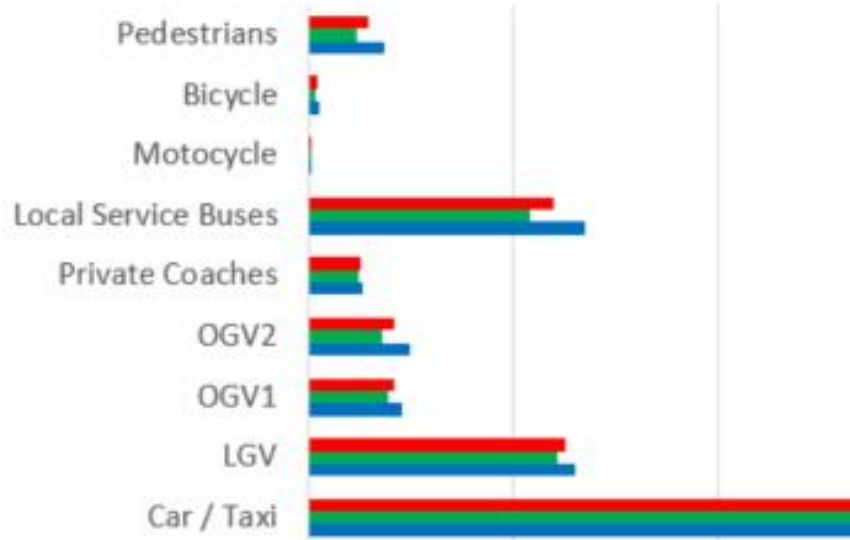




ANGUS SPACES FOR PEOPLE SURVEY REPORT 2020/21



ANGUS COUNCIL AREA

MODE SHARE SURVEYS 2020/2021

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TABLE OF CONTENTS

1.	INTRODUCTION	9
1.1	BACKGROUND	9
1.2	SPACES FOR PEOPLE	9
1.3	SPACES FOR PEOPLE INTERVENTIONS	9
2.	DATA COLLATION	11
2.1	OVERVIEW OF TRAFFIC SURVEYS	11
2.2	PEDESTRIAN BEHAVIOUR AND VOLUME COUNTS	12
2.3	LINK COUNT AND SPEED SURVEYS	14
2.4	CLASSIFIED TURNING COUNTS	17
2.5	MODE SHARE SURVEYS	18
2.6	SUMMARY	18
3.	PEDESTRIAN BEHAVIOUR AND VOLUME REVIEW	19
3.1	PEDESTRIAN BEHAVIOUR SURVEYS	19
3.2	PEDESTRIAN VOLUME SURVEYS	19
3.3	RESULTS OF PEDESTRIAN BEHAVIOUR SURVEYS	20
3.4	RESULTS OF PEDESTRIAN VOLUME SURVEYS	27
4.	VEHICLE LINK COUNT & SPEED REVIEW	44
4.1	OVERVIEW	44
4.2	RESULTS OF LINK COUNTS AND SPEED SURVEYS	45
5.	CLASSIFIED LINK COUNT SURVEYS	56
5.1	OVERVIEW	56
6.	MODE SHARE SURVEYS	62
6.1	RAIL STATION COUNTS	62
6.2	BUS STATION COUNTS	63
6.3	BUS OCCUPANCY COUNTS	65
6.4	VEHICLE OCCUPANCY COUNTS	67
6.5	RESULTS OF MODE SHARE SURVEYS	71
7.	SUMMARY & FINDINGS	80
7.1	SUMMARY	80

LIST OF FIGURES

Figure 1.	Pedestrian Surveys - Arbroath	12
Figure 2.	Pedestrian Surveys - Forfar	13
Figure 3.	Link & Speed Surveys - Arbroath	14
Figure 4.	Link & Speed Surveys - Forfar	15
Figure 5.	Link & Speed Surveys - Edzell	16
Figure 6.	Classified Turn Count Surveys – Arbroath	17
Figure 7.	Arbroath Mode Share Distribution – AM Peak	72
Figure 8.	Arbroath Person Share Distribution – AM Peak	73
Figure 9.	Arbroath Mode Share Distribution – Interpeak	74
Figure 10.	Arbroath Person Share Distribution – Interpeak	75
Figure 11.	Arbroath Mode Share Distribution – PM Peak	76
Figure 12.	Arbroath Person Share Distribution – PM Peak	77
Figure 13.	Arbroath Mode Share Distribution – Full Day	78
Figure 14.	Arbroath Person Share Distribution – Full Day	79

LIST OF TABLES

Table 1.	Installed Interventions Summary	10
Table 2.	Traffic Survey Summary	18
Table 3.	West Port, Arbroath (north footpath) Pedestrian Behaviour Summary	21
Table 4.	West Port, Arbroath (south footpath) Pedestrian Behaviour Summary	23
Table 5.	Castle Street, Forfar (east footpath) Pedestrian Behaviour Summary	25
Table 6.	Castle Street, Forfar (west footpath) Pedestrian Behaviour Summary	26
Table 7.	West Port, Arbroath (north footpath) Pedestrian Volume Summary	28
Table 8.	West Port, Arbroath (south footpath) Pedestrian Volume Summary	30
Table 9.	Millgate, Arbroath (north footpath) Pedestrian Volume Summary	32
Table 10.	Millgate, Arbroath (south footpath) Pedestrian Volume Summary	34
Table 11.	Commerce Street, Arbroath (north footpath) Pedestrian Volume Summary	36
Table 12.	Commerce Street, Arbroath (south footpath) Pedestrian Volume Summary	38
Table 13.	Castle Street, Forfar (east footpath) Pedestrian Volume Summary	40
Table 14.	Castle Street, Forfar (west footpath) Pedestrian Volume Summary	42
Table 15.	West Port, Arbroath (eastbound) Link Flow & Speed Summary	45
Table 16.	Millgate, Arbroath (eastbound) Link Flow & Speed Summary	47
Table 17.	Commerce Street, Arbroath (westbound) Link Flow & Speed Summary	48
Table 18.	Castle Street, Forfar (southbound) Link Flow & Speed Summary	50
Table 19.	B966 High Street, Edzell (northbound) Link Flow & Speed Summary	52
Table 20.	B966 High Street, Edzell (southbound) Link Flow & Speed Summary	54
Table 21.	West Port Arbroath Link Flow Summary	57
Table 22.	Millgate Link Flow Summary	58
Table 23.	Commerce Street Link Flow Summary	60
Table 24.	Castle Street Link Flow Summary	61
Table 25.	Arbroath Railway Station Entry/Exit Counts	62
Table 26.	Arbroath Bus Station Boarding and Alighting Counts (AM Peak 07:00 – 10:00)	63
Table 27.	Arbroath Bus Station Boarding and Alighting Counts (Inter Peak 10:00 – 16:00)	64

Table 28.	Arbroath Bus Station Boarding and Alighting Counts (PM Peak 16:00 – 19:00)	64
Table 29.	Bus & Coach Inbound Cordon Occupancy (AM Peak 07:00 – 10:00)	66
Table 30.	Bus & Coach Inbound Cordon Occupancy (Inter Peak 10:00 – 16:00)	66
Table 31.	Bus & Coach Inbound Cordon Occupancy (PM Peak 16:00 – 19:00)	67
Table 32.	Vehicle Inbound Cordon Occupancy (AM Peak 07:00 – 10:00)	68
Table 33.	Vehicle Inbound Cordon Occupancy (Inter Peak 10:00 – 16:00)	69
Table 34.	Vehicle Inbound Cordon Occupancy (PM Peak 16:00 – 19:00)	70

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1. INTRODUCTION

1.1 Background

- 1.1.1 SYSTRA Ltd (SYSTRA) was commissioned by regional transport authority Tactran in June 2020 in response to the *Spaces for People* initiative, to undertake a comprehensive survey programme to capture changes in active travel behaviour and mode share as the people of Angus, Dundee, Perth & Kinross and Stirling change travel behaviours following the Covid-19 outbreak.
- 1.1.2 The results of the surveys will inform decisions on the benefits of the temporary infrastructure measures being brought forward by the four local authorities Dundee City Council, Perth & Kinross Council, Stirling Council and Angus Council.

1.2 Spaces for People

- 1.2.1 The *Spaces for People* programme is funded by the Scottish Government and managed by Sustrans Scotland. The aim of the initiative is to enable statutory bodies to implement measures focused on protecting public health by enabling pedestrians and cyclists to social distance safely on public roads physical distancing.
- 1.2.2 The initiative focuses on essential journeys, which might include:
- Journeys to and from hospitals and health services
 - Journeys to shops, pharmacies, schools, and other returning workplaces
 - Journeys for recommended exercise, for example neighbourhoods and local parks.
- 1.2.3 The measures being investigated by the authorities will provide temporary walking and cycling infrastructure that helps to protect public health by enabling safe physical distancing for essential journeys and exercise for everyone, in particular where there are space constraints or user safety concerns. The measures might include, but are not limited to:
- Physical interventions
 - Selective road closures using planters or cones
 - Reallocating road space for wider footway
 - Reallocating road space for cycle tracks
 - Reallocating parking and loading
 - Reduced speed limits and/or traffic calming measures
 - Removal of barriers to open up constrained spaces and remove pinch points.
- 1.2.4 This report details the traffic surveys undertaken in four phases between October 2020 and September 2021, and the mode share summary information for each location.

1.3 Spaces for People Interventions

- 1.3.1 A summary of the *Spaces for People* programme interventions within the Angus Council area is given in Table 1 below.

Table 1. Installed Interventions Summary

Area	Type of Intervention	Approx. Installation Date
School(s) in Arbroath	Physical Distancing Signage	30/10/2020
School(s) in Brechin	Physical Distancing Signage	30/10/2020
School(s) in Camoustie	Physical Distancing Signage	30/10/2020
School(s) in Forfar	Physical Distancing Signage	30/10/2020
School(s) in Kirriemuir	Physical Distancing Signage	30/10/2020
School(s) in Monifieth	Physical Distancing Signage	30/10/2020
School(s) in Montrose	Physical Distancing Signage	30/10/2020
Arbroath town centre	Speed reduction - 20mph	16/09/2020
Brechin town centre	Speed reduction - 20mph	10/09/2020
Camoustie town centre	Speed reduction - 20mph	16/09/2020
Forfar town centre	Speed reduction - 20mph	15/09/2020
Kirriemuir town centre	Speed reduction - 20mph	15/09/2020
Monifieth town centre	Speed reduction - 20mph	16/09/2020
Montrose town centre	Speed reduction - 20mph	10/09/2020
Friockheim	Speed reduction - 20mph	14/09/2020
Edzell	Speed reduction - 20mph	07/09/2020
Liff	Speed reduction - 20mph	03/09/2020
Glamis	Speed reduction - 20mph	15/12/2020
Hillside	Speed reduction - 20mph	22/02/2021
Kingsmuir	Speed reduction - 20mph	15/12/2020
Letham	Speed reduction - 20mph	15/12/2020
Newbigging	Speed reduction - 20mph	15/12/2020
Newtyle	Speed reduction - 20mph	15/12/2020
Arbirlot	Speed reduction - 20mph	12/04/2021
Kirkton Of Auchterhouse	Speed reduction - 20mph	12/04/2021
Bary	Speed reduction - 20mph	12/04/2021
Bridgefoot	Speed reduction - 20mph	12/04/2021
Easthaven	Speed reduction - 20mph	12/04/2021
Ferryden	Speed reduction - 20mph	12/04/2021
Fowls	Speed reduction - 20mph	12/04/2021
Inveraldie	Speed reduction - 20mph	12/04/2021
Inverkeilor	Speed reduction - 20mph	12/04/2021
Leysmill	Speed reduction - 20mph	12/04/2021
Lunanhead	Speed reduction - 20mph	12/04/2021
Monikie	Speed reduction - 20mph	12/04/2021
Redford	Speed reduction - 20mph	12/04/2021
Tealing	Speed reduction - 20mph	12/04/2021
Wellbank	Speed reduction - 20mph	12/04/2021
Westmuir	Speed reduction - 20mph	12/04/2021
20no. Cycle Shelters Council Area	Cycle Parking	12/05/2021
Physical Distancing Stickers Council Area	Stickers	24/11/2020
VAS council wide area	Signage	01/04/2021
Arbroath town centre	Footpath widening	10/02/2021
Brechin town centre	Footpath widening	11/02/2021
Forfar town centre	Footpath widening	12/02/2021
Montrose town centre	Footpath widening	15/02/2021

2. DATA COLLATION

2.1 Overview of Traffic Surveys

2.1.1 A programme of traffic surveys for all the locations was undertaken by specialists Nationwide Data Collection (NDC).

2.1.2 The types of surveys undertaken in the Angus area were:

- Pedestrian Behaviour and volume counts
- Link count and speed surveys
- Classified Turning Counts (including cyclists & pedestrians)
- Rail Station Counts*
- Bus Station Counts*
- Bus Occupancy Counts*
- Vehicle Occupancy Counts*.

2.1.3 Data was recorded over a 16 hour period (06:00-22:00) and analysis undertaken for the following time periods:

- AM Peak Period – 07:00 – 10:00
- Inter Peak Period – 10:00 – 16:00
- PM Peak Period – 16:00 – 19:00.

2.1.4 The surveys were undertaken on the following dates:

- October 2020 – Thursday 22nd to Saturday 24th October 2020
- February 2021 – Thursday 25th to Saturday 27th February 2021
- May 2021 – Thursday 11th to Saturday 13th May 2021
- September 2021 – Thursday 9th to Saturday 11th September 2021.

2.1.5 ATC tubes were in place for seven days on the following days:

- Arbroath
- Forfar
- Edzell.

2.1.6 The exception to the programme were the rail, bus and car occupancy surveys informing the mode share analysis (denoted by * above). These were undertaken on Thursday 11th May 2021 only.

2.2 Pedestrian Behaviour and Volume Counts

Arbroath

2.2.1 Six locations within Arbroath were selected in discussion with Tactran for pedestrian volume counts and behaviour surveys. These are detailed below and in Figure 1:

- Ped 1 – West Port between Bridge Street and Millgate (north side)
- Ped 2 – West Port between Bridge Street and Millgate (south side)
- Ped 3 – Millgate between Grimsby Place and A92 Burnside Drive (north side)
- Ped 4 – Millgate between Grimsby Place and A92 Burnside Drive (south side)
- Ped 5 – Commerce Street between Marketgate and High Street (north side)
- Ped 6 – Commerce Street between Marketgate and High Street (south side).

2.2.2 Two-directional classified link counts were carried out within the study section, to include both pedestrians and cyclists. Results were categorised as follows:

- Pedestrians
- Wheeled pedestrians (on scooters etc)
- Pedal Cycles
- Motorcycles
- Cars/Taxis
- LGVs
- OGV1
- OGV2
- Service Buses
- Private Coaches.

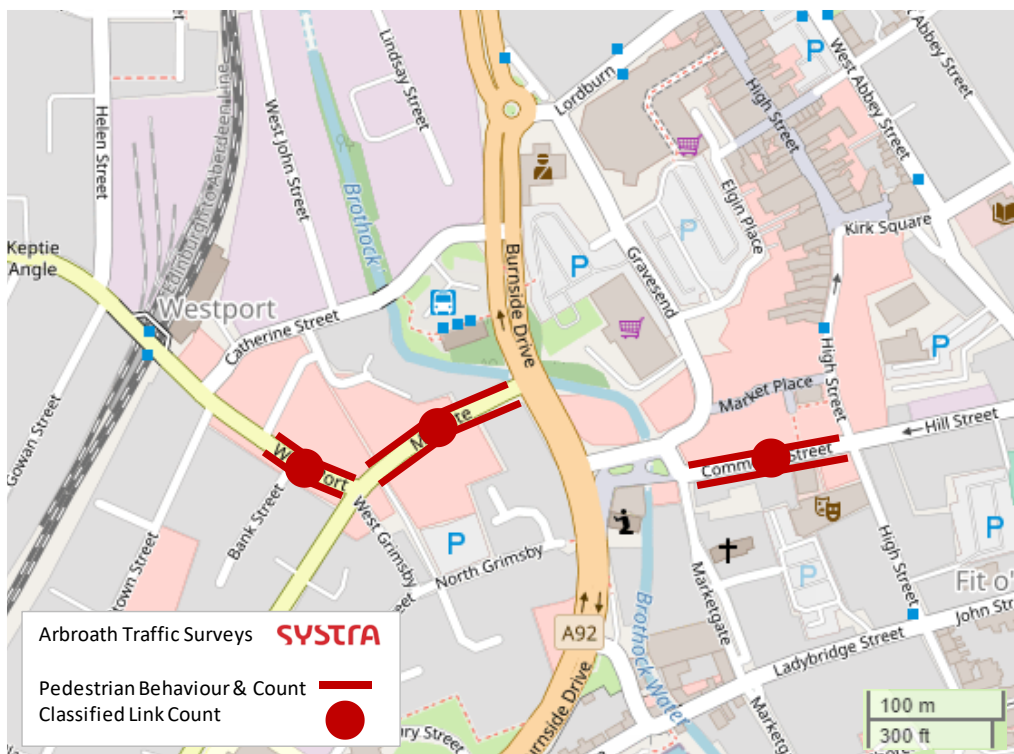


Figure 1. Pedestrian Surveys - Arbroath

Forfar

2.2.3 One location within Forfar was selected for pedestrian survey counts and behaviour surveys. This is detailed below and in Figure 2:

- Ped 7 – Castle Street between Manor Street and Myre Road (east side)
- Ped 8 – Castle Street between Manor Street and Myre Road (west side)



Figure 2. Pedestrian Surveys - Forfar

2.3 Link Count and Speed Surveys

Arbroath

2.3.1 Three locations within Arbroath were selected for link count and speed surveys over a seven day period. These are detailed below and in Figure 3:

- Link & Speed 1 – West Port
- Link & Speed 2 – Millgate
- Link & Speed 3 – Commerce Street.

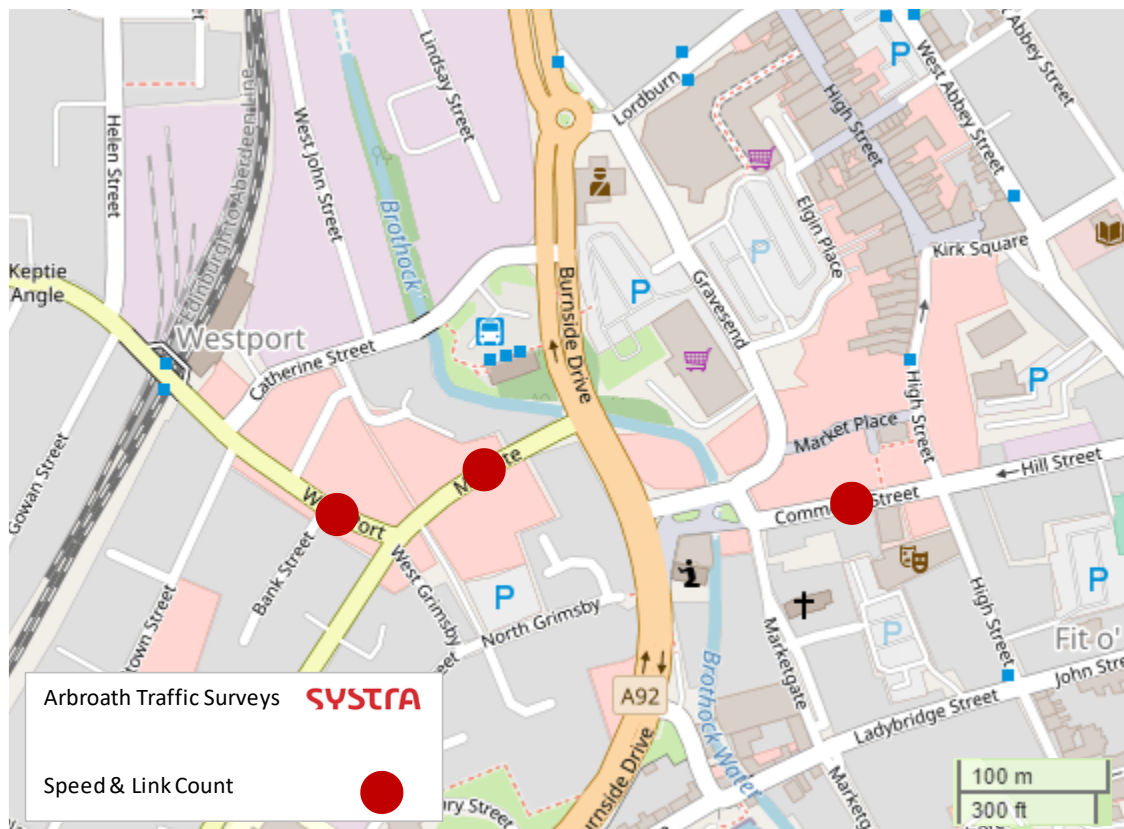


Figure 3. Link & Speed Surveys - Arbroath

Forfar

2.3.2 One location within Forfar was selected for a link count and speed survey over a seven day period. This is detailed below and in Figure 4:

○ Link & Speed 4 – Castle Street

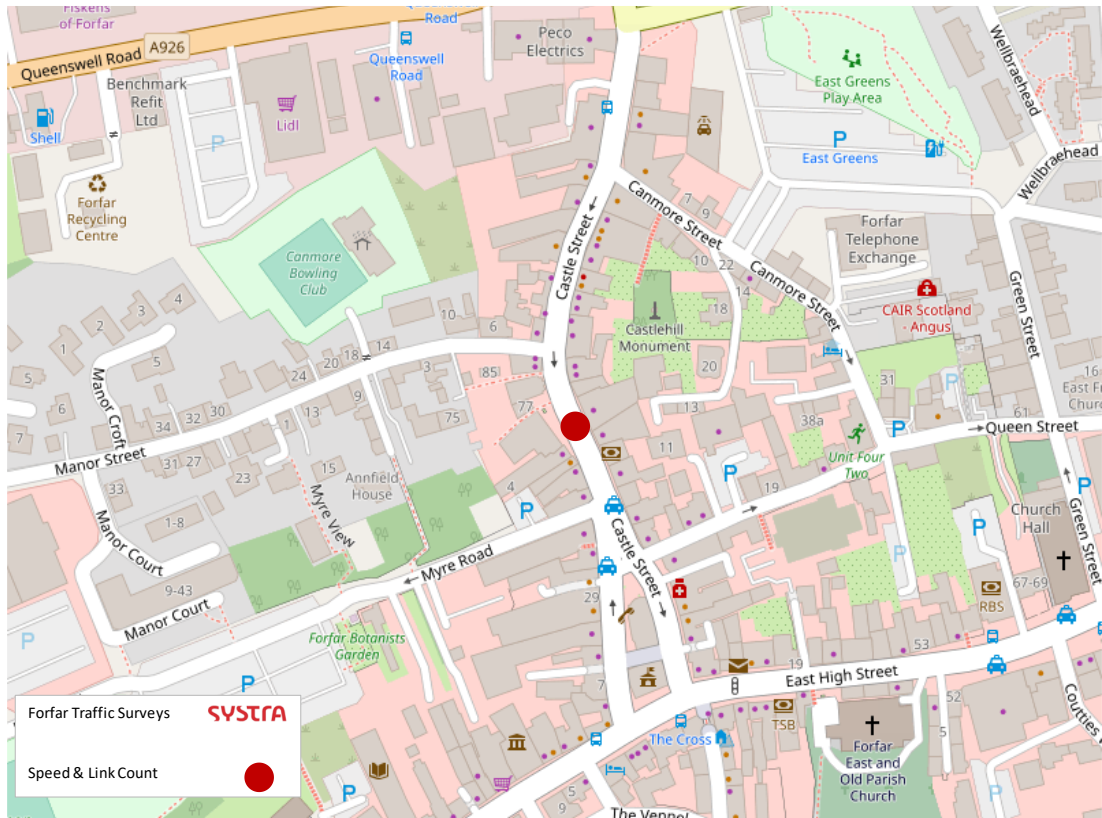


Figure 4. Link & Speed Surveys - Forfar

Edzell

2.3.3 One location within Edzell was selected for a link count and speed survey over a seven day period. This is detailed below and in Figure 5:

- Link & Speed 5 – B966 outside Edzell Primary School

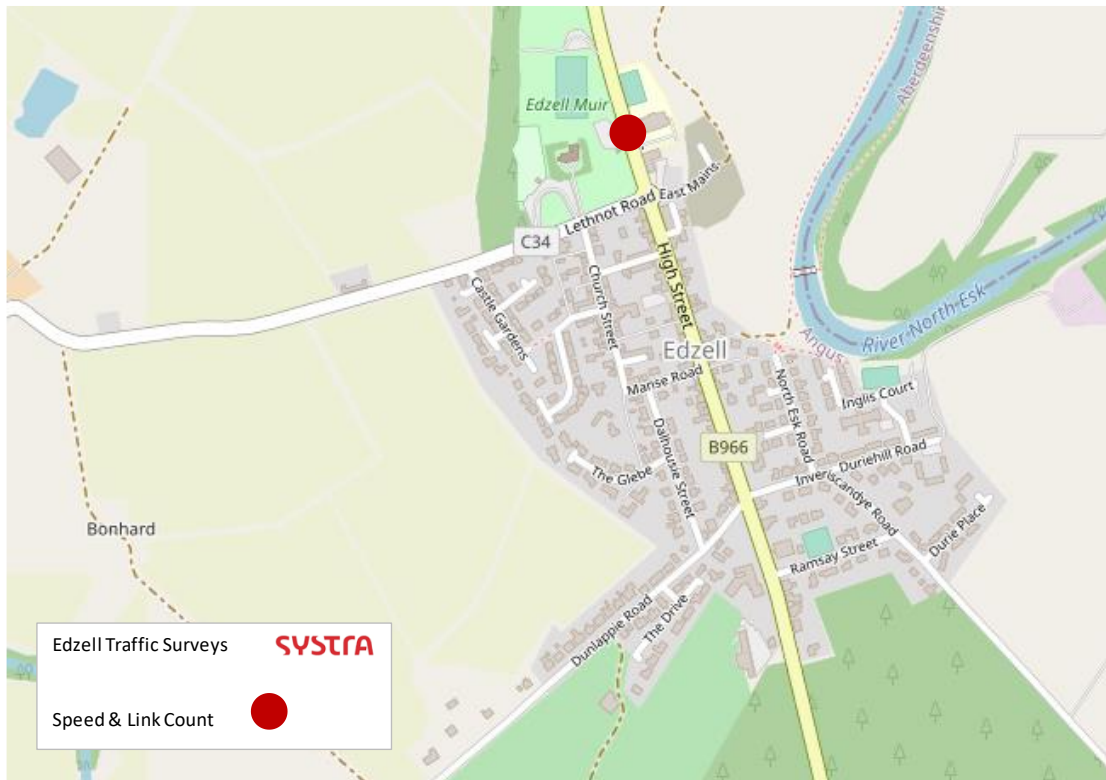


Figure 5. Link & Speed Surveys - Edzell

2.4 Classified Turning Counts

Arbroath

2.4.1 Six locations within Arbroath were selected for classified turn counts. These are detailed below and in Figure 6. The mode share cordon counts were undertaken on the Thursday of each survey period between 06:00 and 22:00:

- CC 1 – Fisheracre/Guthrie Port/A92 Burnside Drive
- CC 2 – West Abbey Street/Academy Street/Hill Place
- CC 3 – A92 Burnside Drive/Harbour/Ladyloan/East Mary Street
- CC 4 – Addison Place/Alexandra Place/Rosemount Road/Nolt Loan Road
- CC 5 – Lochlands Drive/Keptie Road/Footpath
- CC 6 – Cairnie Street/Lochlands Street.

