

# STIRLING SPACES FOR PEOPLE SURVEY REPORT 2020/21





# **STIRLING COUNCIL AREA**

MODE SHARE SURVEYS 2020/2021

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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:
  - O 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 the Stirling Council area in four phases between October 2020 and September 2021, and the mode share summary information for each location.

#### 1.3 Measures

1.3.1 Between the 5th and 26th October 2020, Stirling Council ran a 3 week consultation with the community to direct how and where this funding should be allocated. Council Officers, along with Officers from Sustrans, assessed all responses to the consultation and have finalised the projects below for development and delivery.

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**Table 1. Spaces for People Measures Summary** 

Area	Intervention Description
Bannockburn - Stirling	- Give Space Campaign at Bannockburn Primary School
Causewayhead - Stirling	- Speed reduction to 20mph and footpath widening
Kings Parks - Stirling	- Speed reduction to 20mph in various locations & cycle parking at Kings Park
Laurelhill - Stirling	- Temporary change to road markings at Laurelhill Roundabout
Millenium Way - Stirling	<ul> <li>Installation of bidirectional cycle lane, including cycle defender units and installation of direction signage</li> </ul>
Murray Place - Stirling	<ul> <li>Formalising signage advertising road closure and installation of cycle parking and planters</li> </ul>
Raploch - Stirling	- Speed reduction to 20mph in various locations and temporary build outs
Riverside - Stirling	- Speed reduction to 20mph & Give Space Campaign at Riverside Primary School
Torbrex - Stirling	- Speed reduction to 20mph in various locations
Upper Craigs - Stirling	- Pedestrian warning markings on carriageway and cycle parking
Whins o Milton - Stirling	- Pirnhall Rd and Glasgow Road speed reduction to 40mph
Stirling (cycle parking)	- Installation of cycle parking at Broad Street, Spittal Street and St Johns Street
Stirling (20mph zones)	- Speed reduction to 20mph at the following locations - Manse Crescent, Bellfield Road, Randolph Road, Livilands Gate, Livilands Court, Brentham Avenue, Brentham Crescent, Annfield Grove, Clifford Road, Randolph Court, Annfield Gardens, Livilands Lane
Aberfoyle	- Speed reduction to 20mph at various locations and installation of cycle parking at various locations
Bridge of Allan	<ul> <li>Installation of cycle parking, defender units and dropped kerbs at various locations on Henderson Street and speed reduction to 30mph, extension of cycle lane on A9 to Carse Road and speed reduction to 50mph</li> </ul>
Callander	<ul> <li>Speed reduction to 20mph in various locations, installation of cycle parking at various locations on Main Street and removal of barriers/installation of shared use signs and bollards on old railway line</li> </ul>
Cambuskenneth	- Speed reduction to 30mph on Ladysneuk Road
Dunblane	- Speed reduction to 20mph in various locations, installation of cycle parking at various locations and installation of bollards on existing build outs on Old Doune Road
Fallin	- Speed reduction to 20 mph at on Main Street, Castle View and Baxter Street, and installation of temporary zebra crossing on Main Street
Gargunnock	Addition of pedestrian warning markings to carriageway on Station Road, installation of gateway treatments on Station Road and Leckie Road
Killearn	- Speed reduction to 20mph and installation of cycle parking at various locations
Plean	<ul> <li>- Give Space Campaign at East Plean Primary School, installation of cycle parking at Plean Country Park and speed reduction to 20mph at Main Street, Cadgers Loan, Stirling Place and Parkside Court</li> </ul>





#### 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 Stirling 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:

0	October 2020	<ul> <li>Thursday 22<sup>nd</sup> to Saturday 24<sup>th</sup> October 2020</li> </ul>
0	February 2021	<ul> <li>Thursday 25<sup>th</sup> to Saturday 27<sup>th</sup> February 2021</li> </ul>
0	May 2021	<ul> <li>Thursday 11<sup>th</sup> to Saturday 13<sup>th</sup> May 2021</li> </ul>
0	September 2021	- Thursday 9 <sup>th</sup> to Saturday 11 <sup>th</sup> September 2021.

2.1.5 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

- 2.2.1 Six locations within Stirling were selected in discussion with Tactran for pedestrian volume counts and behaviour surveys. These are detailed below and in Figure 1:
  - Pedestrian 1 Murray Place (East side McDonalds)
  - Pedestrian 2 Murray Place (West side McDonalds)
  - Pedestrian 3 Upper Craigs North side
  - Pedestrian 4 Upper Craigs South Side
  - Pedestrian 5 Murray Place (West side Ian Gallacher Jewellers)
  - Pedestrian 6 Murray Place (East side Ian Gallacher Jewellers).
- 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.

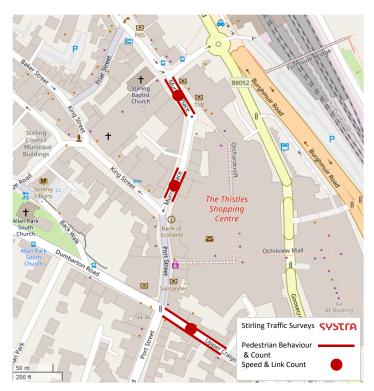


Figure 1. Pedestrian Surveys - Stirling

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## 2.3 Speed Surveys

- 2.3.1 Five locations within Stirling were selected for speed surveys over a seven day period. These are detailed below and in Figures 2 and 3, and above in Figure 1:
  - Speed 1 Murray Place (McDonalds)
  - Speed 2 Upper Craigs
  - Speed 3 Millenium Way
  - Speed 4 Murray Place (Ian Gallacher Jewellers)
  - Speed 5 Causewayhead Road.



Figure 2. Speed Surveys - Stirling



Figure 3. Speed Surveys - Stirling

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#### **Dunblane**

- 2.3.2 Three locations within Dunblane was selected for speed surveys over a seven day period. This is detailed below in Figure 4:
  - Speed 1 High St (near gold post box)
  - O Speed 2 B8033 Perth Rd (north of Bridge)
  - Speed 3 B8033 Stirling Rd (South of Central Scotland jewellery access).



Figure 4. Speed Surveys - Dunblane





#### **Bridge of Allan**

- 2.3.3 One location within Bridge of Allan was selected for speed surveys over a seven day period. This is detailed below in Figure 5:
  - Speed 1 Henderson St (Outside Baynes).



Figure 5. Speed Surveys - Bridge of Allan

### Aberfoyle

- 2.3.4 One location within Aberfoyle was selected for speed surveys over a seven day period. This is detailed below in Figure 6:
  - Speed 1 Main St (Near Coop).

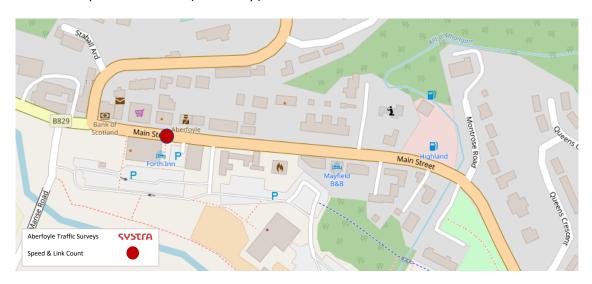


Figure 6. Speed Surveys – Aberfoyle

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#### **Fallin**

- 2.3.5 One location within Fallin was selected for a link count and speed survey over a seven day period. This is detailed below in Figure 7:
  - O Speed 1 A905 (Near library/health centre).



Figure 7. Speed Surveys - Fallin

#### Plean

- 2.3.6 One location within Plean was selected for speed surveys over a seven day period. This is detailed below in Figure 8:
  - Speed 1 Main St (Near Graham Bakers/Keystore Convenience shop).



Figure 8. Speed Surveys – Plean





#### Callander

- 2.3.7 One location within Callander was selected for a link count and speed survey over a seven day period. This is detailed below and in Figure 9:
  - Speed 1 Main St (Near Coop).

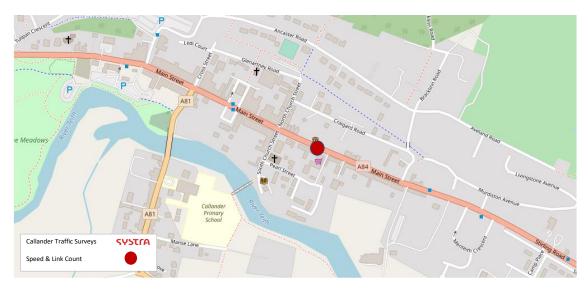


Figure 9. Link & Speed Surveys - Callander

#### Killearn

- 2.3.8 One location within Killearn was selected for a link count and speed survey over a seven day period. This is detailed below and in Figure 10:
  - Speed 1 Main St (Near Coop).



Figure 10. Link & Speed Surveys – Killearn

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#### Gargunnock

- 2.3.9 One location within Gargunnock was selected for a link count and speed survey over a seven day period. This is detailed below and in Figure 11:
  - O Speed 1 Manse Brae



Figure 11. Speed Surveys – Gargunnock





#### 2.5 Classified Link Counts

- 2.5.1 Thirteen locations within Stirling were selected for classified link counts. These are detailed below and in Figure 12 and Figure 13. The mode share cordon counts were undertaken on the Thursday of each survey period between 06:00 and 22:00:
  - COP 1 Barnton Street
  - O COP 2 Maxwell Place
  - O COP 3 Station Rd (one way-east)
  - O COP4 Baker Street
  - COP 5 Corn Exchange Road
  - COP 6 A811 Dumbarton Road
  - COP 7 Kings Park Road
  - COP 8 St Ninians Road
  - O COP 9 Wellgreen Rd (no buses required)
  - COP 10 Goosecroft Road (buses only)
  - COP 11 Goosecroft Road (buses only)
  - O COP 12 Millenium Way
  - O COP 13 St John St (South West of Toolbooth access).

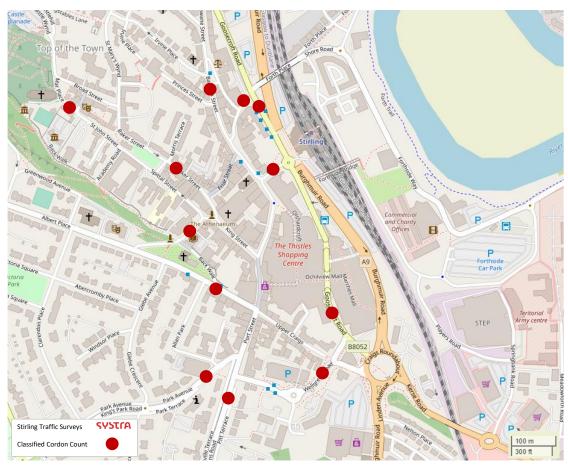


Figure 12. Classified Link Count Surveys – Stirling

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Figure 13.

**Classified Turn Count Surveys - Stirling** 

- 2.5.2 At each site, link count data was collated into the following categories:
  - Pedestrians
  - Pedal Cycles
  - O Motorcycles
  - O Horses
  - Cars/Taxis
  - LGVs
  - OGV1
  - OGV2
  - Service Buses
  - Private Coaches.

#### 2.6 Car Park Occupancy Surveys

- 2.6.1 Six locations within Stirling were selected for car park occupancy surveys. These are detailed below in Figure 14:
  - O Car 1 Dalgleish Court
  - Car 2 Wellgreen Road Multistorey
  - O Car 3 Wellgreen Place
  - Car 4 Burghmuir Retail Park (Waitrose)
  - Car 5 The Marches Multistorey
  - Car 6 The Thistles Multistorey





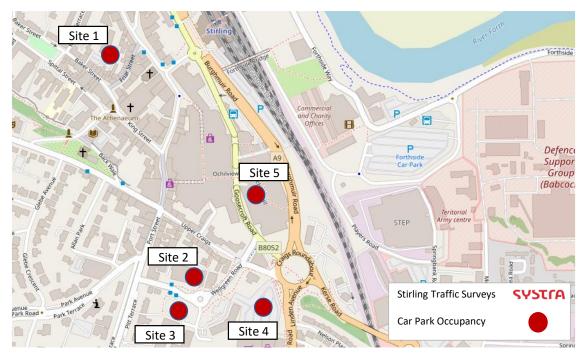


Figure 14.

Car Occupancy Surveys - Stirling

## 2.7 School On Street Car Parking Surveys

- 2.7.1 One location within Stirling was selected for on street car parking surveys. It is detailed below in Figure 15:
  - O Parking 1 Riverside Primary School



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Figure 15.

School Car Occupancy Surveys - Stirling

#### 2.8 Footway Surveys

#### **Stirling**

- 2.8.1 Five locations within Stirling was selected for footway surveys. These are detailed below:
  - Footway 1 B8052 Signalised Pedestrian Crossing at Rail Station
  - Footway 2 B8052 Eastside footway between Rail Station and Bus Station
  - Footway 3 Station Rd between Murray Pl and Goosecroft Rd (North Side)
  - Footway 4 Station Rd between Murray Pl and Goosecroft Rd (South Side)
  - Footway 5 Wellgreen Road to Upper Craigs



Figure 16.

Footway Surveys - Stirling

#### 2.9 Mode Share Surveys

#### **Rail Station Barrier Counts**

2.9.1 Barrier counts were conducted at Stirling 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 Occupancy Surveys**

2.9.2 Bus occupancy counts were undertaken at sites COP1 to COP13 shown in Figure 12 over the 16 hour period (06:00-22:00) on Thursday 11th May 2021.

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#### **Vehicle Occupancy Counts**

2.9.3 Vehicle occupancy counts were undertaken all classified turn count sites over the 16 hour period (06:00-22:00) on Thursday 11th May 2021.

### 2.10 Car Occupancy Counts - Dunblane

- 2.10.1 Vehicle occupancy counts were undertaken at two sites in Dunblane over the 16 hour period (06:00-22:00) on Wednesday 5th May 2021 as shown in Figure 17.
- 2.10.2 The locations surveyed were:
  - O B8033 Perth Road (north of Bridge)
  - B8033 Stirling Road (south of Central Scotland Jewellery access)

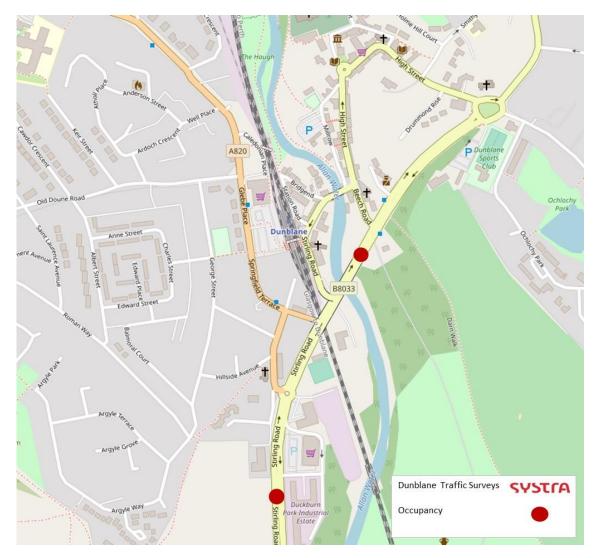


Figure 17. Occupancy Surveys - Dunblane

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## 2.11 Summary

2.11.1 A summary of survey programme undertaken across the Stirling Council area is given in Table 2 below.

**Table 2. Traffic Survey Summary** 

Sı	urvey Requirement	Nov-20	Feb-21	May-21	Sep-21
Stirling	Pedestrian Surveys	✓	✓	✓	✓
	Footway Surveys	✓	✓	✓	✓
	Car Park Surveys			✓	
	Speed Surveys	✓	✓	✓	✓
	Cordon Counts	✓	✓	✓	✓
	School Parking Monitoring			✓	✓
	Occupancy Surveys			✓	
Dunblane	Speed Surveys		✓	✓	✓
	Classified Link Count		✓	✓	✓
	Occupancy Survey			✓	
Bridge of Allan	Speed Surveys		✓	✓	✓
	Classified Link Count		✓	✓	✓
Aberfoyle	Speed Surveys		✓	✓	✓
	Classified Link Count		✓	✓	✓
Fallin	Speed Surveys		✓	✓	✓
	Classified Link Count		✓	✓	✓
Plean	Speed Surveys		✓	✓	✓
	Classified Link Count		✓	✓	✓
Callander	Speed Surveys		✓	✓	✓
	Classified Link Count		✓	✓	✓
Killearn	Speed Surveys		✓	✓	✓
	Classified Link Count		✓	✓	✓
Gargunnock	Speed Surveys		✓	✓	✓





#### 3. PEDESTRIAN BEHAVIOUR AND VOLUME COUNTS

#### 3.1 Pedestrian Behaviour Surveys

- 3.1.1 Summary tables below present the results of the pedestrian behaviour surveys in the Stirling Council area.
- 3.1.2 Following discussion with TACTRAN analysis was undertaken for the following sites in October 2020 only:
  - Pedestrian 3 Upper Craigs North side
  - Pedestrian 4 Upper Craigs South Side

#### 3.2 Pedestrian Volume Surveys

- 3.2.1 Six locations within Stirling were selected in discussion with Tactran for pedestrian volume counts:
  - Pedestrian 1 Murray Place (East side McDonalds)
  - Pedestrian 2 Murray Place (West side McDonalds)
  - Pedestrian 3 Upper Craigs North side
  - Pedestrian 4 Upper Craigs South Side
  - Pedestrian 5 Murray Place (West side Ian Gallacher Jewellers)
  - Pedestrian 6 Murray Place (East side Ian Gallacher Jewellers).

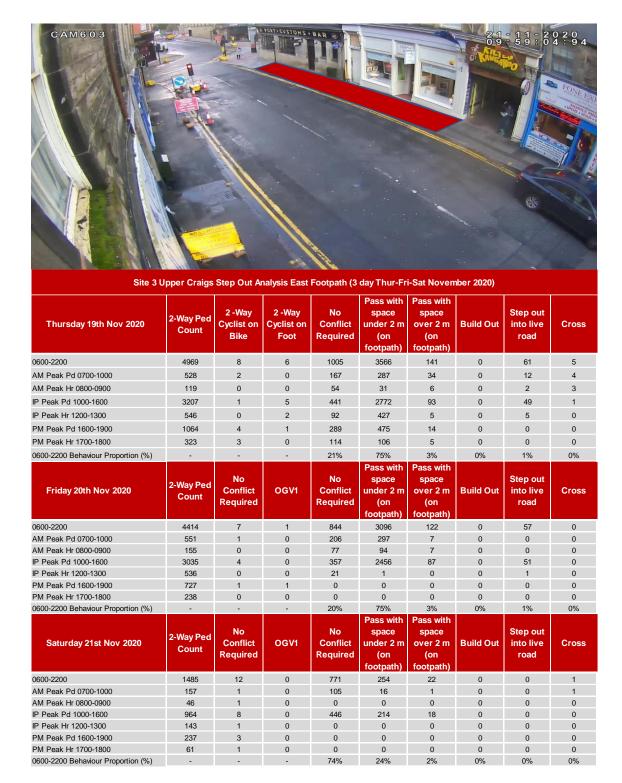
#### 3.3 Results of Pedestrian Behaviour Surveys

3.3.1 Table 3 below presents the results of the pedestrian behaviour data on the east side of Upper Craigs in Stirling.





Table 3. Upper Craigs, Stirling (east footpath) Pedestrian Behaviour Summary



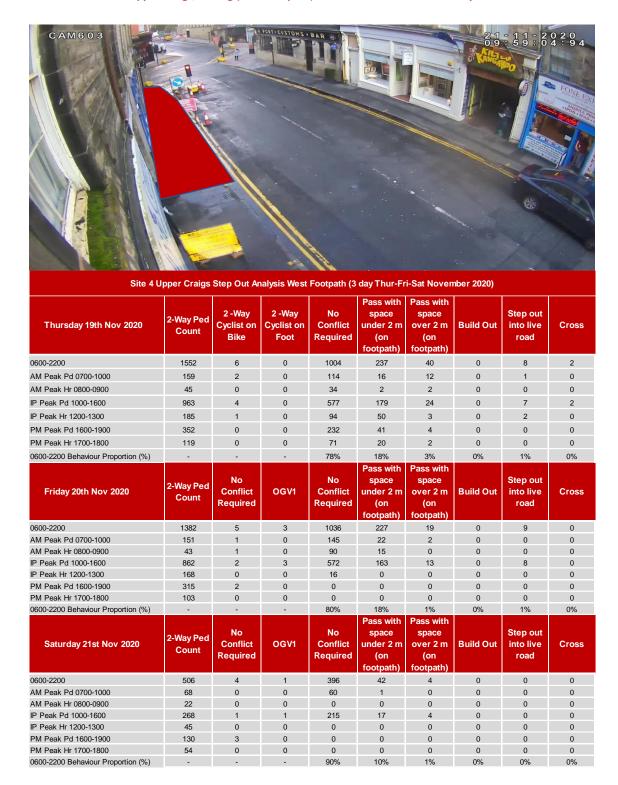
- 3.3.2 Table 3 shows that on average over the 3 days, 38% of pedestrians had no conflict, 58% pass within 2 metres of each other, 3% pass within a space over 2m and 1% cross the road.
- 3.3.3 Table 4 below presents the results of the pedestrian behaviour data on the west side of Upper Craigs in Stirling.

