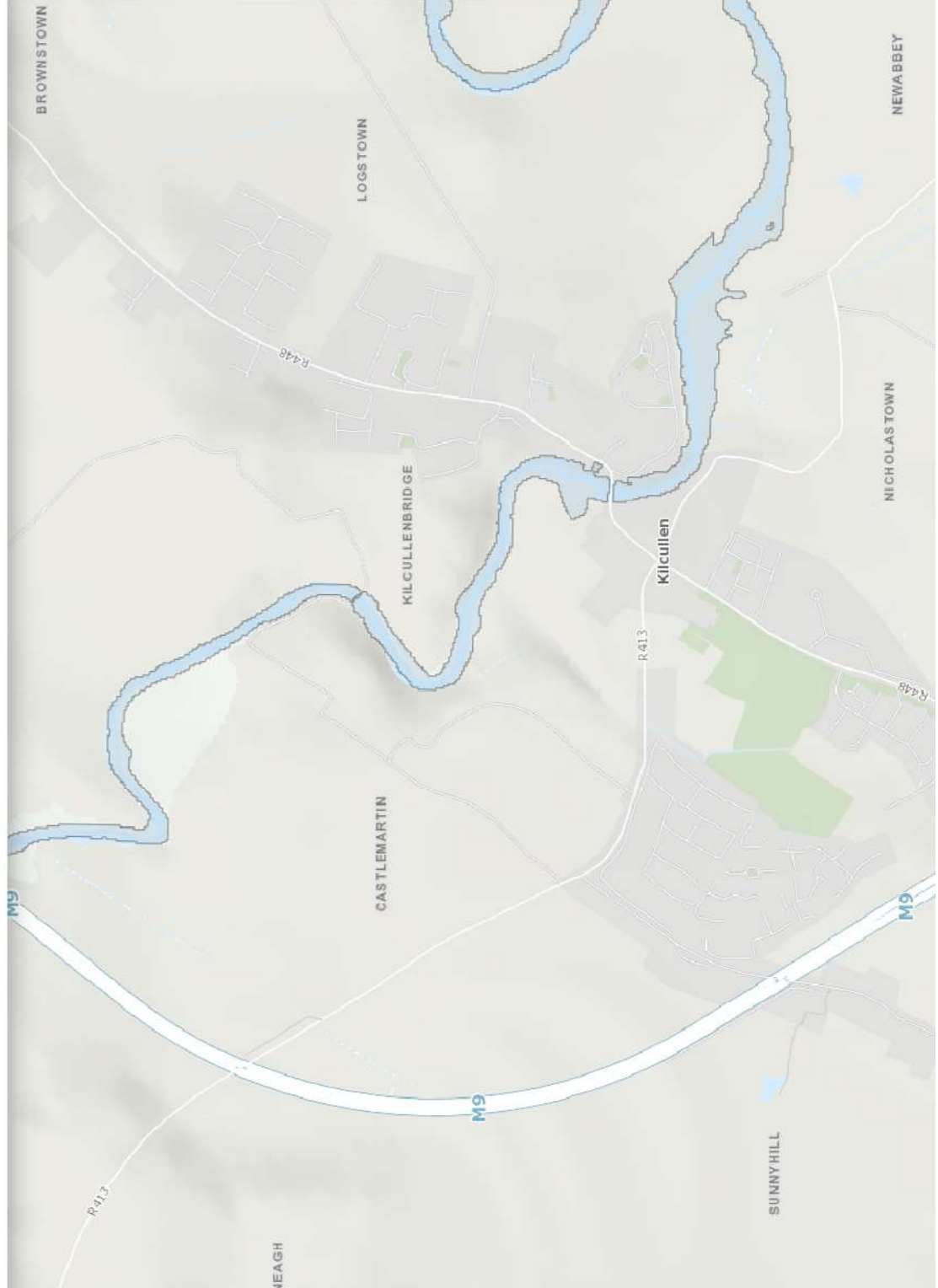
Other; Unknown



Irish Water gives this information as to the position of its underground network as a general guide only on the strict understanding that it is based on the best available information provided by each Local Authority in Ireland. It should not be relied upon in the event of excavations or other works being carried out in the vicinity of the network. The onus is on the parties carrying out the works to ensure the exact location of the network is identified prior to mechanical works being carried out. Service pipes are not generally shown but their presence should be