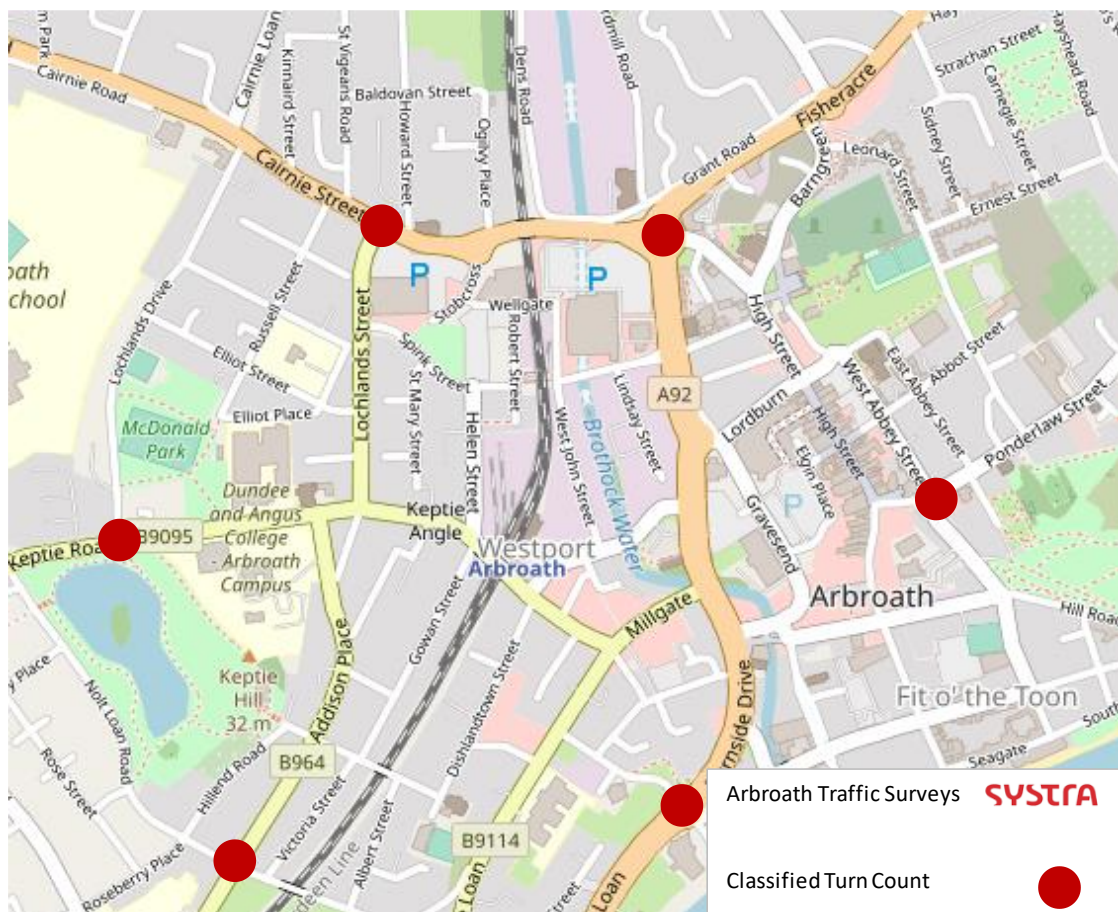


Figure 6. Classified Turn Count Surveys – Arbroath

2.4.2 At each site, link count data was collated into the following categories:

- Pedestrians
- Pedal Cycles
- Motorcycles
- Horses
- Cars/Taxis

- LGVs
- OGV1
- OGV2
- Service Buses
- Private Coaches.

2.5 Mode Share Surveys

Rail Station Barrier Counts

- 2.5.1 Barrier counts were conducted at Arbroath rail station over the 16 hour period (06:00-22:00) on Thursday 11th May 2021 with pedestrian movements captured at both entrances/exits to the station.

Bus Station Counts

- 2.5.2 Counts were undertaken at Arbroath bus station over the 16 hour period (06:00-22:00) on Thursday 11th May 2021, with pedestrian movements captured at all passenger stances within the bus station.

Bus Occupancy Surveys

- 2.5.3 Bus occupancy counts were undertaken at sites CC1 to CC6 shown in Figure 6 over the 16 hour period (06:00-22:00) on Thursday 11th May 2021. Counts were undertaken in an inbound direction only.

Vehicle Occupancy Counts

- 2.5.4 Vehicle occupancy counts were undertaken all classified turn count sites over the 16 hour period (06:00-22:00) on Thursday 11th May 2021. Again, counts were undertaken in an inbound direction only.

2.6 Summary

- 2.6.1 A summary of survey programme undertaken across the Angus Council area is given in Table 2 below.

Table 2. Traffic Survey Summary

Survey Requirement		Oct-20	Feb-21	May-21	Sep-21
Arbroath	Pedestrian Surveys	✓	✓	✓	✓
	Classified Link Count	✓	✓	✓	✓
	Speed Surveys	✓	✓	✓	✓
	Cordon Turn Counts	✓	✓	✓	✓
	Vehicle Occupancy Surveys			✓	
Forfar	Pedestrian Surveys	✓	✓	✓	✓
	Classified Link Count	✓	✓	✓	✓
	Speed Surveys	✓	✓	✓	✓
Edzell	Speed Surveys	✓	✓	✓	✓

3. PEDESTRIAN BEHAVIOUR AND VOLUME REVIEW

3.1 Pedestrian Behaviour Surveys

3.1.1 Summary tables below present the results of the pedestrian behaviour surveys in the Angus Council area.

3.1.2 Following discussion with TACTRAN analysis was undertaken for the following sites in October 2020 only:

- Arbroath Ped 1 – West Port between Bridge Street and Millgate (north side)
- Arbroath Ped 2 – West Port between Bridge Street and Millgate (south side)
- Forfar Ped 7 – Castle Street between Manor Street and Myre Road (east side)
- Forfar Ped 8 – Castle Street between Manor Street and Myre Road (west side)

3.2 Pedestrian Volume Surveys

3.2.1 Six locations within Arbroath were selected in discussion with Tactran for pedestrian volume:

- Ped 1 – West Port between Bridge Street and Millgate (north side)
- Ped 2 – West Port between Bridge Street and Millgate (south side)
- Ped 3 – Millgate between Grimsby Place and A92 Burnside Drive (north side)
- Ped 4 – Millgate between Grimsby Place and A92 Burnside Drive (south side)
- Ped 5 – Commerce Street between Marketgate and High Street (north side)
- Ped 6 – Commerce Street between Marketgate and High Street (south side).

3.2.2 One location within Forfar was selected for pedestrian survey counts and behaviour surveys:

- Ped 7 – Castle Street between Manor Street and Myre Road (east side)
- Ped 8 – Castle Street between Manor Street and Myre Road (west side)

3.3 Results of Pedestrian Behaviour Surveys

Arbroath

- 3.3.1 Table 3 below presents the results of the pedestrian behaviour data on the north side of West Port in Arbroath.

Table 3. West Port, Arbroath (north footpath) Pedestrian Behaviour Summary



Site 1 West Port Step Out Analysis East Footpath (3 day Thur-Fri-Sat October 2020)

Thursday 22nd Oct 2020	2-Way Ped Count	2 -Way Cyclist on Bike	2 -Way Cyclist on Foot	No Conflict Required	Pass with space under 2 m (on footpath)	Pass with space over 2 m (on footpath)	Build Out	Step out into live road	Cross
0600-2200	663	5	1	432	122	3	0	4	2
AM Peak Pd 0700-1000	101	3	0	71	11	0	0	0	1
AM Peak Hr 0800-0900	59	2	0	33	6	0	0	0	1
IP Peak Pd 1000-1600	349	2	1	233	90	3	0	4	0
IP Peak Hr 1200-1300	54	0	0	48	16	0	0	0	0
PM Peak Pd 1600-1900	150	0	0	90	15	0	0	0	1
PM Peak Hr 1700-1800	49	0	0	35	4	0	0	0	0
0600-2200 Behaviour Proportion (%)	-	-	-	77%	22%	1%	0%	1%	0%
Friday 23rd Oct 2020	2-Way Ped Count	No Conflict Required	OGV1	No Conflict Required	Pass with space under 2 m (on footpath)	Pass with space over 2 m (on footpath)	Build Out	Step out into live road	Cross
0600-2200	692	7	3	502	132	1	0	9	1
AM Peak Pd 0700-1000	103	3	1	84	13	0	0	1	0
AM Peak Hr 0800-0900	65	3	1	46	4	0	0	1	0
IP Peak Pd 1000-1600	412	3	2	288	104	1	0	7	0
IP Peak Hr 1200-1300	64	0	0	49	14	0	0	0	0
PM Peak Pd 1600-1900	111	1	0	86	14	0	0	1	1
PM Peak Hr 1700-1800	45	0	0	26	5	0	0	0	0
0600-2200 Behaviour Proportion (%)	-	-	-	78%	20%	0%	0%	1%	0%
Saturday 24th Oct 2020	2-Way Ped Count	No Conflict Required	OGV1	No Conflict Required	Pass with space under 2 m (on footpath)	Pass with space over 2 m (on footpath)	Build Out	Step out into live road	Cross
0600-2200	576	6	0	495	90	0	0	1	3
AM Peak Pd 0700-1000	41	1	0	60	6	0	0	0	0
AM Peak Hr 0800-0900	14	1	0	22	3	0	0	0	0
IP Peak Pd 1000-1600	371	2	0	315	76	0	0	0	3
IP Peak Hr 1200-1300	62	0	0	61	10	0	0	0	0
PM Peak Pd 1600-1900	114	3	0	84	7	0	0	1	0
PM Peak Hr 1700-1800	31	1	0	22	2	0	0	1	0
0600-2200 Behaviour Proportion (%)	-	-	-	84%	15%	0%	0%	0%	1%

3.3.2 Table 3 shows that on the east side footpath of the West Port in Arbroath, on average 80% of pedestrians across the 3 days did not conflict with oncoming pedestrians, whilst 19% passed

on the footpath within a space of 2m or less. The remainder passed with a space over 2m or stepped out into the live carriageway.

3.3.3 Table 4 below presents the results of the pedestrian behaviour data on the south side of West Port in Arbroath.

Table 4. West Port, Arbroath (south footpath) Pedestrian Behaviour Summary



Site 1 West Port Step Out Analysis West Footpath (3 day Thur-Fri-Sat October 2020)

Thursday 22nd Oct 2020	2-Way Ped Count	2-Way Cyclist on Bike	2-Way Cyclist on Foot	No Conflict Required	Pass with space under 2 m (on footpath)	Pass with space over 2 m (on footpath)	Build Out	Step out into live road	Cross
0600-2200	602	8	1	450	42	0	0	1	6
AM Peak Pd 0700-1000	86	1	0	66	4	0	0	0	3
AM Peak Hr 0800-0900	41	0	0	27	2	0	0	0	3
IP Peak Pd 1000-1600	369	4	1	260	33	0	0	1	2
IP Peak Hr 1200-1300	64	0	0	44	7	0	0	0	2
PM Peak Pd 1600-1900	104	0	0	82	5	0	0	0	1
PM Peak Hr 1700-1800	30	0	0	29	1	0	0	0	0
0600-2200 Behaviour Proportion (%)	-	-	-	90%	8%	0%	0%	0%	1%
Friday 23rd Oct 2020	2-Way Ped Count	No Conflict Required	OGV1	No Conflict Required	Pass with space under 2 m (on footpath)	Pass with space over 2 m (on footpath)	Build Out	Step out into live road	Cross
0600-2200	729	8	2	525	56	0	0	1	1
AM Peak Pd 0700-1000	73	0	0	84	4	0	0	1	0
AM Peak Hr 0800-0900	31	0	0	34	2	0	0	1	0
IP Peak Pd 1000-1600	479	2	2	296	49	0	0	0	1
IP Peak Hr 1200-1300	98	1	0	46	10	0	0	0	0
PM Peak Pd 1600-1900	99	3	0	89	3	0	0	0	0
PM Peak Hr 1700-1800	33	1	0	33	1	0	0	0	0
0600-2200 Behaviour Proportion (%)	-	-	-	90%	10%	0%	0%	0%	0%
Saturday 24th Oct 2020	2-Way Ped Count	No Conflict Required	OGV1	No Conflict Required	Pass with space under 2 m (on footpath)	Pass with space over 2 m (on footpath)	Build Out	Step out into live road	Cross
0600-2200	759	6	2	526	36	0	0	0	6
AM Peak Pd 0700-1000	52	1	0	52	1	0	0	0	0
AM Peak Hr 0800-0900	24	0	0	24	0	0	0	0	0
IP Peak Pd 1000-1600	520	4	2	334	32	0	0	0	4
IP Peak Hr 1200-1300	99	0	0	63	4	0	0	0	3
PM Peak Pd 1600-1900	126	0	0	93	2	0	0	0	2
PM Peak Hr 1700-1800	41	0	0	24	1	0	0	0	1
0600-2200 Behaviour Proportion (%)	-	-	-	93%	6%	0%	0%	0%	1%

- 3.3.4 Table 4 shows that on the west side footpath of the West Port in Arbroath, on average 91% of pedestrians across the 3 days did not conflict with oncoming pedestrians, whilst 8% passed on the footpath within a space of 2m or less.

Forfar

- 3.3.5 Table 5 below presents the results of the pedestrian behaviour data on the east side of Castle Street in Forfar.

Table 5. Castle Street, Forfar (east footpath) Pedestrian Behaviour Summary



Site 7 Castle Street Step Out Analysis East Footpath (3 day Thur-Fri-Sat October 2020)

Thursday 22nd Oct 2020	2-Way Ped Count	2-Way Cyclist on Bike	2-Way Cyclist on Foot	No Conflict Required	Pass with space under 2 m (on footpath)	Pass with space over 2 m (on footpath)	Build Out	Step out into live road	Cross
0600-2200	1497	10	2	610	933	44	0	0	0
AM Peak Pd 0700-1000	191	1	0	115	79	4	0	0	0
AM Peak Hr 0800-0900	66	1	0	36	15	1	0	0	0
IP Peak Pd 1000-1600	1046	1	2	312	774	38	0	0	0
IP Peak Hr 1200-1300	180	0	0	43	113	5	0	0	0
PM Peak Pd 1600-1900	195	4	0	115	78	2	0	0	0
PM Peak Hr 1700-1800	59	1	0	41	18	0	0	0	0
0600-2200 Behaviour Proportion (%)	-	-	-	38%	59%	3%	0%	0%	0%
Friday 23rd Oct 2020	2-Way Ped Count	No Conflict Required	OGV1	No Conflict Required	Pass with space under 2 m (on footpath)	Pass with space over 2 m (on footpath)	Build Out	Step out into live road	Cross
0600-2200	1818	5	5	618	1727	55	0	0	0
AM Peak Pd 0700-1000	216	0	1	128	111	2	0	0	0
AM Peak Hr 0800-0900	83	0	1	37	40	1	0	0	0
IP Peak Pd 1000-1600	1229	0	3	293	1425	47	0	0	0
IP Peak Hr 1200-1300	171	0	0	53	192	12	0	0	0
PM Peak Pd 1600-1900	246	4	1	108	161	6	0	0	0
PM Peak Hr 1700-1800	56	1	0	33	38	2	0	0	0
0600-2200 Behaviour Proportion (%)	-	-	-	26%	72%	2%	0%	0%	0%
Saturday 24th Oct 2020	2-Way Ped Count	No Conflict Required	OGV1	No Conflict Required	Pass with space under 2 m (on footpath)	Pass with space over 2 m (on footpath)	Build Out	Step out into live road	Cross
0600-2200	1262	4	0	552	823	53	0	0	0
AM Peak Pd 0700-1000	107	0	0	89	30	3	0	0	0
AM Peak Hr 0800-0900	32	0	0	22	11	1	0	0	0
IP Peak Pd 1000-1600	908	3	0	287	726	49	0	0	0
IP Peak Hr 1200-1300	163	3	0	41	167	10	0	0	0
PM Peak Pd 1600-1900	189	1	0	114	62	1	0	0	0
PM Peak Hr 1700-1800	58	0	0	29	22	0	0	0	0
0600-2200 Behaviour Proportion (%)	-	-	-	39%	58%	4%	0%	0%	0%

3.3.6 Table 5 shows that on the east side footpath of Castle Street in Forfar, on average 34% of pedestrians across the 3 days did not conflict with oncoming pedestrians, whilst 63% passed on the footpath within a space of 2m or less. The remainder passed with a space over 2m or stepped out into the live carriageway.

3.3.7 Table 6 below presents the results of the pedestrian behaviour data on the west side of Castle Street in Forfar.

Table 6. Castle Street, Forfar (west footpath) Pedestrian Behaviour Summary



Site 8 Castle Street Step Out Analysis West Footpath (3 day Thur-Fri-Sat October 2020)

Thursday 22nd Oct 2020	2-Way Ped Count	2-Way Cyclist on Bike	2-Way Cyclist on Foot	No Conflict Required	Pass with space under 2 m (on footpath)	Pass with space over 2 m (on footpath)	Build Out	Step out into live road	Cross
0600-2200	1493	7	2	908	496	52	4	1	0
AM Peak Pd 0700-1000	191	1	0	126	57	2	0	1	0
AM Peak Hr 0800-0900	76	0	0	49	11	0	0	0	0
IP Peak Pd 1000-1600	860	1	1	487	374	48	2	0	0
IP Peak Hr 1200-1300	176	0	0	90	66	9	0	0	0
PM Peak Pd 1600-1900	337	2	1	226	63	2	2	0	0
PM Peak Hr 1700-1800	120	2	0	78	24	2	0	0	0
0600-2200 Behaviour Proportion (%)	-	-	-	62%	34%	4%	0%	0%	0%
Friday 23rd Oct 2020	2-Way Ped Count	No Conflict Required	OGV1	No Conflict Required	Pass with space under 2 m (on footpath)	Pass with space over 2 m (on footpath)	Build Out	Step out into live road	Cross
0600-2200	1669	19	5	1059	899	81	2	1	1
AM Peak Pd 0700-1000	207	2	0	162	52	1	2	0	0
AM Peak Hr 0800-0900	92	1	0	62	6	1	2	0	0
IP Peak Pd 1000-1600	1037	5	4	481	601	71	0	1	1
IP Peak Hr 1200-1300	167	0	0	95	61	12	0	1	0
PM Peak Pd 1600-1900	258	9	0	236	176	8	0	0	0
PM Peak Hr 1700-1800	71	4	0	87	44	2	0	0	0
0600-2200 Behaviour Proportion (%)	-	-	-	52%	44%	4%	0%	0%	0%
Saturday 24th Oct 2020	2-Way Ped Count	No Conflict Required	OGV1	No Conflict Required	Pass with space under 2 m (on footpath)	Pass with space over 2 m (on footpath)	Build Out	Step out into live road	Cross
0600-2200	1262	11	0	861	627	90	2	0	0
AM Peak Pd 0700-1000	95	2	0	115	7	7	0	0	0
AM Peak Hr 0800-0900	36	0	0	44	2	1	0	0	0
IP Peak Pd 1000-1600	885	0	0	429	432	80	2	0	0
IP Peak Hr 1200-1300	143	0	0	73	63	10	0	0	0
PM Peak Pd 1600-1900	192	9	0	166	167	3	0	0	0
PM Peak Hr 1700-1800	66	7	0	51	68	2	0	0	0
0600-2200 Behaviour Proportion (%)	-	-	-	54%	40%	6%	0%	0%	0%

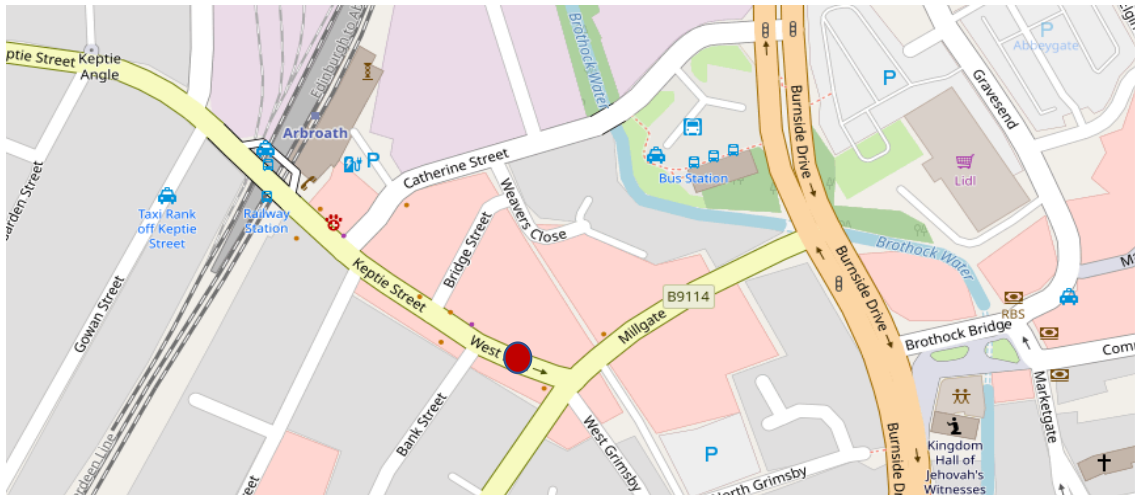
- 3.3.8 Table 6 shows that on the west side footpath of Castle Street in Forfar, on average 56% of pedestrians across the 3 days did not conflict with oncoming pedestrians, whilst 39% passed on the footpath within a space of 2m or less, the remaining 5% passing with a gap of over 2m.

3.4 Results of Pedestrian Volume Surveys

Arbroath

- 3.4.1 Table 7 below presents the results of the pedestrian volume data on the north side of West Port in Arbroath during each of the four survey periods.