Tactran Mode Share Surveys	
Stirling Council Area	GB01T20C61
Survey Report	16/12/2021





Table 4. Upper Craigs, Stirling (west footpath) Pedestrian Behaviour Summary



3.3.4 Table 4 shows that on average over the 3 days, 83% of pedestrians had no conflict, 15% pass within 2 metres of each other and 2% pass within a space over 2m.

Tactran Mode Share Surveys	
Stirling Council Area	GB01T20C61
Survey Report	16/12/2021





# 3.4 Results of Pedestrian Volume Surveys

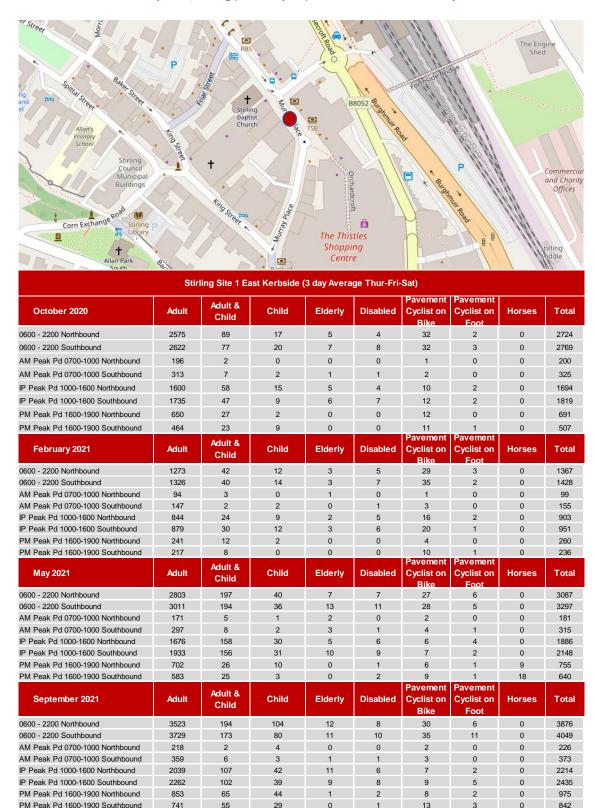
3.4.1	Table 5 below presents the results of the pedestrian volume data on the east side of Murray
	Place in Stirling during each of the four survey periods.

Tactran Mode Share Surveys	
Stirling Council Area	GB01T20C61
Survey Report	16/12/2021





Table 5. Murray Place, Stirling (east footpath) Pedestrian Volume Summary



3.4.2 Table 5 shows that the lowest pedestrian volumes were observed in February 2021 and the highest volumes in September 2021.

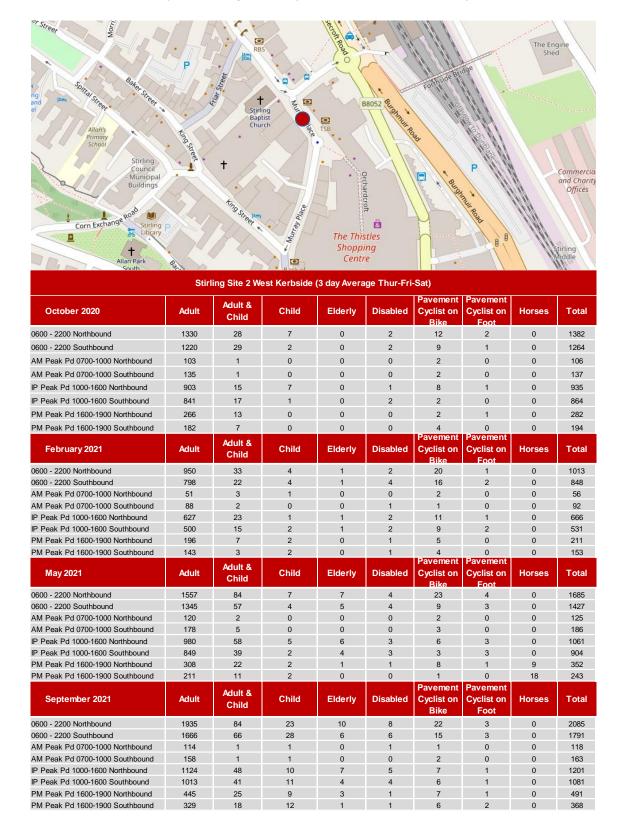
Tactran Mode Share Surveys	
Stirling Council Area	GB01T20C61
Survey Report	16/12/2021





3.4.3 Table 6 below presents the results of the pedestrian volume data on the west side of Murray Place in Stirling during each of the four survey periods.

Table 6. Murray Place, Stirling (west footpath) Pedestrian Volume Summary



Tactran Mode Share Surveys	
Stirling Council Area	GB01T20C61
Survey Report	16/12/2021



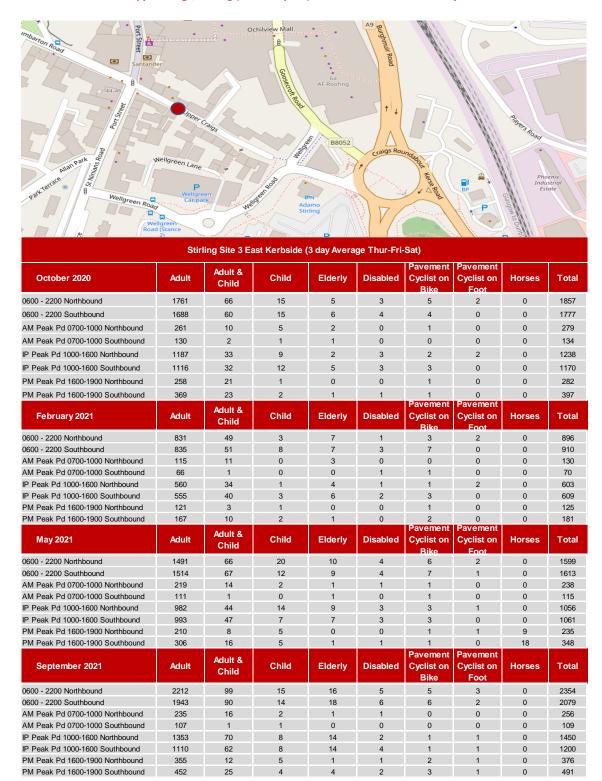


- 3.4.4 Table 6 shows that again, the lowest pedestrian volumes were observed in February 2021 when Scotland was living under lockdown conditions. The highest volumes were observed in September 2021.
- 3.4.5 Table 7 below presents the results of the pedestrian volume data on the east side of Upper Craigs in Stirling during each of the four survey periods.





Table 7. Upper Craigs, Stirling (east footpath) Pedestrian Volume Summary



3.4.6 Table 7 shows that the lowest pedestrian volumes were observed in February 2021 when Scotland was in lockdown and the highest volumes were observed in September 2021.

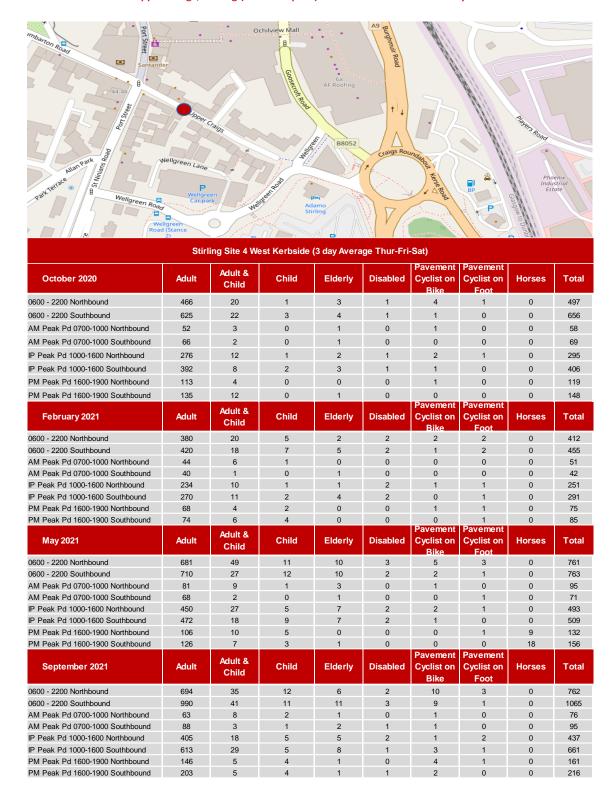
Tactran Mode Share Surveys	
Stirling Council Area	GB01T20C61
Survey Report	16/12/2021





3.4.7 Table 8 below presents the results of the pedestrian volume data on the west side of Upper Craigs in Stirling during each of the four survey periods.

Table 8. Upper Craigs, Stirling (west footpath) Pedestrian Volume Summary



Tactran Mode Share Surveys	
Stirling Council Area	GB01T20C61
Survey Report	16/12/2021



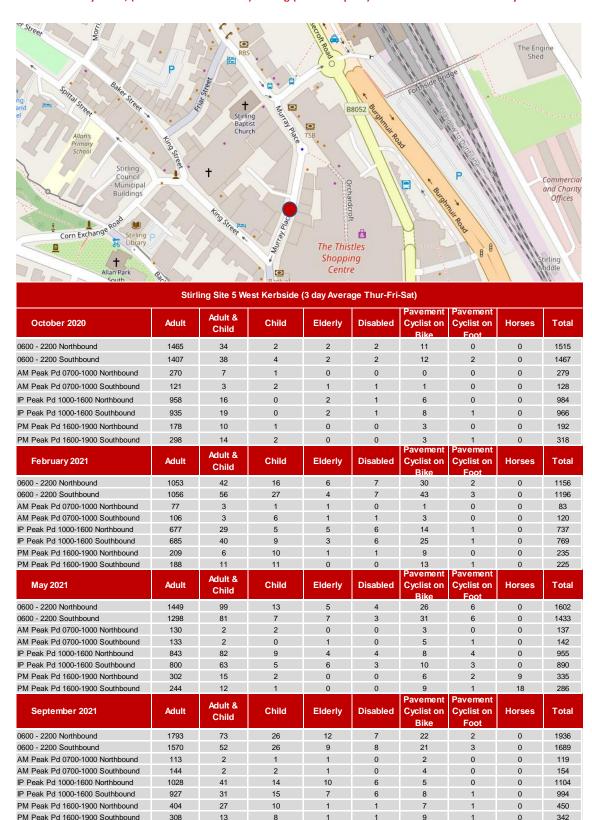


- 3.4.8 Table 8 shows that like other sites the lowest volumes were observed in February 2021, and the highest in September 2021. The west footpath shows significantly lower flows than the east footpath.
- 3.4.9 Table 9 below presents the results of the pedestrian volume data on the west side of Murray Place (adjacent to Ian Gallacher jewellers) in Stirling during each of the four survey periods.





Table 9. Murray Place, (Ian Gallacher Jewellers) Stirling (west footpath) Pedestrian Volume Summary



Tactran Mode Share Surveys	
Stirling Council Area	GB01T20C61
Survey Report	16/12/2021



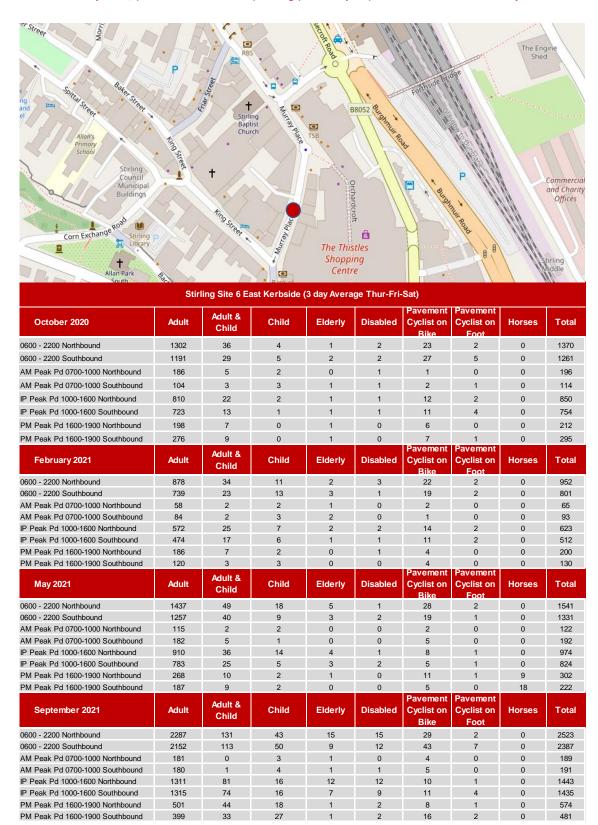


- 3.4.10 Table 9 shows that like other sites the lowest volumes were observed in February 2021, and the highest in September 2021.
- 3.4.11 Table 10 below presents the results of the pedestrian volume data on the east side of Murray Place (adjacent to Ian Gallacher jewellers) in Stirling during each of the four survey periods.





Table 10. Murray Place, (Ian Gallacher Jewellers) Stirling (east footpath) Pedestrian Volume Summary



Tactran Mode Share Surveys	
Stirling Council Area	GB01T20C61
Survey Report	16/12/2021





3.4.12	Table 10 shows that like other sites the lowest volumes were observed in February	2021,	and
	the highest in September 2021.		

Tactran Mode Share Surveys	
Stirling Council Area	GB01T20C61
Survey Report	16/12/2021





# 4. SPEED SURVEYS REVIEW

### 4.1 Overview

- 4.1.1 Summary tables below present the results of the speed surveys in the Stirling Council area (seven sites in Stirling, three sites in Dunblane, two sites in Plean and Gargunnock and one site in the remaining areas: Bridge of Allan, Aberfoyle, Fallin, Callander and Killearn).
- 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
  - O 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 Speed Surveys

## Stirling

4.2.1 Table 11 below presents a comparison of the results of the speed data on Murray Place northbound in Stirling.

Table 11. Site 1 Murray Place (Northbound)

The Engine Shed

Alian's Primary School

Striking Council Municipal Barbist Church

Alian Park

Alian Park

Alian Park

Alian Park

Alian Park

Barbist Church

The Thistles

Shopping Centre

Stirling Site 1 Murray Place Northbound uesday hursday Saturday Monday 23 Wednesday Friday 20 Sunday 22 5 Day 7 Day November 2020 21 Nov Nov 2020 25 Nov 2020 Nov 2020 Nov 2020 Mean Mean 2020 วดวด 2020 0000-2400 Vehicle Flow 308 282 297 360 371 275 274 324 310 Mean Speed (mph) 10 1 10 1 10.2 96 99 10.5 99 10.0 10.0 85%ile Speed (mph) 12.8 12.1 12.7 11.9 12.7 12.7 12.4 12.4 12.2 No. Vehicles > 20 MPH Limit 0 0 0 0 0 0 % Vehicles > 20 MPH Limit 0.0% 0.0% 0.3% 0.0% 0.0% 0.4% 0.0% 0.1% 0.1% No. Vehicles > 35 MPH 0 0 0 0 0 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% Monday 22 Wednesday Friday 26 Sunday 21 5 Day 7 Day February 2021 25 Feb 27 Feb Feb 2021 24 Feb 2021 Feb 2021 Feb 2021 Mean Mean 0000-2400 Vehicle Flow 297 255 294 284 376 300 256 301 295 Mean Speed (mph) 11.2 11.0 10.3 10.7 10.7 10.9 10.7 10.8 10.8 85%ile Speed (mph) 13.8 13.9 12.6 13.2 13.6 13.5 13.4 13.4 13.4 No. Vehicles > 20 MPH Limit 0 0 0 2 0 1 1 1 % Vehicles > 20 MPH Limit 1.3% 0.0% 0.0% 0.0% 0.5% 0.3% 0.0% 0.4% 0.3% No. Vehicles > 35 MPH 0 0 0 0 0 0 0 % Vehicles > 35 MPH 0.7% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.1% 0.1% 5 Day 7 Day Monday 10 Wednesday Friday 07 Sunday 09 04 May May 2021 06 May 08 May May 2021 05 May 2021 May 2021 May 2021 Mean Mean 0000-2400 Vehicle Flow 543 507 497 532 610 605 472 538 538 Mean Speed (mph) 10.3 10.6 10.6 10.2 10.4 10.5 10.7 10.4 10.5 85%ile Speed (mph) 13.3 13.2 13.7 12.8 13.1 13.1 13.4 13.2 13.2 No. Vehicles > 20 MPH Limit 0 10 0 % Vehicles > 20 MPH Limit 0.4% 0.6% 0.0% 0.0% 1.6% 0.0% 0.5% 0.5% 0.6% No. Vehicles > 35 MPH 0 0 0 0 0 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% uesdav hursda aturda Monday 06 Wednesday Friday 10 5 Day 7 Day September 2021 07 Sep 09 Sep 11 Sep Sep 2021 08 Sep 2021 Sep 2021 Sep 2021 Mean Mean 2021 2021 2021 340 434 499 418 427 424 0000-2400 Vehicle Flow 457 405 413 Mean Speed (mph) 10.3 10.4 10.3 11.0 10.2 10.3 10.4 10.4 10.4 85%ile Speed (mph) 12.5 13.0 13.0 13.4 12.6 13.1 12.8 12.9 12.9 No. Vehicles > 20 MPH Limit 1 3 0 2 5 2 % Vehicles > 20 MPH Limit 0.3% 0.2% 0.7% 0.0% 0.2% 0.5% 1.2% 0.3% 0.4% No. Vehicles > 35 MPH 0 0 0 0 0 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%

Tactran Mode Share Surveys	
Stirling Council Area	GB01T20C61
Survey Report	16/12/2021





- 4.2.2 Table 11 indicates that the 5-day average traffic flows were lowest in February 2021 when Scotland was in a period of lockdown. Conversely, the 5-day mean speed was highest at 10.8 mph. The flows in September 2021 were lower than May 2021.
- 4.2.3 The proportion of vehicles exceeding 20mph was slightly higher in May 2021 compared with the other survey periods.