*Gas Networks Ireland (GNI), their affiliates and assigns, accept no responsibility for any information contained in this document concerning location and technical designation of the gas distribution and transmission network ("the information"). Any representations and warranties express or implied, are excluded to the fullest extent permitted by law. No liability shall be accepted for any loss or damage including, without limitation, direct, indirect, special, incidental, punitive or consequential loss including loss of profits, arising out of or in connection with the use of the information (including maps or mapping data). NOTE: DIAL BEFORE YOU DIG. Phone 1850 427 747 or e-mail dig@gasnetworks.ie - The actual position of the gas/electricity distribution and transmission network must be verified on site before any mechanical excavating takes place. If any mechanical excavation is proposed, hard copy maps must be requested from GNI re gas. All work in the vicinity of the gas distribution and transmission network must be completed in accordance with the current edition of the Health & Safety Authority publication, "Code of Practice For Avoiding Danger From Underground Services" which is available from the Health and Safety Authority (1890 28 93 89) or can be downloaded free of charge at www.hsa.ie."

APPENDIX D:
FLOOD MAP



←
Layers

⚙️
Tools

🔍
Search

+
River Flood Extents – Present Day

River - Low Probability

Legend: Layer Queryable: No

River - Medium Probability

Legend: Layer Queryable: No

River - High Probability

Legend: Layer Queryable: No

+
Coastal Flood Extents – Present Day

+
PDF Maps (Printable)