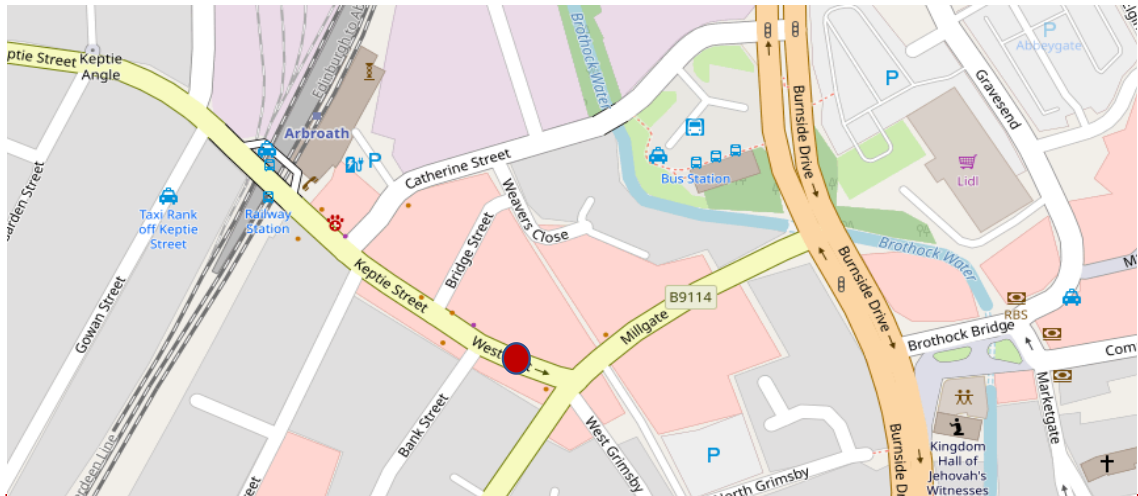
Table 7. West Port, Arbroath (north footpath) Pedestrian Volume Summary



Site 1 West Port North Kerbside (3 day Average Thur-Fri-Sat)									
October 2020	Adult	Adult & Child	Child	Elderly	Disabled	Pavement Cyclist on Bike	Pavement Cyclist on Foot	Horses	Total
0600 - 2200 Eastbound	322	20	12	2	1	4	0	0	362
0600 - 2200 Westbound	308	21	8	1	0	3	1	0	343
AM Peak Pd 0630-0930 Eastbound	28	2	2	1	0	0	0	0	32
AM Peak Pd 0630-0930 Westbound	32	1	4	1	0	1	0	0	39
IP Peak Pd 0930-1530 Eastbound	220	12	3	1	0	3	0	0	239
IP Peak Pd 0930-1530 Westbound	203	14	2	0	0	1	1	0	222
PM Peak Pd 1530-1830 Eastbound	46	4	5	0	0	1	0	0	57
PM Peak Pd 1530-1830 Westbound	46	5	2	0	0	0	0	0	54
February 2021	Adult	Adult & Child	Child	Elderly	Disabled	Pavement Cyclist on Bike	Pavement Cyclist on Foot	Horses	Total
0600 - 2200 Eastbound	196	18	3	1	2	1	0	0	223
0600 - 2200 Westbound	171	7	3	1	0	2	2	0	185
AM Peak Pd 0630-0930 Eastbound	30	3	0	0	0	0	0	0	34
AM Peak Pd 0630-0930 Westbound	18	0	0	0	0	0	0	0	19
IP Peak Pd 0930-1530 Eastbound	114	13	2	1	1	1	0	0	132
IP Peak Pd 0930-1530 Westbound	99	7	2	1	0	0	1	0	110
PM Peak Pd 1530-1830 Eastbound	27	2	1	0	0	1	0	0	32
PM Peak Pd 1530-1830 Westbound	33	0	1	0	0	1	0	0	35
May 2021	Adult	Adult & Child	Child	Elderly	Disabled	Pavement Cyclist on Bike	Pavement Cyclist on Foot	Horses	Total
0600 - 2200 Eastbound	307	16	4	5	2	3	1	0	337
0600 - 2200 Westbound	272	14	2	4	1	2	1	0	298
AM Peak Pd 0630-0930 Eastbound	44	2	0	1	0	0	0	0	47
AM Peak Pd 0630-0930 Westbound	32	2	1	0	0	0	0	0	36
IP Peak Pd 0930-1530 Eastbound	185	6	2	4	1	1	1	0	199
IP Peak Pd 0930-1530 Westbound	159	7	0	3	1	0	1	0	172
PM Peak Pd 1530-1830 Eastbound	47	6	2	0	0	1	0	0	56
PM Peak Pd 1530-1830 Westbound	47	3	1	0	0	1	0	0	52
September 2021	Adult	Adult & Child	Child	Elderly	Disabled	Pavement Cyclist on Bike	Pavement Cyclist on Foot	Horses	Total
0600 - 2200 Eastbound	415	11	5	3	3	3	1	0	440
0600 - 2200 Westbound	367	11	1	2	3	5	4	0	392
AM Peak Pd 0630-0930 Eastbound	43	2	1	1	1	0	0	0	49
AM Peak Pd 0630-0930 Westbound	46	1	0	1	1	1	0	0	49
IP Peak Pd 0930-1530 Eastbound	261	6	2	1	1	1	0	0	272
IP Peak Pd 0930-1530 Westbound	199	9	1	1	2	2	2	0	216
PM Peak Pd 1530-1830 Eastbound	64	3	3	0	0	1	0	0	71
PM Peak Pd 1530-1830 Westbound	65	1	0	0	0	0	1	0	67

- 3.4.2 Table 7 shows that the lowest pedestrian volumes were recorded in February 2021 when Scotland was in lockdown, and the highest pedestrian volumes were recorded in September 2021.
- 3.4.3 Table 8 below presents the results of the pedestrian volume data on the south side of West Port in Arbroath during each of the four survey periods.

Table 8. West Port, Arbroath (south footpath) Pedestrian Volume Summary

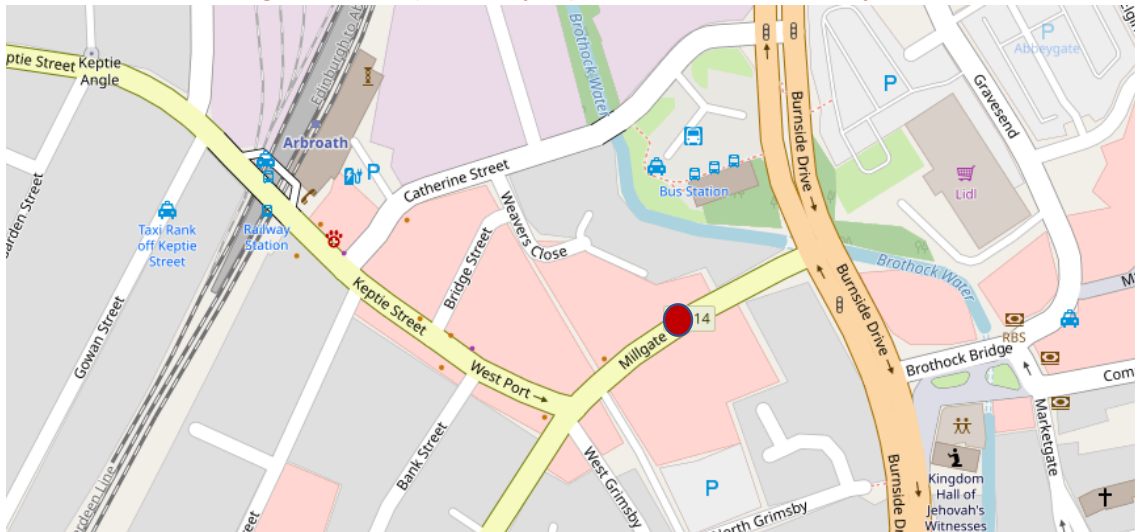


Site 1 West Port South Kerbside (3 day Average Thur-Fri-Sat)

October 2020	Adult	Adult & Child	Child	Elderly	Disabled	Pavement Cyclist on Bike	Pavement Cyclist on Foot	Horses	Total
0600 - 2200 Eastbound	288	41	21	1	0	2	0	0	353
0600 - 2200 Westbound	241	36	14	1	0	4	1	0	298
AM Peak Pd 0630-0930 Eastbound	22	20	7	0	0	0	0	0	50
AM Peak Pd 0630-0930 Westbound	26	2	4	0	0	2	0	0	35
IP Peak Pd 0930-1530 Eastbound	181	14	10	0	0	1	0	0	207
IP Peak Pd 0930-1530 Westbound	141	25	6	0	0	1	1	0	173
PM Peak Pd 1530-1830 Eastbound	59	6	4	0	0	0	0	0	69
PM Peak Pd 1530-1830 Westbound	47	6	4	0	0	1	0	0	58
February 2021	Adult	Adult & Child	Child	Elderly	Disabled	Pavement Cyclist on Bike	Pavement Cyclist on Foot	Horses	Total
0600 - 2200 Eastbound	229	33	9	2	4	3	0	0	279
0600 - 2200 Westbound	199	26	8	1	2	4	2	0	242
AM Peak Pd 0630-0930 Eastbound	29	14	1	0	1	0	0	0	45
AM Peak Pd 0630-0930 Westbound	17	1	0	0	1	1	1	0	22
IP Peak Pd 0930-1530 Eastbound	137	12	4	2	3	2	0	0	160
IP Peak Pd 0930-1530 Westbound	109	18	5	1	1	1	0	0	135
PM Peak Pd 1530-1830 Eastbound	42	5	3	0	0	0	0	0	51
PM Peak Pd 1530-1830 Westbound	49	5	3	0	0	1	0	0	59
May 2021	Adult	Adult & Child	Child	Elderly	Disabled	Pavement Cyclist on Bike	Pavement Cyclist on Foot	Horses	Total
0600 - 2200 Eastbound	275	43	14	4	2	1	1	0	340
0600 - 2200 Westbound	241	35	11	1	2	3	1	0	295
AM Peak Pd 0630-0930 Eastbound	33	19	7	1	0	0	0	0	59
AM Peak Pd 0630-0930 Westbound	39	4	2	0	0	2	0	0	47
IP Peak Pd 0930-1530 Eastbound	169	19	5	3	1	0	1	0	198
IP Peak Pd 0930-1530 Westbound	139	25	6	1	2	0	1	0	174
PM Peak Pd 1530-1830 Eastbound	43	3	1	0	0	1	0	0	49
PM Peak Pd 1530-1830 Westbound	39	3	2	0	0	1	0	0	46
September 2021	Adult	Adult & Child	Child	Elderly	Disabled	Pavement Cyclist on Bike	Pavement Cyclist on Foot	Horses	Total
0600 - 2200 Eastbound	336	24	11	2	1	3	1	0	378
0600 - 2200 Westbound	279	24	5	2	1	4	2	0	317
AM Peak Pd 0630-0930 Eastbound	38	5	4	0	1	1	0	0	50
AM Peak Pd 0630-0930 Westbound	38	1	0	1	0	1	0	0	41
IP Peak Pd 0930-1530 Eastbound	201	17	4	2	0	1	0	0	226
IP Peak Pd 0930-1530 Westbound	152	17	4	1	0	2	2	0	178
PM Peak Pd 1530-1830 Eastbound	62	1	2	0	0	1	0	0	66
PM Peak Pd 1530-1830 Westbound	56	5	1	0	0	0	0	0	63

- 3.4.4 Table 8 shows that the lowest pedestrian volumes were recorded in February 2021 when Scotland was in lockdown, and the highest pedestrian volumes were recorded in September 2021.
- 3.4.5 Table 9 below presents the results of the pedestrian volume data on the north side of Millgate in Arbroath during each of the four survey periods.

Table 9. Millgate, Arbroath (north footpath) Pedestrian Volume Summary

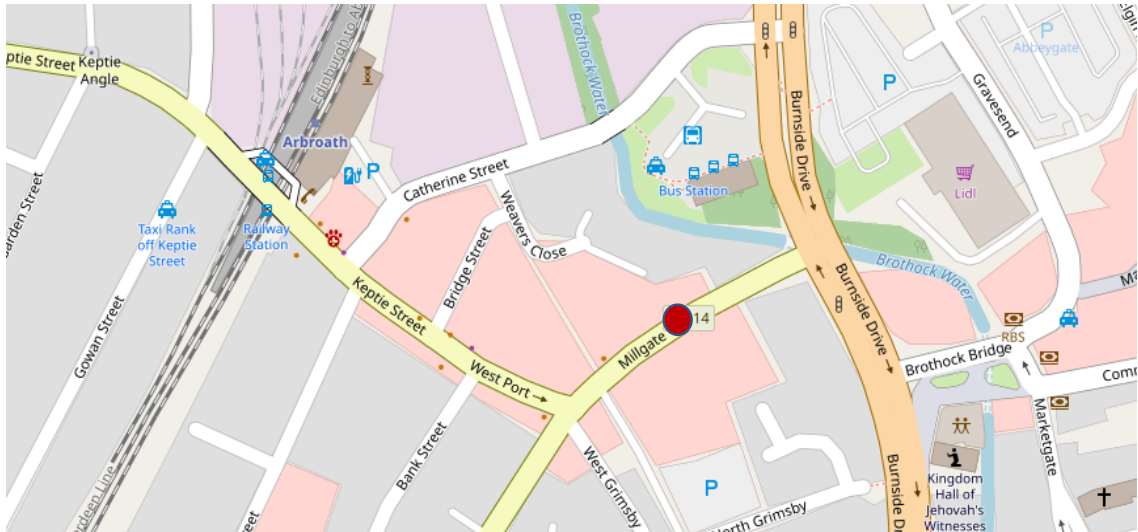


Site 2 Millgate North Kerbside (3 day Average Thur-Fri-Sat)

October 2020	Adult	Adult & Child	Child	Elderly	Disabled	Pavement Cyclist on Bike	Pavement Cyclist on Foot	Horses	Total
0600 - 2200 Eastbound	259	15	3	2	3	4	0	0	287
0600 - 2200 Westbound	210	24	5	2	1	5	1	0	248
AM Peak Pd 0630-0930 Eastbound	35	1	1	0	0	1	0	0	39
AM Peak Pd 0630-0930 Westbound	16	14	1	1	0	1	0	0	32
IP Peak Pd 0930-1530 Eastbound	138	11	3	2	2	1	0	0	157
IP Peak Pd 0930-1530 Westbound	116	8	3	1	1	1	0	0	131
PM Peak Pd 1530-1830 Eastbound	53	3	0	0	0	1	0	0	57
PM Peak Pd 1530-1830 Westbound	48	1	1	0	0	2	0	0	52
February 2021	Adult	Adult & Child	Child	Elderly	Disabled	Pavement Cyclist on Bike	Pavement Cyclist on Foot	Horses	Total
0600 - 2200 Eastbound	212	25	6	1	2	5	0	0	250
0600 - 2200 Westbound	211	26	4	1	2	4	1	0	249
AM Peak Pd 0630-0930 Eastbound	31	2	0	0	0	1	0	0	34
AM Peak Pd 0630-0930 Westbound	14	6	1	0	0	1	0	0	22
IP Peak Pd 0930-1530 Eastbound	100	22	4	1	1	3	0	0	131
IP Peak Pd 0930-1530 Westbound	106	15	1	1	2	3	0	0	127
PM Peak Pd 1530-1830 Eastbound	42	2	2	0	0	1	0	0	47
PM Peak Pd 1530-1830 Westbound	52	4	2	0	0	0	1	0	58
May 2021	Adult	Adult & Child	Child	Elderly	Disabled	Pavement Cyclist on Bike	Pavement Cyclist on Foot	Horses	Total
0600 - 2200 Eastbound	248	22	4	3	5	5	1	0	288
0600 - 2200 Westbound	221	17	7	6	3	4	1	0	259
AM Peak Pd 0630-0930 Eastbound	36	1	0	0	1	2	0	0	40
AM Peak Pd 0630-0930 Westbound	22	6	3	1	0	0	0	0	32
IP Peak Pd 0930-1530 Eastbound	135	17	3	2	4	0	0	0	161
IP Peak Pd 0930-1530 Westbound	120	6	1	4	2	1	0	0	134
PM Peak Pd 1530-1830 Eastbound	44	3	1	0	0	1	0	0	50
PM Peak Pd 1530-1830 Westbound	50	5	1	1	0	2	1	0	60
September 2021	Adult	Adult & Child	Child	Elderly	Disabled	Pavement Cyclist on Bike	Pavement Cyclist on Foot	Horses	Total
0600 - 2200 Eastbound	306	17	5	5	4	4	0	0	341
0600 - 2200 Westbound	263	18	5	3	3	4	2	0	298
AM Peak Pd 0630-0930 Eastbound	33	0	0	0	1	0	0	0	36
AM Peak Pd 0630-0930 Westbound	23	10	2	1	0	0	0	0	36
IP Peak Pd 0930-1530 Eastbound	161	14	3	4	2	2	0	0	186
IP Peak Pd 0930-1530 Westbound	140	6	2	2	2	1	1	0	154
PM Peak Pd 1530-1830 Eastbound	60	2	2	1	1	1	0	0	67
PM Peak Pd 1530-1830 Westbound	51	1	1	0	1	2	0	0	56

- 3.4.6 Table 9 shows that the lowest pedestrian volumes were recorded in February 2021 when Scotland was in lockdown, and the highest pedestrian volumes were recorded in September 2021.
- 3.4.7 Table 10 below presents the results of the pedestrian volume data on the south side of Millgate in Arbroath during each of the four survey periods.

Table 10. Millgate, Arbroath (south footpath) Pedestrian Volume Summary

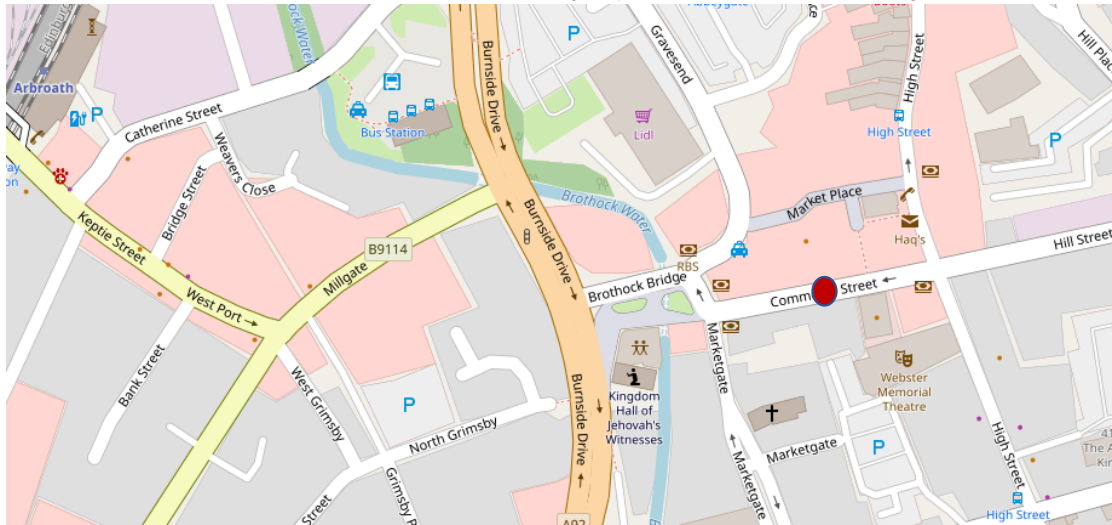


Site 2 Millgate South Kerbside (3 day Average Thur-Fri-Sat)

October 2020	Adult	Adult & Child	Child	Elderly	Disabled	Pavement Cyclist on Bike	Pavement Cyclist on Foot	Horses	Total
0600 - 2200 Eastbound	272	37	3	1	3	2	0	0	317
0600 - 2200 Westbound	250	40	2	2	3	4	1	0	302
AM Peak Pd 0630-0930 Eastbound	44	1	0	0	0	1	0	0	46
AM Peak Pd 0630-0930 Westbound	23	6	1	0	0	1	0	0	32
IP Peak Pd 0930-1530 Eastbound	174	29	0	1	2	1	0	0	207
IP Peak Pd 0930-1530 Westbound	162	28	0	1	2	1	1	0	195
PM Peak Pd 1530-1830 Eastbound	28	6	2	0	0	0	0	0	37
PM Peak Pd 1530-1830 Westbound	49	5	1	0	0	0	0	0	56
February 2021	Adult	Adult & Child	Child	Elderly	Disabled	Pavement Cyclist on Bike	Pavement Cyclist on Foot	Horses	Total
0600 - 2200 Eastbound	216	32	5	0	4	4	0	0	262
0600 - 2200 Westbound	165	24	3	1	2	4	2	0	200
AM Peak Pd 0630-0930 Eastbound	43	3	0	0	1	2	0	0	49
AM Peak Pd 0630-0930 Westbound	12	6	1	0	0	0	1	0	21
IP Peak Pd 0930-1530 Eastbound	122	28	4	0	3	1	0	0	159
IP Peak Pd 0930-1530 Westbound	103	14	1	1	1	2	1	0	124
PM Peak Pd 1530-1830 Eastbound	29	1	1	0	0	1	0	0	31
PM Peak Pd 1530-1830 Westbound	35	4	1	0	0	1	0	0	40
May 2021	Adult	Adult & Child	Child	Elderly	Disabled	Pavement Cyclist on Bike	Pavement Cyclist on Foot	Horses	Total
0600 - 2200 Eastbound	249	31	3	5	3	2	1	0	295
0600 - 2200 Westbound	220	36	5	6	4	4	1	0	277
AM Peak Pd 0630-0930 Eastbound	56	5	0	2	1	0	0	0	64
AM Peak Pd 0630-0930 Westbound	18	12	2	2	1	1	0	0	36
IP Peak Pd 0930-1530 Eastbound	135	22	2	3	3	1	1	0	166
IP Peak Pd 0930-1530 Westbound	130	19	3	3	3	1	1	0	160
PM Peak Pd 1530-1830 Eastbound	37	4	0	0	0	0	0	0	41
PM Peak Pd 1530-1830 Westbound	43	5	1	1	0	1	0	0	50
September 2021	Adult	Adult & Child	Child	Elderly	Disabled	Pavement Cyclist on Bike	Pavement Cyclist on Foot	Horses	Total
0600 - 2200 Eastbound	298	42	3	3	4	4	1	0	354
0600 - 2200 Westbound	268	42	4	5	6	4	1	0	330
AM Peak Pd 0630-0930 Eastbound	52	5	0	0	1	3	0	0	61
AM Peak Pd 0630-0930 Westbound	22	11	1	0	0	1	0	0	36
IP Peak Pd 0930-1530 Eastbound	162	29	2	2	2	1	1	0	199
IP Peak Pd 0930-1530 Westbound	160	22	2	4	5	1	1	0	195
PM Peak Pd 1530-1830 Eastbound	43	7	0	1	1	1	0	0	53
PM Peak Pd 1530-1830 Westbound	49	7	1	1	1	1	0	0	60

- 3.4.8 Table 10 shows that the lowest pedestrian volumes were recorded in February 2021 when Scotland was in lockdown, and the highest pedestrian volumes were recorded in September 2021.
- 3.4.9 Table 11 below presents the results of the pedestrian volume data on the north side of Commerce Street in Arbroath during each of the four survey periods.

Table 11. Commerce Street, Arbroath (north footpath) Pedestrian Volume Summary

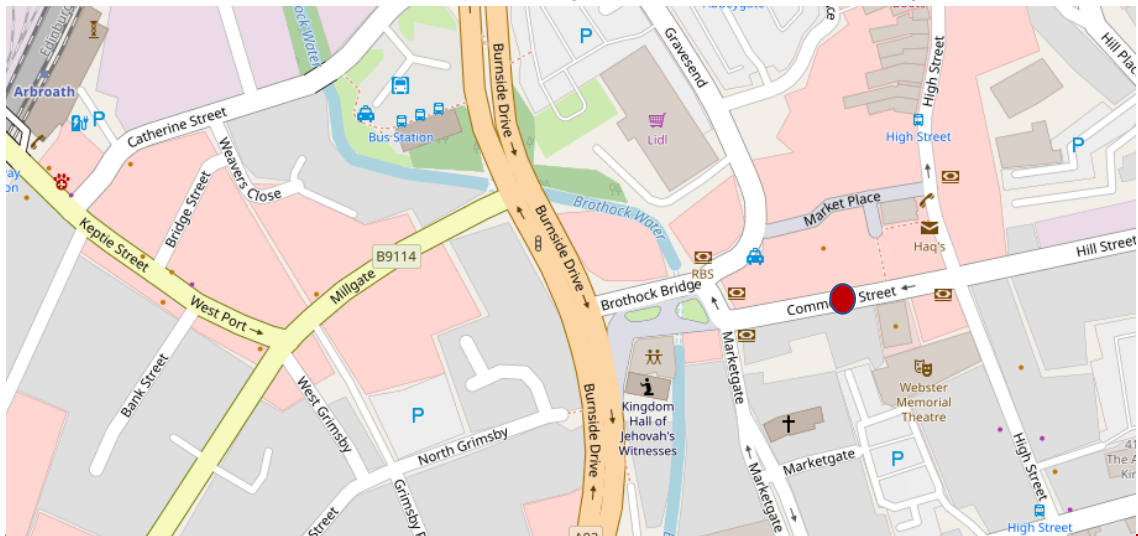


Site 3 Commerce Street North Kerbside (3 day Average Thur-Fri-Sat)

October 2020	Adult	Adult & Child	Child	Elderly	Disabled	Pavement Cyclist on Bike	Pavement Cyclist on Foot	Horses	Total
0600 - 2200 Eastbound	99	10	2	2	0	1	1	0	114
0600 - 2200 Westbound	119	11	3	1	1	1	0	0	136
AM Peak Pd 0630-0930 Eastbound	14	2	0	0	0	0	0	0	16
AM Peak Pd 0630-0930 Westbound	15	2	0	0	0	0	0	0	17
IP Peak Pd 0930-1530 Eastbound	65	4	1	1	0	0	1	0	72
IP Peak Pd 0930-1530 Westbound	78	6	2	1	1	0	0	0	88
PM Peak Pd 1530-1830 Eastbound	14	3	1	1	0	0	0	0	19
PM Peak Pd 1530-1830 Westbound	20	4	1	0	0	0	0	0	25
February 2021	Adult	Adult & Child	Child	Elderly	Disabled	Pavement Cyclist on Bike	Pavement Cyclist on Foot	Horses	Total
0600 - 2200 Eastbound	97	4	0	1	0	1	1	0	104
0600 - 2200 Westbound	118	10	0	2	0	1	2	0	133
AM Peak Pd 0630-0930 Eastbound	17	1	0	0	0	0	0	0	18
AM Peak Pd 0630-0930 Westbound	19	2	0	0	0	0	0	0	22
IP Peak Pd 0930-1530 Eastbound	64	2	0	0	0	1	1	0	68
IP Peak Pd 0930-1530 Westbound	66	8	0	1	0	1	1	0	78
PM Peak Pd 1530-1830 Eastbound	10	1	0	0	0	0	0	0	11
PM Peak Pd 1530-1830 Westbound	23	0	0	0	0	0	0	0	23
May 2021	Adult	Adult & Child	Child	Elderly	Disabled	Pavement Cyclist on Bike	Pavement Cyclist on Foot	Horses	Total
0600 - 2200 Eastbound	134	3	0	1	0	1	1	0	140
0600 - 2200 Westbound	143	3	0	2	1	2	1	0	150
AM Peak Pd 0630-0930 Eastbound	31	1	0	0	0	0	0	0	33
AM Peak Pd 0630-0930 Westbound	22	1	0	0	0	0	0	0	24
IP Peak Pd 0930-1530 Eastbound	75	1	0	0	0	0	1	0	77
IP Peak Pd 0930-1530 Westbound	84	0	0	1	1	2	1	0	88
PM Peak Pd 1530-1830 Eastbound	17	1	0	0	0	0	0	0	18
PM Peak Pd 1530-1830 Westbound	22	1	0	0	0	0	0	0	23
September 2021	Adult	Adult & Child	Child	Elderly	Disabled	Pavement Cyclist on Bike	Pavement Cyclist on Foot	Horses	Total
0600 - 2200 Eastbound	123	5	0	0	1	0	0	0	130
0600 - 2200 Westbound	164	8	4	1	0	1	1	0	179
AM Peak Pd 0630-0930 Eastbound	24	2	0	0	0	0	0	0	26
AM Peak Pd 0630-0930 Westbound	21	2	1	0	0	0	0	0	24
IP Peak Pd 0930-1530 Eastbound	72	0	0	0	1	0	0	0	73
IP Peak Pd 0930-1530 Westbound	94	3	2	1	0	0	0	0	100
PM Peak Pd 1530-1830 Eastbound	18	1	0	0	0	0	0	0	20
PM Peak Pd 1530-1830 Westbound	33	3	1	0	0	0	1	0	38

- 3.4.10 Table 11 shows that the pedestrian volumes remained relatively consistent across all surveys, with the lowest volume being recorded in February 2021 when Scotland was in lockdown, and the highest number recorded in May 2021.
- 3.4.11 Table 12 below presents the results of the pedestrian volume data on the south side of Commerce Street in Arbroath during each of the four survey periods.