4.2.5 Table 12 presents the results for Murray Place southbound in Stirling.

B Corn Exchi The Thistles Shopping Centre Stirling Site 1 Murray Place Southbound Tuesday Saturday Thursday Friday 20 5 Day Monday 23 Wednesday Sunday 22 November 2020 **24 Nov 19 Nov 21 Nov** Nov 2020 25 Nov 2020 Nov 2020 Nov 2020 1217 0000-2400 Vehicle Flow 787 813 828 1136 845 653 956 897 Mean Speed (mph) 11.3 11.2 10.9 10.5 10.8 11.5 10.9 11.1 85%ile Speed (mph) 14.4 14.3 13.8 13.4 13.5 14.4 14.0 13.9 14.0 No. Vehicles > 20 MPH Limit 2 5 2 3 3 3 % Vehicles > 20 MPH Limit 0.4% 0.5% 0.2% 0.4% 0.2% 0.5% 0.3% 0.3% 0.4% No. Vehicles > 35 MPH 0 0 0 0 0 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% aturday Monday 22 Wednesday Friday 26 Sunday 21 5 Day 7 Day February 2021 23 Feb 25 Feb 27 Feb Feb 2021 24 Feb 2021 eb 2021 Feb 2021 Mean Mean 202 0000-2400 Vehicle Flow 843 1114 904 814 883 866 708 879 922 Mean Speed (mph) 123 12 7 124 124 124 13.0 129 12 4 126 85%ile Speed (mph) 15.4 16.1 15.7 15.5 15.7 16.3 16.7 15.7 15.9 No. Vehicles > 20 MPH Limit 15 14 18 15 22 23 24 17 19 % Vehicles > 20 MPH Limit 1.8% 1.7% 2.0% 1.7% 2.0% 2.5% 3.4% 1.8% 2.2% No. Vehicles > 35 MPH 0 0 0 0 0 0 0 % Vehicles > 35 MPH 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.2% aturday londay 10 Wednesday Friday 07 Sunday 09 5 Day 7 Day 08 May May 2021 04 May 06 May May 2021 05 May 2021 May 2021 May 2021 Mean Mean 202 0000-2400 Vehicle Flow 1428 1419 1320 1413 1369 1621 1167 1415 1630 Mean Speed (mph) 11.3 11 4 11.8 11.1 11.2 11 2 11.7 11 4 114 85%ile Speed (mph) 14.4 14.8 15.1 14.3 14.3 14.4 14.7 14.6 14.6 No. Vehicles > 20 MPH Limit 11 10 15 21 9 11 10 13 12 % Vehicles > 20 MPH Limit 0.8% 0.7% 1.1% 1.5% 0.6% 0.7% 0.9% 0.9% 0.9% No. Vehicles > 35 MPH % Vehicles > 35 MPH 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% uesda hursd aturda Monday 06 Wednesday Friday 10 Sunday 12 5 Day 7 Day September 2021 07 Sep 11 Sep 09 Sep Sep 2021 Sep 2021 Sep 2021 08 Sep 2021 Mean Mean 202 2021 2021 0000-2400 Vehicle Flow 1303 1380 1387 1499 1690 1528 1329 1452 1445 11.8 12.2 11.8 12.1 11.8 11.9 Mean Speed (mph) 11.5 11.9 11.9 85%ile Speed (mph) 14.6 14.9 15.2 14.7 14.8 15.2 15.0 14.8 14.9 No. Vehicles > 20 MPH Limit 12 14 13 16 17 8 12 12 % Vehicles > 20 MPH Limit 0.9% 1.0% 0.9% 0.5% 0.9% 1.1% 0.9% 0.9% 0.6%

Table 12. Site 1 Murray Place (Southbound)

4.2.6 Table 12 shows that the 5-day average traffic flows were lowest in February 2021 when Scotland was in a period of lockdown. Again, the 5-day mean speed was highest at 12.4 mph. The September 2021 flows were the highest that were observed.

0

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Tactran Mode Share Surveys	
Stirling Council Area	GB01T20C61
Survey Report	16/12/2021

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0

0.0%

No. Vehicles > 35 MPH

% Vehicles > 35 MPH

0

0





4.2.7	he proportion of vehicles exceeding 20mph was higher in February 2021 compared v	with
	ovember 2020, May 2021 and September 2021.	

Tactran Mode Share Surveys	
Stirling Council Area	GB01T20C61
Survey Report	16/12/2021





4.2.8 Table 13 presents the results for Upper Craigs eastbound in Stirling.

Ochilview Mall 8 B8052 caigs Ro Stirling Site 2 Upper Craigs Eastbound Tuesday Thursday Saturday Monday 23 Wednesday Friday 20 Sunday 22 5 Day 7 Day November 2020 21 Nov **24 Nov 19 Nov** Nov 2020 25 Nov 2020 Nov 2020 Nov 2020 459 551 372 444 960 335 619 0000-2400 Vehicle Flow 859 428 Mean Speed (mph) 12.0 12.0 12.2 11.4 11.1 12.6 11.7 12.1 85%ile Speed (mph) 16.1 15.8 15.9 14.6 14.1 15.8 16.9 15.3 15.6 No. Vehicles > 20 MPH Limit 15 8 15 17 14 10 9 14 13 % Vehicles > 20 MPH Limit 4.0% 1.8% 3.3% 2.0% 1.5% 2.3% 2.7% 2.5% 2.5% No. Vehicles > 35 MPH 0 0 0 0 0 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% hursda aturday londay 22 Wednesday Friday 26 Sunday 21 5 Day 7 Day February 2021 23 Feb 25 Feb 27 Feb Feb 2021 24 Feb 2021 Feb 2021 Mean Feb 2021 Mean 2021 0000-2400 Vehicle Flow 379 512 347 392 182 378 385 433 508 Mean Speed (mph) 13.4 13.5 14.9 13.4 13.6 12.9 13.9 13.8 13.7 85%ile Speed (mph) 17.6 17.9 18.8 17.7 17.8 17.3 17.8 18.0 17.8 No. Vehicles > 20 MPH Limit 21 22 16 24 33 24 24 23 23 % Vehicles > 20 MPH Limit 5.5% 5.7% 8.8% 5.5% 6.4% 4.7% 6.9% 6.4% 6.2% No. Vehicles > 35 MPH % Vehicles > 35 MPH 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% Monday 10 Wednesday Friday 07 Sunday 09 5 Day 7 Day May 2021 08 May 04 May 06 May May 2021 05 May 2021 May 2021 May 2021 Mean Mean 202 0000-2400 Vehicle Flow 541 665 665 632 711 775 573 673 816 Mean Speed (mph) 12.9 12.0 12.6 11.9 12.3 11.9 12.9 12.3 12.4 85%ile Speed (mph) 16.5 15.9 16.7 15.7 16.1 15.5 16.2 16.2 16.1 No. Vehicles > 20 MPH Limit 0 Ω 0 0 0 0 0 % Vehicles > 20 MPH Limit 0.0% 0.0% 0.0% 0.0% 0.1% 0.0% 0.0% 0.0% 0.0% No. Vehicles > 35 MPH 0 0 0.0% 0.0% % Vehicles > 35 MPH 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% aturda uesday hursda Monday 06 Wednesday Friday 10 Sunday 12 5 Day 7 Day September 2021 07 Sep 09 Sep 11 Sep Sep 2021 08 Sep 202<sup>e</sup> Sep 2021 Sep 2021 Mean Mean 202 0000-2400 Vehicle Flow 468 571 585 594 776 490 489 599 568 12.6 12.4 12.6 12.4 12.5 13.2 13.5 12.5 12.7 Mean Speed (mph) 85%ile Speed (mph) 16.2 15.7 16.1 15.8 15.7 16.6 17.4 15.9 16.2

Table 13. Site 2 Upper Craigs (Eastbound)

4.2.9 Table 13 shows that the 5-day average traffic flows were lowest in February 2021 when Scotland was in a period of lockdown, the mean speed being 13.8mph at this point.

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Tactran Mode Share Surveys	
Stirling Council Area	GB01T20C61
Survey Report	16/12/2021

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No. Vehicles > 20 MPH Limit

% Vehicles > 20 MPH Limit

No. Vehicles > 35 MPH

% Vehicles > 35 MPH

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0.1%

0

0.0%

1

0.1%

0

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

Tactran Mode Share Surveys	
Stirling Council Area	GB01T20C61
Survey Report	16/12/2021





4.2.11 Table 14 presents the results for Upper Craigs westbound in Stirling.

Ochilview Mall 0 Street Port raigs R Stirling Site 2 Upper Craigs Westbound Tuesday Thursday Saturday Monday 23 Wednesday Friday 20 Sunday 22 5 Day 7 Day November 2020 21 Nov **24 Nov 19 Nov** Nov 2020 25 Nov 2020 Nov 2020 Nov 2020 965 365 417 301 606 538 0000-2400 Vehicle Flow 428 856 431 Mean Speed (mph) 10.6 10.7 10.9 11.0 10.9 11.0 11.0 10.8 10.9 85%ile Speed (mph) 12.9 13.5 14.2 14.1 13.7 14.7 14.4 13.7 13.9 No. Vehicles > 20 MPH Limit 8 5 10 8 4 10 6 7 7 % Vehicles > 20 MPH Limit 2.2% 1.2% 2.4% 0.9% 0.4% 2.3% 2.0% 1.4% 1.6% No. Vehicles > 35 MPH 0 0 0 0 0 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% hursda aturday londay 22 Wednesday Friday 26 Sunday 21 5 Day 7 Day February 2021 25 Feb 23 Feb 27 Feb Feb 2021 24 Feb 2021 Feb 2021 Feb 2021 Mean Mean 2021 0000-2400 Vehicle Flow 344 382 182 529 385 397 444 386 510 Mean Speed (mph) 12.1 12.4 13.8 12.4 12.4 11.9 12.5 12.6 12.5 85%ile Speed (mph) 15.4 15.9 16.9 15.9 15.9 15.3 15.9 16.0 15.9 No. Vehicles > 20 MPH Limit 3 8 6 6 5 6 % Vehicles > 20 MPH Limit 0.8% 0.8% 4.4% 1.6% 1.1% 1.4% 1.7% 1.7% 1.7% No. Vehicles > 35 MPH % Vehicles > 35 MPH 0.0% 1.1% 0.0% 0.0% 0.0% 0.2% 0.2% 0.0% 0.0% Monday 10 Wednesday Friday 07 Sunday 09 5 Day 7 Day May 2021 08 May 04 May 06 May May 2021 05 May 2021 May 2021 May 2021 Mean Mean 2021 0000-2400 Vehicle Flow 586 666 661 768 817 583 700 703 842 Mean Speed (mph) 11.9 11.6 11.9 11.6 11.6 11.9 12.2 11.7 11.8 85%ile Speed (mph) 14.9 14.7 15.0 15.1 14.9 15.3 15.5 14.9 15.1 No. Vehicles > 20 MPH Limit 0 0 0 0 0 0 0 % Vehicles > 20 MPH Limit 0.0% 0.0% 0.2% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% No. Vehicles > 35 MPH 0 0 0.0% 0.0% % Vehicles > 35 MPH 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% aturda uesday hursda Monday 06 Wednesday Friday 10 Sunday 12 5 Day 7 Day September 2021 07 Sep 09 Sep 11 Sep Sep 2021 08 Sep 202<sup>e</sup> Sep 2021 Sep 2021 Mean Mean 202 202 0000-2400 Vehicle Flow 485 568 574 603 774 502 471 601 568 10.9 11.0 11.3 11.7 11.5 11.6 12.2 11.3 11.5 Mean Speed (mph) 85%ile Speed (mph) 14.4 14.1 14.8 15.5 16.0 15.2 16.5 15.0 15.2 No. Vehicles > 20 MPH Limit 0 0 0 0 0 0 0 1 1 % Vehicles > 20 MPH Limit 0.0% 0.0% 0.0% 0.2% 0.0% 0.2% 0.0% 0.0% 0.1%

Table 14. Site 2 Upper Craigs (Westbound)

4.2.12 Table 14 shows that the 5-day average traffic flows were lowest in February 2021 when Scotland was in a period of lockdown. The mean speed of traffic in November 2020 was lowest at 10.8 mph.

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Tactran Mode Share Surveys	
Stirling Council Area	GB01T20C61
Survey Report	16/12/2021

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0.0%

No. Vehicles > 35 MPH

% Vehicles > 35 MPH

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0.0%

0

0.0%





4.2.13	The proportion of vehicles exceeding 20mph was much lower in May 2021 and September
	2021 compared with November 2020 and February 2021.

Tactran Mode Share Surveys	
Stirling Council Area	GB01T20C61
Survey Report	16/12/2021





- 4.2.15 Table 15 presents the results for Millennium Way northbound in Stirling.
- For the remaining sites, no data is available for November 2020 Following tables only 4.2.16 contain data for February, May and September 2021.

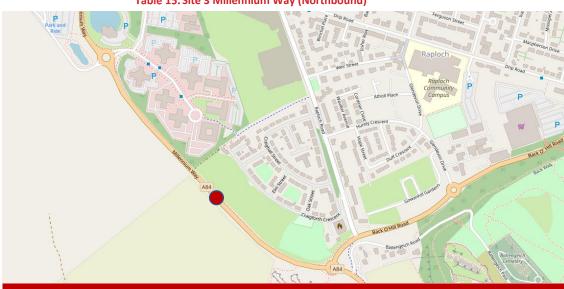


Table 15. Site 3 Millennium Way (Northbound)

· ·			A.	C .	84	13	The same		
Stirling Site 3 Millenium Way Northbound									
February 2021	Monday 22 Feb 2021	Tuesday 23 Feb 2021	Wednesday 24 Feb 2021	Thursday 25 Feb 2021	Friday 26 Feb 2021	Saturday 27 Feb 2021	Sunday 21 Feb 2021	5 Day Mean	7 Day Mean
0000-2400 Vehicle Flow	4666	4393	4755	4984	5483	4098	3354	4856	4533
Mean Speed (mph)	43.4	43.6	43.0	43.2	43.4	43.8	43.7	43.3	43.4
85%ile Speed (mph)	48.3	48.5	48.1	48.1	48.3	49.3	49.1	48.3	48.5
No. Vehicles > 40 MPH Limit	3483	3318	3332	3713	4050	3068	2469	3579	3348
% Vehicles > 40 MPH Limit	74.6%	75.5%	70.1%	74.5%	73.9%	74.9%	73.6%	73.7%	73.9%
No. Vehicles > 55 MPH	134	140	118	113	156	160	139	132	137
% Vehicles > 55 MPH	2.9%	3.2%	2.5%	2.3%	2.8%	3.9%	4.1%	2.7%	3.1%
May 2021	Monday 10 May 2021	Tuesday 04 May 2021	Wednesday 05 May 2021	Thursday 06 May 2021	Friday 07 May 2021	Saturday 08 May 2021	Sunday 09 May 2021	5 Day Mean	7 Day Mean
0000-2400 Vehicle Flow	5531	5737	5853	5939	6322	5317	4687	5876	5627
Mean Speed (mph)	37.2	41.3	41.2	41.0	41.2	41.4	38.9	40.4	40.3
85%ile Speed (mph)	41.6	45.4	45.5	45.2	45.3	45.5	43.2	44.6	44.5
No. Vehicles > 40 MPH Limit	5497	5736	5851	5937	6322	5316	4685	5869	5621
% Vehicles > 40 MPH Limit	99.4%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	99.9%	99.9%
No. Vehicles > 55 MPH	15	49	41	48	54	56	21	41	41
% Vehicles > 55 MPH	0.3%	0.9%	0.7%	0.8%	0.9%	1.1%	0.4%	0.7%	0.7%
September 2021	Monday 06 Sep 2021	Tuesday 07 Sep 2021	Wednesday 08 Sep 2021	Thursday 09 Sep 2021	Friday 10 Sep 2021	Saturday 11 Sep 2021	Sunday 12 Sep 2021	5 Day Mean	7 Day Mean
0000-2400 Vehicle Flow	7441	7344	7845	7789	8139	7332	6606	7712	7499
Mean Speed (mph)	40.8	40.4	35.0	40.1	39.8	42.1	42.2	39.2	40.1
85%ile Speed (mph)	45.8	45.7	45.0	45.5	45.8	46.6	46.7	45.6	45.9
No. Vehicles > 40 MPH Limit	4139	4130	3440	4000	4501	4804	4303	4042	4188
% Vehicles > 40 MPH Limit	55.6%	56.2%	43.8%	51.4%	55.3%	65.5%	65.1%	52.5%	56.1%
No. Vehicles > 55 MPH	79	75	95	91	99	114	92	88	92
% Vehicles > 55 MPH	1.1%	1.0%	1.2%	1.2%	1.2%	1.6%	1.4%	1.1%	1.2%

- Table 15 shows that the 5-day average traffic flows were lowest in February 2021 when Scotland was in a period of lockdown. The flow in September 2021 was higher than May 2021. The mean speed of traffic in February 2021 was 43.3 mph, compared with 40.4 mph in May 2021 and 39.2 mph in September 2021.
- 4.2.18 The proportion of vehicles exceeding 40mph was much greater in May 2021 compared with February 2021, with September 2021 being lower than both November 2020 and May 2021.

Tactran Mode Share Surveys	
Stirling Council Area	GB01T20C61
Survey Report	16/12/2021



No. Vehicles > 55 MPH

% Vehicles > 55 MPH



4.2.19 Table 16 presents the results for Millennium Way southbound In Stirling.

Stirling Site 3 Millenium Way Southbound uesdav Thursdav Saturdav Monday 22 Wednesday Friday 26 Sunday 21 23 Feb February 2021 27 Feb 25 Feb Feb 2021 24 Feb 2021 Feb 2021 Feb 2021 3794 3737 4543 2760 3888 3655 0000-2400 Vehicle Flow 3420 3948 3382 43.3 42.7 42.6 42.8 43.1 42.9 43.0 Mean Speed (mph) 43.2 43.1 85%ile Speed (mph) 48.5 48.3 48.9 48.6 48.9 47.9 48.8 48.7 48.5 No Vehicles > 40 MPH Limit 2622 2274 2393 2646 3091 2356 1911 2605 2470 % Vehicles > 40 MPH Limit 69.1% 66.5% 64.0% 67.0% 68.0% 69.7% 69.2% 66.9% 67.7% No. Vehicles > 55 MPH 145 112 113 101 168 116 83 128 120 % Vehicles > 55 MPH 3.8% 3.3% 3.0% 2.6% 3.4% 3.0% 3.3% 3.3% 3.7% uesda hursda aturda Wednesday Monday 10 Friday 07 Sunday 09 5 Day 7 Day May 2021 04 May 06 May 08 May May 2021 05 May 202<sup>-</sup> May 2021 May 2021 0000-2400 Vehicle Flow 7383 7713 7835 8275 6732 6048 7767 7374 7630 Mean Speed (mph) 37.0 37.8 38.2 37.9 38.3 38.7 37.6 37.8 37.9 85%ile Speed (mph) 41.4 42.1 42.6 42.1 42.6 43.1 41.9 42.2 42.3 No. Vehicles > 40 MPH Limit 7349 7623 7696 7827 8266 6726 6041 7752 7361 % Vehicles > 40 MPH Limit 99.5% 99.9% 99.8% 99.9% 99.9% 99.9% 99.9% 99.8% 99.8% No. Vehicles > 55 MPH 23 32 36 19 42 29 29 31 % Vehicles > 55 MPH 0.3% 0.5% 0.4% 0.5% 0.4% 0.4% 0.2% 0.6% Saturday 7 Day Friday 10 5 Day Monday 06 Wednesday Sunday 12 September 2021 07 Sep 09 Sep 11 Sep Sep 2021 08 Sep 2021 Sep 2021 Sep 2021 Mean Mean 2021 2021 2021 0000-2400 Vehicle Flow 5840 5713 6439 5127 6006 5876 5874 6166 5974 Mean Speed (mph) 39.8 39.6 38.7 38.6 40.3 42 2 42.3 39.4 40.2 85%ile Speed (mph) 44.6 44.1 43.7 42.9 45.2 47.2 47.4 44.1 45.0 2511 2388 3857 No. Vehicles > 40 MPH Limit 2202 1983 2985 3359 2414 % Vehicles > 40 MPH Limit 43.0% 40.7% 38.5% 32.2% 46.4% 64.6% 65.5% 40.1% 47.3%

Table 16. Site 3 Millennium Way (Southbound)

4.2.20 Table 16 shows that the 5-day average traffic flows were much lower in February 2021 when Scotland was in a period of lockdown. The flows in September 2021 were lower than May 2021. The mean speed of traffic in February 2021 was 42.9mph, compared with 42.2 mph in May 2021 and 39.4mph in September 2021.