+
Past Flood Events

View Flood Plans

Add Layer

Layers

Tools

Search

Active Layers **+ Add Layer**

River Flood Extents – Present Day

River - Low Probability

Legend: Layer Queryable: No

River - Medium Probability

Legend: Layer Queryable: No

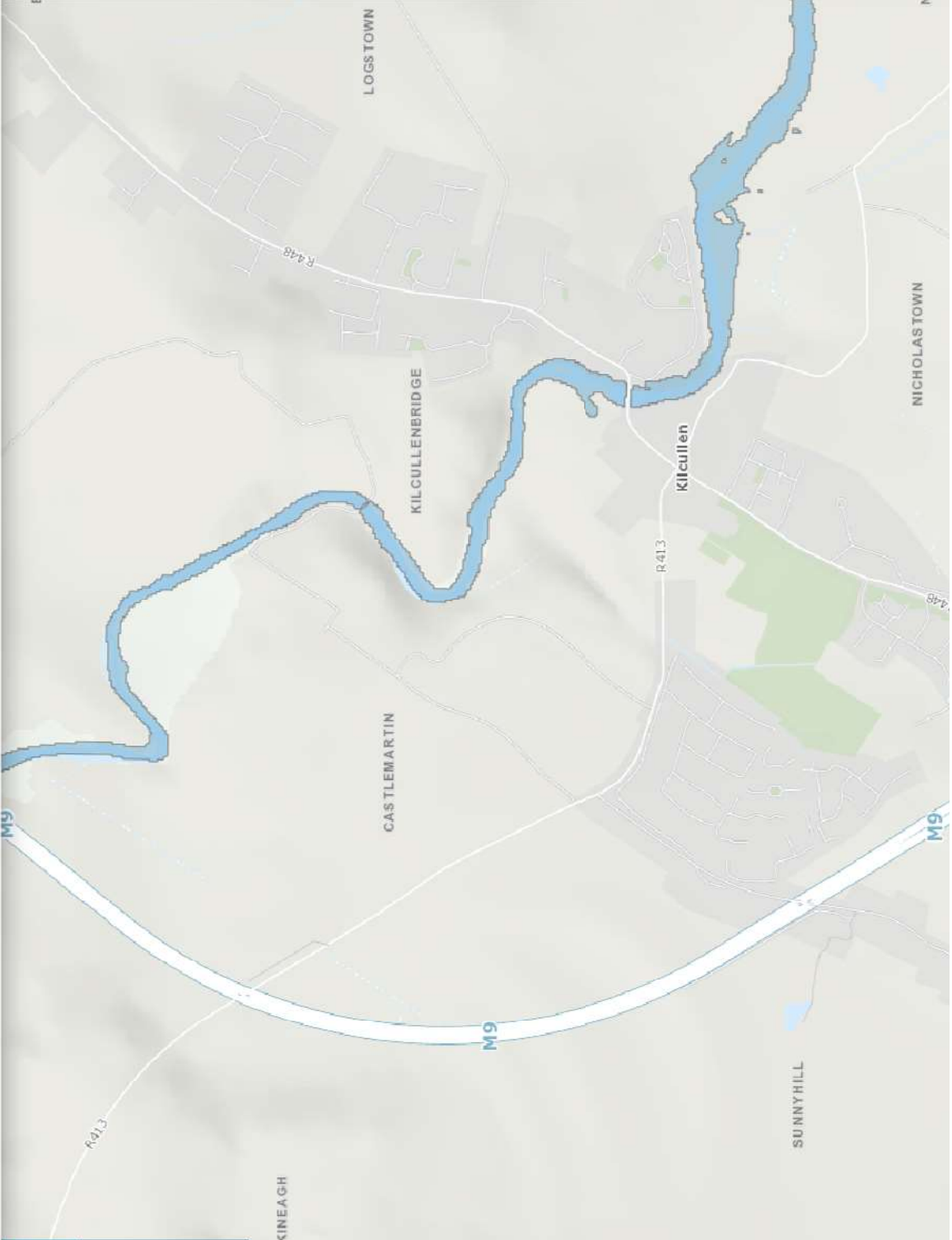
River - High Probability

Legend: Layer Queryable: No

Coastal Flood Extents – Present Day

PDF Maps (Printable)