Table 12. Commerce Street, Arbroath (south footpath) Pedestrian Volume Summary



Site 3 Commerce Street South Kerbside (3 day Average Thur-Fri-Sat)

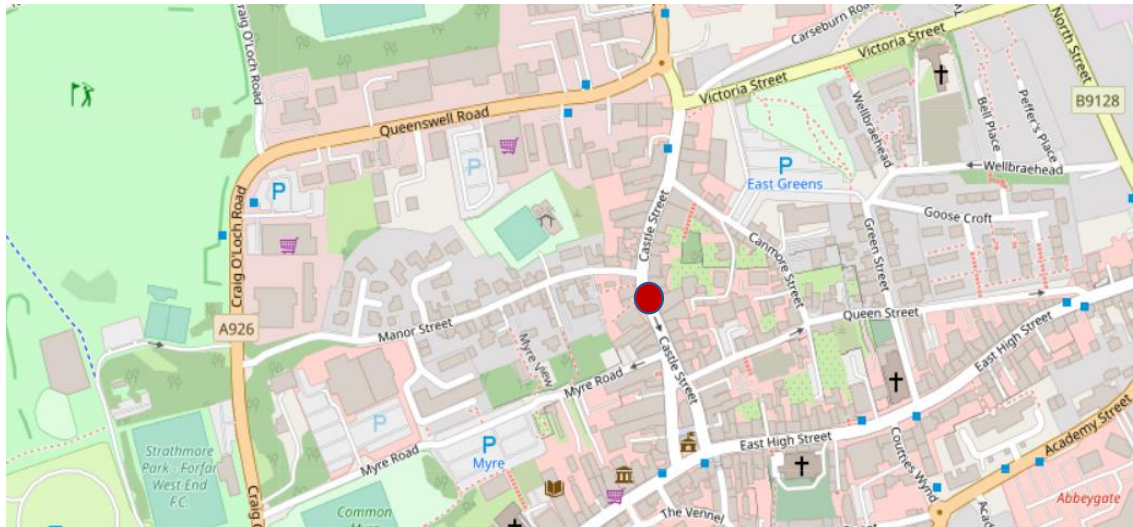
October 2020	Adult	Adult & Child	Child	Elderly	Disabled	Pavement Cyclist on Bike	Pavement Cyclist on Foot	Horses	Total
0600 - 2200 Eastbound	95	5	2	2	0	1	0	0	105
0600 - 2200 Westbound	85	4	2	1	1	1	1	0	94
AM Peak Pd 0630-0930 Eastbound	8	0	0	0	0	0	0	0	9
AM Peak Pd 0630-0930 Westbound	10	1	0	0	0	1	0	0	12
IP Peak Pd 0930-1530 Eastbound	57	2	1	1	0	1	0	0	62
IP Peak Pd 0930-1530 Westbound	47	2	2	0	1	0	1	0	52
PM Peak Pd 1530-1830 Eastbound	19	3	0	0	0	0	0	0	22
PM Peak Pd 1530-1830 Westbound	16	0	0	0	0	0	0	0	16
February 2021	Adult	Adult & Child	Child	Elderly	Disabled	Pavement Cyclist on Bike	Pavement Cyclist on Foot	Horses	Total
0600 - 2200 Eastbound	69	3	0	0	0	1	0	0	74
0600 - 2200 Westbound	67	4	0	0	1	1	0	0	75
AM Peak Pd 0630-0930 Eastbound	8	1	0	0	0	0	0	0	10
AM Peak Pd 0630-0930 Westbound	7	1	0	0	1	0	0	0	9
IP Peak Pd 0930-1530 Eastbound	40	1	0	0	0	0	0	0	41
IP Peak Pd 0930-1530 Westbound	42	3	0	0	0	1	0	0	47
PM Peak Pd 1530-1830 Eastbound	12	1	0	0	0	0	0	0	13
PM Peak Pd 1530-1830 Westbound	12	0	0	0	0	0	0	0	12
May 2021	Adult	Adult & Child	Child	Elderly	Disabled	Pavement Cyclist on Bike	Pavement Cyclist on Foot	Horses	Total
0600 - 2200 Eastbound	94	5	0	1	1	1	0	0	103
0600 - 2200 Westbound	97	7	0	2	2	0	1	0	108
AM Peak Pd 0630-0930 Eastbound	10	2	0	1	1	0	0	0	14
AM Peak Pd 0630-0930 Westbound	12	3	0	0	1	0	0	0	17
IP Peak Pd 0930-1530 Eastbound	52	1	0	0	0	1	0	0	55
IP Peak Pd 0930-1530 Westbound	55	4	0	1	1	0	1	0	62
PM Peak Pd 1530-1830 Eastbound	18	2	0	0	0	0	0	0	20
PM Peak Pd 1530-1830 Westbound	18	0	0	0	0	0	0	0	18
September 2021	Adult	Adult & Child	Child	Elderly	Disabled	Pavement Cyclist on Bike	Pavement Cyclist on Foot	Horses	Total
0600 - 2200 Eastbound	112	5	2	0	0	1	0	0	120
0600 - 2200 Westbound	120	8	2	0	0	1	0	0	132
AM Peak Pd 0630-0930 Eastbound	12	3	0	0	0	0	0	0	15
AM Peak Pd 0630-0930 Westbound	14	0	0	0	0	0	0	0	14
IP Peak Pd 0930-1530 Eastbound	56	1	2	0	0	0	0	0	59
IP Peak Pd 0930-1530 Westbound	74	5	2	0	0	1	0	0	81
PM Peak Pd 1530-1830 Eastbound	25	2	0	0	0	0	0	0	28
PM Peak Pd 1530-1830 Westbound	15	3	0	0	0	0	0	0	18

3.4.12 Table 12 shows that the lowest pedestrian volumes were recorded in February 2021 when Scotland was in lockdown, and the highest pedestrian volumes were recorded in September 2021.

Forfar

3.4.13 Table 13 below presents the results of the pedestrian volume data on the east side of Castle Street in Forfar during each of the four survey periods.

Table 13. Castle Street, Forfar (east footpath) Pedestrian Volume Summary

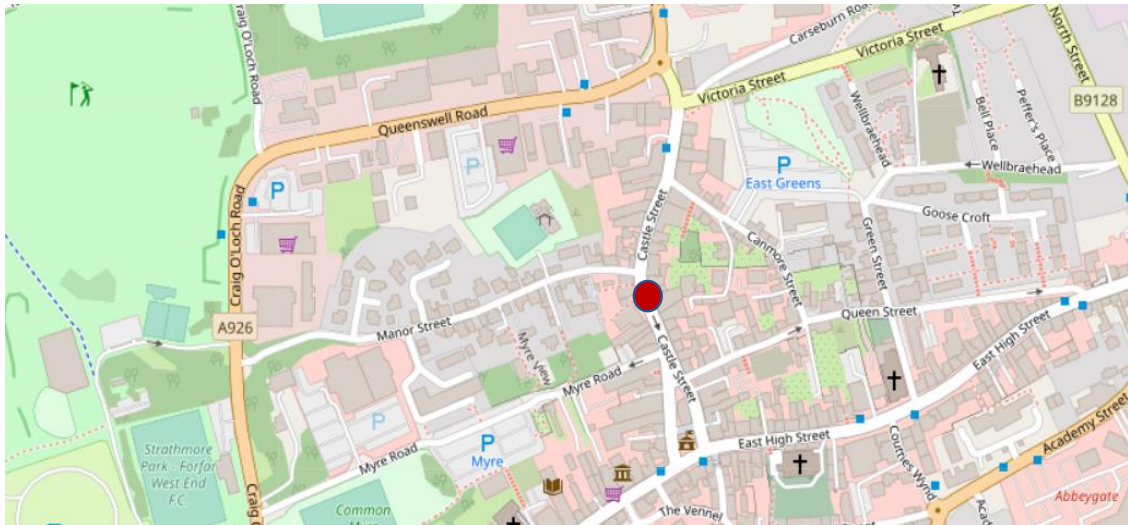


Site 1 Castle Street East Kerbside (3 day Average Thur-Fri-Sat)

October 2020	Adult	Adult & Child	Child	Elderly	Disabled	Pavement Cyclist on Bike	Pavement Cyclist on Foot	Horses	Total
0600 - 2200 Northbound	623	25	23	10	3	2	1	0	686
0600 - 2200 Southbound	758	26	47	9	2	4	2	0	848
AM Peak Pd 0700-1000 Northbound	65	6	14	0	0	0	0	0	86
AM Peak Pd 0700-1000 Southbound	80	4	1	1	0	0	0	0	86
IP Peak Pd 1000-1600 Northbound	440	17	5	9	3	1	0	0	475
IP Peak Pd 1000-1600 Southbound	527	14	35	8	2	1	1	0	589
PM Peak Pd 1600-1900 Northbound	82	1	4	0	0	1	0	0	89
PM Peak Pd 1600-1900 Southbound	106	6	10	0	0	2	0	0	124
February 2021	Adult	Adult & Child	Child	Elderly	Disabled	Pavement Cyclist on Bike	Pavement Cyclist on Foot	Horses	Total
0600 - 2200 Northbound	482	27	3	4	4	1	0	0	521
0600 - 2200 Southbound	202	19	1	1	0	2	0	0	224
AM Peak Pd 0700-1000 Northbound	27	1	0	0	0	0	0	0	29
AM Peak Pd 0700-1000 Southbound	266	9	1	3	3	0	0	0	282
IP Peak Pd 1000-1600 Northbound	131	11	1	1	1	0	0	0	146
IP Peak Pd 1000-1600 Southbound	139	19	0	1	0	1	0	0	160
PM Peak Pd 1600-1900 Northbound	30	1	0	0	0	0	0	0	31
PM Peak Pd 1600-1900 Southbound	22	1	1	0	0	0	0	0	24
May 2021	Adult	Adult & Child	Child	Elderly	Disabled	Pavement Cyclist on Bike	Pavement Cyclist on Foot	Horses	Total
0600 - 2200 Northbound	672	33	24	4	10	5	0	0	747
0600 - 2200 Southbound	746	32	33	4	9	4	1	0	829
AM Peak Pd 0700-1000 Northbound	97	7	15	1	2	0	0	0	122
AM Peak Pd 0700-1000 Southbound	96	4	3	0	2	0	0	0	105
IP Peak Pd 1000-1600 Northbound	452	19	6	3	7	1	0	0	488
IP Peak Pd 1000-1600 Southbound	504	26	23	4	6	2	1	0	565
PM Peak Pd 1600-1900 Northbound	84	5	3	0	2	2	0	0	95
PM Peak Pd 1600-1900 Southbound	99	3	7	0	1	1	0	0	111
September 2021	Adult	Adult & Child	Child	Elderly	Disabled	Pavement Cyclist on Bike	Pavement Cyclist on Foot	Horses	Total
0600 - 2200 Northbound	698	42	28	6	2	5	1	0	782
0600 - 2200 Southbound	774	48	34	8	2	2	1	0	868
AM Peak Pd 0700-1000 Northbound	77	5	13	0	0	0	0	0	96
AM Peak Pd 0700-1000 Southbound	80	5	0	1	0	0	0	0	86
IP Peak Pd 1000-1600 Northbound	486	26	14	5	1	4	0	0	537
IP Peak Pd 1000-1600 Southbound	516	30	22	7	2	1	0	0	578
PM Peak Pd 1600-1900 Northbound	87	9	1	1	0	0	0	0	98
PM Peak Pd 1600-1900 Southbound	105	12	12	0	0	0	0	0	129

- 3.4.14 Table 13 shows that the lowest pedestrian volumes were recorded in February 2021 when Scotland was in lockdown, and the highest pedestrian volumes were recorded in September 2021.
- 3.4.15 Table 14 below presents the results of the pedestrian volume data on the west side of Castle Street in Forfar during each of the four survey periods.

Table 14. Castle Street, Forfar (west footpath) Pedestrian Volume Summary



Site 1 Castle Street West Kerbside (3 day Average Thur-Fri-Sat)

October 2020	Adult	Adult & Child	Child	Elderly	Disabled	Pavement Cyclist on Bike	Pavement Cyclist on Foot	Horses	Total
0600 - 2200 Northbound	624	29	61	10	2	6	1	0	733
0600 - 2200 Southbound	593	41	105	7	2	6	1	0	757
AM Peak Pd 0700-1000 Northbound	73	5	25	0	1	1	0	0	105
AM Peak Pd 0700-1000 Southbound	55	4	0	0	0	1	0	0	61
IP Peak Pd 1000-1600 Northbound	395	18	27	9	1	0	1	0	452
IP Peak Pd 1000-1600 Southbound	366	24	79	6	2	2	1	0	479
PM Peak Pd 1600-1900 Northbound	98	4	9	1	0	4	0	0	115
PM Peak Pd 1600-1900 Southbound	113	11	26	1	0	3	0	0	154
February 2021	Adult	Adult & Child	Child	Elderly	Disabled	Pavement Cyclist on Bike	Pavement Cyclist on Foot	Horses	Total
0600 - 2200 Northbound	439	32	6	3	5	3	0	0	489
0600 - 2200 Southbound	438	26	5	3	5	7	1	0	485
AM Peak Pd 0700-1000 Northbound	67	6	0	1	1	1	0	0	75
AM Peak Pd 0700-1000 Southbound	50	3	0	0	1	1	0	0	56
IP Peak Pd 1000-1600 Northbound	266	21	3	3	3	1	0	0	297
IP Peak Pd 1000-1600 Southbound	273	19	2	2	3	3	1	0	303
PM Peak Pd 1600-1900 Northbound	66	3	3	0	1	2	0	0	74
PM Peak Pd 1600-1900 Southbound	77	4	3	0	1	1	0	0	85
May 2021	Adult	Adult & Child	Child	Elderly	Disabled	Pavement Cyclist on Bike	Pavement Cyclist on Foot	Horses	Total
0600 - 2200 Northbound	600	34	54	4	10	5	2	0	710
0600 - 2200 Southbound	591	35	69	3	7	7	0	0	713
AM Peak Pd 0700-1000 Northbound	90	5	23	1	1	1	0	0	121
AM Peak Pd 0700-1000 Southbound	68	8	0	1	0	1	0	0	78
IP Peak Pd 1000-1600 Northbound	372	23	29	3	9	2	0	0	438
IP Peak Pd 1000-1600 Southbound	372	16	44	3	7	3	0	0	445
PM Peak Pd 1600-1900 Northbound	79	6	3	0	0	1	1	0	90
PM Peak Pd 1600-1900 Southbound	87	10	25	0	0	1	0	0	122
September 2021	Adult	Adult & Child	Child	Elderly	Disabled	Pavement Cyclist on Bike	Pavement Cyclist on Foot	Horses	Total
0600 - 2200 Northbound	684	40	45	9	2	9	1	0	790
0600 - 2200 Southbound	684	40	63	7	1	7	0	0	802
AM Peak Pd 0700-1000 Northbound	93	3	20	0	0	2	0	0	118
AM Peak Pd 0700-1000 Southbound	69	6	0	0	0	0	0	0	75
IP Peak Pd 1000-1600 Northbound	434	28	22	8	1	3	0	0	496
IP Peak Pd 1000-1600 Southbound	435	24	46	6	1	2	0	0	516
PM Peak Pd 1600-1900 Northbound	89	7	3	1	0	2	0	0	102
PM Peak Pd 1600-1900 Southbound	109	8	16	0	0	2	0	0	135

3.4.16 Table 14 shows that the lowest pedestrian volumes were recorded in February 2021 when Scotland was in lockdown, and the highest pedestrian volumes were recorded in September 2021.

4. VEHICLE LINK COUNT & SPEED REVIEW

4.1 Overview

4.1.1 Summary tables below present the results of the link count and speed surveys in the Angus Council area (three sites in Arbroath, one site in Forfar and one site in Edzell).

4.1.2 For each survey, the summary information is as follows:

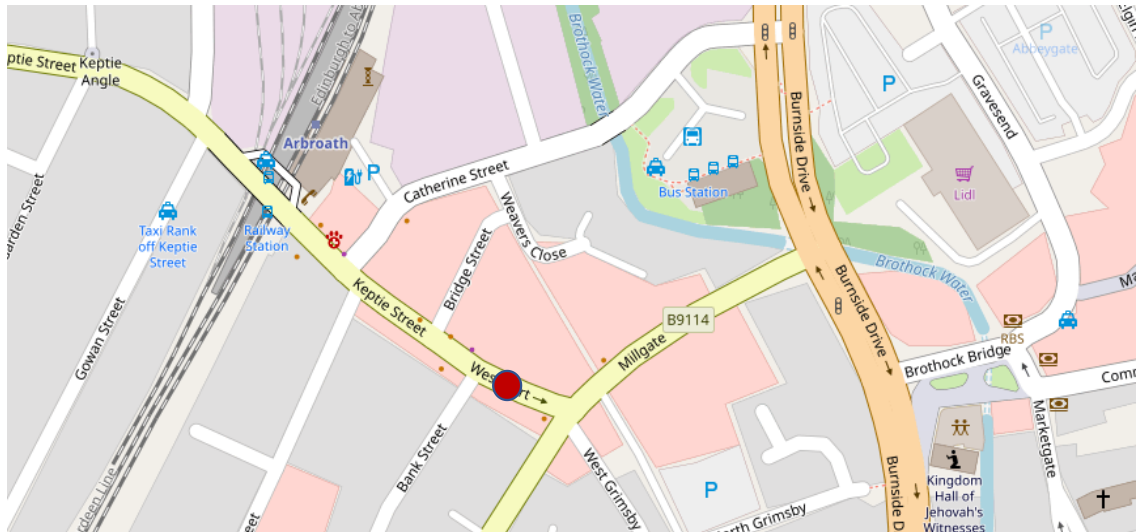
- Site Number
- Site Location
- Total Flow – Directional daily flow
- Mean Speed (mph) – Mean or average speed of all vehicles in either direction
- 85%ile Speed (mph) – Speed at, or below, which 85% of vehicles were travelling. The remaining 15% were recorded travelling at a higher speed
- Number of vehicles travelling at a speed greater than the 20mph limit
- Proportion of vehicles travelling at a speed greater than the 20mph limit
- Number of vehicles travelling at a speed greater than 35mph
- Proportion of vehicles travelling at a speed greater than 35mph.

4.2 Results of Link Counts and Speed Surveys

Arbroath

4.2.1 Table 15 below presents a comparison of the results of the link flow and speed data on the West Port eastbound in Arbroath.

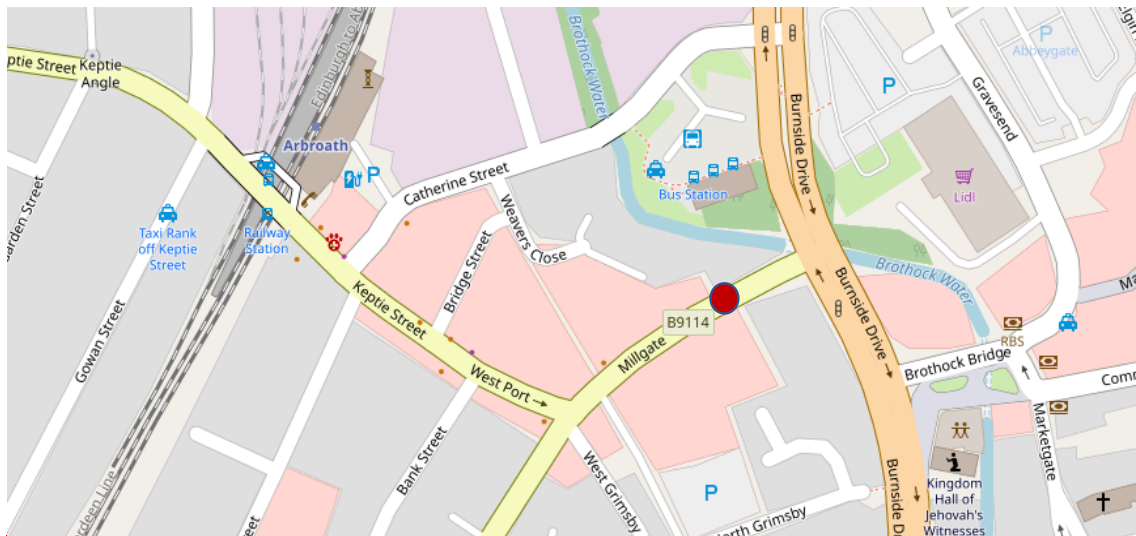
Table 15. West Port, Arbroath (eastbound) Link Flow & Speed Summary



Site 1 West Port									
October 2020	Mon 26/10/20	Tue 27/10/20	Wed 21/10/20	Thu 22/10/20	Fri 23/10/20	Sat 24/10/20	Sun 25/10/20	5 Day Mean	7 Day Mean
0000-2400 Vehicle Flow	1762	1867	1814	2065	2280	2006	1160	1958	1851
Mean Speed (mph)	18.9	18.4	18.6	18.9	18.0	18.0	19.3	18.6	18.6
85%ile Speed (mph)	23.0	22.5	22.9	23.0	22.2	22.5	23.5	22.7	22.8
No. Vehicles > 20 MPH Limit	706	684	690	846	733	658	524	732	692
% Vehicles > 20 MPH Limit	40.1%	36.6%	38.0%	41.0%	32.1%	32.8%	45.2%	37.6%	38.0%
No. Vehicles > 35 MPH	6	2	0	5	1	5	0	3	3
% Vehicles > 35 MPH	0.3%	0.1%	0.0%	0.2%	0.0%	0.2%	0.0%	0.1%	0.1%
March 2021	Mon 29/03/21	Tue 30/03/21	Wed 31/03/21	Thu 01/04/21	Fri 26/03/21	Sat 27/03/21	Sun 28/03/21	5 Day Mean	7 Day Mean
0000-2400 Vehicle Flow	1537	1544	1568	1698	2100	1506	1042	1689	1571
Mean Speed (mph)	19.0	19.1	19.3	19.4	18.9	18.6	20.0	19.1	19.2
85%ile Speed (mph)	22.9	23.1	23.4	23.3	23.0	23.0	24.0	23.1	23.2
No. Vehicles > 20 MPH Limit	667	656	707	781	835	586	532	729	681
% Vehicles > 20 MPH Limit	43.4%	42.5%	45.1%	46.0%	39.8%	38.9%	51.1%	43.3%	43.8%
No. Vehicles > 35 MPH	0	0	2	1	3	3	1	1	1
% Vehicles > 35 MPH	0.0%	0.0%	0.1%	0.1%	0.1%	0.2%	0.1%	0.1%	0.1%
May 2021	Mon 10/05/21	Tue 04/05/21	Wed 05/05/21	Thu 06/05/21	Fri 07/05/21	Sat 08/05/21	Sun 09/05/21	5 Day Mean	7 Day Mean
0000-2400 Vehicle Flow	1837	2029	1948	2093	2310	1972	1272	2043	1923
Mean Speed (mph)	18.5	18.7	18.4	17.9	18.3	17.6	19.0	18.4	18.3
85%ile Speed (mph)	22.4	22.8	22.6	22.3	22.3	22.0	23.2	22.5	22.5
No. Vehicles > 20 MPH Limit	686	814	740	661	822	576	527	745	689
% Vehicles > 20 MPH Limit	37.3%	40.1%	38.0%	31.6%	35.6%	29.2%	41.4%	36.4%	35.9%
No. Vehicles > 35 MPH	1	1	0	0	0	0	0	0	0
% Vehicles > 35 MPH	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
September 2021	Mon 06/09/21	Tue 07/09/21	Wed 08/09/21	Thu 09/09/21	Fri 10/09/21	Sat 11/09/21	Sun 12/09/21	5 Day Mean	7 Day Mean
0000-2400 Vehicle Flow	1726	1821	1892	2092	2435	2253	1408	1993	1947
Mean Speed (mph)	18.4	17.9	18.4	17.9	18.0	17.9	19.3	18.1	18.3
85%ile Speed (mph)	22.4	22.1	22.6	22.1	22.2	22.0	23.3	22.3	22.4
No. Vehicles > 20 MPH Limit	593	577	684	660	788	738	641	660	669
% Vehicles > 20 MPH Limit	34.4%	31.7%	36.2%	31.5%	32.4%	32.8%	45.5%	33.1%	34.4%
No. Vehicles > 35 MPH	2	1	0	2	1	1	0	1	1
% Vehicles > 35 MPH	0.1%	0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	0.1%	0.1%

- 4.2.2 Table 15 indicates that the 5-day average traffic flows were lowest in March 2021 when Scotland was in a period of lockdown. Conversely, the 5-day mean speed was highest at 19.1 mph.
- 4.2.3 The proportion of vehicles exceeding 20mph was slightly lower in May 2021 compared with October 2020, the lowest proportion being observed in September 2021.
- 4.2.4 The vehicle flows out with lockdown (March 2021) and vehicle speeds are relatively consistent.
- 4.2.5 Table 16 presents the results for Millgate eastbound in Arbroath.