29

0.5%

55

0.9%

1.3%

118

2.0%

4.2.21 The proportion of vehicles exceeding 20mph was much higher in May 2021 compared with February 2021.

Tactran Mode Share Surveys	
Stirling Council Area	GB01T20C61
Survey Report	16/12/2021

0.6%

0.9%

68

0.8%



85%ile Speed (mph)

No. Vehicles > 35 MPH

% Vehicles > 35 MPH

No. Vehicles > 20 MPH Limit % Vehicles > 20 MPH Limit



4.2.23 Table 17 presents the results for Murray Place southbound in Stirling.

Table 17. Site 4 Murray Place (Southbound) B Corn Exchi The Thistles Shopping Centre Stirling Site 4 Murray Place Southbound Saturday Tuesday Thursday Monday 22 Wednesday Friday 26 Sunday 21 February 2021 23 Feb 25 Feb 27 Feb Feb 2021 24 Feb 2021 Feb 2021 Feb 2021 202 0000-2400 Vehicle Flow 579 573 614 603 778 668 481 629 614 10.1 10.0 10.1 9.8 10.1 10.2 10.6 10.0 10.1 Mean Speed (mph) 85%ile Speed (mph) 13.1 12.8 13.0 12.5 13.3 13.2 13.7 12.9 13.1 No. Vehicles > 20 MPH Limit 0 4 0 3 1 0 2 1 % Vehicles > 20 MPH Limit 0.2% 0.0% 0.7% 0.0% 0.4% 0.1% 0.0% 0.2% 0.2% No. Vehicles > 35 MPH 0 % Vehicles > 35 MPH 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% uesdav hursda aturda Monday 10 Wednesday Friday 07 Sunday 09 5 Day 7 Day May 2021 04 May 08 May 06 May May 2021 Mean 05 May 2021 May 2021 May 2021 971 1026 1009 0000-2400 Vehicle Flow 926 990 1018 1223 1120 818 Mean Speed (mph) 9.9 9.4 9.8 9.9 9.8 9.9 9.8 9.8 9.8 85%ile Speed (mph) 12.6 12.4 12.8 12.3 12.2 12.5 12.1 12.5 12.4 No. Vehicles > 20 MPH Limit 3 2 % Vehicles > 20 MPH Limit 0.2% 0.3% 0.1% 0.1% 0.1% 0.2% 0.1% 0.2% 0.2% No. Vehicles > 35 MPH 0 0 0 0 0 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% Wednesday Monday 06 Friday 10 Sunday 12 5 Day 7 Day September 2021 07 Sep 09 Sep 11 Sep Sep 2021 08 Sep 2021 Sep 2021 Sep 2021 Mean Mean 2021 2021 2021 0000-2400 Vehicle Flow 954 1014 1057 1137 1246 1157 929 1082 1071 Mean Speed (mph) 9.7 9.8 10.1 10.1 10.0 10.3 10.3 99 10.0

4.2.24 Table 17 shows that the 5-day average traffic flows were lowest in February 2021 when Scotland was in a period of lockdown. The mean speed of traffic in February 2021 was only 10.0mph, 9.8mph in May 2021 and 9.9mph in September 2021.

13.0

0.3%

0

0.0%

13.0

0.2%

0

0.0%

12.9

0.6%

0

0.0%

13.3

0.5%

0

0.0%

13.4

0.3%

0

0.0%

12.8

0.2%

0

0.0%

13.0

0.3%

0

0.0%

4.2.25 The proportion of vehicles exceeding 20mph was the same throughout all survey periods.

Tactran Mode Share Surveys	
Stirling Council Area	GB01T20C61
Survey Report	16/12/2021

12.5

0.2%

0

0.0%

12.8

0.0%

0

0.0%





Table 18 presents the results for Causewayhead Road northbound in Stirling.

Table 18. Site 5 Causewayhead Road (Northbound) UK Products Ltd Stirling Site 5 Causewayhead Road Northbound Saturday Tuesday Thursday Friday 26 Sunday 21 Monday 22 Wednesday 5 Day February 2021 23 Feb 25 Feb 27 Feb Feb 2021 24 Feb 2021 Feb 2021 Feb 2021 202 0000-2400 Vehicle Flow 4536 3977 4404 4494 4892 4174 3703 4461 4311 25.9 25.9 25.7 26.1 25.3 25.2 25.8 25.8 25.7 Mean Speed (mph) 85%ile Speed (mph) 30.5 31.0 30.6 30.8 30.4 30.3 30.5 30.7 30.6 No. Vehicles > 20 MPH Limit 3897 3326 3653 3881 4020 3424 3144 3755 3621 % Vehicles > 20 MPH Limit 85.9% 83.6% 82.9% 86.4% 82.2% 82.0% 84.9% 84.2% 84.0% No. Vehicles > 35 MPH 10 12 10 % Vehicles > 35 MPH 0.2% 0.2% 0.2% 0.3% 0.3% 0.2% 0.2% 0.2% 0.2% uesda hursda Saturda Monday 10 Wednesday Sunday 09 5 Day 7 Day Friday 07 May 2021 08 May 04 May 06 May Mean May 2021 05 May 2021 May 2021 May 2021 202 6488 8554 8203 7867 0000-2400 Vehicle Flow 8475 8620 8879 7770 6281 Mean Speed (mph) 23.9 23.5 23.6 23.7 23.2 23.9 24.6 23.6 23.8 85%ile Speed (mph) 28.2 28.2 28.2 28.0 28.0 28.6 28.9 28.1 28.3 No. Vehicles > 20 MPH Limit 5228 6528 6688 6973 6646 6106 5300 6413 6210 % Vehicles > 20 MPH Limit 80.6% 77.0% 78.2% 80.9% 74.9% 78.6% 84.4% 78.3% 79.2% No. Vehicles > 35 MPH 3 5 9 4 % Vehicles > 35 MPH 0.0% 0.1% 0.0% 0.0% 0.1% 0.1% 0.1% 0.1% 0.1% Monday 06 Wednesday Friday 10 Sunday 12 5 Day 7 Dav September 2021 09 Sep 07 Sep 11 Sep Sep 2021 08 Sep 2021 Sep 2021 Sep 2021 Mean Mean

2021

6655

20.9

25.4

3657

55.0%

14

0.2%

2021

6432

21.6

26.4

4000

62.2%

11

0.2%

5613

22.1

27.0

3680

65.6%

9

0.2%

6496

21.1

25.6

3663

56.4%

8

0.1%

6360

21.3

25.9

3714

58.5%

9

0.1%

6834

21.1

25.8

3848

56.3%

10

0.1%

4.2.28 Table 18 shows that the 5-day average traffic flows were much lower in February 2021 when Scotland was in a period of lockdown. The mean speed of traffic in February 2021 was 25.8mph, and then 23.6mph in May 2021, reducing further to 21.1mph in September 2021.

6543

21.2

25.8

3852

58.9%

10

0.2%

2021

6334

21.0

25.7

3523

55.6%

0.0%

6112

21.1

25.4

3436

56.2%

5

0.1%

0000-2400 Vehicle Flow

No. Vehicles > 20 MPH Limit

% Vehicles > 20 MPH Limit

No. Vehicles > 35 MPH

% Vehicles > 35 MPH

Mean Speed (mph)

85%ile Speed (mph)

4.2.29 The proportion of vehicles exceeding 20mph was lower in May 2021 and September 2021 compared with February 2021.

Tactran Mode Share Surveys	
Stirling Council Area	GB01T20C61
Survey Report	16/12/2021





4.2.31 Table 19 presents the results for Causewayhead Road southbound in Stirling.

Table 19. Site 5 Causewayhead Road (southbound) Ltd Stirling Site 5 Causewayhead Road Southbound Saturday Tuesday Thursday Monday 22 Friday 26 Wednesday 5 Day February 2021 23 Feb 25 Feb 27 Feb Feb 2021 24 Feb 2021 Feb 2021 Feb 2021 202 0000-2400 Vehicle Flow 4422 3697 4126 4471 4922 4070 3501 4328 4173 27.0 26.7 26.5 26.8 26.5 25.9 26.7 26.5 Mean Speed (mph) 26.3 85%ile Speed (mph) 30.9 30.8 30.5 31.0 30.5 30.6 30.2 30.7 30.6 No. Vehicles > 20 MPH Limit 4070 3361 3733 4096 4470 3643 3129 3946 3786 % Vehicles > 20 MPH Limit 92.0% 90.9% 90.5% 91.6% 90.8% 89.5% 89.4% 91.2% 90.7% No. Vehicles > 35 MPH 10 12 % Vehicles > 35 MPH 0.3% 0.1% 0.1% 0.3% 0.1% 0.2% 0.2% 0.2% 0.2% uesda hursda aturda Wednesday Sunday 09 5 Day 7 Day Monday 10 Friday 07 08 May May 2021 04 May 06 May May 2021 05 May 202<sup>4</sup> May 2021 May 2021 Mean 202 4315 6181 0000-2400 Vehicle Flow 7126 6888 6655 7020 6547 4719 6401 Mean Speed (mph) 28.9 26.8 27.1 27.5 27.6 27.3 29.1 27.6 27.8 33.3 31.1 33.6 31.8 32.0 85%ile Speed (mph) 31.2 31.7 31.6 31.5 No. Vehicles > 20 MPH Limit 4093 6537 6397 6265 6556 6040 4494 5970 5769 % Vehicles > 20 MPH Limit 94.9% 91.7% 92.9% 94.1% 93.4% 92.3% 95.2% 93.4% 93.5% No. Vehicles > 35 MPH 34 19 17 29 25 28 21 23 % Vehicles > 35 MPH 0.8% 0.1% 0.3% 0.3% 0.4% 0.4% 0.6% 0.4% 0.4% Monday 06 Wednesday Friday 10 Sunday 12 5 Day 7 Dav September 2021 09 Sep 07 Sep 11 Sep Sep 2021 08 Sep 2021 Sep 2021 Sep 2021 Mean Mean 2021 2021 2021

4.2.32 Table 19 shows that the 5-day average traffic flows were much lower in February 2021 when Scotland was in a period of lockdown. The mean speed of traffic in May 2021 was 27.6mph, similarly in February 2021 26.7mph, speeds were reduced in September 2021 at 22.6mph.

6393

22.8

27.2

4771

74.6%

0.1%

6637

22.4

26.6

4766

71.8%

0.1%

6255

23.1

27.5

4852

77.6%

3

0.0%

6318

22.7

26.8

4638

73.4%

6

0.1%

5457

23.2

27.5

4154

76.1%

3

0.1%

6263

22.6

26.9

4571

73.0%

0.1%

6146

22.8

27.1

4551

74.1%

6

0.1%

- 4.2.33 The proportion of vehicles exceeding 20mph was higher in May 2021 compared with February 2021, before reducing again in September 2021.
- 4.2.34 Table 20 presents the results for Forrest Road northbound in Stirling.
- 4.2.35 For the remaining sites, data is only available for September 2021.

5870

22.4

26.8

4205

71.6%

3

0.1%

6095

22 7

27.0

4474

73.4%

12

0.2%

0000-2400 Vehicle Flow

No. Vehicles > 20 MPH Limit

% Vehicles > 20 MPH Limit

No. Vehicles > 35 MPH

Mean Speed (mph)

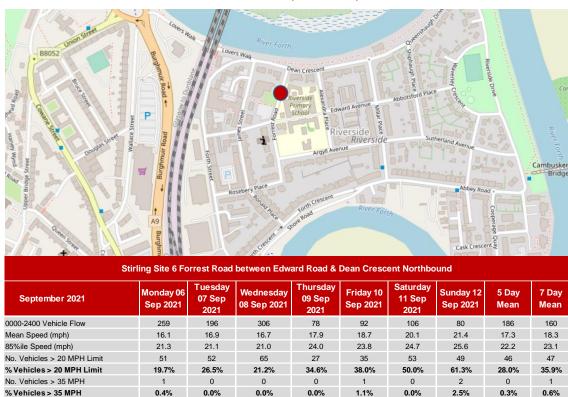
85%ile Speed (mph)

Tactran Mode Share Surveys	
Stirling Council Area	GB01T20C61
Survey Report	16/12/2021





**Table 20. Site 6 Forrest Road (Northbound)** 

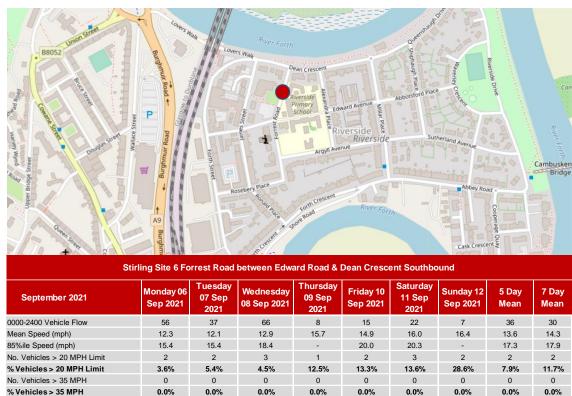


- 4.2.36 Table 20 shows that the 5-day average traffic flows was just under 200 vehicles. The mean speed of traffic in September 2021 was 17.3 mph.
- 4.2.37 The proportion of vehicles exceeding 20mph was 28% in September 2021.
- 4.2.38 Table 21 presents the results for Millennium Way southbound In Stirling.





Table 21. Site 3 Forrest Road (Southbound)



- 4.2.39 Table 21 shows that the 5-day average traffic flows was just under 50 vehicles. The mean speed of traffic in September 2021 was 13.6 mph.
- 4.2.40 The proportion of vehicles exceeding 20mph was 7.9% in September 2021.

Tactran Mode Share Surveys	
Stirling Council Area	GB01T20C61
Survey Report	16/12/2021





4.2.42 Table 22 presents the results for Argyll Avenue eastbound in Stirling.

BB052

The street Holy

Total Street

Band Covers Walk

Abbets ord Place

Appendix Annue

Band Covers Walk

Appendix Annue

Appendix Annue

Appendix Annue

Appendix Annue

Annue Porth

Appendix Annue

Annue Porth

# Table 22. Site 7 Argyll Avenue (Eastbound)

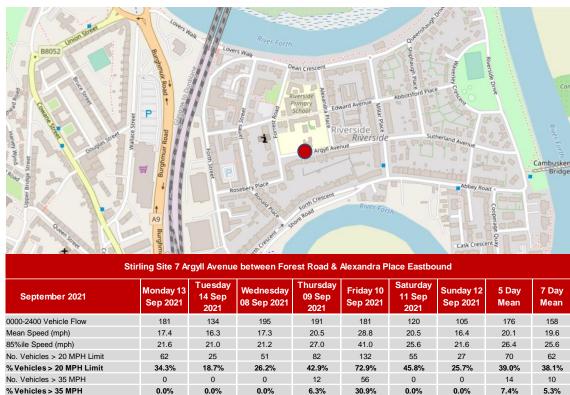
Stirling Site 7 Argyll Avenue between Forest Road & Alexandra Place Eastbound									
September 2021	Monday 13 Sep 2021	Tuesday 14 Sep 2021	Wednesday 08 Sep 2021	Thursday 09 Sep 2021	Friday 10 Sep 2021	Saturday 11 Sep 2021	Sunday 12 Sep 2021	5 Day Mean	7 Day Mean
0000-2400 Vehicle Flow	264	283	269	276	289	112	89	276	226
Mean Speed (mph)	15.4	15.5	16.0	16.1	16.5	17.8	16.5	15.9	16.3
85%ile Speed (mph)	20.3	20.7	20.4	21.1	21.7	21.9	21.9	20.8	21.1
No. Vehicles > 20 MPH Limit	49	50	44	63	63	32	20	54	46
% Vehicles > 20 MPH Limit	18.6%	17.7%	16.4%	22.8%	21.8%	28.6%	22.5%	19.4%	21.2%
No. Vehicles > 35 MPH	0	0	2	5	6	0	0	3	2
% Vehicles > 35 MPH	0.0%	0.0%	0.7%	1.8%	2.1%	0.0%	0.0%	0.9%	0.7%

- 4.2.43 Table 22 shows that the 5-day average traffic flow was just under 300 vehicles. The mean speed of traffic in September 2021 was 15.9 mph.
- 4.2.44 The proportion of vehicles exceeding 20mph was 19.4% in September 2021.
- 4.2.45 Table 23 presents the results for Argyll Avenue westbound in Stirling.





Table 23. Site 7 Argyll Avenue (Westbound)



- 4.2.46 Table 23 shows that the 5-day average traffic flow was just under 200 vehicles. The mean speed of traffic in September 2021 was 20.1 mph.
- 4.2.47 The proportion of vehicles exceeding 20mph was 39.0% in September 2021.





#### **Dunblane**

% Vehicles > 35 MPH

September 2021

No. Vehicles > 20 MPH Limit

% Vehicles > 20 MPH Limit

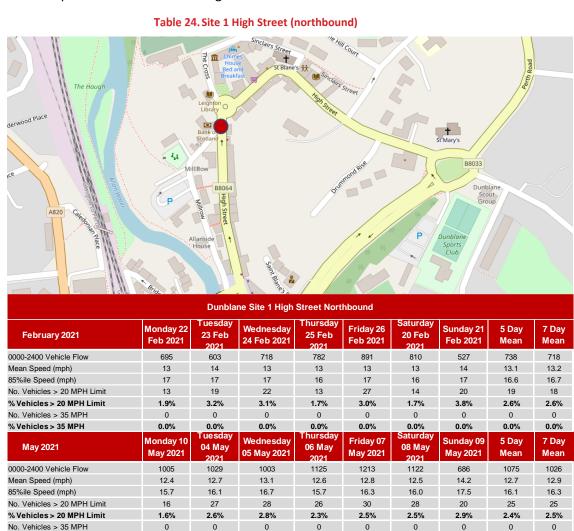
No. Vehicles > 35 MPH

% Vehicles > 35 MPH

0000-2400 Vehicle Flow

Mean Speed (mph) 85%ile Speed (mph)

4.2.49 Table 24 presents the results for High Street northbound in Dunblane.



4.2.50 Table 24 shows that the 5-day average traffic flows were lowest in February 2021 when Scotland was in a period of lockdown. The mean speed of traffic in May 2021 was only 12.7mph, compared with 13.1mph in February 2021, reducing further to 12.5mph in September 2021.