Past Flood Events



View Flood Plans

Add Layer

River Flood Extents – Present Day

River - Low Probability

Legend: Layer Queryable: No

River - Medium Probability

Legend: Layer Queryable: No

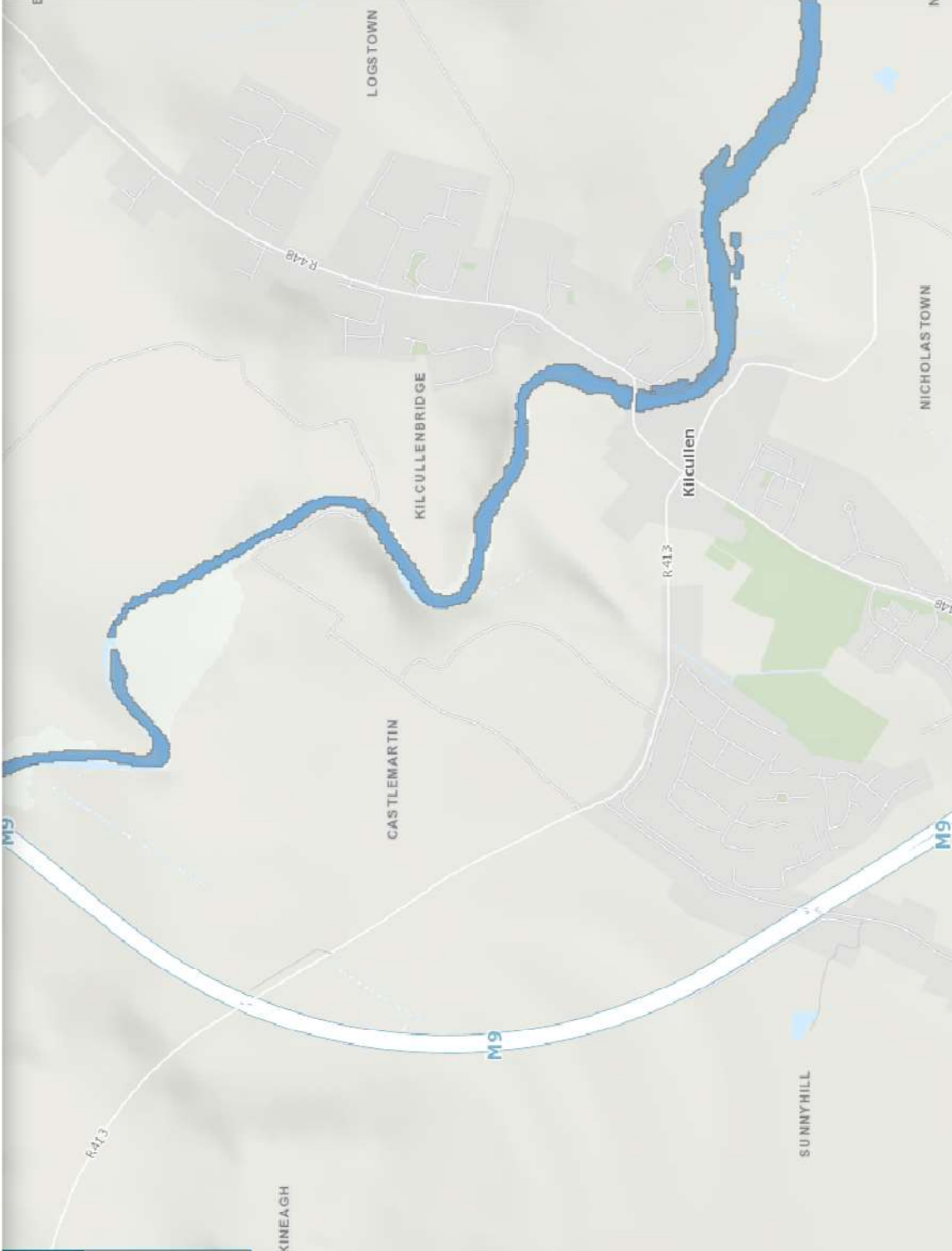
River - High Probability

Legend: Layer Queryable: No

Coastal Flood Extents – Present Day

PDF Maps (Printable)

Past Flood Events



DUBLIN REGIONAL HYDROMETRIC OFFICE.

FLOODING 11-15 JUNE 1993

DUBLIN:

The County experienced very heavy flooding, with the West and North been most effected, with water levels at some of the sites in these areas been the highest since our records began. The South of the County also experienced flooding. Most of our sites on this side of the county, with the exception of Waldrons Br., and Willbrook Rd. showed higher flooding on 26-27 May 1993. The flooding for this period in May shows highest water levels since records began, at some of these sites. Maximum flow measurements were carried out at a number of sites in the County.

WICKLOW:

The County experienced very heavy flooding, with the West of the County worst effected. Very heavy flooding occurred in both the Liffey, and Slaney catchments. More detailed information will be furnished later on these catchments. West Wicklow was not effected that much with higher water levels recorded on 17 May, and 26-27 May 1993. Maximum flow measurements were carried out at a number of sites in the County.

KILDARE:

Very heavy flooding occurred throughout the County. Some of the highest floods for years were experienced in the lower Liffey catchment, and the Ryewater, where we measured the highest flow ever measured on the Ryewater at Leixlip. Also very heavy flooding occurred on the Greese River, which would be adjacent to West Wicklow, which is where we showed above, also had severe flooding. Maximum flow measurements were carried out at a number of sites in the County.

Note: A detailed report of flooding in our area , with details for the individual sites to be furnished shortly.

LEVEL AND FLOW RECORDS

JUNE 1993

STNO	LOCATION	RIVER	AREA	HIGHEST W.L. RECORDED			MEASURED FLOW				REMARKS
				DATE	TIME	STAGE	DATE	TIME	STAGE	FLOW	
802	NAUL	DELVIN	37.0	12/6/93	7.00	1.00	-	-	-	-	
803	FIELDSTOWN	BROADMEADOW	76.2	11/6/93	22.00	~1.72	14/6/93	16.46	1.277	18.4804	
805	KINSALEY HALL	SILVICE	10.1	~11/6/93	~19.30	~1.34	12/6/93	19.30	0.840	2.6147	MAX FLOW MEAS.
809	BALHERARY	WARD	62.0	11/6/93	~22.00	1.25	-	-	-	-	
810	GARRISTOWN S.W.	GARRISTOWN ST.	1.1	11/6/93	15.00	0.85	14/6/93	15.35	0.440	0.1896	MAX FLOW MEAS.
812	BALLYBOCHILL	STREAM	~22	WEIR	DROWNED	OUT	-	-	-	-	
814	SHERRIES	MILL	11.7	11/6/93	23.00	0.99	14/6/93	~14.20	0.790	1.247	MAX FLOW MEAS.
901	LEIXLIP	REWATER	215.0	OPW	OPW	OPW	12/6/93	21.42	1.500	39.7377	MAX FLOW MEAS.
902	LUCAN	GRIFFIN	41.2	12/6/93	9.00	~1.19	12/6/93	16.35	0.876	11.9189	MAX FLOW MEAS.
909	MILLBROOK ROAD	CAENDORHER	22.4	11/6/93	19.00	1.50	-	-	-	-	
910	WALDRON'S BRIDGE	DODDER	95.2	11/6/93	-	-	12/6/93	1.40	31.426	66.11	MAX FLOW MEAS.
911	FRANKFORT	SLANG	6.7	11/6/93	12.00	1.25	-	-	-	-	
912	LEIXLIP BR.	LIFFEY	1034.0	-	-	-	12/6/93	~22.20	2.248	158	MAX FLOW MEAS.
916	ARTHURSTOWN	STREAM	-	11/6/93	23.00	0.32	14/6/93	19.20	0.112	0.0096	
919	DRUMCONDRA	TOLVA	128.6	N/A	N/A	N/A	12/6/93	3.02	7.874	38.8012	MAX FLOW MEAS.
922	LEIXLIP FOWER	STATLIFFEY	~819	ESB	ESB	ESB	12/6/93	-	-	118	MAX FLOW MEAS.
925	BALLINAGEE BRIDGE	BALLINAGEE	-	11/6/93	N/A	1.26	-	-	-	-	
926	ANNALECKA BRIDGE	ANNALECKA	-	11/6/93	5.00	1.54	-	-	-	-	
1002	RATHDRUM	AWONDRE	233.0	12/6/93	1.00	1.33	-	-	-	-	
1004	LARAGH	GLENMAGNASS	28.0	11/6/93	17.30	1.06	-	-	-	-	
1017	BALLYMAN	BALLYMAN STREAM	3.8	11/6/93	17.30	0.87	-	-	-	-	
1021	OWEN'S ROAD	SHANAGH	30.9	11/6/93	22.00	1.37	11/6/93	17.33	1.000	6.5281	
1022	CARRICKMINES	CABINTRELLY	10.4	11/6/93	18.45	1.20	11/6/93	18.22	1.078	5.2464	
1024	GLENCULLEN BR	GLENCULLEN	~14	11/6/93	19.00	1.14	-	-	-	-	
1028	KNOCKNAMOHILL	AUGHERIM	204.1	11/6/93	19.00	1.48	-	-	-	-	
1213	RAITHVILLY	SLANEY	185.0	ORLOW COUNTY	COUNCIL		-	-	-	-	
1230	KNICKEREN FORD	KNICKEREN	-	N/A	N/A	N/A	-	-	-	-	
1431	JAPANESE GNS	TULLY	13.0	12/6/93	2.00	0.61	14/6/93	~22.15	0.494	0.2211	
1438	BALLITORE	GREESE	56.3	12/5/93	4.30	1.31	14/6/93	22.48	0.965	6.8563	MAX FLOW MEAS.