Table 16. Millgate, Arbroath (eastbound) Link Flow & Speed Summary



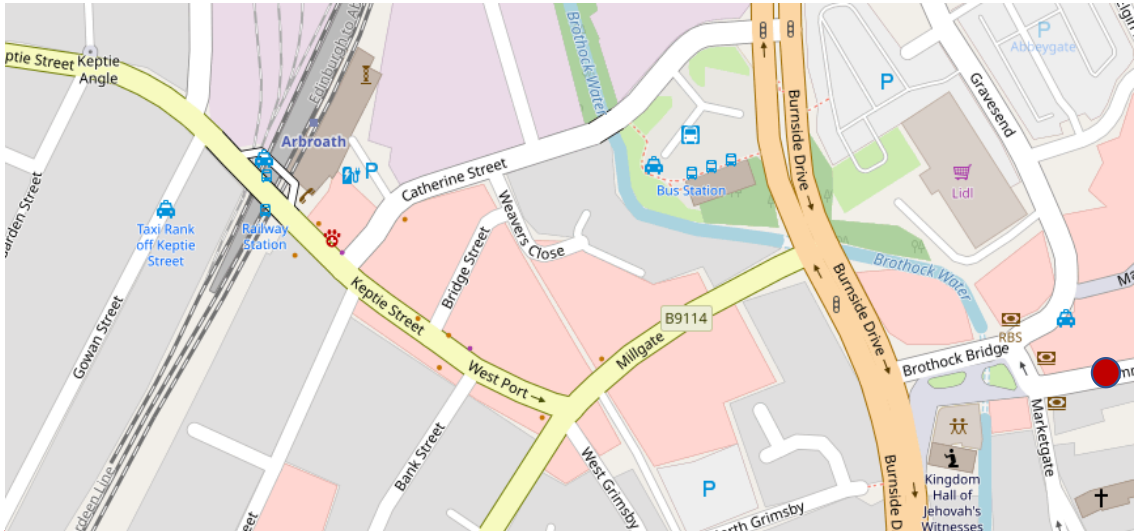
Site 2 Millgate									
October 2020	Mon 26/10/20	Tue 27/10/20	Wed 21/10/20	Thu 22/10/20	Fri 23/10/20	Sat 24/10/20	Sun 25/10/20	5 Day Mean	7 Day Mean
0000-2400 Vehicle Flow	1264	1331	1313	1461	1621	1391	784	1398	1309
Mean Speed (mph)	16.9	16.9	16.5	16.6	16.8	16.9	18.1	16.7	17.0
85%ile Speed (mph)	21.1	20.9	20.6	20.6	20.7	21.0	22.1	20.8	21.0
No. Vehicles > 20 MPH Limit	275	266	245	273	306	295	245	273	272
% Vehicles > 20 MPH Limit	21.8%	20.0%	18.7%	18.7%	18.9%	21.2%	31.3%	19.6%	21.5%
No. Vehicles > 35 MPH	0	0	1	1	0	6	0	0	1
% Vehicles > 35 MPH	0.0%	0.0%	0.1%	0.1%	0.0%	0.4%	0.0%	0.0%	0.1%
March 2021	Mon 29/03/21	Tue 30/03/21	Wed 31/03/21	Thu 01/04/21	Fri 26/03/21	Sat 27/03/21	Sun 28/03/21	5 Day Mean	7 Day Mean
0000-2400 Vehicle Flow	1018	1044	1090	1132	1425	1020	707	1142	1062
Mean Speed (mph)	18.3	18.4	18.2	18.2	18.1	18.0	18.7	18.2	18.3
85%ile Speed (mph)	22.3	22.4	22.4	22.0	22.3	21.9	22.4	22.3	22.2
No. Vehicles > 20 MPH Limit	324	335	356	349	428	308	247	358	335
% Vehicles > 20 MPH Limit	31.8%	32.1%	32.7%	30.8%	30.0%	30.2%	34.9%	31.5%	31.8%
No. Vehicles > 35 MPH	2	1	2	2	4	0	4	2	2
% Vehicles > 35 MPH	0.2%	0.1%	0.2%	0.2%	0.3%	0.0%	0.6%	0.2%	0.2%
May 2021	Mon 10/05/21	Tue 04/05/21	Wed 05/05/21	Thu 06/05/21	Fri 07/05/21	Sat 08/05/21	Sun 09/05/21	5 Day Mean	7 Day Mean
0000-2400 Vehicle Flow	1303	1409	1413	1550	1625	1471	817	1460	1370
Mean Speed (mph)	17.7	17.5	17.4	17.1	17.6	17.0	18.2	17.5	17.5
85%ile Speed (mph)	21.6	21.5	21.3	21.0	21.7	21.0	22.0	21.4	21.4
No. Vehicles > 20 MPH Limit	340	363	336	338	427	307	224	361	334
% Vehicles > 20 MPH Limit	26.1%	25.8%	23.8%	21.8%	26.3%	20.9%	27.4%	24.7%	24.4%
No. Vehicles > 35 MPH	2	1	0	0	1	0	0	1	1
% Vehicles > 35 MPH	0.2%	0.1%	0.0%	0.0%	0.1%	0.0%	0.0%	0.1%	0.0%
September 2021	Mon 06/09/21	Tue 07/09/21	Wed 08/09/21	Thu 09/09/21	Fri 10/09/21	Sat 11/09/21	Sun 12/09/21	5 Day Mean	7 Day Mean
0000-2400 Vehicle Flow	1207	1308	1336	1466	1719	1646	982	1407	1381
Mean Speed (mph)	17.4	17.4	17.0	17.0	17.2	16.8	17.9	17.2	17.2
85%ile Speed (mph)	21.7	21.9	21.3	21.3	21.4	21.0	22.1	21.5	21.5
No. Vehicles > 20 MPH Limit	301	321	317	324	414	355	293	335	332
% Vehicles > 20 MPH Limit	24.9%	24.5%	23.7%	22.1%	24.1%	21.6%	29.8%	23.8%	24.1%
No. Vehicles > 35 MPH	1	2	1	0	0	1	0	1	1
% Vehicles > 35 MPH	0.1%	0.2%	0.1%	0.0%	0.0%	0.1%	0.0%	0.1%	0.1%

4.2.6 Table 16 shows that the 5-day average traffic flows were lowest in March 2021 when Scotland was in a period of lockdown. Again, the 5-day mean speed was highest at 18.2 mph.

4.2.7 The proportion of vehicles exceeding 20mph was higher in May 2021 compared with October 2020. The proportion of vehicles exceeding the 20mph speed limit in September 2021 was similar to May 2021 and both were higher than October 2020.

4.2.8 Table 17 presents the results for Commerce Street westbound in Arbroath.

Table 17. Commerce Street, Arbroath (westbound) Link Flow & Speed Summary



Site 3 Commerce Street

October 2020	Mon 26/10/20	Tue 27/10/20	Wed 21/10/20	Thu 22/10/20	Fri 23/10/20	Sat 24/10/20	Sun 25/10/20	5 Day Mean	7 Day Mean
0000-2400 Vehicle Flow	3852	4092	3718	3910	4208	3427	2611	3956	3688
Mean Speed (mph)	17.8	17.8	18.1	17.6	17.5	18.0	18.2	17.8	17.9
85%ile Speed (mph)	21.4	21.3	21.6	21.1	21.1	21.7	22.0	21.3	21.5
No. Vehicles > 20 MPH Limit	991	1045	1110	932	988	942	782	1013	970
% Vehicles > 20 MPH Limit	25.7%	25.5%	29.9%	23.8%	23.5%	27.5%	30.0%	25.6%	26.3%
No. Vehicles > 35 MPH	0	2	0	0	1	4	0	1	1
% Vehicles > 35 MPH	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%
March 2021	Mon 29/03/21	Tue 30/03/21	Wed 31/03/21	Thu 01/04/21	Fri 26/03/21	Sat 27/03/21	Sun 28/03/21	5 Day Mean	7 Day Mean
0000-2400 Vehicle Flow	3297	3195	3390	3769	4115	2844	2380	3553	3284
Mean Speed (mph)	18.2	18.0	18.3	17.8	17.7	17.8	18.4	18.0	18.0
85%ile Speed (mph)	21.5	21.4	21.6	21.2	21.3	21.5	21.8	21.4	21.5
No. Vehicles > 20 MPH Limit	915	850	957	936	989	741	717	929	872
% Vehicles > 20 MPH Limit	27.8%	26.6%	28.2%	24.8%	24.0%	26.1%	30.1%	26.3%	26.8%
No. Vehicles > 35 MPH	1	1	2	0	0	0	0	1	1
% Vehicles > 35 MPH	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
May 2021	Mon 10/05/21	Tue 04/05/21	Wed 05/05/21	Thu 06/05/21	Fri 07/05/21	Sat 08/05/21	Sun 09/05/21	5 Day Mean	7 Day Mean
0000-2400 Vehicle Flow	4538	4606	4736	5111	5209	4086	3100	4840	4484
Mean Speed (mph)	16.9	17.0	17.2	16.6	16.9	16.8	17.8	16.9	17.0
85%ile Speed (mph)	20.3	20.2	20.5	19.9	20.1	20.1	21.1	20.2	20.3
No. Vehicles > 20 MPH Limit	802	771	892	735	837	634	727	807	771
% Vehicles > 20 MPH Limit	17.7%	16.7%	18.8%	14.4%	16.1%	15.5%	23.5%	16.7%	17.2%
No. Vehicles > 35 MPH	1	0	1	1	1	0	0	1	1
% Vehicles > 35 MPH	0.0%	0.0%	0.1%	0.0%	0.0%	-0.1%	0.0%	0.0%	0.0%
September 2021	Mon 06/09/21	Tue 07/09/21	Wed 08/09/21	Thu 09/09/21	Fri 10/09/21	Sat 11/09/21	Sun 12/09/21	5 Day Mean	7 Day Mean
0000-2400 Vehicle Flow	4207	4394	3640	4362	4971	4015	2894	4315	4069
Mean Speed (mph)	17.5	17.5	17.7	17.4	16.9	17.1	18.0	17.4	17.4
85%ile Speed (mph)	21.0	20.7	21.1	20.7	20.3	20.5	21.4	20.8	20.8
No. Vehicles > 20 MPH Limit	934	951	850	894	847	743	782	895	857
% Vehicles > 20 MPH Limit	22.2%	21.6%	23.4%	20.5%	17.0%	18.5%	27.0%	20.7%	21.1%
No. Vehicles > 35 MPH	0	0	0	0	1	0	0	0	0
% Vehicles > 35 MPH	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

4.2.9 Table 17 shows that the 5-day average traffic flows were lowest in March 2021 when Scotland was in a period of lockdown, the mean speed being 18.0 mph at this point.

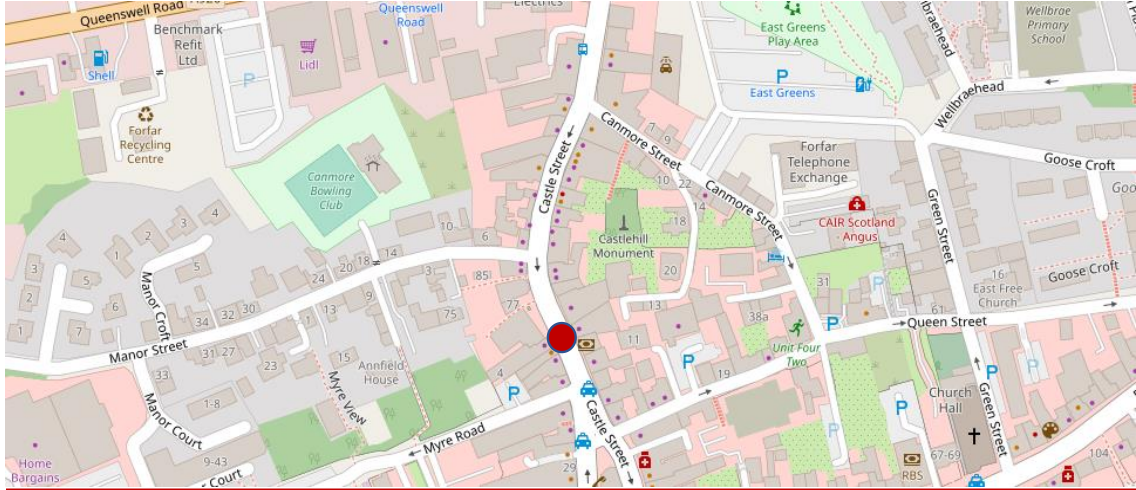
4.2.10 The proportion of vehicles exceeding 20mph was lower in May 2021 compared with October 2020, and much lower than in March 2021. There was an increase in the proportion of vehicles

exceeding 20mph in September 2021 when compared to May 2021, although the number wa lower than October 2020 and March 2021.

Forfar

4.2.11 Table 18 presents the results for Castle Street southbound in Forfar.

Table 18. Castle Street, Forfar (southbound) Link Flow & Speed Summary



Site 1 Castle Street									
October / November 2020	Mon 02/11/20	Tue 27/10/20	Wed 28/10/20	Thu 29/10/20	Fri 30/10/20	Sat 31/10/20	Sun 01/11/20	5 Day Mean	7 Day Mean
0000-2400 Vehicle Flow	3174	3465	3722	3083	3484	3981	2606	3386	3359
Mean Speed (mph)	14.1	15.5	15.3	11.5	13.2	14.7	17.2	13.9	14.5
85%ile Speed (mph)	19.0	19.2	19.1	16.0	18.1	18.5	20.6	18.3	18.6
No. Vehicles > 20 MPH Limit	330	368	368	149	264	321	509	296	330
% Vehicles > 20 MPH Limit	10.4%	10.6%	9.9%	4.8%	7.6%	8.1%	19.5%	8.7%	10.1%
No. Vehicles > 35 MPH	10	13	7	15	6	12	0	10	9
% Vehicles > 35 MPH	0.3%	0.4%	0.2%	0.5%	0.2%	0.3%	0.0%	0.3%	0.3%
February 2021	Mon 22/02/21	Tue 23/02/21	Wed 24/02/21	Thu 25/02/21	Fri 26/02/21	Sat 20/02/21	Sun 21/02/21	5 Day Mean	7 Day Mean
0000-2400 Vehicle Flow	3015	3010	3310	3516	3913	3182	2475	3353	3203
Mean Speed (mph)	17.2	16.8	17.4	17.4	16.9	16.5	18.1	17.1	17.2
85%ile Speed (mph)	21.1	20.9	21.3	21.5	20.9	20.3	21.5	21.1	21.1
No. Vehicles > 20 MPH Limit	697	621	804	893	805	537	711	764	724
% Vehicles > 20 MPH Limit	23.1%	20.6%	24.3%	25.4%	20.6%	16.9%	28.7%	22.8%	22.6%
No. Vehicles > 35 MPH	1	0	0	0	3	4	1	1	1
% Vehicles > 35 MPH	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.0%	0.0%	0.0%
May 2021	Mon 03/05/21	Tue 04/05/21	Wed 05/05/21	Thu 06/05/21	Fri 07/05/21	Sat 08/05/21	Sun 09/05/21	5 Day Mean	7 Day Mean
0000-2400 Vehicle Flow	3377	4643	4693	4976	5095	4600	3455	4557	4406
Mean Speed (mph)	16.7	16.2	16.1	16.3	15.6	15.6	17.3	16.2	16.3
85%ile Speed (mph)	20.4	20.1	20.1	20.2	19.8	19.8	20.5	20.1	20.1
No. Vehicles > 20 MPH Limit	574	712	735	823	711	646	683	711	698
% Vehicles > 20 MPH Limit	17.0%	15.3%	15.7%	16.5%	14.0%	14.0%	19.8%	15.6%	15.8%
No. Vehicles > 35 MPH	2	10	2	8	8	15	1	6	7
% Vehicles > 35 MPH	0.1%	0.2%	0.0%	0.2%	0.2%	0.3%	0.0%	0.1%	0.1%
September 2021	Mon 06/09/21	Tue 07/09/21	Wed 08/09/21	Thu 09/09/21	Fri 10/09/21	Sat 11/09/21	Sun 12/09/21	5 Day Mean	7 Day Mean
0000-2400 Vehicle Flow	3984	4154	3471	3928	3669	4307	2925	3841	3777
Mean Speed (mph)	15.9	15.8	16.1	15.7	15.7	15.5	17.3	15.8	16.0
85%ile Speed (mph)	19.7	19.4	19.6	19.5	19.5	19.1	20.6	19.5	19.6
No. Vehicles > 20 MPH Limit	516	491	410	491	447	422	543	471	474
% Vehicles > 20 MPH Limit	13.0%	11.8%	11.8%	12.5%	12.2%	9.8%	18.6%	12.3%	12.6%
No. Vehicles > 35 MPH	4	5	8	1	2	0	2	4	3
% Vehicles > 35 MPH	0.1%	0.1%	0.2%	0.0%	0.1%	0.0%	0.1%	0.1%	0.1%

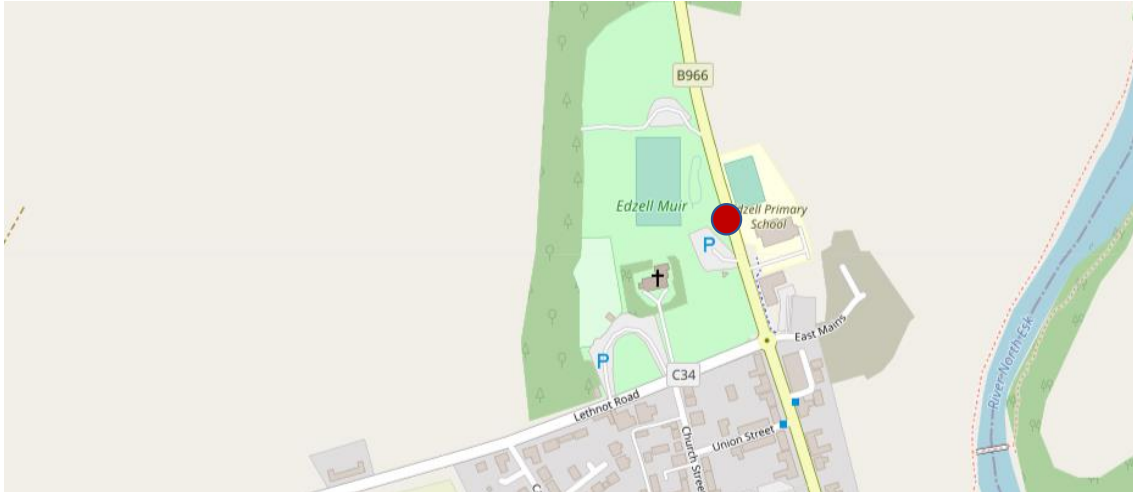
4.2.12 Table 18 shows that the 5-day average traffic flows were lowest in March 2021 when Scotland was in a period of lockdown, although they were only slightly lower than October /November 2020. The mean speed of traffic in October 2020 was only 13.9 mph, compared with 15.8 mph in September 2021..

4.2.13 The proportion of vehicles exceeding 20mph was much higher in May 2021 compared with October 2020 and September 2021, but lower than in February 2021.

Edzell

4.2.14 Table 19 presents the results for the B966 High Street northbound in Edzell.

Table 19. B966 High Street, Edzell (northbound) Link Flow & Speed Summary



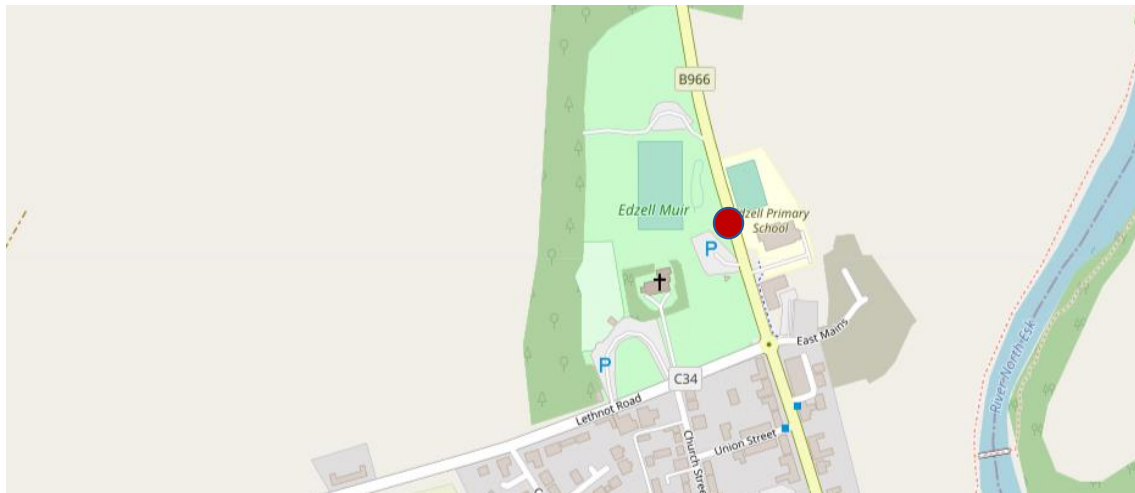
Site 1 High Street									
Oct / Nov 2020	Mon 26/10/20	Tue 27/10/20	Wed 21/10/20	Thu 22/10/20	Fri 23/10/20	Sat 24/10/20	Sun 25/10/20	5 Day Mean	7 Day Mean
0000-2400 Vehicle Flow	806	796	898	878	904	697	894	856	839
Mean Speed (mph)	29.1	29.1	29.0	28.1	28.6	30.7	30.6	28.8	29.3
85%ile Speed (mph)	36.2	36.4	36.2	35.0	35.0	37.0	37.4	35.8	36.2
No. Vehicles > 20 MPH Limit	757	731	822	785	825	657	853	784	776
% Vehicles > 20 MPH Limit	93.9%	91.8%	91.5%	89.4%	91.3%	94.3%	95.4%	91.6%	92.5%
No. Vehicles > 35 MPH	150	156	179	132	135	178	213	150	163
% Vehicles > 35 MPH	18.6%	19.6%	19.9%	15.0%	14.9%	25.5%	23.8%	17.6%	19.5%
Feb-21	Mon 22/02/21	Tue 23/02/21	Wed 24/02/21	Thu 25/02/21	Fri 26/02/21	Sat 20/02/21	Sun 21/02/21	5 Day Mean	7 Day Mean
0000-2400 Vehicle Flow	673	537	662	677	753	510	552	660	623
Mean Speed (mph)	29.3	29.1	29.3	30.1	29.9	31.3	30.2	29.5	29.9
85%ile Speed (mph)	35.7	36.2	36.3	37.3	37.0	37.6	35.9	36.5	36.6
No. Vehicles > 20 MPH Limit	628	492	611	642	703	496	525	615	585
% Vehicles > 20 MPH Limit	93.3%	91.6%	92.3%	94.8%	93.4%	97.3%	95.1%	93.2%	93.9%
No. Vehicles > 35 MPH	123	104	123	155	161	129	115	133	130
% Vehicles > 35 MPH	18.3%	19.4%	18.6%	22.9%	21.4%	25.3%	20.2%	20.2%	20.9%
April / May 2021	Mon 03/05/21	Tue 04/05/21	Wed 05/05/21	Thu 06/05/21	Fri 30/04/21	Sat 01/05/21	Sun 02/05/21	5 Day Mean	7 Day Mean
0000-2400 Vehicle Flow	752	773	886	804	969	957	776	837	845
Mean Speed (mph)	28.5	27.6	28.0	27.6	28.0	28.7	28.7	27.9	28.2
85%ile Speed (mph)	34.5	34.3	34.8	34.6	34.3	34.3	34.3	34.5	34.4
No. Vehicles > 20 MPH Limit	706	689	795	708	885	892	727	757	772
% Vehicles > 20 MPH Limit	93.9%	89.1%	89.7%	88.1%	91.3%	93.2%	93.7%	90.4%	91.3%
No. Vehicles > 35 MPH	97	92	130	105	123	122	91	109	109
% Vehicles > 35 MPH	12.9%	11.9%	14.7%	13.1%	12.7%	12.7%	11.7%	13.1%	12.8%
September 2021	Mon 06/09/21	Tue 07/09/21	Wed 08/09/21	Thu 09/09/21	Fri 10/09/21	Sat 11/09/21	Sun 12/09/21	5 Day Mean	7 Day Mean
0000-2400 Vehicle Flow	922	985	1001	866	905	913	944	936	934
Mean Speed (mph)	27.0	26.6	26.4	26.9	27.0	28.5	26.2	26.8	26.9
85%ile Speed (mph)	33.9	33.0	32.7	33.8	33.6	34.7	33.1	33.4	33.5
No. Vehicles > 20 MPH Limit	807	851	859	768	794	860	790	816	818
% Vehicles > 20 MPH Limit	87.5%	86.4%	85.8%	88.7%	87.7%	94.2%	83.7%	87.2%	87.7%
No. Vehicles > 35 MPH	106	84	84	97	87	131	89	92	97
% Vehicles > 35 MPH	11.5%	8.5%	8.4%	11.2%	9.6%	14.3%	9.4%	9.8%	10.4%

4.2.15 Table 19 shows that the 5-day average traffic flows were lowest in February 2021 when Scotland was in a period of lockdown, but the mean speed was 29.5 mph. The highest flows were observed in September 2021 when the mean speed was 26.8 mph.

4.2.16 The proportion of vehicles exceeding 20mph in May 2021 was 90.4%, similar to October 2020 (91.6%), higher than the proportion in September 2021 (87.2%).