0.0%

Wednesday

08 Sep 2021

1048

12.7

16.0

Ω

0.0%

0

0.0%

0.0%

hursdav

09 Sep

2021

1121

12.7

15.9

0

0.0%

0

0.0%

0.0%

Friday 10

Sep 2021

1282

12.3

15.8

0

0.0%

0

0.0%

0.0%

Saturday

11 Sep

2021

1088

12.3

15.7

0

0.0%

0

0.0%

0.0%

Sunday 12

Sep 2021

714

13.4

16.8

0

0.0%

0

0.0%

0.0%

5 Day

Mean

1088

12.5

15.8

0

0.0%

0.0%

0.0%

7 Day

Mean

1035

12.6

16.0

Ω

0.0%

0

0.0%

4.2.51 The proportion of vehicles exceeding 20mph in February 2021 was similar in May 2021.

Tactran Mode Share Surveys	
Stirling Council Area	GB01T20C61
Survey Report	16/12/2021

0.0%

Monday 06

Sep 2021

952

12.5

15.8

Ω

0.0%

0.0%

0.0%

uesdav

07 Sep

2021

1038

12.3

15.7

1

0.1%

0.1%





4.2.53 Table 25 presents the results for Perth Road northbound in Dunblane.

Table 25. Site 2 Perth Road (Northbound) 44 B8033 **Dunblane Site 2 B8033 Perth Road Northbound** Tuesdav Thursday Saturday Monday 22 Wednesday Friday 19 23 Feb February 2021 25 Feb 20 Feb Feb 2021 24 Feb 2021 Feb 2021 Feb 2021 4064 3797 4692 3129 4053 3836 0000-2400 Vehicle Flow 3482 4228 3462 27.2 27.4 Mean Speed (mph) 27 27 28 27 27 27 28 85%ile Speed (mph) 34 34 35 34 34 35 35 34.3 34.4 No. Vehicles > 20 MPH Limit 3091 2661 2891 3196 3538 2604 2446 3075 2918 % Vehicles > 20 MPH Limit 76.1% 76.4% 76.1% 75.6% 75.4% 75.2% 78.2% 75.9% 76.1% No. Vehicles > 35 MPH 0 0 0 0 % Vehicles > 35 MPH 0.0% 0.0% 0.1% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% aturda 5 Day Friday 07 7 Day londay 10 Wednesda Sunday 09 May 2021 04 May 06 May 08 May May 2021 05 May 202<sup>-</sup> May 2021 May 2021 0000-2400 Vehicle Flow 5538 5908 5784 6776 6252 5287 3786 6052 5619 26.6 26.5 Mean Speed (mph) 26.7 26.5 26.9 25.6 25.6 27.7 26.5 85%ile Speed (mph) 33.6 33.1 33.3 31.9 33.2 32.5 34.6 33.0 33.2 No. Vehicles > 20 MPH Limit 4212 4560 4515 5046 4764 3846 3004 4619 4278 % Vehicles > 20 MPH Limit 76.1% 77.2% 78.1% 74.5% 76.2% 72.7% 79.3% 76.4% 76.3% No. Vehicles > 35 MPH 16 11 13 12 23 17 15 14 % Vehicles > 35 MPH 0.3% 0.2% 0.1% 0.4% 0.3% 0.2% 0.2% Saturday 7 Day Friday 10 5 Day Monday 06 Wednesday Sunday 12 September 2021 07 Sep 09 Sep 11 Sep Sep 2021 08 Sep 2021 Sep 2021 Sep 2021 Mean Mean 2021 2021 2021 0000-2400 Vehicle Flow 5645 6134 6705 4385 6088 5729 5825 6133 5275 Mean Speed (mph) 24.2 24.2 23.9 24.1 24.0 24.4 24.7 24.1 24.2 85%ile Speed (mph) 30.8 30.8 30.3 30.8 30.6 31.2 31.5 30.7 30.9 No. Vehicles > 20 MPH Limit 4011 4294 3710 4281 4271 3160 4039 % Vehicles > 20 MPH Limit 71.1% 70.8% 69.6% 70.0% 70.1% 70.3% 72.1% 70.3% 70.6% No. Vehicles > 35 MPH 13 % Vehicles > 35 MPH 0.1% 0.2% 0.1% 0.1% 0.0% 0.0% 0.1% 0.1%

- 4.2.54 Table 25 shows that the 5-day average traffic flows were lowest in February 2021 when Scotland was in a period of lockdown. The mean speed of traffic in February 2021 was 27.2mph. The highest flows was observed in September 2021 when the mean speed had reduced to 24.1mph.
- 4.2.55 The average proportion of vehicles exceeding 20mph was across all surveys.

Tactran Mode Share Surveys	
Stirling Council Area	GB01T20C61
Survey Report	16/12/2021





4.2.57 Table 26 presents the results for Perth Road southbound in Dunblane.

Table 26. Site 2 B8033 Perth Road (Southbound) 44 B8033 **Dunblane Site 2 B8033 Perth Road Southbound** Tuesday Thursdav Saturday Monday 22 Wednesday Friday 19 23 Feb February 2021 25 Feb 20 Feb Feb 2021 24 Feb 2021 Feb 2021 Feb 2021 3468 3379 4086 2901 3521 3366 0000-2400 Vehicle Flow 2956 3714 3058 31.4 Mean Speed (mph) 31 32 31 31 31 32 32 31.5 36 36 35.9 36.0 85%ile Speed (mph) 36 36 36 36 36 No. Vehicles > 20 MPH Limit 3424 2929 3346 3668 4027 3014 2874 3479 3326 % Vehicles > 20 MPH Limit 98.7% 99.1% 99.0% 98.8% 98.6% 98.6% 99.1% 98.8% 98.8% No. Vehicles > 45 MPH 0 0 0 0 0 0 0 0 0 % Vehicles > 45 MPH 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% hursda aturda Monday 10 Wednesda Friday 07 Sunday 09 5 Day 7 Day May 2021 04 May 06 May 08 May May 2021 05 May 202 May 2021 May 2021 0000-2400 Vehicle Flow 4839 5025 4972 5377 4417 3458 5036 4722 4968 Mean Speed (mph) 30.0 29.9 29.9 28.7 29.9 29.0 31.3 29.7 29.8 85%ile Speed (mph) 34.3 34.2 34.0 33.2 34.2 33.6 35.7 34.0 34.2 No. Vehicles > 20 MPH Limit 4720 4858 4920 4741 5264 4185 3414 4901 4586 % Vehicles > 20 MPH Limit 97.5% 97.8% 97.9% 95.4% 97.9% 94.7% 98.7% 97.3% 97.1% No. Vehicles > 45 MPH 15 15 17 27 20 % Vehicles > 45 MPH 0.3% 0.3% 0.4% 0.3% 0.2% 0.3% 0.6% 0.3% Saturday 7 Day 5 Day Monday 06 Wednesday Friday 10 Sunday 12 September 2021 07 Sep 09 Sep 11 Sep

4.2.58 Table 26 shows that the 5-day average traffic flows were lowest in February 2021 when Scotland was in a period of lockdown. The mean speed of traffic in February 2021 was slightly higher (31.4mph) compared with May 2021 (29.7mph) and lower in September 2021 (26.8mph).

08 Sep 2021

5406

27.1

32.5

5000

92.5%

10

0.2%

Sep 2021

5926

26.6

31.9

5448

91.9%

0.1%

2021

4801

27.3

32.8

4455

92.8%

15

0.3%

2021

5356

26.6

32.0

4881

91.1%

10

0.2%

Sep 2021

4001

28.0

33.4

3735

93.4%

0.5%

Mean

5378

26.8

32.2

4945

92.0%

0.2%

Mean

5099

27.0

32.4

4702

92.3%

4.2.59 The average proportion of vehicles exceeding 20mph was similar across all surveys.

Tactran Mode Share Surveys	
Stirling Council Area	GB01T20C61
Survey Report	16/12/2021

Sep 2021

5032

26.7

32.0

4566

90.7%

0.2%

0000-2400 Vehicle Flow

No. Vehicles > 20 MPH Limit

% Vehicles > 20 MPH Limit

No. Vehicles > 45 MPH

% Vehicles > 45 MPH

Mean Speed (mph)

85%ile Speed (mph)

2021

5169

27.0

32.4

4831

93.5%

0.1%



% Vehicles > 35 MPH



4.2.61 Table 27 presents the results for Stirling Road northbound in Dunblane.

John R Gray Road B8033 Stirling Road Duckburn Park Industrial Estate **Dunblane Site 3 Stirling Road Northbound** Tuesday Thursdav Saturday Monday 22 Wednesday Friday 26 23 Feb February 2021 20 Feb 25 Feb Feb 2021 Feb 2021 24 Feb 2021 Feb 2021 3992 4030 4855 3207 4181 3969 0000-2400 Vehicle Flow 3598 4429 3675 33.0 Mean Speed (mph) 33 33 33 33 33 33 33 33.0 38 38.2 38.2 85%ile Speed (mph) 38 38 38 38 38 39 No. Vehicles > 20 MPH Limit 3978 3589 4014 4404 4832 3659 3178 4163 3951 % Vehicles > 20 MPH Limit 99.6% 99.7% 99.6% 99.4% 99.5% 99.6% 99.1% 99.6% 99.5% No. Vehicles > 35 MPH 84 57 80 79 71 62 60 74 70 % Vehicles > 35 MPH 2.1% 1.6% 2.0% 1.8% 1.5% 1.7% 1.9% 1.8% 1.8% uesda hursda aturda 5 Day londay 10 Wednesday Friday 07 Sunday 09 7 Day May 2021 04 May 06 May 08 May May 2021 05 May 202<sup>-</sup> May 2021 May 2021 0000-2400 Vehicle Flow 5209 5244 5433 5524 6019 5050 3936 5486 5202 33.0 33.2 Mean Speed (mph) 33.0 33.2 33.0 32.8 33.1 33.3 33.9 85%ile Speed (mph) 38.4 38.2 38.1 38.0 38.4 38.4 39.2 38.2 38.4 No. Vehicles > 20 MPH Limit 5144 5231 5389 5473 5979 5033 3913 5443 5166 % Vehicles > 20 MPH Limit 98.8% 99.8% 99.2% 99.1% 99.3% 99.7% 99.4% 99.2% 99.3% No. Vehicles > 35 MPH 88 74 83 88 91 107 88 85 88 % Vehicles > 35 MPH 1.5% 1.5% 1.7% 1.4% 1.6% 2.1% 2.2% 1.7% Saturday Friday 10 Monday 06 Wednesday Sunday 12 5 Day 7 Day September 2021 07 Sep 09 Sep 11 Sep Sep 2021 08 Sep 2021 Sep 2021 Sep 2021 Mean Mean 2021 2021 2021 0000-2400 Vehicle Flow 5197 5578 6169 4290 5633 5354 5406 5815 5022 Mean Speed (mph) 28.1 28.4 28.5 28.3 28.3 29.2 29.0 28.3 28.5 85%ile Speed (mph) 32.5 32.3 32.5 32.4 32.2 33.2 33.3 32.4 32.6 4961 No. Vehicles > 20 MPH Limit 5047 5478 4241 % Vehicles > 20 MPH Limit 97.1% 98.7% 98.2% 98.1% 98.9% 98.8% 98.9% 98.2% 98.4% No. Vehicles > 35 MPH 15 13 17 18 13

Table 27. Site 3 Castle Street, Dunblane (Northbound)

4.2.62 Table 27 shows that the 5-day average traffic flows were lowest in February 2021 when Scotland was in a period of lockdown. The mean speed of traffic in February and May 2021 was 33.0mph, which reduced to 28.3mph in September 2021.

0.1%

0.2%

0.5%

0.4%

0.2%

0.3%

4.2.63 Therefore, the average proportion of vehicles exceeding 20mph speed was similar across all surveys.

Tactran Mode Share Surveys	
Stirling Council Area	GB01T20C61
Survey Report	16/12/2021

0.3%

0.3%



% Vehicles > 35 MPH



4.2.65 Table 28 presents the results for Stirling Road southbound in Dunblane.

John R Gray Road B8033 Stirling Road Duckburn Park Industrial **Dunblane Site 3 Stirling Road Southbound** Tuesday Thursday Saturday Monday 22 Wednesday Friday 26 February 2021 20 Feb 23 Feb 25 Feb Feb 2021 Feb 2021 24 Feb 2021 Feb 2021 3272 3206 3661 2588 3299 3121 0000-2400 Vehicle Flow 2847 3510 2760 Mean Speed (mph) 36 35 35 35 35 35 35 35.2 35.1 39 39.7 39.6 85%ile Speed (mph) 40 40 40 40 39 40 No. Vehicles > 20 MPH Limit 3237 2842 3192 3493 3627 2747 2528 3278 3095 % Vehicles > 20 MPH Limit 98.9% 99.8% 99.6% 99.5% 99.1% 99.5% 97.7% 99.4% 99.2% No. Vehicles > 35 MPH 106 55 76 103 101 71 91 88 86 % Vehicles > 35 MPH 3.2% 2.4% 2.9% 2.6% 3.5% 2.8% 1.9% 2.8% 2.6% uesda hursda aturda Wednesda Monday 10 Friday 07 Sunday 09 5 Day 7 Day May 2021 04 May 06 May 08 May May 2021 05 May 202<sup>-</sup> May 2021 May 2021 202 0000-2400 Vehicle Flow 4286 4472 4359 4754 3890 3198 4441 4185 4336 35.5 35.5 Mean Speed (mph) 35.4 35.8 35.6 35.2 35.6 35.5 35.7 85%ile Speed (mph) 39.8 40.3 40.0 39.7 39.9 39.9 40.2 39.9 40.0 No. Vehicles > 20 MPH Limit 4271 4323 4452 4345 4741 3880 3168 4426 4169 % Vehicles > 20 MPH Limit 99.7% 99.7% 99.6% 99.7% 99.7% 99.7% 99.1% 99.7% 99.6% No. Vehicles > 35 MPH 94 116 141 117 120 119 120 118 118 % Vehicles > 35 MPH 2.2% 2.7% 3.2% 2.7% 2.5% 3.1% Saturday Friday 10 Monday 06 Wednesday Sunday 12 5 Day 7 Day September 2021 07 Sep 09 Sep 11 Sep Sep 2021 08 Sep 2021 Sep 2021 Sep 2021 Mean Mean 2021 2021 2021 4712 4489 0000-2400 Vehicle Flow 4365 4741 5081 3572 4584 4789 4290 Mean Speed (mph) 30.3 30.6 30.8 29.1 28.9 29.2 28.8 29.9 29.7 85%ile Speed (mph) 35.0 35.0 35.4 33.6 33.1 33.3 33.1 34.4 34.1 4303 4692 4237 3509 4644 4424 No. Vehicles > 20 MPH Limit 4530 4995 % Vehicles > 20 MPH Limit 98.6% 98.8% 99.0% 98.2% 98.3% 98.8% 98.2% 98.6% 98.6% No. Vehicles > 35 MPH 21 11

Table 28. Site 3 Stirling Road (Southbound)

4.2.66 Table 28 shows that the 5-day average traffic flows were lower in February 2021 when Scotland was in a period of lockdown. The mean speed of traffic in February 2021 was similar to that of May 2021 (35.2mph and 35.5mph respectively), but reduced in September 2021 (29.9mph).

0.4%

0.2%

0.2%

0.3%

0.2%

4.2.67 Therefore, the average proportion of vehicles exceeding 20mph speed was similar across all surveys.

Tactran Mode Share Surveys	
Stirling Council Area	GB01T20C61
Survey Report	16/12/2021

0.4%

0.2%

0.3%

0.3%





## **Bridge of Allan**

4.2.68 Table 29 presents the results for the Henderson Street eastbound in Bridge of Allan.

Table 29. Site 1 Henderson Street (Eastbound) rierford Court Well Road Allanbridge Bridge of Allan Site 1 Henderson Street Eastbound 5 Day 7 Day Monday 22 Wednesday Friday 26 Sunday 28 February 2021 23 Feb 25 Feb 27 Feb Feb 2021 24 Feb 2021 Feb 2021 Feb 2021 Mean Mean 0000-2400 Vehicle Flow 4345 3926 4313 4505 5035 4230 3647 4425 4286 Mean Speed (mph) 20.6 21.3 20.3 20.4 19.3 18.8 19.3 20.4 20.0 85%ile Speed (mph) 24.6 25.2 24.4 24.4 23.4 23.2 23.5 24.4 24.1 No. Vehicles > 20 MPH Limit 2453 2195 2326 1525 2052 2406 2006 1451 2277 % Vehicles > 20 MPH Limit 55.4% 62.5% 51.6% 36.1% 50.9% 39.8% 39.8% 52.0% 48.0% No. Vehicles > 35 MPH 11 22 17 13 21 20 12 17 17 % Vehicles > 35 MPH 0.3% 0.6% 0.4% 0.3% 0.4% 0.5% 0.3% 0.4% 0.4% Monday 10 Friday 07 Sunday 09 5 Day Wednesda 7 Day May 2021 06 May 08 May 04 May May 2021 05 May 202<sup>-</sup> May 2021 May 2021 Mean Mean 0000-2400 Vehicle Flow 5477 5770 6033 5993 6423 5476 4478 5939 5664 Mean Speed (mph) 20.0 19.8 19.4 18.4 18.2 19.4 19.2 85%ile Speed (mph) 23.2 23.9 23.6 23.3 22.8 22.6 23.7 23.4 23.3 No. Vehicles > 20 MPH Limit 2678 2523 2397 2193 1705 2517 2795 1787 2297 % Vehicles > 20 MPH Limit 51.0% 46.4% 41.8% 40.0% 34.1% 31.1% 39.9% 42.7% 40.6% No. Vehicles > 35 MPH 0 3 3 % Vehicles > 35 MPH 0.1% 0.0% 0.1% 0.1% 0.1% 0.0% 0.0% 0.1% 0.0% uesda hursda Saturda

4.2.69 Table 29 shows that the 5-day average traffic flows were lowest in February 2021 when Scotland was in a period of lockdown, and the mean speed was 20.4mph. Flows increased in both May and September 2021, whilst the mean speed reduced over time.

Wednesday

08 Sep 2021

6543

18.5

22.8

2167

33.1%

19

Friday 10

Sep 2021

6586

17.9

22 1

1917

29.1%

23

0.3%

11 Sep

2021

5959

17.7

22 0

1632

27.4%

14

0.2%

09 Sep

6279

18.7

22.8

2254

35.9%

24

0.4%

Sunday 12

Sep 2021

4935

19.0

23.1

1828

37.0%

20

5 Day

Mean

6221

18.8

22 9

2267

36.7%

21

7 Day

Mean

6000

18.6

228

2114

35.5%

20

4.2.70 The proportion of vehicles exceeding 20mph in May 2021 was slightly lower than in February 2021, and continued to decline in September 2021.