LEVEL AND FLOW RECORDS MAY 1993

STNO	LOCATION	RIVER	AREA	HIGHEST W.L. RECORDED			MEASURED FLOW					REMARKS
				DATE	TIME	STAGE	DATE	TIME	STAGE	FLOW		
802 NAUL	DELVIN		37.0	27/5/93	17.00	0.84	-	-	-	-	-	
803 FIELDSTOWN	BROADMEADOW		76.2	N/A	N/A	N/A	-	-	-	-	-	
805 KINSALEY HALL	SUIJCE		10.1	27/5/93	11.30	1.04	-	-	-	-	-	
809 BALHEARY	WARD		62.0				28/5/93	13.35	0.665	4.4423		
810 GARRISTOWN S.W.	GARRISTOWN ST.		1.1	26/5/93	11.15	0.56	-	-	-	-	-	
812 BALLYBOGHILL	STREAM		~22				-	-	-	-	-	
814 SKERRIES	MILL		11.7	27/5/93	9.00	0.76	28/5/93	~14.20	0.473	0.332		
901 LEIXLIP	RYEWATER		215.0	30/5/93	20.00	0.78	-	-	-	-	-	
902 LUCAN	GRIFFIN		41.2	OPW	OPW	OPW	-	-	-	-	-	
909 WILBERK ROAD	OMENDOHER		22.4	26/5/93	9.30	1.32	26/5/93	16.40	0.860	4.6727		
910 WALDRON'S BRIDGE	DODDER		95.2				-	-	-	-	-	
911 FRANKFORT	SLANG		6.7	DUBLIN CORPORAT	ION	1.33	26/5/93	15.00	0.760	1.9476		
912 LEIXLIP BR.	LIFEY		1034.0				-	-	-	-	-	
916 ARDHURSTOWN	STREAM		-				-	-	-	-	-	
919 DELMONDA	TOLKA		129.6				-	-	-	-	-	
922 LEIXLIP FOWER	STATLIFREY		~819				-	-	-	-	-	
925 BALLINAGEE BRIDGE	BALLINAGEE		-				-	-	-	-	-	
926 ANNALECKA BRIDGE	ANNALECKA		-				-	-	-	-	-	
1002 RATHDRUM	AVONMORE		233.0	17/5/93	7.30	1.22	-	-	-	-	-	
1004 LARAGH	GLENMAGNASS		28.0	26/5/93	9.15	0.94	-	-	-	-	-	
1009 COOLGARROW	AUGHERIM		227.0	17/5/93	7.30	1.62	-	-	-	-	-	
1017 BALLMAN	BALLMAN STREAM		3.8	26/5/93	10.20	1.14	27/5/93	~16.00	1.390	30.4213		MAX FLOW MEAS
1021 OGDON'S ROAD	SHANAGARAH		30.9	26/5/93	11.30	1.87	26/5/93	12.30	1.794	13.844		MAX FLOW MEAS
1022 CARRICKMINES	CABINTEELY		10.4	26/5/93	10.30	1.38	26/5/93	13.40	1.208	5.8932		MAX FLOW MEAS
1024 GLENCULLEN BR	GLENCULLEN		~14	26/5/93	7.30	~1.49	-	-	-	-	-	
1028 KNOCKGRAVONHILL	AUGHERIM		204.1	17/5/93	14.30	1.63	27/5/93	16.00	1.183	26.6494		MAX FLOW MEAS
1033 KILGARRA WEST	GOLDMINE		-	26/5/93	9.00	1.55	-	-	-	-	-	
1213 BATHVILLY	SLANEY		185.0	N/A	N/A	N/A	27/5/93	15.10	-	3.7719		MAX FLOW MEAS
1230 KNICKEN FORD	KNICKEN		-	CARLOW COUNTY	COUNCIL	N/A	-	-	-	-	-	
1431 JAPANESE GINS	TULLY		13.0	N/A	N/A	N/A	-	-	-	-	-	