4.2.17 Table 20 presents the results for the B966 High Street southbound in Edzell.

Table 20. B966 High Street, Edzell (southbound) Link Flow & Speed Summary



Site 1 High Street									
October / November 2020	Mon 26/10/20	Tue 27/10/20	Wed 21/10/20	Thu 22/10/20	Fri 23/10/20	Sat 24/10/20	Sun 25/10/20	5 Day Mean	7 Day Mean
0000-2400 Vehicle Flow	906	879	1004	941	958	754	920	938	909
Mean Speed (mph)	25.3	25.2	24.9	24.9	25.6	27.2	26.6	25.2	25.7
85%ile Speed (mph)	32.2	31.7	31.6	31.5	32.2	33.8	32.6	31.8	32.2
No. Vehicles > 20 MPH Limit	715	689	770	736	769	671	807	736	737
% Vehicles > 20 MPH Limit	78.9%	78.4%	76.7%	78.2%	80.3%	89.0%	87.7%	78.5%	81.3%
No. Vehicles > 35 MPH	71	61	63	57	74	90	70	65	69
% Vehicles > 35 MPH	7.8%	6.9%	6.3%	6.1%	7.7%	11.9%	7.6%	7.0%	7.6%
February 2021	Mon 22/02/21	Tue 23/02/21	Wed 24/02/21	Thu 25/02/21	Fri 26/02/21	Sat 20/02/21	Sun 21/02/21	5 Day Mean	7 Day Mean
0000-2400 Vehicle Flow	713	620	670	716	810	513	565	706	658
Mean Speed (mph)	26.6	25.7	26.4	26.6	26.7	27.6	26.9	26.4	26.6
85%ile Speed (mph)	33.7	32.8	33.3	33.6	33.8	34.7	33.3	33.4	33.6
No. Vehicles > 20 MPH Limit	606	493	546	609	706	454	497	592	559
% Vehicles > 20 MPH Limit	85.0%	79.5%	81.5%	85.1%	87.2%	88.5%	88.0%	83.9%	84.9%
No. Vehicles > 35 MPH	83	63	83	82	97	75	71	82	79
% Vehicles > 35 MPH	11.6%	10.2%	12.4%	11.5%	12.0%	14.6%	12.6%	11.6%	12.0%
April / May 2021	Mon 03/05/21	Tue 04/05/21	Wed 05/05/21	Thu 06/05/21	Fri 30/04/21	Sat 01/05/21	Sun 02/05/21	5 Day Mean	7 Day Mean
0000-2400 Vehicle Flow	835	874	943	886	946	1006	804	897	899
Mean Speed (mph)	25.5	25.1	25.1	24.8	24.7	26.0	26.2	25.0	25.3
85%ile Speed (mph)	31.9	32.1	32.3	31.8	31.8	31.9	32.1	32.0	32.0
No. Vehicles > 20 MPH Limit	687	677	737	672	729	869	696	700	724
% Vehicles > 20 MPH Limit	82.3%	77.5%	78.2%	75.8%	77.1%	86.4%	86.6%	78.1%	80.5%
No. Vehicles > 35 MPH	64	72	83	74	69	73	63	72	71
% Vehicles > 35 MPH	7.7%	8.2%	8.8%	8.4%	7.3%	7.3%	7.8%	8.1%	7.9%
September 2021	Mon 06/09/21	Tue 07/09/21	Wed 08/09/21	Thu 09/09/21	Fri 10/09/21	Sat 11/09/21	Sun 12/09/21	5 Day Mean	7 Day Mean
0000-2400 Vehicle Flow	992	1136	1123	952	1017	888	1036	1044	1021
Mean Speed (mph)	23.3	23.1	23.2	23.5	23.7	25.2	23.6	23.4	23.7
85%ile Speed (mph)	29.4	28.9	28.8	29.9	29.9	31.2	29.5	29.4	29.7
No. Vehicles > 20 MPH Limit	695	785	804	692	740	735	754	743	744
% Vehicles > 20 MPH Limit	70.1%	69.1%	71.6%	72.7%	72.8%	82.8%	72.8%	71.2%	72.9%
No. Vehicles > 35 MPH	32	32	30	36	49	48	43	36	39
% Vehicles > 35 MPH	3.2%	2.8%	2.7%	3.8%	4.8%	5.4%	4.2%	3.4%	3.8%

4.2.18 Table 20 shows that the 5-day average traffic flows were lowest in February 2021 when Scotland was in a period of lockdown. Conversely, the mean speed was highest at 26.4mph. The average flows were highest in September 2021 and the mean speed was lower at 23.4mph.

4.2.19 The proportion of vehicles exceeding 20mph in May 2021 was 78.1%, similar to October 2020 (78.5%), and higher than September 2021 (71.2%).

5. CLASSIFIED LINK COUNT SURVEYS

5.1 Overview

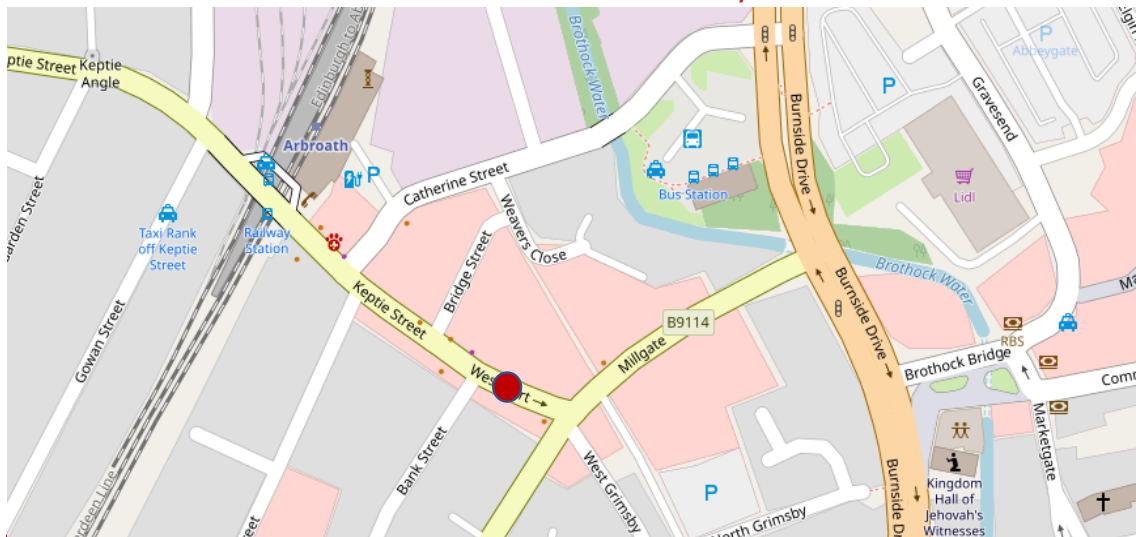
5.1.1 Summary tables below present the results of the classified link count surveys in the Angus Council area (three sites in Arbroath, one site in Forfar).

5.1.2 For each survey, the summary data is presented as a 3-day average (Thursday, Friday & Saturday) and aggregated into the following information:

- Site Number
- Site Location
- 06:00 – 22:00 Total Flow – Directional daily flow
- AM Peak Period 07:00-10:00 Vehicle Flow
- AM Peak Hr 08:00-09:00 Vehicle Flow
- IP Peak Period 10:00-16:00 Vehicle Flow
- IP Peak Hour 12:00-13:00 Vehicle Flow
- PM Peak Period 16:00-19:00 Vehicle Flow
- PM Peak Hour 17:00-18:00 Vehicle Flow
- 06:00-22:00 Vehicle Proportion.

5.1.4 Table 21 presents the results for West Port in Arbroath.

Table 21. West Port Arbroath Link Flow Summary

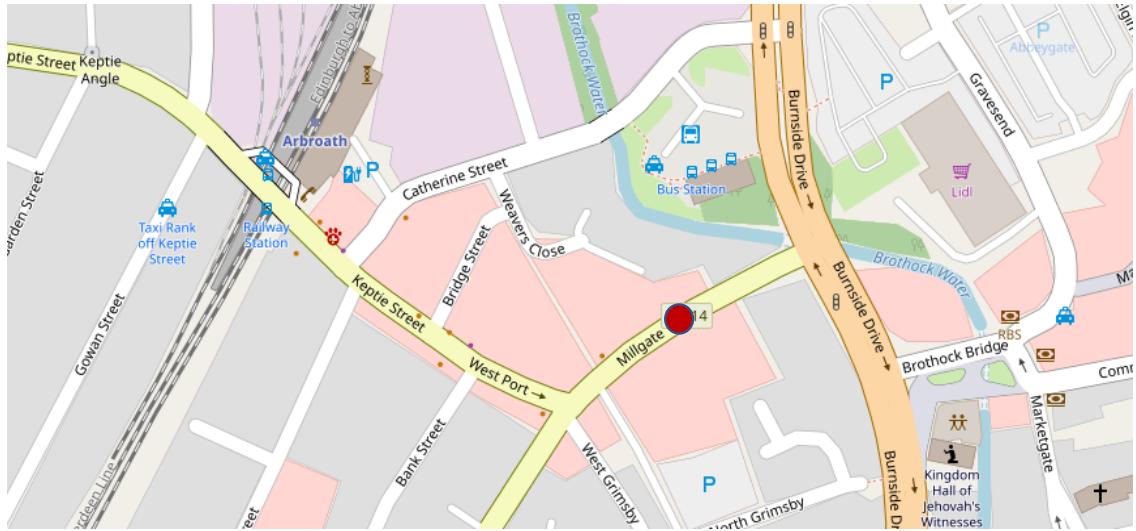


Site 1 West Port (3 day Average Thur-Fri-Sat)									
October 2020	Car	LGV	OGV1	OGV2	Service Bus	Private Coach	Motor Cycle	Pedal Cycle	Total
0600-2200 Vehicle Flow	1762	223	25	1	0	6	2	22	2041
AM Peak Pd 0700-1000 Vehicle Flow	266	47	8	1	0	3	0	4	329
AM Peak Hr 0800-0900 Vehicle Flow	103	18	3	0	0	0	0	2	126
IP Peak Pd 1000-1600 Vehicle Flow	878	116	14	0	0	3	0	10	1022
IP Peak Hr 1200-1300 Vehicle Flow	157	21	3	0	0	0	0	1	183
PM Peak Pd 1600-1900 Vehicle Flow	389	43	2	0	0	0	1	3	438
PM Peak Hr 1700-1800 Vehicle Flow	122	14	1	0	0	0	1	1	139
0600-2200 Vehicle Proportion	86%	11%	1%	0%	0%	0%	0%	1%	100%
February 2021	Car	LGV	OGV1	OGV2	Service Bus	Private Coach	Motor Cycle	Pedal Cycle	Total
0600-2200 Vehicle Flow	1550	190	16	0	0	1	5	42	1803
AM Peak Pd 0700-1000 Vehicle Flow	195	37	5	0	0	1	1	4	242
AM Peak Hr 0800-0900 Vehicle Flow	73	13	1	0	0	0	0	2	89
IP Peak Pd 1000-1600 Vehicle Flow	792	104	8	0	0	0	4	24	932
IP Peak Hr 1200-1300 Vehicle Flow	137	21	1	0	0	0	0	3	163
PM Peak Pd 1600-1900 Vehicle Flow	357	35	2	0	0	0	0	10	405
PM Peak Hr 1700-1800 Vehicle Flow	122	12	1	0	0	0	0	2	137
0600-2200 Vehicle Proportion	86%	10%	1%	0%	0%	0%	0%	2%	100%
May 2021	Car	LGV	OGV1	OGV2	Service Bus	Private Coach	Motor Cycle	Pedal Cycle	Total
0600-2200 Vehicle Flow	1761	197	19	1	0	4	5	21	2008
AM Peak Pd 0700-1000 Vehicle Flow	284	46	4	0	0	2	1	6	343
AM Peak Hr 0800-0900 Vehicle Flow	109	21	1	0	0	1	0	3	135
IP Peak Pd 1000-1600 Vehicle Flow	867	102	13	0	0	1	3	10	995
IP Peak Hr 1200-1300 Vehicle Flow	144	19	3	0	0	0	1	1	166
PM Peak Pd 1600-1900 Vehicle Flow	375	33	2	1	0	0	0	2	413
PM Peak Hr 1700-1800 Vehicle Flow	121	11	1	0	0	0	0	1	133
0600-2200 Vehicle Proportion	88%	10%	1%	0%	0%	0%	0%	1%	100%
September 2021	Car	LGV	OGV1	OGV2	Service Bus	Private Coach	Motor Cycle	Pedal Cycle	Total
0600-2200 Vehicle Flow	1870	177	20	1	0	2	1	31	2101
AM Peak Pd 0700-1000 Vehicle Flow	284	40	5	0	0	1	0	8	338
AM Peak Hr 0800-0900 Vehicle Flow	118	16	1	0	0	1	0	4	140
IP Peak Pd 1000-1600 Vehicle Flow	869	88	12	1	0	0	1	14	984
IP Peak Hr 1200-1300 Vehicle Flow	147	17	2	0	0	0	0	2	169
PM Peak Pd 1600-1900 Vehicle Flow	430	37	2	0	0	0	0	7	477
PM Peak Hr 1700-1800 Vehicle Flow	135	14	1	0	0	0	0	4	154
0600-2200 Vehicle Proportion	89%	8%	1%	0%	0%	0%	0%	1%	100%

5.1.5 Table 21 shows that the proportion of vehicles was very similar across all survey periods. The proportion of cyclists showed a slight increase in February 2021.

5.1.6 Table 22 presents the results for Millgate in Arbroath.

Table 22. Millgate Link Flow Summary

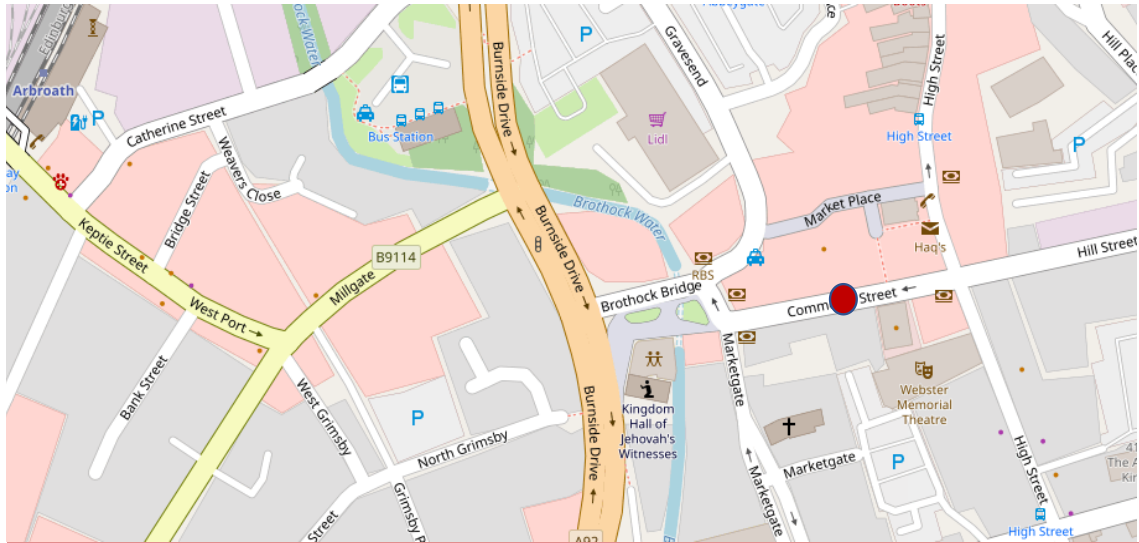


Site 2 Millgate (3 day Average Thur-Fri-Sat)									
October 2020	Car	LGV	OGV1	OGV2	Service Bus	Private Coach	Motor Cycle	Pedal Cycle	Total
0600-2200 Vehicle Flow	1256	161	20	0	0	10	1	30	1478
AM Peak Pd 0700-1000 Vehicle Flow	153	26	7	0	0	2	0	6	195
AM Peak Hr 0800-0900 Vehicle Flow	46	13	2	0	0	0	0	2	64
IP Peak Pd 1000-1600 Vehicle Flow	654	93	10	0	0	5	0	12	774
IP Peak Hr 1200-1300 Vehicle Flow	117	17	3	0	0	0	0	1	138
PM Peak Pd 1600-1900 Vehicle Flow	298	32	1	0	0	2	0	4	338
PM Peak Hr 1700-1800 Vehicle Flow	100	12	1	0	0	1	0	1	115
0600-2200 Vehicle Proportion	85.0%	10.9%	1.4%	0.0%	0.0%	0.7%	0.0%	2.0%	100.0%
February 2021	Car	LGV	OGV1	OGV2	Service Bus	Private Coach	Motor Cycle	Pedal Cycle	Total
0600-2200 Vehicle Flow	1046	122	15	0	0	6	4	38	1232
AM Peak Pd 0700-1000 Vehicle Flow	120	22	6	0	0	0	0	4	153
AM Peak Hr 0800-0900 Vehicle Flow	33	8	2	0	0	0	0	1	45
IP Peak Pd 1000-1600 Vehicle Flow	533	69	6	0	0	4	3	19	633
IP Peak Hr 1200-1300 Vehicle Flow	88	13	2	0	0	0	0	2	105
PM Peak Pd 1600-1900 Vehicle Flow	252	25	3	0	0	2	0	9	291
PM Peak Hr 1700-1800 Vehicle Flow	87	8	1	0	0	1	0	2	99
0600-2200 Vehicle Proportion	85.0%	9.9%	1.2%	0.0%	0.0%	0.5%	0.3%	3.1%	100.0%
May 2021	Car	LGV	OGV1	OGV2	Service Bus	Private Coach	Motor Cycle	Pedal Cycle	Total
0600-2200 Vehicle Flow	1262	147	17	0	0	8	4	20	1458
AM Peak Pd 0700-1000 Vehicle Flow	165	26	3	0	0	0	1	4	199
AM Peak Hr 0800-0900 Vehicle Flow	51	12	1	0	0	0	0	2	66
IP Peak Pd 1000-1600 Vehicle Flow	660	83	12	0	0	5	2	8	771
IP Peak Hr 1200-1300 Vehicle Flow	121	14	2	0	0	0	1	1	138
PM Peak Pd 1600-1900 Vehicle Flow	278	25	0	0	0	2	0	4	309
PM Peak Hr 1700-1800 Vehicle Flow	101	8	0	0	0	1	0	1	112
0600-2200 Vehicle Proportion	86.5%	10.1%	1.2%	0.0%	0.0%	0.5%	0.3%	1.4%	100.0%
September 2021	Car	LGV	OGV1	OGV2	Service Bus	Private Coach	Motor Cycle	Pedal Cycle	Total
0600-2200 Vehicle Flow	1330	120	23	2	0	7	2	25	1509
AM Peak Pd 0700-1000 Vehicle Flow	169	19	7	0	0	0	0	5	201
AM Peak Hr 0800-0900 Vehicle Flow	57	8	4	0	0	0	0	3	72
IP Peak Pd 1000-1600 Vehicle Flow	640	68	12	2	0	4	1	12	738
IP Peak Hr 1200-1300 Vehicle Flow	107	14	1	0	0	0	0	1	124
PM Peak Pd 1600-1900 Vehicle Flow	322	26	2	0	0	2	1	7	361
PM Peak Hr 1700-1800 Vehicle Flow	104	9	0	0	0	1	0	3	117
0600-2200 Vehicle Proportion	88.1%	8.0%	1.5%	0.1%	0.0%	0.4%	0.1%	1.7%	100.0%

- 5.1.7 Table 22 shows that the proportion of cars was higher in May 2021 and September 2021 than in October 2020 and February 2021. The proportion of cyclists increased in February 2021 but was at its lowest in May 2021.

5.1.9 Table 23 presents the results for the Commerce Street in Arbroath.

Table 23. Commerce Street Link Flow Summary

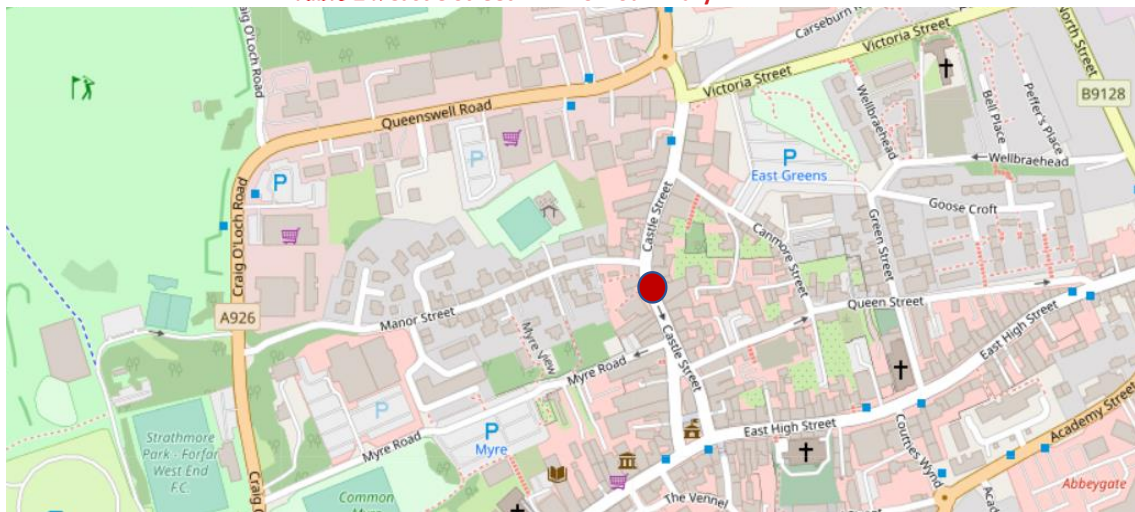


Site 3 Commerce Street (3 day Average Thur-Fri-Sat)									
October 2020	Car	LGV	OGV1	OGV2	Service Bus	Private Coach	Motor Cycle	Pedal Cycle	Total
0600-2200 Vehicle Flow	3325	339	38	3	0	3	3	10	3721
AM Peak Pd 0700-1000 Vehicle Flow	493	84	10	1	0	1	0	1	590
AM Peak Hr 0800-0900 Vehicle Flow	164	31	3	0	0	0	0	0	199
IP Peak Pd 1000-1600 Vehicle Flow	1724	172	22	2	0	2	2	5	1930
IP Peak Hr 1200-1300 Vehicle Flow	293	30	6	0	0	0	0	0	329
PM Peak Pd 1600-1900 Vehicle Flow	774	50	4	0	0	0	0	2	831
PM Peak Hr 1700-1800 Vehicle Flow	268	16	0	0	0	0	0	2	287
0600-2200 Vehicle Proportion	89.4%	9.1%	1.0%	0.1%	0.0%	0.1%	0.1%	0.3%	100.0%
February 2021	Car	LGV	OGV1	OGV2	Service Bus	Private Coach	Motor Cycle	Pedal Cycle	Total
0600-2200 Vehicle Flow	3275	323	37	3	0	3	10	27	3678
AM Peak Pd 0700-1000 Vehicle Flow	448	81	12	0	0	0	1	3	546
AM Peak Hr 0800-0900 Vehicle Flow	143	24	4	0	0	0	0	0	171
IP Peak Pd 1000-1600 Vehicle Flow	1785	167	19	2	0	3	6	17	1999
IP Peak Hr 1200-1300 Vehicle Flow	288	26	3	1	0	1	0	1	320
PM Peak Pd 1600-1900 Vehicle Flow	744	55	3	0	0	0	2	5	809
PM Peak Hr 1700-1800 Vehicle Flow	244	21	1	0	0	0	1	2	269
0600-2200 Vehicle Proportion	89.0%	8.8%	1.0%	0.1%	0.0%	0.1%	0.3%	0.7%	100.0%
May 2021	Car	LGV	OGV1	OGV2	Service Bus	Private Coach	Motor Cycle	Pedal Cycle	Total
0600-2200 Vehicle Flow	3015	256	46	1	0	5	13	13	3350
AM Peak Pd 0700-1000 Vehicle Flow	645	73	10	0	0	1	1	1	732
AM Peak Hr 0800-0900 Vehicle Flow	208	21	4	0	0	1	0	0	234
IP Peak Pd 1000-1600 Vehicle Flow	1537	117	27	1	0	4	9	9	1703
IP Peak Hr 1200-1300 Vehicle Flow	220	21	3	0	0	1	2	1	249
PM Peak Pd 1600-1900 Vehicle Flow	514	39	5	0	0	0	3	1	563
PM Peak Hr 1700-1800 Vehicle Flow	185	14	0	0	0	0	1	0	201
0600-2200 Vehicle Proportion	90.0%	7.7%	1.4%	0.0%	0.0%	0.1%	0.4%	0.4%	100.0%
September 2021	Car	LGV	OGV1	OGV2	Service Bus	Private Coach	Motor Cycle	Pedal Cycle	Total
0600-2200 Vehicle Flow	3832	358	57	4	0	2	11	21	4286
AM Peak Pd 0700-1000 Vehicle Flow	577	86	13	1	0	1	1	5	684
AM Peak Hr 0800-0900 Vehicle Flow	193	30	5	0	0	0	0	1	230
IP Peak Pd 1000-1600 Vehicle Flow	1957	187	33	2	0	1	6	10	2196
IP Peak Hr 1200-1300 Vehicle Flow	321	30	5	0	0	0	1	1	360
PM Peak Pd 1600-1900 Vehicle Flow	848	58	7	2	0	1	2	2	919
PM Peak Hr 1700-1800 Vehicle Flow	305	20	1	0	0	0	1	0	329
0600-2200 Vehicle Proportion	89.4%	8.4%	1.3%	0.1%	0.0%	0.1%	0.3%	0.5%	100.0%

5.1.10 Table 23 shows that the proportion of all vehicle types was fairly consistent across all survey periods.

5.1.11 Table 24 presents the results for Castle Street in Forfar.

Table 24. Castle Street Link Flow Summary



Site 1 Castle Street Forfar (3 day Average Thur-Fri-Sat)