Tactran Mode Share Surveys	
Stirling Council Area	GB01T20C61
Survey Report	16/12/2021

londay 06

Sep 2021

5672

19.7

23.6

2585

45.6%

28

07 Sep

6024

19.0

23.2

2412

40.0%

13

September 2021

No. Vehicles > 20 MPH Limit

% Vehicles > 20 MPH Limit

No. Vehicles > 35 MPH

% Vehicles > 35 MPH

0000-2400 Vehicle Flow

Mean Speed (mph)

85%ile Speed (mph)



No. Vehicles > 20 MPH Limit

% Vehicles > 20 MPH Limit

No. Vehicles > 35 MPH

% Vehicles > 35 MPH



Table 30 presents the results for the Henderson Street westbound in Bridge of Allan.

rierford Court Well Road Allanbridge P RBS **Bridge of Allan Site 1 Henderson Street Westbound** Tuesday Thursdav Saturday Monday 22 Wednesday Friday 26 February 2021 23 Feb 25 Feb 27 Feb Feb 2021 24 Feb 2021 Feb 2021 4786 4672 5572 3844 4867 4704 0000-2400 Vehicle Flow 4202 5101 4751 Mean Speed (mph) 21.0 21.8 20.8 20.7 19.5 18.4 19.3 20.8 20.2 85%ile Speed (mph) 24.7 25.4 24.6 24.7 24.0 22.8 23.7 24.7 24.3 No. Vehicles > 20 MPH Limit 2907 2869 2685 2917 2463 1533 1579 2768 2422 % Vehicles > 20 MPH Limit 60.7% 68.3% 57.5% 57.2% 44.2% 32.3% 41.1% 57.6% 51.6% No. Vehicles > 35 MPH 19 18 21 20 15 18 18 17 11 % Vehicles > 35 MPH 0.2% 0.5% 0.4% 0.4% 0.4% 0.3% 0.5% 0.4% 0.4% uesda hursd aturda Monday 10 Wednesda Friday 07 Sunday 09 5 Day 7 Day May 2021 04 May 06 May 08 May May 2021 05 May 202<sup>-</sup> May 2021 May 2021 0000-2400 Vehicle Flow 5823 6480 6638 7011 6108 4700 6424 6133 6170 Mean Speed (mph) 20.9 20.3 19.7 19.4 18.7 19.5 19.8 19.5 18.1 85%ile Speed (mph) 24.7 24.6 24.2 23.8 23.5 22.9 24.0 24.2 24.0 No. Vehicles > 20 MPH Limit 3452 3286 2975 2921 2641 1958 2056 3055 2756 % Vehicles > 20 MPH Limit 59.3% 53.3% 45.9% 44.0% 37.7% 32.1% 43.7% 48.0% 45.1% No. Vehicles > 35 MPH 0 % Vehicles > 35 MPH 0.0% 0.0% 0.1% 0.0% 0.1% 0.0% 0.1% 0.0% Saturda 7 Dav Monday 06 Wednesday Friday 10 Sunday 12 5 Day September 2021 07 Sep 09 Sep 11 Sep Sep 2021 08 Sep 2021 Sep 2021 Sep 2021 Mean Mean 2021 2021 2021 0000-2400 Vehicle Flow 6244 7399 7546 5519 6982 6772 6734 6989 6974 Mean Speed (mph) 19.5 18.7 17.5 18.6 17.6 16.4 18.7 18.4 18.1 85%ile Speed (mph) 23.6 23.2 22.8 23.3 22.5 21.8 23.1 23.1 22.9

Table 30. Site Henderson Street (Westbound)

Table 30 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 20.8mph. Flows increased in May 2021 and continued to increase in September 2021, whilst the mean speed reduced over time.

2290

31.0%

12

0.2%

2250

29.8%

16

0.2%

1617

23.2%

20

0.3%

2069

37.5%

21

0.4%

2507

36.3%

16

0.2%

34.6%

0.3%

2647

37.9%

17

0.2%

4.2.73 The proportion of vehicles exceeding 20mph in May 2021 was slightly lower than in February 2021, and continued to decline in September 2021.

Tactran Mode Share Surveys	
Stirling Council Area	GB01T20C61
Survey Report	16/12/2021

2813

45.1%

21

0.3%

37.6%

16

0.2%





## **Aberfoyle**

4.2.74 Table 31 presents the results for the Main Street eastbound in Aberfoyle.

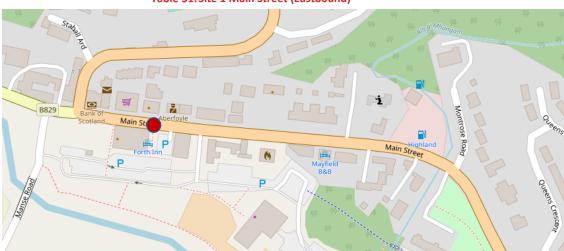


Table 31. Site 1 Main Street (Eastbound)

<u></u>		11		11/1/	4Y /				//4
Aberfoyle Site 1 Main Street Eastbound									
February 2021	Monday 22 Feb 2021	Tuesday 23 Feb 2021	Wednesday 24 Feb 2021	Thursday 25 Feb 2021	Friday 26 Feb 2021	Saturday 27 Feb 2021	Sunday 28 Feb 2021	5 Day Mean	7 Day Mean
0000-2400 Vehicle Flow	708	659	742	861	940	971	958	782	834
Mean Speed (mph)	20.0	20.1	20.7	19.0	20.0	18.8	18.9	20.0	19.6
85%ile Speed (mph)	25.6	25.4	26.0	24.4	25.3	23.5	23.7	25.3	24.8
No. Vehicles > 20 MPH Limit	347	307	380	330	439	327	360	361	356
% Vehicles > 20 MPH Limit	49.0%	46.6%	51.2%	38.3%	46.7%	33.7%	37.6%	46.4%	43.3%
No. Vehicles > 35 MPH	3	7	7	3	2	3	0	4	4
% Vehicles > 35 MPH	0.4%	1.1%	0.9%	0.3%	0.2%	0.3%	0.0%	0.6%	0.5%
May 2021	Monday 10 May 2021	Tuesday 04 May 2021	Wednesday 05 May 2021	Thursday 06 May 2021	Friday 07 May 2021	Saturday 08 May 2021	Sunday 09 May 2021	5 Day Mean	7 Day Mean
0000-2400 Vehicle Flow	761	1019	1281	1253	1454	1421	1547	1154	1248
Mean Speed (mph)	21.1	20.5	20.6	20.6	19.4	19.3	18.9	20.4	20.1
85%ile Speed (mph)	26.5	25.3	25.7	25.9	24.8	24.3	23.9	25.6	25.2
No. Vehicles > 20 MPH Limit	445	549	697	698	654	606	604	609	608
% Vehicles > 20 MPH Limit	58.5%	53.9%	54.4%	55.7%	45.0%	42.6%	39.0%	53.5%	49.9%
No. Vehicles > 35 MPH	2	2	5	4	2	7	3	3	4
% Vehicles > 35 MPH	0.3%	0.2%	0.4%	0.3%	0.1%	0.5%	0.2%	0.3%	0.3%
September 2021	Monday 06 Sep 2021	Tuesday 07 Sep 2021	Wednesday 08 Sep 2021	Thursday 09 Sep 2021	Friday 10 Sep 2021	Saturday 11 Sep 2021	Sunday 12 Sep 2021	5 Day Mean	7 Day Mean
0000-2400 Vehicle Flow	1335	1452	1821	1241	1467	508	2134	1463	1423
Mean Speed (mph)	18.2	17.9	17.8	18.9	17.7	18.8	16.3	18.1	17.9
35%ile Speed (mph)	22.6	22.3	22.0	23.3	21.9	23.4	20.1	22.4	22.2
No. Vehicles > 20 MPH Limit	426	424	502	469	388	190	331	442	390
% Vehicles > 20 MPH Limit	31.9%	29.2%	27.6%	37.8%	26.4%	37.4%	15.5%	30.6%	29.4%
No. Vehicles > 35 MPH	4	1	1	6	3	1	1	3	2
% Vehicles > 35 MPH	0.3%	0.1%	0.1%	0.5%	0.2%	0.2%	0.0%	0.2%	0.2%

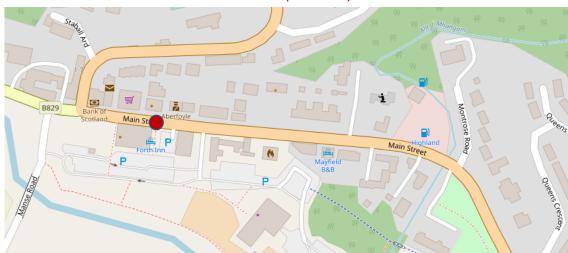
- 4.2.75 Table 31 shows that the 5-day average traffic flows were lowest in February 2021 when Scotland was in a period of lockdown, but the mean speed was 20.0mph. The highest flows were observed in September 2021 when the mean speed was 18.1mph
- 4.2.76 The proportion of vehicles exceeding 20mph was similar in February 2021 and May 2021, but decreased in September 2021.

Tactran Mode Share Surveys	
Stirling Council Area	GB01T20C61
Survey Report	16/12/2021





4.2.77 Table 32 presents the results for the Main Street westbound in Main Street.



**Table 32. Site Main Street (Westbound)** 

		1		11	PY /				
Aberfoyle Site 1 Main Street Westbound									
February 2021	Monday 22 Feb 2021	Tuesday 23 Feb 2021	Wednesday 24 Feb 2021	Thursday 25 Feb 2021	Friday 26 Feb 2021	Saturday 27 Feb 2021	Sunday 28 Feb 2021	5 Day Mean	7 Day Mean
0000-2400 Vehicle Flow	781	733	804	907	1024	1032	1017	850	900
Mean Speed (mph)	21	21	21	21	21	20	21	21.0	20.9
35%ile Speed (mph)	27	26	27	26	27	26	27	26.6	26.6
No. Vehicles > 20 MPH Limit	470	417	494	523	635	558	573	508	524
% Vehicles > 20 MPH Limit	60.2%	56.9%	61.4%	57.7%	62.0%	54.1%	56.3%	59.6%	58.4%
No. Vehicles > 35 MPH	7	4	9	7	6	4	16	7	8
% Vehicles > 35 MPH	0.9%	0.5%	1.1%	0.8%	0.6%	0.4%	1.6%	0.8%	0.8%
May 2021	Monday 10 May 2021	Tuesday 04 May 2021	Wednesday 05 May 2021	Thursday 06 May 2021	Friday 07 May 2021	Saturday 08 May 2021	Sunday 09 May 2021	5 Day Mean	7 Day Mear
0000-2400 Vehicle Flow	808	1028	1376	1310	1580	1435	1537	1220	1296
Mean Speed (mph)	22.6	21.6	22.6	22.2	21.5	21.4	21.5	22.1	21.9
85%ile Speed (mph)	27.5	26.5	27.5	27.0	26.9	26.9	26.5	27.1	27.0
No. Vehicles > 20 MPH Limit	573	676	991	906	1002	902	953	830	858
% Vehicles > 20 MPH Limit	70.9%	65.8%	72.0%	69.2%	63.4%	62.9%	62.0%	68.3%	66.69
No. Vehicles > 35 MPH	14	8	8	16	12	8	15	12	12
% Vehicles > 35 MPH	1.7%	0.8%	0.6%	1.2%	0.8%	0.6%	1.0%	1.0%	0.9%
September 2021	Monday 06 Sep 2021	Tuesday 07 Sep 2021	Wednesday 08 Sep 2021	Thursday 09 Sep 2021	Friday 10 Sep 2021	Saturday 11 Sep 2021	Sunday 12 Sep 2021	5 Day Mean	7 Day Mear
0000-2400 Vehicle Flow	1415	1547	1883	1331	1607	653	1991	1557	1490
Mean Speed (mph)	19.7	19.4	19.3	19.9	18.9	20.0	18.0	19.4	19.3
35%ile Speed (mph)	23.9	23.9	24.0	24.5	23.8	24.8	22.5	24.0	23.9
No. Vehicles > 20 MPH Limit	659	692	849	661	659	332	626	704	640
% Vehicles > 20 MPH Limit	46.6%	44.7%	45.1%	49.7%	41.0%	50.8%	31.4%	45.4%	44.29
No. Vehicles > 35 MPH	3	2	8	3	4	0	4	4	3
% Vehicles > 35 MPH	0.2%	0.1%	0.4%	0.2%	0.2%	0.0%	0.2%	0.2%	0.2%

- 4.2.78 Table 32 shows that the 5-day average traffic flows were lowest in February 2021 when Scotland was in a period of lockdown. However the mean speed was higher in May 2021 (22.1mph).
- 4.2.79 The proportion of vehicles exceeding 20mph was similar in May 2021 and February 2021, before decreasing in September 2021.

Tactran Mode Share Surveys	
Stirling Council Area	GB01T20C61
Survey Report	16/12/2021



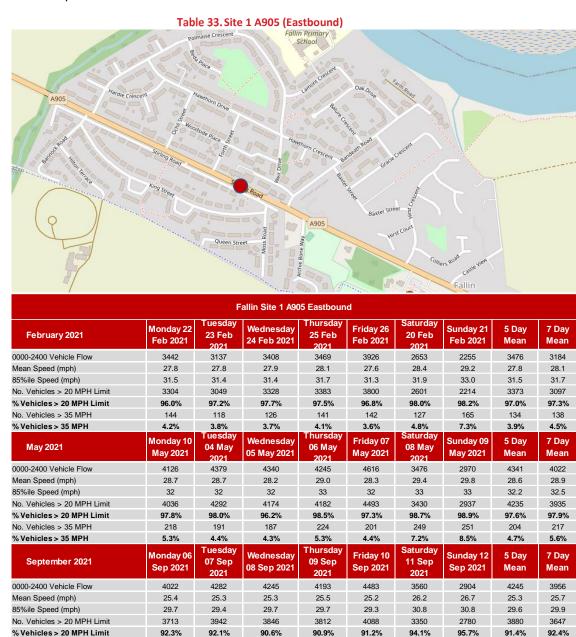


#### **Fallin**

No. Vehicles > 35 MPH

% Vehicles > 35 MPH

4.2.80 Table 33 presents the results for the A905 eastbound in Fallin.



4.2.81 Table 33 shows that the 5-day average traffic flows were lowest in February 2021 when Scotland was in a period of lockdown. However the mean speed was higher in May 2021 (28.6mph), before reducing again in September 2021.

102

93

87

113

115

96

101

4.2.82 The proportion of vehicles exceeding 20mph was higher in May 2021 when compared to February 2021, before reducing slightly in September 2021, although was still over 90%.

Tactran Mode Share Surveys	
Stirling Council Area	GB01T20C61
Survey Report	16/12/2021

82

2.0%

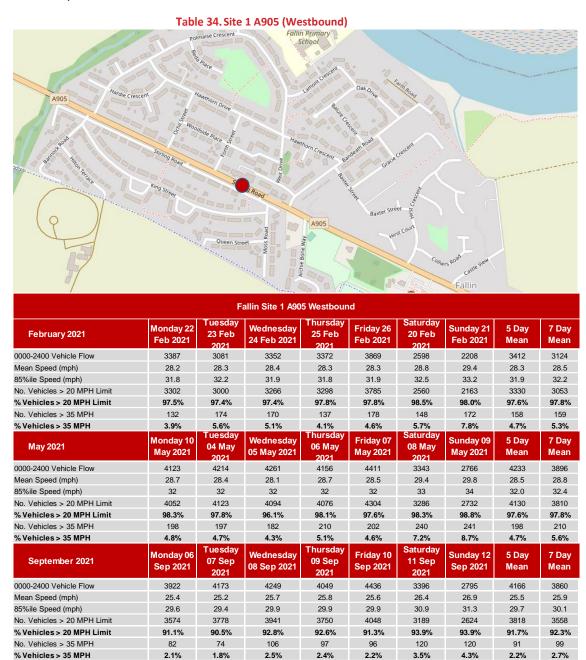
114

2.7%





4.2.83 Table 34 presents the results for the A905 westbound in Fallin.



- 4.2.84 Table 34 shows that the 5-day average traffic flows were lowest in February 2021 when Scotland was in a period of lockdown. The mean speed was similar for both February and May 2021 (28.3mph and 28.5mph respectively), but reduced in September 2021 (25.5mph).
- 4.2.85 The proportion of vehicles exceeding 20mph in May 2021 was similar to February 2021, during a period of lockdown, but reduced slightly in September 2021 although it was over 90% in all survey periods.

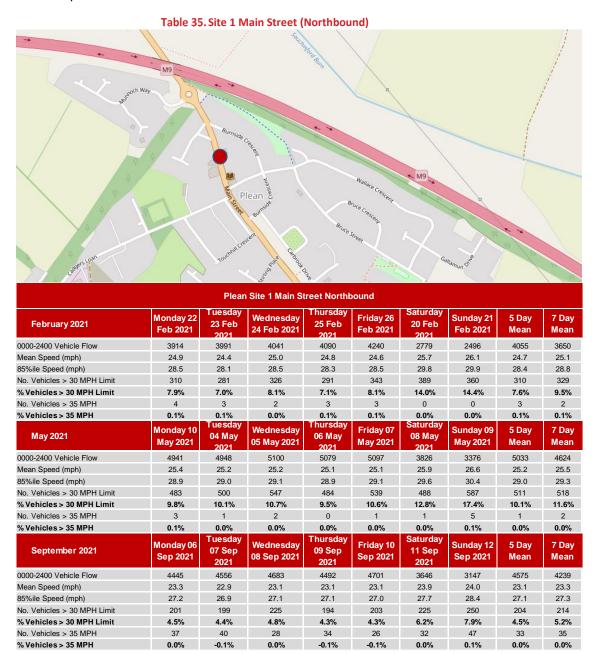
Tactran Mode Share Surveys	
Stirling Council Area	GB01T20C61
Survey Report	16/12/2021





#### Plean

4.2.86 Table 35 presents the results for the Main Street northbound in Plean.



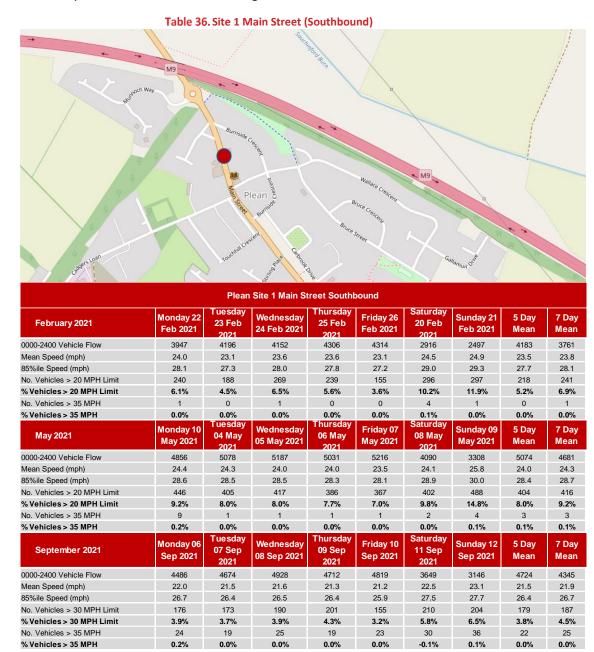
- 4.2.87 Table 35 shows that the 5-day average traffic flows were lowest in February 2021 when Scotland was in a period of lockdown, but the mean speed was lower than May 2021. The mean speed was lowest in September 2021.
- 4.2.88 The proportion of vehicles exceeding 30mph was higher in May 2021 than in February 2021, the lowest proportion was observed in September 2021.