MINUTES OF MEETING

Reference: P4D403A – F310 – 017 – 004-001 Page 1 of 2

Project No.: P4D403A

Project Title: OPW Flood Hazard Mapping – Phase 1

Purpose of Meeting: Kildare County Council – Oral Report – Area Engineer – Naas

Participating:

Area Engineer	Kildare County Council
Overseer/Supervisor	Kildare County Council
Search Manager	ESBI

Venue: KCC Naas

Date of Meeting: 01/04/05

Copies to:

Compiled by: Search Manager ESBI

Status Draft

Approved for ESBI:

**Approved for Kildare
County Council**

Date:

Meeting with Area Engineer for Naas 01/04/05

The Area Engineer and his supervisor outlined 12 areas that are or were prone to flooding. These are: -

1. Kill River, Arthurstown Road –
 - a. The Kill River overflows its banks and inundates the Arthurstown road on a recurring basis. This is generally coincident with extended periods of heavy rain.
 - b. A number of houses along the Arthurstown road have been subject to flooding when the Kill River overflows its banks and inundates the road carriageway.Flood Id = 589
2. Johnstown – Historical flooding problem in the town of Johnstown particularly related to the Morell River. Engineering Consultants Report is available and will be forwarded by KCC.
Flood Id = 590
3. Rathmore – New Housing Estate in Rathmore is subject to flooding during periods of heavy rainfall. It is thought that the land drainage has been interfered during the construction of the estate.
Flood Id = 591
4. Punchestown Race Course – The entrance to Punchestown is subject to recurring flooding during periods of heavy rainfall. A new soakaway is due to be installed as part of a pipelaying scheme for the area. It is expected that this will resolve this localised flooding.
Flood Id = 593
5. Silverhill – Junction of N81 and Silverhill road. Silverhill road subject to recurring flooding during periods of heavy rain.
Flood Id = 594
6. Kilcullen Town – Subject to flooding in 1993 when the Liffey burst its banks. Bank in the town got flooded, particularly the cellar of the building.
Flood Id = 595
7. Brannockstown – Subject to flooding historically but works have been carried out in the town and problem has been solved.
Flood Id = 596
8. Carragh – Road floods, Associated with a pipe which drains from development and ties into the River Liffey.
Flood Id = 597
9. Eadestown - Cemetery at Eadestown flooded historically but no flooding has occurred since a pipe was installed from the road area to the nearby stream.
Flood Id = 598
10. Naas – Limited capacity culvert causes occasional flooding at Hotel on the Newbridge road.
Flood Id = 600
11. Newtown Road – In vicinity of a private lake, road flooding occurs during periods of heavy rain due to limited capacities of pipes and culverts under driveways along the road.
Flood Id = 601
12. Ladytown Area – Sluice gate system on a river in this location, when closed during periods of heavy rain, water backs up and floods yard. It was suggested that motorway flooding M7 could be related to this problem.
Flood Id = 602



OCSC

O'CONNOR | SUTTON | CRONIN

Multidisciplinary
Consulting Engineers

9 Prussia Street
Dublin 7
Ireland

T | +353 (0)1 8682000
F | +353 (0)1 8682100
W | www.ocsc.ie