October 2020	Car	LGV	OGV1	OGV2	Service Bus	Private Coach	Motor Cycle	Pedal Cycle	Total
0600-2200 Vehicle Flow	3626	430	41	3	2	4	6	23	4135
AM Peak Pd 0700-1000 Vehicle Flow	532	100	17	0	1	3	1	3	656
AM Peak Hr 0800-0900 Vehicle Flow	187	31	5	0	0	1	0	1	225
IP Peak Pd 1000-1600 Vehicle Flow	1834	208	15	2	0	1	2	9	2073
IP Peak Pd 1200-1300 Vehicle Flow	319	36	3	0	0	0	0	1	360
PM Peak Pd 1600-1900 Vehicle Flow	839	85	5	1	0	0	3	6	938
PM Peak Pd 1700-1800 Vehicle Flow	291	28	1	0	0	0	1	2	322
0600-2200 Vehicle Proportion	88%	10%	1%	0%	0%	0%	0%	1%	100%
February 2021	Car	LGV	OGV1	OGV2	Service Bus	Private Coach	Motor Cycle	Pedal Cycle	Total
0600-2200 Vehicle Flow	3198	410	38	3	1	7	14	30	3702
AM Peak Pd 0700-1000 Vehicle Flow	454	82	14	0	0	2	1	4	558
AM Peak Hr 0800-0900 Vehicle Flow	158	29	3	0	0	1	1	0	191
IP Peak Pd 1000-1600 Vehicle Flow	1641	204	16	2	0	4	8	16	1891
IP Peak Pd 1200-1300 Vehicle Flow	277	34	4	1	0	0	1	2	319
PM Peak Pd 1600-1900 Vehicle Flow	737	86	4	0	0	1	4	6	837
PM Peak Pd 1700-1800 Vehicle Flow	270	35	2	0	0	0	1	4	312
0600-2200 Vehicle Proportion	86%	11%	1%	0%	0%	0%	0%	1%	100%
May 2021	Car	LGV	OGV1	OGV2	Service Bus	Private Coach	Motor Cycle	Pedal Cycle	Total
0600-2200 Vehicle Flow	4263	455	43	4	1	7	17	19	4810
AM Peak Pd 0700-1000 Vehicle Flow	587	92	15	3	0	2	1	1	701
AM Peak Hr 0800-0900 Vehicle Flow	184	26	6	1	0	1	1	0	219
IP Peak Pd 1000-1600 Vehicle Flow	2155	215	22	0	0	4	8	11	2415
IP Peak Pd 1200-1300 Vehicle Flow	385	36	3	0	0	0	0	2	428
PM Peak Pd 1600-1900 Vehicle Flow	965	102	4	1	0	1	3	2	1078
PM Peak Pd 1700-1800 Vehicle Flow	340	35	1	1	0	0	1	0	379
0600-2200 Vehicle Proportion	89%	9%	1%	0%	0%	0%	0%	0%	100%
September 2021	Car	LGV	OGV1	OGV2	Service Bus	Private Coach	Motor Cycle	Pedal Cycle	Total
0600-2200 Vehicle Flow	3866	440	55	0	0	5	13	22	4401
AM Peak Pd 0700-1000 Vehicle Flow	561	86	19	0	0	2	0	3	671
AM Peak Hr 0800-0900 Vehicle Flow	182	27	6	0	0	0	0	0	216
IP Peak Pd 1000-1600 Vehicle Flow	1851	225	28	0	0	2	6	15	2127
IP Peak Pd 1200-1300 Vehicle Flow	318	37	4	0	0	0	0	2	362
PM Peak Pd 1600-1900 Vehicle Flow	892	89	5	0	0	1	4	3	994
PM Peak Pd 1700-1800 Vehicle Flow	302	35	2	0	0	0	1	2	342
0600-2200 Vehicle Proportion	88%	10%	1%	0%	0%	0%	0%	0%	100%

5.1.12 Table 24 shows that the proportion of all vehicle types was consistent across all survey periods.

6. MODE SHARE SURVEYS

6.1 Rail Station Counts

6.1.1 Entry and exit counts were undertaken at both the front and rear entrances of Arbroath Railway Station on Tuesday 11th May 2021. Surveys were undertaken between 06:00 and 22:00.

6.1.2 The results were classified by the following:

- Adult
- Adult & Child
- Child
- Elderly
- Disabled
- Cyclist on Bike
- Cyclist on Foot.

6.1.3 Table 25 presents a summary of the entry and exit counts.

Table 25. Arbroath Railway Station Entry/Exit Counts

Arbroath Rail Stn	Station Front Entrance	Station Front Exit	Station Rear Entrance	Station Rear Exit	Total Entry	Total Exit
06:00 - 22:00	140	151	247	224	387	375
07:00 - 10:00	29	24	59	38	88	62
10:00 - 16:00	90	82	107	97	197	179
16:00 - 19:00	28	44	51	53	79	97

6.1.4 Table 25 shows that over the 16 hour period (0600-2200hrs), there was a total of 387 pedestrians entering Arbroath Railway Station and 375 pedestrians exiting:

- In the AM peak period (07:00 – 10:00), 88 pedestrians entered the station and 62 departed the station.
- In the Off peak period (10:00 – 16:00), 197 pedestrians entered the station and 179 departed the station.
- In the PM peak period (16:00 – 19:00), 79 pedestrians entered the station and 97 departed the station.

6.2 Bus Station Counts

6.2.1 Boarding (on bus) and alighting (off bus) counts were undertaken at all eight stances in Arbroath Bus Station on Tuesday 11th May 2021. Surveys were undertaken between 06:00 and 22:00.

6.2.2 The results were classified by the following:

- Arrival Time
- Bus Number during arrival
- Operator
- Boarding (On bus)
- Alighting (Off bus)
- Bus Number during departure
- Departure Time
- Dwell Time.

6.2.3 Table 26 below summarises the results of the boarding and alighting counts in the AM Peak (07:00 – 10:00).

Table 26. Arbroath Bus Station Boarding and Alighting Counts (AM Peak 07:00 – 10:00)

AM Peak Period (07:00-10:00)	Boarding (On bus)	Alighting (Off bus)	Number of services	Average Boarding	Average Alighting	Average dwell time
Stance 1	0	3	1	0	3	00:00:29
Stance 2	26	32	15	2	2	00:02:51
Stance 3	2	4	4	1	1	00:04:07
Stance 4	28	38	11	3	3	00:05:55
Stance 5	29	15	7	4	2	00:08:48
Stance 6	4	19	7	1	3	00:05:31
Stance 7	2	3	2	1	2	00:02:10
Stance 8	7	5	1	7	5	00:01:21
Average	12	15	6	2	3	00:03:54

6.2.4 Table 26 shows that the busiest stance in Arbroath Bus Station, during the AM Peak, in terms of passengers was Stance 4 which saw a total of 66 passengers either boarding or alighting in the AM peak period. Stance 4 was used by services 27, 27A, 43A, 73 and 73A, all of which are operated by Stagecoach.

6.2.5 In terms of the number of bus services, Stance 2 was busiest with 15 services, comprising the 27, 30, 30A and 39, again all operated by Stagecoach.

6.2.6 The stance with the longest dwell time (08:48), was Stance 5, whilst the average dwell time across all stances is just under 4 minutes (03:54).

6.2.7 Table 27 presents the same information for the inter-peak period (10:00-16:00).

Table 27. Arbroath Bus Station Boarding and Alighting Counts (Inter Peak 10:00 – 16:00)

IP Peak Period (10:00-16:00)	Boarding (On bus)	Alighting (Off bus)	Number of services	Average Boarding	Average Alighting	Average dwell time
Stance 1	12	1	4	3	0	00:02:19
Stance 2	91	70	25	4	3	00:04:10
Stance 3	51	53	18	3	3	00:02:44
Stance 4	147	58	22	7	3	00:05:42
Stance 5	81	58	16	5	4	00:02:57
Stance 6	55	45	10	6	5	00:04:41
Stance 7	0	0	0	0	0	-
Stance 8	16	18	4	4	5	00:05:26
Average	57	38	12	4	3	00:04:00

6.2.8 Table 27 shows that the busiest stance in Arbroath Bus Station, during the inter-peak, in terms of passengers was again Stance 4 which saw a total of 205 passengers either boarding or alighting during the inter-peak peak period. Stance 4 was used by services 27, 30, 43A, 73 and 73A, all of which are operated by Stagecoach.

6.2.9 In terms of the number of bus services, Stance 2 was busiest with 25 services, comprising the 27, 30, and 39, again all operated by Stagecoach.

6.2.10 The stance with the longest dwell time (05:42), was Stance 4, whilst the average dwell time across all stances was exactly 4 minutes.

6.2.11 Table 28 presents the same information for the PM peak period (16:00-19:00).

Table 28. Arbroath Bus Station Boarding and Alighting Counts (PM Peak 16:00 – 19:00)

PM Peak Period (16:00-19:00)	Boarding (On bus)	Alighting (Off bus)	Number of services	Average Boarding	Average Alighting	Average dwell time
Stance 1	0	0	1	0	0	00:00:14
Stance 2	37	18	14	3	1	00:05:52
Stance 3	5	5	6	1	1	00:03:40
Stance 4	26	18	10	3	2	00:06:44
Stance 5	28	18	10	3	2	00:05:28
Stance 6	16	9	9	2	1	00:02:45
Stance 7	35	8	3	12	3	00:04:26
Stance 8	14	14	5	3	3	00:10:31
Average	20	11	7	3	2	00:04:58

6.2.12 Table 28 shows that the busiest stance in Arbroath Bus Station, during the PM Peak, in terms of passengers is Stance 2 which saw a total of 55 passengers either boarding or alighting in the PM peak period. Stance 2 was used by services 27 and 39, both of which are operated by Stagecoach.

6.2.13 In terms of the number of bus services, again stance 2 was busiest with 14 services.

6.2.14 The stance with the longest dwell time (10:31), was Stance 8, whilst the average dwell time across all stances was almost 5 minutes (04:58).

6.3 Bus Occupancy Counts

6.3.1 Bus occupancy surveys were undertaken inbound only towards Arbroath at each of the classified turning count sites CC1 to CC6, as shown in Figure 6.

6.3.2 Bus occupancy data was gathered for one day, Tuesday 11th May 2021, between 06:00 and 22:00.

6.3.3 The methodology used to gather the bus occupancy required manual enumerators to review the footage at each site – i.e. manual check and note if the bus was empty, ¼ full, ½ full, ¾ full, full or full with standing passengers.

6.3.4 The capacity of vehicles was the same as those used in a previous study for TACTRAN [*Mode Share Surveys 2019 – Draft, SYSTRA, Ref. GB01t19A57/4, 11/07/19*], namely:

○	Midi bus	15 passengers
○	Mini bus	15 passengers
○	Single decker bus	30 passengers
○	Double decker bus	72 passengers
○	Coach	55 passengers
○	Mini Coach	14 passengers
○	Midi Coach	14 passengers
○	School Bus	40 passengers

6.3.5 Vehicles where the occupancy was not visible (e.g. where coaches had dark tinted windows) were excluded from the analysis, and similarly where vehicles were subsequently observed at Arbroath Bus Station, these were excluded from the analysis to remove any element of double counting.

6.3.6 Table 29 below presents the bus occupancy at each of the inbound cordon entry points around Arbroath town centre in the AM peak period (07:00 – 10:00).

Table 29. Bus & Coach Inbound Cordon Occupancy (AM Peak 07:00 – 10:00)

AM Peak Period (07:00-10:00)	Mode	Total Vehicles	Total Passengers	Average Occupancy
CC1	Bus	2	18	9
	Coach	2	10.5	5
CC2	Bus	-	-	-
	Coach	1	3.5	4
CC3	Bus	1	0	0
	Coach	4	3.5	1
CC4	Bus	-	-	-
	Coach	1	0	0
CC5	Bus	4	0	0
	Coach	2	3.5	2
CC6	Bus	-	-	-
	Coach	1	0	0

6.3.7 Table 29 shows that the corridor with the highest bus and coach occupancy was CC1, A92 Burnside Drive, southbound towards Arbroath town centre.

6.3.8 The average inbound AM peak period bus occupancy was 3 passengers and the average coach occupancy was 2 passengers.

6.3.9 Table 30 presents the same information for the Inter peak period (10:00 – 16:00).

Table 30. Bus & Coach Inbound Cordon Occupancy (Inter Peak 10:00 – 16:00)

Inter Peak Period (10:00-16:00)	Mode	Total Vehicles	Total Passengers	Average Occupancy
CC1	Bus	1	3.75	4
	Coach	3	10.5	4
CC2	Bus	1	3.75	4
	Coach	4	20.75	5
CC3	Bus	1	3.75	4
	Coach	8	10.5	1
CC4	Bus	-	-	-
	Coach	2	3.5	2
CC5	Bus	5	15	3
	Coach	4	10.5	3
CC6	Bus	-	-	-
	Coach	-	-	-

6.3.10 Table 30 shows that bus and coach occupancy was highest on corridor CC2, Academy Street in the inter peak period.

6.3.11 The average inbound inter peak period bus occupancy was 4 passengers and the average coach occupancy was 3 passengers

6.3.12 Table 31 presents the same information for the PM peak (16:00 – 19:00).

Table 31. Bus & Coach Inbound Cordon Occupancy (PM Peak 16:00 – 19:00)

PM Peak Period (15:00-19:00)	Mode	Total Vehicles	Total Passengers	Average Occupancy
CC1	Bus	1	18	18
	Coach	2	3.5	2
CC2	Bus	1	7.5	8
	Coach	1	3.5	4
CC3	Bus	2	0	0
	Coach	2	0	0
CC4	Bus	-	-	-
	Coach	1	0	0
CC5	Bus	3	18	6
	Coach	1	13.75	14
CC6	Bus	1	18	18
	Coach	-	-	-

6.3.13 Table 31 shows that bus occupancy during the PM Peak period was highest on CC1 (A92 Burnside Drive southbound) and CC6 (Lochlands Street southbound). The highest coach occupancy was seen on CC5 (Keptie Road eastbound), all inbound towards Arbroath town centre.

6.3.14 The average inbound PM peak period bus occupancy was 10 passengers and the average coach occupancy was 4 passengers

6.4 Vehicle Occupancy Counts

6.4.1 Vehicle occupancy counts were undertaken inbound only towards Arbroath at each of the classified turning count sites CC1 to CC6, as shown in Figure 6.

6.4.2 Vehicle occupancy data was gathered for one day, Tuesday 11th May 2021, between 06:00 and 22:00.

6.4.3 Table 32 below presents the vehicle occupancy and sample rates at each of the inbound cordon entry points around Arbroath town centre in the AM peak period (07:00 – 10:00).

Table 32. Vehicle Inbound Cordon Occupancy (AM Peak 07:00 – 10:00)

AM Peak Period (07:00-10:00)	Mode	Vehicle Total	Observed Vehicles	Sample Rate	Number of Occupants	Average Occupancy
CC1	Car	1497	330	22.0%	444	1.35
	LGV	245	78	31.8%	95	1.22
	OGV1	45	29	64.4%	36	1.24
	OGV2	22	15	68.2%	15	1.00
CC2	Car	592	139	23.5%	202	1.45
	LGV	96	41	42.7%	50	1.22
	OGV1	8	7	87.5%	7	1.00
	OGV2	1	1	100.0%	1	1.00
CC3	Car	806	186	23.1%	243	1.31
	LGV	228	64	28.1%	86	1.34
	OGV1	40	25	62.5%	28	1.12
	OGV2	11	7	63.6%	10	1.43
CC4	Car	184	57	31.0%	72	1.26
	LGV	33	23	69.7%	26	1.13
	OGV1	6	3	50.0%	3	1.00
	OGV2	0	0	-	0	-
CC5	Car	503	124	24.7%	154	1.24
	LGV	83	36	43.4%	41	1.14
	OGV1	15	12	80.0%	16	1.33
	OGV2	0	0	-	0	-
CC6	Car	356	91	25.6%	119	1.31
	LGV	67	30	44.8%	36	1.20
	OGV1	8	7	87.5%	9	1.29
	OGV2	3	2	66.7%	2	1.00
Average	Car	770	178	23.1%	240	1.35
	LGV	151	52	34.4%	64	1.23
	OGV1	25	16	64.0%	19	1.19
	OGV2	9	6	66.7%	7	1.17

6.4.4 Table 32 shows that in the AM peak period, inbound towards Arbroath town centre, the average car occupancy was 1.35 persons, LGV 1.23 persons, OGV1 1.19 persons and OGV 2 1.17 persons.

6.4.5 Table 33 presents the same information for the inter peak period (10:00 – 16:00).

Table 33. Vehicle Inbound Cordon Occupancy (Inter Peak 10:00 – 16:00)

Inter Peak Period (10:00-16:00)	Mode	Vehicle Total	Observed Vehicles	Sample Rate	Number of Occupants	Average Occupancy
CC1	Car	3210	697	21.7%	976	1.40
	LGV	450	143	31.8%	176	1.23
	OGV1	101	54	53.5%	61	1.13
	OGV2	61	35	57.4%	38	1.09
CC2	Car	1265	296	23.4%	395	1.33
	LGV	158	65	41.1%	79	1.22
	OGV1	22	17	77.3%	18	1.06
	OGV2	0	0	-	0	-
CC3	Car	2223	494	22.2%	673	1.36
	LGV	301	109	36.2%	136	1.25
	OGV1	78	48	61.5%	57	1.19
	OGV2	29	22	75.9%	23	1.05
CC4	Car	346	105	30.3%	144	1.37
	LGV	41	35	85.4%	41	1.17
	OGV1	9	6	66.7%	8	1.33
	OGV2	0	0	-	0	-
CC5	Car	1053	279	26.5%	351	1.26
	LGV	170	83	48.8%	98	1.18
	OGV1	22	18	81.8%	20	1.11
	OGV2	1	1	100.0%	1	1.00
CC6	Car	825	215	26.1%	273	1.27
	LGV	112	57	50.9%	68	1.19
	OGV1	20	15	75.0%	17	1.13
	OGV2	1	0	0.0%	0	-
Average	Car	1761	398	22.6%	547	1.37
	LGV	238	88	37.0%	108	1.23
	OGV1	53	31	58.5%	36	1.16
	OGV2	23	14	60.9%	15	1.07

6.4.6 Table 33 shows that in the inter peak period, inbound towards Arbroath town centre, the average car occupancy was 1.37 persons, LGV 1.23 persons, OGV1 1.16 persons and OGV 2 1.07 persons.

6.4.7 Table 34 presents the same information for the PM peak period (16:00 – 19:00).

Table 34. Vehicle Inbound Cordon Occupancy (PM Peak 16:00 – 19:00)

PM Peak Period (16:00-19:00)	Mode	Vehicle Total	Observed Vehicles	Sample Rate	Number of Occupants	Average Occupancy
CC1	Car	1842	385	20.9%	576	1.50
	LGV	196	64	32.7%	78	1.22
	OGV1	22	14	63.6%	16	1.14
	OGV2	9	7	77.8%	7	1.00
CC2	Car	623	144	23.1%	209	1.45
	LGV	79	36	45.6%	52	1.44
	OGV1	5	3	60.0%	3	1.00
	OGV2	2	2	100.0%	2	1.00
CC3	Car	1194	255	21.4%	362	1.42
	LGV	151	51	33.8%	66	1.29
	OGV1	22	15	68.2%	16	1.07
	OGV2	1	1	100.0%	1	1.00
CC4	Car	213	68	31.9%	85	1.25
	LGV	40	24	60.0%	28	1.17
	OGV1	1	1	100.0%	1	1.00
	OGV2	0	0	-	0	-
CC5	Car	537	135	25.1%	170	1.26
	LGV	69	35	50.7%	41	1.17
	OGV1	3	3	100.0%	3	1.00
	OGV2	2	1	50.0%	1	1.00
CC6	Car	442	113	25.6%	142	1.26
	LGV	48	25	52.1%	32	1.28
	OGV1	0	0	-	0	-
	OGV2	0	0	-	0	-
Average	Car	968	213	22.0%	308	1.45
	LGV	117	44	37.6%	56	1.27
	OGV1	13	8	61.5%	9	1.13
	OGV2	3	3	100.0%	3	1.00

6.4.8 Table 34 shows that in the PM peak period, inbound towards Arbroath town centre, the average car occupancy was 1.45 persons, LGV 1.27 persons, OGV1 1.13 persons and OGV 2 1.00 persons.

6.5 Results of Mode Share Surveys

6.5.1 The results of the various mode share surveys can be analysed and presented in different ways. Through discussions previously with Tactran, the methodology developed for assessing and summarising the survey data for each site was agreed as follows:

- By Time Period
- By Mode – both by vehicle and by person.

Mode Share By Time Period

6.5.2 All traffic surveys were undertaken over a 16 hour period 06:00-22:00. The mode share data is presented into four separate time periods, namely:

- AM Peak 07:00 – 10:00
- Inter-peak 10:00 – 16:00
- PM Peak 16:00 – 19:00
- Full day 07:00 – 19:00

Mode Share By Mode

6.5.3 Mode share data can be presented from the perspective of the share of vehicles or by the share of people. Both these methodologies are presented in this report, and are detailed as follows:

- ‘Mode Share Distribution’ – Each vehicle, including buses counts as 1 trip - this methodology does not take into account the number of people in a vehicle or a bus
- ‘Person Share Distribution’ – Each person counts as 1 trip, therefore the bus patronage and multi occupancy vehicle

6.5.4 Within each site assessed, traffic is analysed routing inbound to the town/city.

6.5.5 The survey data collected for Arbroath included additional pedestrian and cycle information, as requested by Tactran.

6.5.6 In order to consider the volume of inbound trips to Arbroath, the following assumptions and data usage was applied:

- Sites CC1 to CC6 were assessed to represent the points of entry to the town.
- Bus/coach passengers which entered Arbroath were assumed to be destinating in Arbroath

6.5.7 The following figures present the Arbroath mode share distribution, calculated from the survey data as detailed above. Figure 7 and Figure 8 present the AM Peak mode share by vehicle and by person respectively.

6.5.8 Figure 9 and Figure 10 present the interpeak mode share results, Figure 11 and Figure 12 present the PM Peak mode share results and Figure 13 and Figure 14 present the full day mode share results.

6.5.9 Each figure presents the inbound mode share by vehicle type for the four survey periods (October 2020, February 2021, May 2021 and September 2021). The inbound mode share by person is presented for May 2021, as this was the only survey that captured vehicle occupancy.

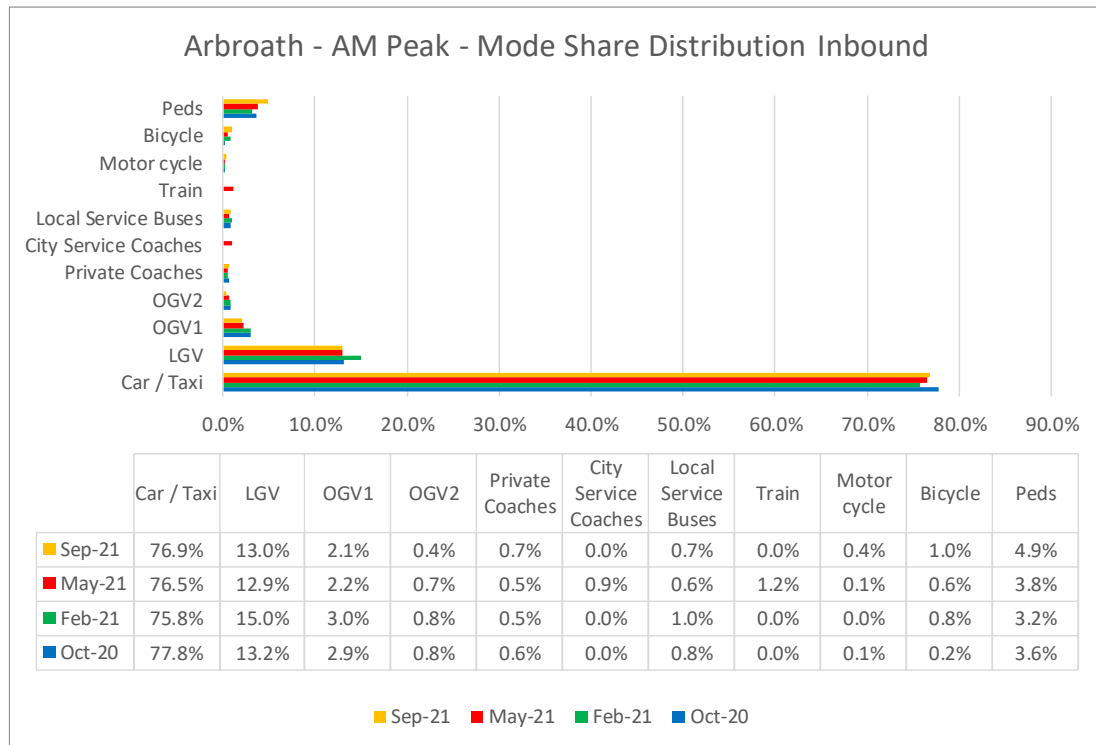


Figure 7. Arbroath Mode Share Distribution – AM Peak

6.5.10 Figure 7 shows that the mode share of vehicles remained relatively consistent over the four survey periods. The results for city service coaches and rail are only included in May 2021 as bus station and rail station surveys were only undertaken at this point.

6.5.11 The proportion of pedestrians was very similar across the first three surveys but showed a slight increase in September 2021, whilst the proportion of cyclists shows a similar increase.

6.5.12 The total of the vehicles and pedestrians observed as part of the mode surveys in the AM peak was 4,845 in October 2020, 3,453 in February 2021, 5,196 in May 2021 and 4,864 in September 2021.