Tactran Mode Share Surveys	
Stirling Council Area	GB01T20C61
Survey Report	16/12/2021





4.2.89 Table 36 presents the results for the High Street southbound in Plean.

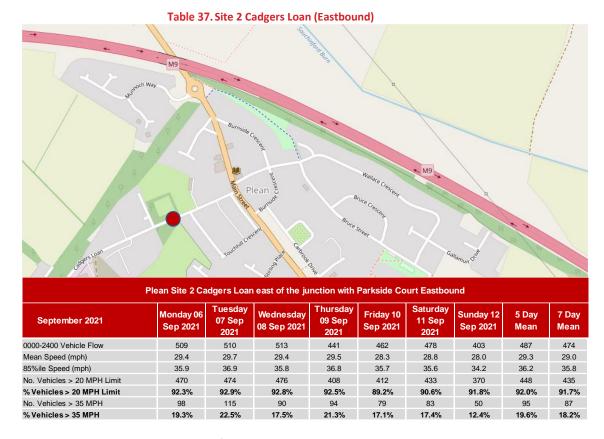


- 4.2.90 Table 36 shows that the 5-day average traffic flows were lowest in February 2021 when Scotland was in a period of lockdown. The mean speed in February 2021 was 23.5mph and reduced to 21.5mph in September 2021.
- 4.2.91 The proportion of vehicles exceeding 20mph in May 2021 was higher than February 2021, before reducing in September 2021.
- 4.2.92 Table 37 presents the results for Cadgers Loan eastbound in Plean. Surveys at this location were only undertaken in September 2021.

Tactran Mode Share Surveys	
Stirling Council Area	GB01T20C61
Survey Report	16/12/2021



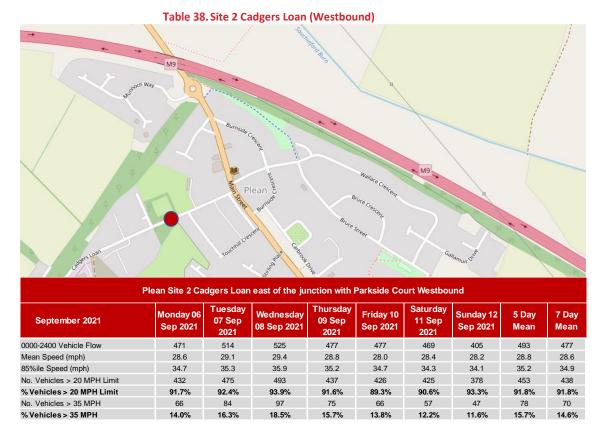




- 4.2.93 Table 37 shows that the average flow was 487 vehicles and the mean speed was 29.3mph.
- 4.2.94 The proportion of vehicles exceeding 20mph was 92.0%.
- 4.2.95 Table 38 presents the results for Cadgers Loan westbound in Plean. Again, the surveys were only undertaken in September 2021.







- 4.2.96 Table 38 shows that the average flow was 493 vehicles and the mean speed was 28.8mph.
- 4.2.97 The proportion of vehicles exceeding 20mph was 91.8%.

Tactran Mode Share Surveys	
Stirling Council Area	GB01T20C61
Survey Report	16/12/2021





### Callander

4.2.98 Table 39 presents the results for the Main Street eastbound in Callander.



### Table 39. Site Main Street (Eastbound)

	Grove	1		1				Camp	11 90
Callander Site 1 Main Street Eastbound									
February 2021	Monday 01 Mar 2021	Tuesday 02 Mar 2021	Wednesday 03 Mar 2021	Thursday 25 Feb 2021	Friday 26 Feb 2021	Saturday 27 Feb 2021	Sunday 28 Feb 2021	5 Day Mean	7 Day Mean
0000-2400 Vehicle Flow	2657	2671	2597	2835	2959	2501	2211	2744	2633
Mean Speed (mph)	24.0	24.1	23.8	24.2	24.4	23.9	24.5	24.1	24.1
35%ile Speed (mph)	28.3	28.4	28.1	28.5	28.5	28.6	29.1	28.4	28.5
No. Vehicles > 20 MPH Limit	2203	2252	2135	2400	2559	2036	1854	2310	2206
% Vehicles > 20 MPH Limit	82.9%	84.3%	82.2%	84.7%	86.5%	81.4%	83.9%	84.1%	83.7%
No. Vehicles > 35 MPH	26	19	22	26	25	16	28	24	23
% Vehicles > 35 MPH	1.0%	0.7%	0.8%	0.9%	0.8%	0.6%	1.3%	0.9%	0.9%
May 2021	Monday 10 May 2021	Tuesday 04 May 2021	Wednesday 05 May 2021	Thursday 06 May 2021	Friday 07 May 2021	Saturday 08 May 2021	Sunday 09 May 2021	5 Day Mean	7 Day Mean
0000-2400 Vehicle Flow	4122	4297	4387	4236	5006	4360	4361	4410	4396
Mean Speed (mph)	23.0	22.9	23.1	22.2	21.9	21.8	22.5	22.6	22.5
85%ile Speed (mph)	27.7	27.3	27.7	27.0	26.7	26.9	26.9	27.3	27.2
No. Vehicles > 20 MPH Limit	3159	3276	3471	3046	3350	2940	3156	3260	3200
% Vehicles > 20 MPH Limit	76.6%	76.2%	79.1%	71.9%	66.9%	67.4%	72.4%	74.2%	72.9%
No. Vehicles > 35 MPH	34	31	26	23	38	26	33	30	30
% Vehicles > 35 MPH	0.8%	0.7%	0.6%	0.5%	0.8%	0.6%	0.8%	0.7%	0.7%
September 2021	Monday 06 Sep 2021	Tuesday 07 Sep 2021	Wednesday 08 Sep 2021	Thursday 09 Sep 2021	Friday 03 Sep 2021	Saturday 04 Sep 2021	Sunday 05 Sep 2021	5 Day Mean	7 Day Mean
0000-2400 Vehicle Flow	3922	4233	5087	4387	5304	5304	5392	4587	4804
Mean Speed (mph)	21.2	20.8	21.4	21.5	20.4	20.2	20.7	21.1	20.9
35%ile Speed (mph)	25.8	25.7	25.7	25.9	25.0	24.8	25.2	25.6	25.4
No. Vehicles > 20 MPH Limit	2418	2502	3316	2809	2900	2748	3043	2789	2819
% Vehicles > 20 MPH Limit	61.7%	59.1%	65.2%	64.0%	54.7%	51.8%	56.4%	60.9%	59.0%
No. Vehicles > 35 MPH	17	23	18	30	15	22	24	21	21
% Vehicles > 35 MPH	0.4%	0.5%	0.4%	0.7%	0.3%	0.4%	0.4%	0.5%	0.5%

- Table 39 shows that the 5-day average traffic flows were far lower in February 2021 when 4.2.99 Scotland was in a period of lockdown. The mean speed in February 2021 was 24.1mph. The highest flows were observed in September 2021 when the mean speed had decreased to 21.1mph.
- 4.2.100 The proportion of vehicles exceeding 20mph was lower in May 2021 when compared to February 2021, the decline continuing in September 2021.

Tactran Mode Share Surveys	
Stirling Council Area	GB01T20C61
Survey Report	16/12/2021



No. Vehicles > 20 MPH Limit

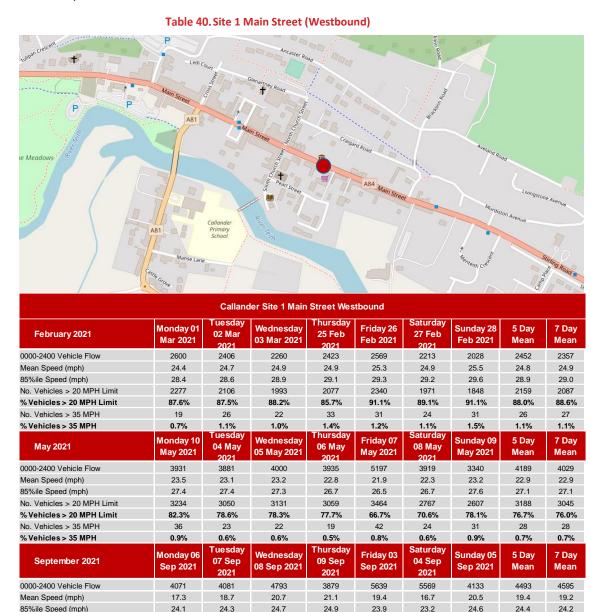
% Vehicles > 20 MPH Limit

No. Vehicles > 35 MPH

% Vehicles > 35 MPH



4.2.101 Table 40 presents the results for the Main Street westbound in Callander.



4.2.102 Table 40 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 higher at 24.8mph. Traffic flows were highest in September 2021, by which time the mean speed had decreased to 19.4mph.

2690

56.1%

20

0.4%

2276

20

0.5%

2611

46.3%

20

0.4%

2008

39

0.7%

2197

21

2232

49.8%

20

2195

48.3%

23

4.2.103 The proportion of vehicles exceeding 20mph in May 2021 was lower than February 2021, reducing further in September 2021.

Tactran Mode Share Surveys	
Stirling Council Area	GB01T20C61
Survey Report	16/12/2021

1697

41.7%

23

0.6%

1887

46.2%

19

0.5%





### Killearn

4.2.104 Table 41 presents the results for the Main Street northbound in Killearn.

Rillearn

Rillearn

Riker Roady

Kirkhouse Wood

Table 41. Site 1 Main Street (Northbound)

	15.0			Thomas			- 4	10.000	
Killearn Site 1 Main Street Northbound									
February 2021	Monday 22 Feb 2021	Tuesday 23 Feb 2021	Wednesday 24 Feb 2021	Thursday 25 Feb 2021	Friday 19 Feb 2021	Saturday 20 Feb 2021	Sunday 21 Feb 2021	5 Day Mean	7 Day Mean
0000-2400 Vehicle Flow	1301	1178	1287	1255	1190	1023	970	1242	1172
Mean Speed (mph)	24.7	24.8	24.3	24.5	24.9	23.3	24.2	24.6	24.4
85%ile Speed (mph)	30.8	31.1	30.6	30.7	31.2	30.4	30.2	30.9	30.7
No. Vehicles > 30 MPH Limit	253	241	230	238	245	169	154	241	219
% Vehicles > 30 MPH Limit	19.4%	20.5%	17.9%	19.0%	20.6%	16.5%	15.9%	19.5%	18.5%
No. Vehicles > 45 MPH	3	2	1	1	0	1	1	1	1
% Vehicles > 45 MPH	0.2%	0.2%	0.1%	0.1%	0.0%	0.1%	0.1%	0.1%	0.1%
May 2021	Monday 10 May 2021	Tuesday 04 May 2021	Wednesday 05 May 2021	Thursday 06 May 2021	Friday 07 May 2021	Saturday 08 May 2021	Sunday 09 May 2021	5 Day Mean	7 Day Mean
0000-2400 Vehicle Flow	1641	1545	1630	1688	1656	1229	1023	1632	1487
Mean Speed (mph)	24.8	24.9	24.6	25.0	24.9	24.4	24.9	24.8	24.8
85%ile Speed (mph)	30.3	30.5	30.5	30.8	30.9	30.7	31.2	30.6	30.7
No. Vehicles > 30 MPH Limit	274	278	297	323	337	223	215	302	278
% Vehicles > 30 MPH Limit	16.7%	18.0%	18.2%	19.1%	20.4%	18.1%	21.0%	18.5%	18.8%
No. Vehicles > 45 MPH	1	1	1	0	1	0	0	1	1
% Vehicles > 45 MPH	0.1%	0.1%	0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%
September 2021	Monday 06 Sep 2021	Tuesday 07 Sep 2021	Wednesday 08 Sep 2021	Thursday 09 Sep 2021	Friday 10 Sep 2021	Saturday 11 Sep 2021	Sunday 12 Sep 2021	5 Day Mean	7 Day Mean
0000-2400 Vehicle Flow	1713	1859	1917	1769	1871	1547	1213	1826	1698
Mean Speed (mph)	22.5	22.6	23.3	23.4	23.0	22.9	22.8	23.0	22.9
35%ile Speed (mph)	28.1	28.1	29.3	29.2	28.9	28.7	28.9	28.7	28.7
No. Vehicles > 30 MPH Limit	138	161	237	215	194	171	141	189	180
% Vehicles > 30 MPH Limit	8.1%	8.7%	12.4%	12.2%	10.4%	11.1%	11.6%	10.3%	10.6%
No. Vehicles > 45 MPH	0	1	3	3	2	5	0	2	2
% Vehicles > 45 MPH	0.0%	0.1%	0.2%	0.2%	0.1%	0.3%	0.0%	0.1%	0.1%

- 4.2.105 Table 41 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 24.6mph. Flows were highest in September 2021 when the mean speed was 23.0mph.
- 4.2.106 The proportion of vehicles exceeding 20mph was similar in February and May 2021, but reduced in September 2021.

Tactran Mode Share Surveys	
Stirling Council Area	GB01T20C61
Survey Report	16/12/2021





4.2.107 Table 42 presents the results for the Main Street southbound in Killearn.

Table 42. Site 1 Main Street (Southbound) Killearn Killearn Site 1 Main Street Southbound Tuesday Thursday Saturday 5 Day 7 Day Monday 22 Friday 19 February 2021 25 Feb 20 Feb 23 Feb Feb 2021 24 Feb 2021 Feb 2021 Feb 2021 2021 2021 0000-2400 Vehicle Flow 1095 1053 966 892 1016 971 928 1037 824 27.8 28.1 27.6 28.2 26.8 28.0 27.6 Mean Speed (mph) 28.1 26.9 85%ile Speed (mph) 32.8 32.8 32.8 33.0 33.3 32.1 32.1 32.9 32.7 No. Vehicles > 30 MPH Limit 346 311 308 329 338 213 237 326 297 % Vehicles > 30 MPH Limit 31.6% 33.5% 29.2% 31.7% 35.0% 25.8% 26.6% 32.2% 30.5% No. Vehicles > 45 MPH 2 % Vehicles > 45 MPH 0.0% 0.4% 0.3% 0.2% 0.4% 0.2% 0.3% 0.3% 0.3% 5 Day 7 Day Monday 10 Wednesday Friday 07 Sunday 09 May 2021 04 May 08 May 06 May May 2021 05 May 2021 May 2021 May 2021 Mean 0000-2400 Vehicle Flow 1325 1301 1377 1421 1474 1080 929 1380 1272 26.7 27.3 27.1 Mean Speed (mph) 27.1 27.4 27.3 27.3 27.3 26.7 85%ile Speed (mph) 31.6 31.9 32.2 31.9 31.9 31.1 31.9 31.9 31.8 No. Vehicles > 30 MPH Limit 322 360 363 359 390 248 228 359 324 % Vehicles > 30 MPH Limit 24.3% 27.7% 26.4% 25.3% 26.5% 23.0% 24.5% 26.0% 25.4% No. Vehicles > 45 MPH 3 3 2 % Vehicles > 45 MPH 0.2% 0.4% 0.2% 0.1% 0.1% 0.1% 0.1% 0.2% 0.2%

Saturday

11 Sep

2021

1285

25.7

31.0

243

18.9%

0.3%

Sunday 12

Sep 2021

1054

25.8

31.3

214

20.3%

5 Day

Mean

1487

25.7

30.9

290

19.5%

7 Day

Mean

1396

25.7

31.0

272

19.5%

Friday 10

Sep 2021

1557

25.7

30.9

305

19.6%

0.1%

09 Sep

1496

25.9

30.9

302

20.2%

0.1%

4.2.108 Table 42 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 higher at 28.0mph. The highest flows were observed in September 2021 when the mean speed was lowest at 25.7mph.

Wednesdav

08 Sep 2021

1563

25.9

31.2

314

20.1%

0.1%

4.2.109 The proportion of vehicles exceeding 20mph was lower in May 2021, when compared with February 2021, the reduction continued in September 2021.

Tactran Mode Share Surveys	
Stirling Council Area	GB01T20C61
Survey Report	16/12/2021

Monday 06

Sep 2021

1345

25.5

30.8

252

18.7%

07 Sep

1473

25.5

30.8

276

18.7%

0.1%

September 2021

No. Vehicles > 30 MPH Limit

% Vehicles > 30 MPH Limit

0000-2400 Vehicle Flow

Mean Speed (mph)

85%ile Speed (mph)

% Vehicles > 45 MPH





31.1

204

85.7%

8

3.4%

Sunday 12

Sep 2021

277

25.1

30.9

231

83.4%

10

3 6%

31.1

285

84.6%

15

4.4%

5 Day

Mean

356

25.7

31.0

313

88.0%

14

3 9%

31.1

263

84.8%

14

4.4%

7 Day

Mean

338

25.7

30.9

295

87.2%

13

3.9%

## Gargunnock

85%ile Speed (mph)

No. Vehicles > 20 MPH Limit

% Vehicles > 20 MPH Limit

September 2021

No. Vehicles > 20 MPH Limit

% Vehicles > 20 MPH Limit

No. Vehicles > 35 MPH

% Vehicles > 35 MPH

No. Vehicles > 35 MPH

% Vehicles > 35 MPH

0000-2400 Vehicle Flow

Mean Speed (mph)

85%ile Speed (mph)

4.2.110 Table 43 presents the results for the Manse Brae eastbound in Gargunnock.

Table 43. Site 1 Manse Brae (Eastbound) Gargunnock Site 1 Manse Brae Eastbound Thursday Saturday 7 Day 5 Day Monday 22 Wednesday Friday 26 Sunday 21 February 2021 25 Feb 23 Feb 20 Feb Feb 2021 24 Feb 2021 Feb 2021 Feb 2021 Mean Mean 0000-2400 Vehicle Flow 214 187 205 218 263 176 189 217 207 Mean Speed (mph) 24 25 25 24.7 24.4 29 29 85%ile Speed (mph) 30 30 30 30 29 29.6 29.4 No. Vehicles > 20 MPH Limit 175 155 169 184 212 131 153 179 168 % Vehicles > 20 MPH Limit 81.1% 81.8% 82.9% 82.4% 84.4% 80.6% 74.4% 81.0% 82.4% No. Vehicles > 35 MPH 5 6 6 8 2 6 5 % Vehicles > 35 MPH 1.4% 2.7% 2.9% 2.8% 3.0% 1.1% 1.1% 2.6% 2.1% 7 Day 5 Day Monday 10 Wednesday Friday 07 Sunday 09 May 2021 04 May 06 May 08 May May 2021 05 May 2021 May 2021 May 2021 Mean Mean 0000-2400 Vehicle Flow 311 347 317 325 348 350 252 238 337 Mean Speed (mph) 26.1 26.0 26.2 24.5 24.9 26.0 25.5 25.5 25.6

4.2.111	Table 43 shows tha	t the 5-day	y average	e traffic	flows	were low	est in F	ebruary	2021 w	hen
	Scotland was in a p	eriod of lo	ckdown.	Howev	er the	mean sp	eed was	higher	in May	and
	September 2021 (25	.5mph and	25.7mph	respec	tively).					

4.2.112 The proportion of vehicles exceeding 20mph was similar in February 2021 and May 2021, but was highest in September 2021 (88.0%).