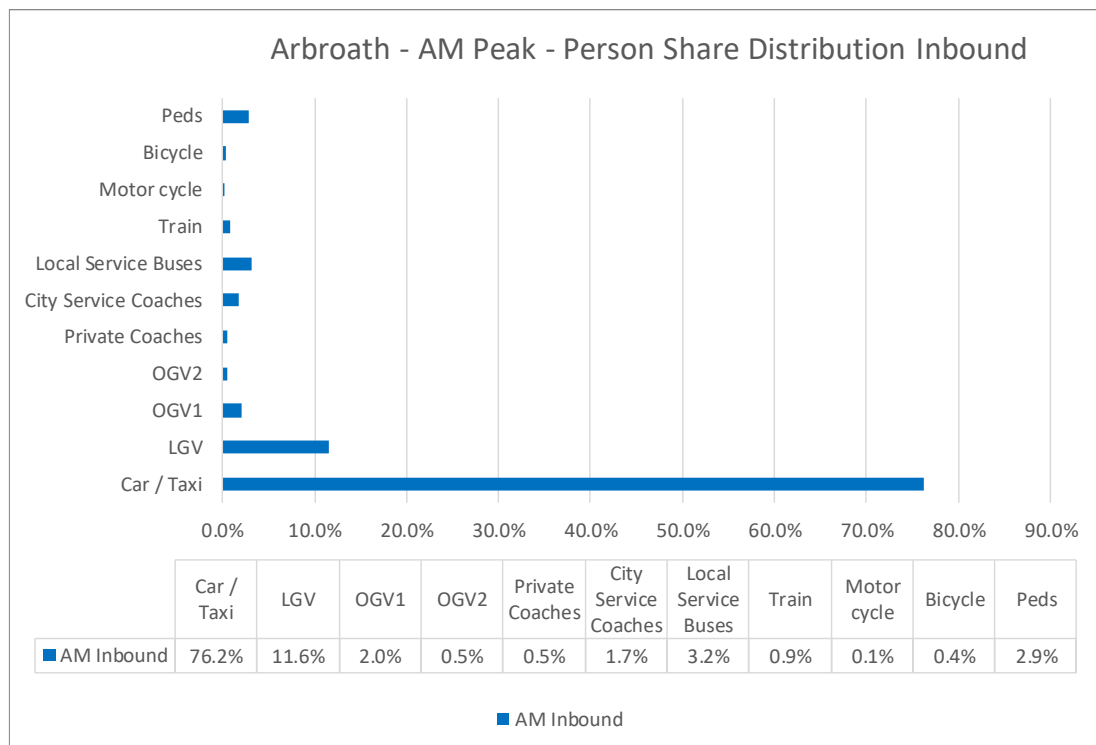


Figure 8. Arbroath Person Share Distribution – AM Peak

6.5.13 Figure 8 shows that the majority of people heading into Arbroath did so by car and taxi. Total bus usage was around 5% in the AM peak, rail was around 1%, bicycle 0.4% and walking just under 3%.

6.5.14 The person total observed in the AM peak was 6,820 in May 2021

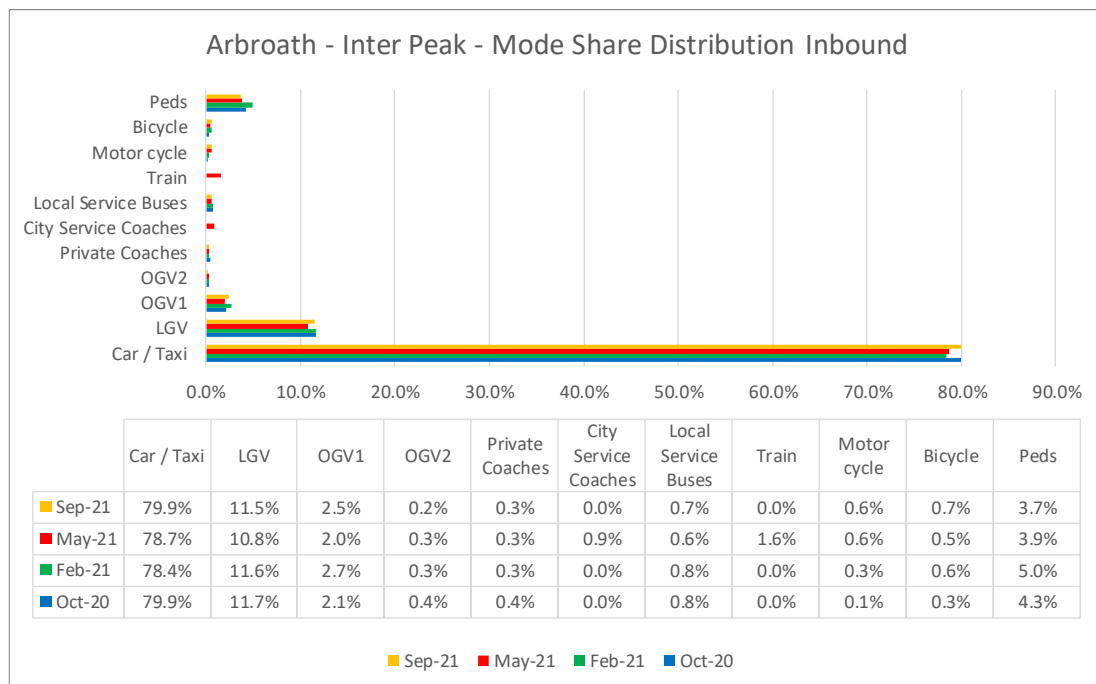


Figure 9. Arbroath Mode Share Distribution – Interpeak

- 6.5.15 Figure 9 shows that in the inter peak, the mode share of vehicles remained relatively consistent over the four survey periods. The results for city service coaches and rail are only included in May 2021 as bus station and rail station surveys were only undertaken at this point.
- 6.5.16 The proportion of pedestrians reduced in May 2021 and September 2021 which was the lowest of all of the surveys, whilst the proportion of cyclists was highest in September 2021.
- 6.5.17 The total of the vehicles and pedestrians observed as part of the mode surveys in the inter peak was 10,533 in October 2020, 8,632 in February 2021, 11,301 in May 2021 and 10,628 in September 2021.

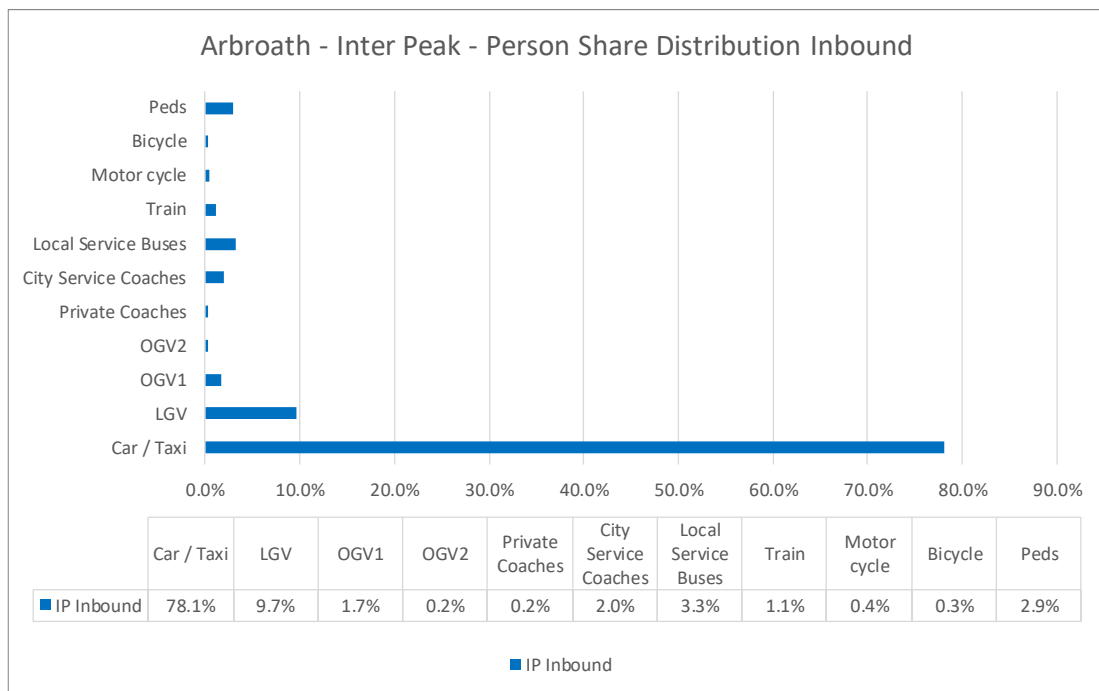


Figure 10. Arbroath Person Share Distribution – Interpeak

6.5.18 Figure 10 shows that the majority of people heading into Arbroath did so by car and taxi. Total bus usage was just under 6% in the inter peak, rail around 1%, bicycle 0.3% and walking just under 3%.

6.5.19 The person total observed in the inter peak was 14,832 in May 2021.

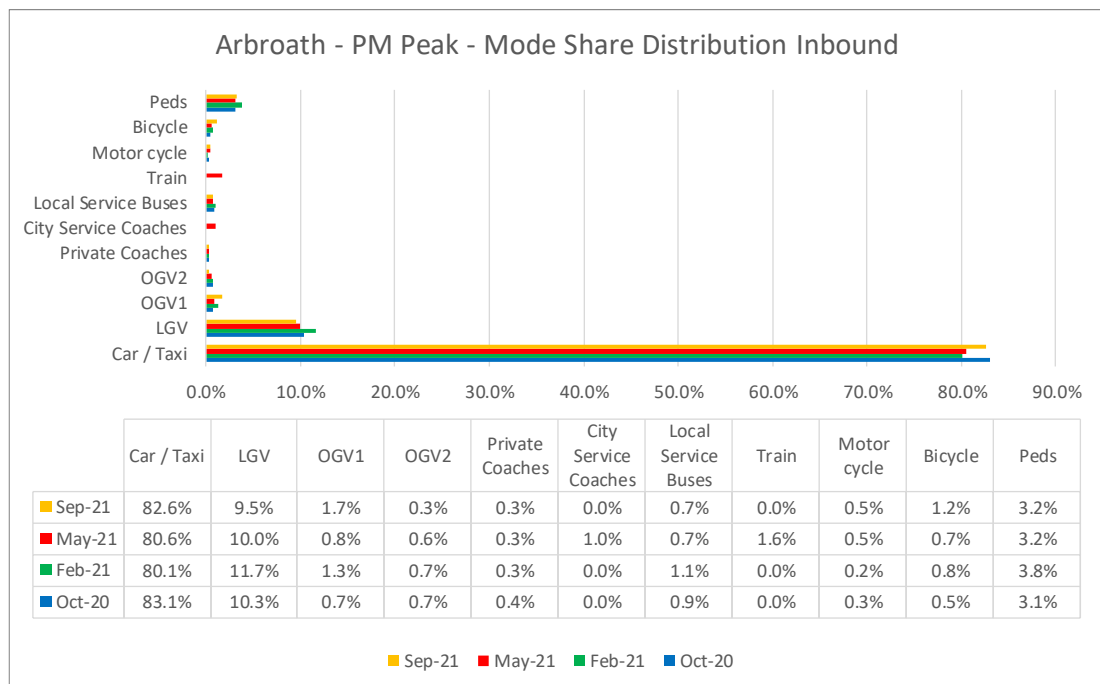


Figure 11. Arbroath Mode Share Distribution – PM Peak

- 6.5.20 Figure 11 shows that in the PM peak, the mode share of vehicles again remained relatively consistent over the four survey periods. The results for city service coaches and rail were only included in May 2021 as bus station and rail station surveys were only undertaken at this point.
- 6.5.21 The proportion of pedestrians remained consistent, but was highest in February 2021 when Scotland was under lockdown conditions, whilst the proportion of cyclists was highest in September 2021.
- 6.5.22 The total of the vehicles and pedestrians observed as part of the mode surveys in the PM peak was 5,446 in October 2020, 4,024 in February 2021, 5,883 in May 2021 and 5,878 in September 2021.

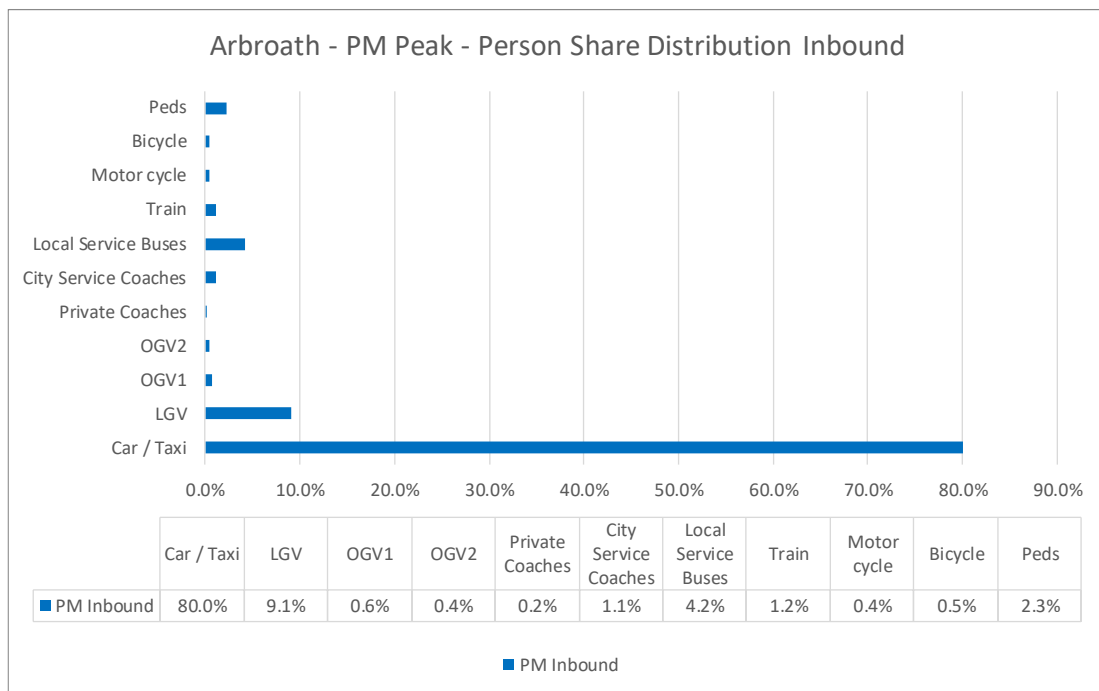


Figure 12. Arbroath Person Share Distribution – PM Peak

6.5.23 Figure 12 shows that the majority of people heading into Arbroath did so by car and taxi. Total bus usage was just under 6% in the PM peak, rail just over 1%, bicycle 0.5% and walking just over 2%.

6.5.24 The person total observed in the inter peak was 8,225 in May 2021.

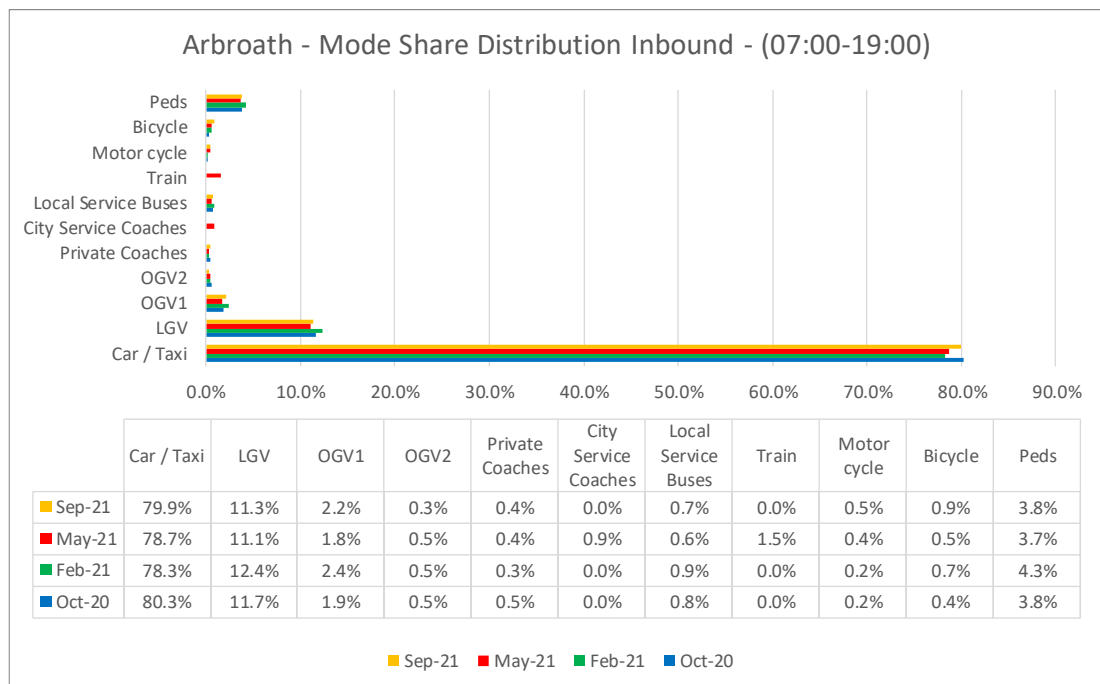


Figure 13. Arbroath Mode Share Distribution – Full Day

- 6.5.25 Figure 13 shows that across the day, the mode share of vehicles again remained relatively consistent over the four survey periods. The results for city service coaches and rail were only included in May 2021 as bus station and rail station surveys were only undertaken at this point.
- 6.5.26 The proportion of pedestrians remained consistent, but was highest in February 2021 when Scotland was under lockdown conditions, whilst the proportion of cyclists was highest in September 2021.
- 6.5.27 The total of the vehicles and pedestrians observed as part of the mode surveys across the day was 20,824 in October 2020, 16,109 in February 2021, 22,380 in May 2021 and 21,370 in September 2021.

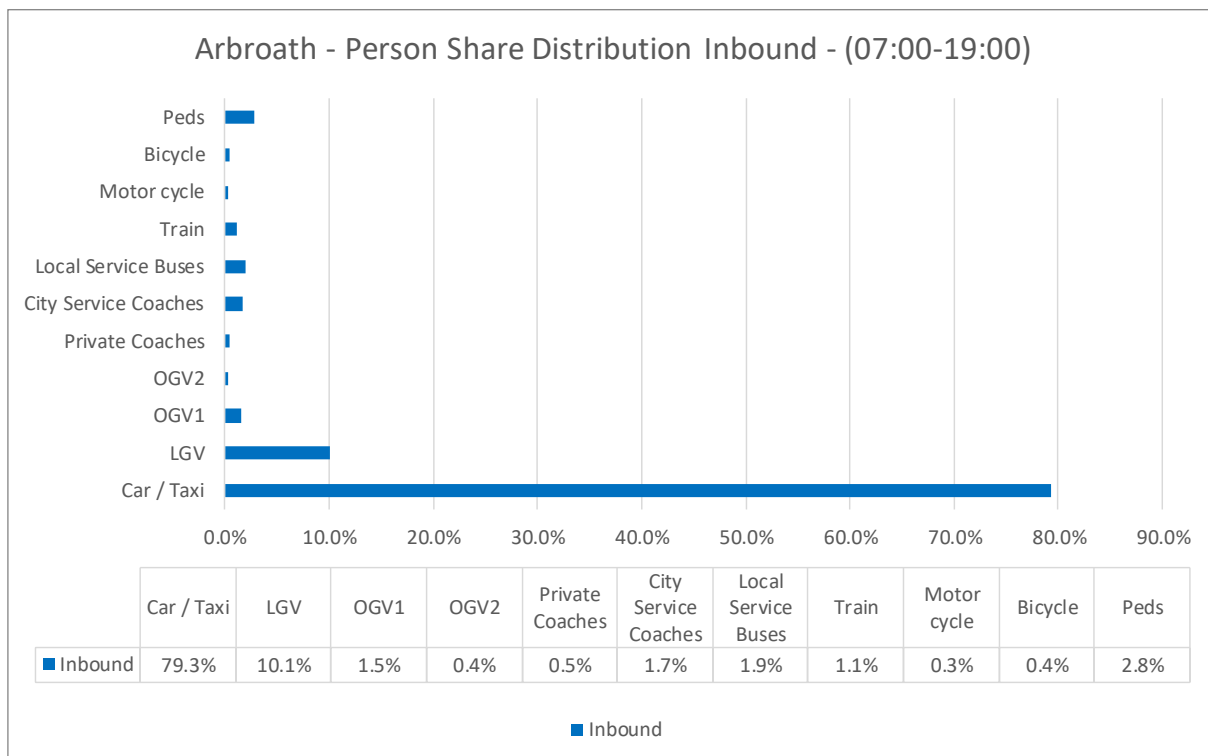


Figure 14. Arbroath Person Share Distribution – Full Day

6.5.28 Figure 14 shows that the majority of people heading into Arbroath did so by car and taxi. Total bus usage was just under 5%, rail just over 1%, bicycle 0.4% and walking just under 3%.

6.5.29 The person total observed in the inter peak was 29,877 in May 2021.

7. SUMMARY & FINDINGS

7.1 Summary

7.1.1 SYSTRA Ltd (SYSTRA) was commissioned by Tactran to undertake traffic surveys through various sites in the Angus, Dundee, Perth & Kinross, & Stirling area.

7.1.2 The types of surveys undertaken for this study were:

- Pedestrian Behaviour and volume counts
- Link count and speed surveys
- Classified Turning Counts (including cyclists & pedestrians)
- Rail Station Counts
- Bus Station Counts
- Bus Occupancy Counts
- Vehicle Occupancy Counts.

7.1.3 All surveys were recorded over a 16 hour period (06:00-22:00) and the analysis was split into the following time periods:

- AM Peak Period – 07:00 – 10:00
- Inter Peak Period – 10:00 – 16:00
- PM Peak Period – 16:00 – 19:00

7.1.4 The mode share data was also considered from the perspective of the share of vehicles and by the share of people. Both these methodologies are presented in this report, and are detailed as follows:

- ‘Mode Share Distribution’ – Each vehicle, including buses counts as 1 trip - this methodology does not take into account the number of people in a vehicle or a bus
- ‘Person Share Distribution’ – Each person counts as 1 trip, therefore the bus patronage and multi occupancy vehicle.

7.1.5 The mode share data was collated inbound only towards Arbroath Town centre area.

7.2 Findings

Pedestrian Behaviour and Volume Counts

7.2.1 The results of the pedestrian behaviour and volume count surveys indicate:

Arbroath

- On the east side footpath of the West Port in Arbroath, on average 80% of pedestrians across the 3 days did not conflict with oncoming pedestrians, whilst 19% passed on the footpath within a space of 2m or less. The remainder passed with a space over 2m or stepped out into the live carriageway.
- On the west side footpath of the West Port in Arbroath, on average 91% of pedestrians across the 3 days did not conflict with oncoming pedestrians, whilst 8% passed on the footpath within a space of 2m or less.

- Pedestrian volume surveys show that the lowest pedestrian volumes were recorded in February 2021 when Scotland was in lockdown, and the highest pedestrian volumes were recorded in September 2021.

Forfar

- On the east side footpath of Castle Street in Forfar, on average 34% of pedestrians across the 3 days did not conflict with oncoming pedestrians, whilst 63% passed on the footpath within a space of 2m or less. The remainder passed with a space over 2m or stepped out into the live carriageway
- On the west side footpath of Castle Street in Forfar, on average 56% of pedestrians across the 3 days did not conflict with oncoming pedestrians, whilst 39% passed on the footpath within a space of 2m or less, the remaining 5% passing with a gap of over 2m
- Pedestrian volume surveys show that the lowest pedestrian volumes were recorded in February 2021 when Scotland was in lockdown, and the highest pedestrian volumes were recorded in September 2021 Link Count and Speed Surveys

7.2.2 The results of the wider link counts and speed surveys indicate:

Arbroath

- The mean speed of traffic on West Port and Millgate increased in March 2021 when compared against October 2020 before reducing again in May and September 2021, whilst at Commerce Street there was an increase in March 2021 before a reduction was seen in May 2021 and September 2021.

Forfar

- Mean speeds increased in February, May and September 2021 when compared against October 2020.

Edzell

- On the High Street, adjacent to the primary school, the mean speeds remained consistent in all four survey periods. All surveys indicated in excess of 70% of drivers exceeding the 20mph limit northbound.
- The speeds were highest in March 2020 when Scotland was living under lockdown conditions.

Mode Share Surveys (Arbroath)

7.2.3 The results of the mode share surveys in Arbroath indicate that the mode share has remained consistent over the three surveys, car usage in each period has been around 80%, the volume of cyclists has remained below 1% and pedestrians have remained consistent at around 3% to 5%. The mode share by person surveys indicated:

- In the AM peak the majority of people travelling inbound were doing so by car/taxi (76.2%), LGV accounted for almost 12 % of people and HGV around 2.5%. In terms of public transport bus accounted for around 5.4% of people and train just under

1%. Cycling and walking accounted for just under 4%, cycling at 0.5% and walking at 2.9% of all people heading inbound towards Arbroath town centre.

- In the inter-peak, the majority of people travelling inbound were doing so by car/taxi (78.1%), LGV accounted for almost 10 % of people and HGV around 2%. In terms of public transport bus accounted for around 5.5% of people and train just over 1%. Cycling and walking accounted for just under 4%, cycling at 0.7% and walking at 2.9% of all people heading inbound towards Arbroath town centre.
- In the PM peak, the majority of people travelling inbound were doing so by car/taxi (80%), LGV accounted for slightly over 9% of people and HGV around 1%. In terms of public transport bus accounted for around 5.5% of people and train just over 1%. Cycling and walking accounted for just under 4%, cycling at 0.9% and walking at 2.3% of all people heading inbound towards Arbroath town centre.
- Across the full day, the majority of people travelling inbound were doing so by car/taxi (79.3%), LGV accounted for around 10 % of people and HGV around 2%. In terms of public transport bus accounted for around 4% of people and train just over 1%. Cycling and walking accounted for just over 3%, cycling at 0.4% and walking at 2.8% of all people heading inbound towards Arbroath town centre.

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