Tactran Mode Share Surveys	
Stirling Council Area	GB01T20C61
Survey Report	16/12/2021

31.4

298

85.9%

17

4.9%

Monday 06

Sep 2021

350

25.9

30.7

311

88.9%

11

3 1%

31.4

279

88.0%

18

5.7%

uesdav

07 Sep

2021

345

25.9

31.6

296

85.8%

16

4 6%

31.6

284

87.4%

16

4.9%

Wednesday

08 Sep 2021

358

26.0

31.2

321

89.7%

18

5.0%

30.2

281

80.7%

11

3.2%

hursdav

09 Sep

2021

353

25.6

30.9

310

87.8%

10

2 8%

31.0

284

81.1%

11

3.1%

Friday 10

Sep 2021

373

25.3

30.6

327

87.7%

14

3.8%

31.2

213

84.5%

14

5.6%

Saturday

11 Sep

2021

307

25.8

30.6

268

87.3%

14

4 6%





4.2.113 Table 44 presents the results for the Manse Brae westbound in Gargunnock.

Table 44. Manse Brae (Westbound) Gargunnock Site 1 Manse Brae Westbound Saturday Tuesday Thursday 5 Day Monday 22 Friday 26 7 Day February 2021 25 Feb 20 Feb 23 Feb Feb 2021 24 Feb 2021 Feb 2021 Feb 2021 Mean 2021 2021 2021 0000-2400 Vehicle Flow 108 75 131 120 98 101 89 87 95 21 22 22 21 21.7 21.3 Mean Speed (mph) 22 21 21 85%ile Speed (mph) 26 28 29 29 26 26 26 27.5 27.0 No. Vehicles > 20 MPH Limit 61 56 49 51 79 51 65 59 59 % Vehicles > 20 MPH Limit 56.5% 62.9% 65.3% 58.6% 60.3% 53.7% 54.2% 60.7% 58.8% No. Vehicles > 35 MPH 0 % Vehicles > 35 MPH 1.9% 1.1% 1.3% 1.1% 0.8% 0.0% 0.8% 1.0% 1.2% 5 Day Monday 10 Wednesday Friday 07 Sunday 09 May 2021 04 May 08 May 06 May May 2021 05 May 2021 May 2021 May 2021 Mean 202 0000-2400 Vehicle Flow 119 113 116 165 172 89 106 137 126 23.5 21.0 22.7 22.9 22.9 23.1 Mean Speed (mph) 23.5 24.0 24.1 85%ile Speed (mph) 29.5 28.4 27.7 29.4 26.7 29.6 28.2 28.3 28.5 No. Vehicles > 20 MPH Limit 90 83 89 97 123 73 74 96 90 % Vehicles > 20 MPH Limit 75.6% 73.5% 76.7% 58.8% 71.5% 82.0% 69.8% 71.2% 72.6% No. Vehicles > 35 MPH 0 % Vehicles > 35 MPH 2.5% 3.5% 3.4% 0.0% 1.7% 0.0% 1.9% 2.3% 1.9% 5 Day 7 Day Monday 06 Wednesdav Friday 10 Sunday 12 September 2021 09 Sep 07 Sep Sep 2021 Sep 2021 08 Sep 2021 Mean Sep 2021 Mean 2021 141 144 0000-2400 Vehicle Flow 127 146 128 127 144 139 160 Mean Speed (mph) 24.3 23.0 24.3 23.4 22 7 23.8 23.1 23.5 23.5 85%ile Speed (mph) 28.7 27.8 30.4 28.6 29.4 29.8 28.3 29.0 29.0 No. Vehicles > 20 MPH Limit 116 119 118 98 102 99 85 111 105 % Vehicles > 20 MPH Limit 75.7% 74.4% 77.2% 77.3% 77.1%

4.2.114 Table 44 shows that the 5-day average traffic flows were lowest in February 2021 when Scotland was in a period of lockdown. However the mean speed was higher in September 2021 (23.5mph)

0.0%

- 4.2.115 The average proportion of vehicles exceeding 20mph was highest in September 2021 (77.1%).
- 4.2.116 Table 45 presents the results for Station Road northbound in Gargunnock.

% Vehicles > 35 MPH

Tactran Mode Share Surveys	
Stirling Council Area	GB01T20C61
Survey Report	16/12/2021



85%ile Speed (mph)

No. Vehicles > 20 MPH Limit

% Vehicles > 20 MPH Limit

No. Vehicles > 35 MPH

% Vehicles > 35 MPH



21.2

42

24.6%

0

0.0%

63

0

0.0%

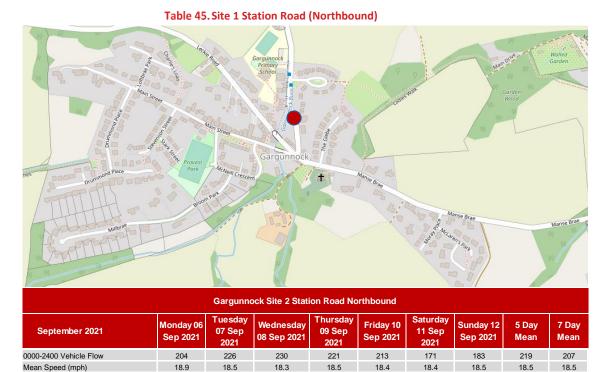
30.7%

0

0.0%

0

0.0%



4.2.117 Table 45 shows that the 5-day average traffic flows were 219 vehicles and the mean speed was 18.5mph.

66

28.7%

0

0.0%

77

34.8%

0

0.0%

69

0

0.0%

4.2.118 The proportion of vehicles exceeding 20mph was 31.2%.

72

35.3%

0.0%

4.2.119 Table 46 presents the results for the Station Road southbound in Gargunnock.

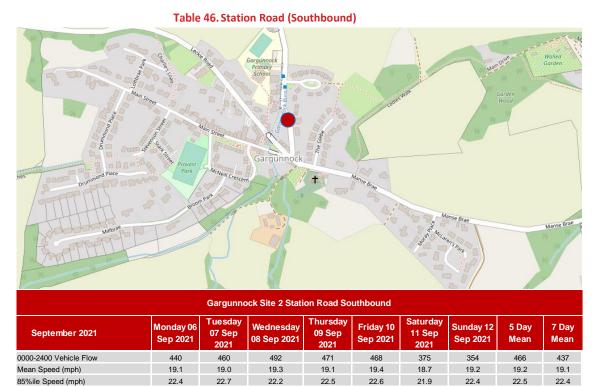
0

0.0%

Tactran Mode Share Surveys	
Stirling Council Area	GB01T20C61
Survey Report	16/12/2021







4.2.120 Table 46 shows that the 5-day average traffic flows were 466 vehicles and the mean speed was 19.2mph

193

39.2%

0

0.0%

184

39.3%

0

0.0%

41.8%

0

0.0%

120

32.0%

0

0.0%

0

0.0%

37.5%

0

0.0%

0

0.0%

4.2.121 The proportion of vehicles exceeding 20mph was 38.5%.

157

35.7%

0.0%

36.3%

0

0.0%

No. Vehicles > 20 MPH Limit

% Vehicles > 20 MPH Limit

No. Vehicles > 35 MPH

% Vehicles > 35 MPH

Tactran Mode Share Surveys	
Stirling Council Area	GB01T20C61
Survey Report	16/12/2021





# 5. LINK COUNT SURVEYS REVIEW

### 5.1 Overview

- 5.1.1 Summary tables below present the results of the link count surveys in the Stirling Council area (five sites in Stirling, three sites in Dunblane and one site in the remaining areas: Bridge of Allan, Aberfoyle, Fallin, Plean, Callander, Killearn and Gargunnock).
- 5.1.2 For each of the vehicle flow surveys, the summary information is as follows:
  - Site Number
  - Site Location
  - O Total Flow Directional daily flow (over survey period)
  - Flow by Vehicle Type (Car, LGV, OGV1, OGV2, Service Bus, Private Coach, Motor Cycle)
  - AM Peak Flow 07:00-10:00 Vehicle Flow
  - AM peak Hour Flow 08:00-09:00 Vehicle Flow
  - O Interpeak Flow 10:00-16:00 Vehicle Flow
  - Interpeak Peak Hour Flow 12:00-13:00 Vehicle Flow
  - O PM Peak Flow 16:00-19:00 Vehicle Flow
  - O PM Peak Hour Flow 17:00-18:00 Vehicle Flow
  - Proportion of each vehicle type.
- 5.1.3 For each of the pedestrian flow surveys, the summary information is as follows:
  - Site Number
  - Site Location
  - Total Flow Directional daily flow (over survey period)
  - Flow by Pedestrian Type (Adult, Adult and Child, Elderly, Disabled, Cyclist, Cyclist on foot, Horse)
  - O AM Peak Flow 07:00-10:00 Pedestrian Flow
  - Interpeak Flow 10:00-16:00 Pedestrian Flow
  - O PM Peak Flow 16:00-19:00 Pedestrian Flow.





# 5.3 Results of Link Count Surveys

## **Dunblane**

5.3.1 Table 47 presents the vehicle type breakdown for the High Street northbound in Dunblane.



		Site	1 High St No	rthbound				
February 2021	Car	LGV	OGV1	OGV2	Service Bus	Private Coach	Motor Cycle	Total
0600-2200 Vehicle Flow	646	106	6	0	0	0	1	759
AM Peak Pd 0700-1000 Vehicle Flow	82	20	0	0	0	0	0	102
AM Peak Hr 0800-0900 Vehicle Flow	28	3	0	0	0	0	0	31
IP Peak Pd 1000-1600 Vehicle Flow	393	72	6	0	0	0	1	472
IP Peak Pd 1200-1300 Vehicle Flow	52	12	1	0	0	0	1	66
PM Peak Pd 1600-1900 Vehicle Flow	133	12	0	0	0	0	0	145
PM Peak Pd 1700-1800 Vehicle Flow	53	8	0	0	0	0	0	61
0600-2200 Vehicle Proportion	85.1%	14.0%	0.8%	0.0%	0.0%	0.0%	0.1%	100.0%
May 2021	Car	LGV	OGV1	OGV2	Service Bus	Private Coach	Motor Cycle	Total
0600-2200 Vehicle Flow	844	113	9	0	0	0	2	968
AM Peak Pd 0700-1000 Vehicle Flow	110	25	4	0	0	0	0	139
AM Peak Hr 0800-0900 Vehicle Flow	36	7	1	0	0	0	0	44
IP Peak Pd 1000-1600 Vehicle Flow	446	69	3	0	0	0	0	518
IP Peak Pd 1200-1300 Vehicle Flow	74	15	0	0	0	0	0	89
PM Peak Pd 1600-1900 Vehicle Flow	184	14	1	0	0	0	1	200
PM Peak Pd 1700-1800 Vehicle Flow	62	7	0	0	0	0	0	69
0600-2200 Vehicle Proportion	87.2%	11.7%	0.9%	0.0%	0.0%	0.0%	0.2%	100.0%
September 2021	Car	LGV	OGV1	OGV2	Service Bus	Private Coach	Motor Cycle	Total
0600-2200 Vehicle Flow	877	104	11	1	0	0	13	1006
AM Peak Pd 0700-1000 Vehicle Flow	117	15	5	1	0	0	0	138
AM Peak Hr 0800-0900 Vehicle Flow	42	2	1	0	0	0	0	45
P Peak Pd 1000-1600 Vehicle Flow	453	66	5	0	0	0	4	528
P Peak Pd 1200-1300 Vehicle Flow	68	15	1	0	0	0	0	84
PM Peak Pd 1600-1900 Vehicle Flow	199	18	1	0	0	0	5	223
PM Peak Pd 1700-1800 Vehicle Flow	73	9	0	0	0	0	2	84
0600-2200 Vehicle Proportion	87.2%	10.3%	1.1%	0.1%	0.0%	0.0%	1.3%	100.0%

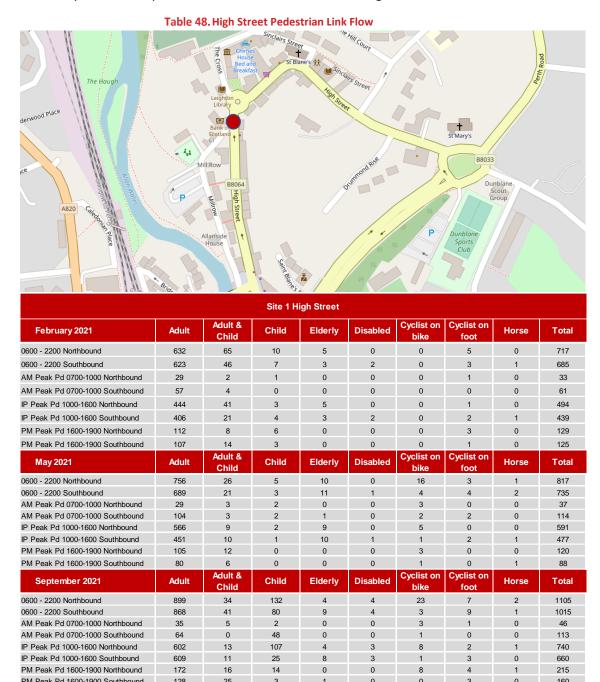
5.3.2 Table 47 shows that car flows were higher in September 2021, compared to May and February 2021.

Tactran Mode Share Surveys	
Stirling Council Area	GB01T20C61
Survey Report	16/12/2021





5.3.4 Table 48 presents the pedestrian flow breakdown for the High Street in Dunblane.



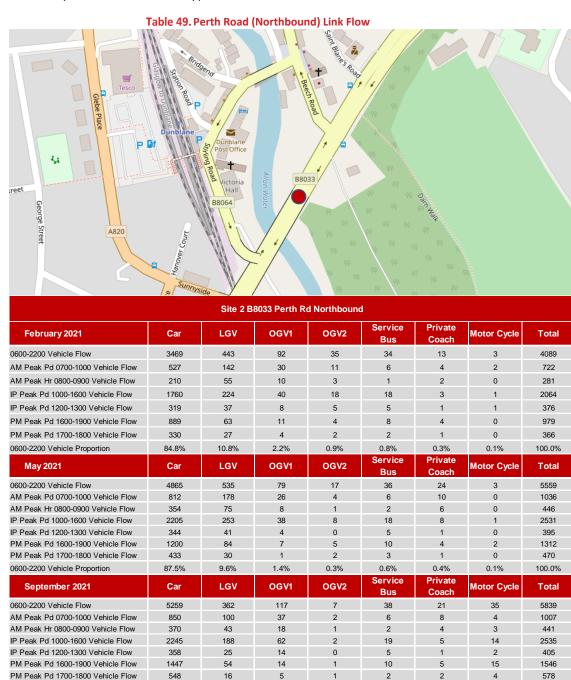
5.3.5 Table 48 shows that pedestrian flows have increased throughout 2021 and the highest number were observed in September 2021, the biggest increase being observed in the inter peak period.

Tactran Mode Share Surveys	
Stirling Council Area	GB01T20C61
Survey Report	16/12/2021





# 5.3.7 Table 49 presents the vehicle type breakdown for Perth Road northbound in Dunblane.



# 5.3.8 Table 49 shows that car flows were highest in September 2021.

90.1%

6.2%

2.0%

0600-2200 Vehicle Proportion

Tactran Mode Share Surveys	
Stirling Council Area	GB01T20C61
Survey Report	16/12/2021

0.6%

100.0%





# 5.3.10 Table 50 presents the vehicle type breakdown for Perth Road southbound in Dunblane.



Site 2 B8033 Perth Rd Southbound								
February 2021	Car	LGV	OGV1	OGV2	Service Bus	Private Coach	Motor Cycle	Total
0600-2200 Vehicle Flow	3100	376	79	34	21	18	3	3631
AM Peak Pd 0700-1000 Vehicle Flow	590	56	17	9	5	6	0	683
AM Peak Hr 0800-0900 Vehicle Flow	239	19	8	5	2	2	0	275
IP Peak Pd 1000-1600 Vehicle Flow	1573	233	44	18	10	4	1	1883
IP Peak Pd 1200-1300 Vehicle Flow	304	39	5	4	2	0	1	355
PM Peak Pd 1600-1900 Vehicle Flow	697	76	9	7	4	3	1	797
PM Peak Pd 1700-1800 Vehicle Flow	259	28	2	3	0	1	0	293
0600-2200 Vehicle Proportion	85.4%	10.4%	2.2%	0.9%	0.6%	0.5%	0.1%	100.0%
May 2021	Car	LGV	OGV1	OGV2	Service Bus	Private Coach	Motor Cycle	Total
0600-2200 Vehicle Flow	4298	446	68	12	24	28	7	4883
AM Peak Pd 0700-1000 Vehicle Flow	853	77	12	1	6	9	2	960
AM Peak Hr 0800-0900 Vehicle Flow	364	30	6	1	2	3	1	407
IP Peak Pd 1000-1600 Vehicle Flow	1866	240	35	8	10	7	4	2170
IP Peak Pd 1200-1300 Vehicle Flow	293	30	5	3	2	0	3	336
PM Peak Pd 1600-1900 Vehicle Flow	1029	104	14	3	8	8	1	1167
PM Peak Pd 1700-1800 Vehicle Flow	366	35	5	1	0	3	0	410
0600-2200 Vehicle Proportion	88.0%	9.1%	1.4%	0.2%	0.5%	0.6%	0.1%	100.0%
September 2021	Car	LGV	OGV1	OGV2	Service Bus	Private Coach	Motor Cycle	Total
0600-2200 Vehicle Flow	4696	343	83	6	24	25	40	5217
AM Peak Pd 0700-1000 Vehicle Flow	879	47	14	2	6	9	6	963
AM Peak Hr 0800-0900 Vehicle Flow	359	19	4	0	2	3	1	388
IP Peak Pd 1000-1600 Vehicle Flow	2036	180	52	2	9	6	17	2302
IP Peak Pd 1200-1300 Vehicle Flow	351	31	10	0	2	0	3	397
PM Peak Pd 1600-1900 Vehicle Flow	1169	87	13	0	8	5	11	1293
PM Peak Pd 1700-1800 Vehicle Flow	427	25	4	0	1	2	2	461
0600-2200 Vehicle Proportion	90.0%	6.6%	1.6%	0.1%	0.5%	0.5%	0.8%	100.0%

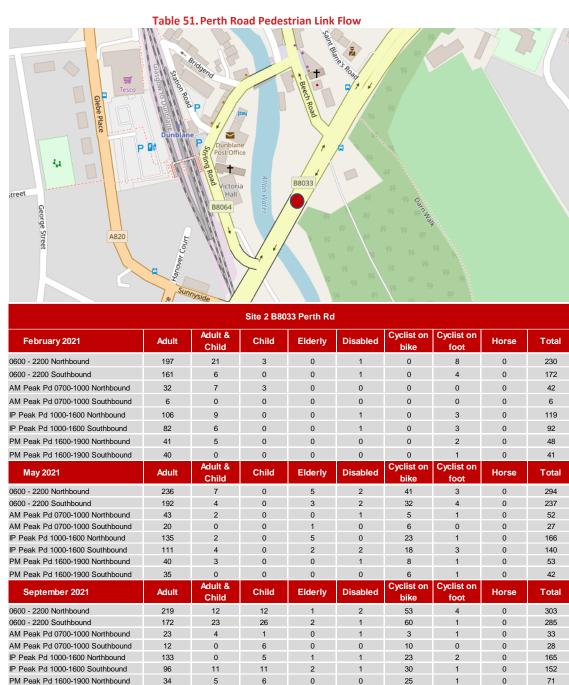
# 5.3.11 Table 50 shows that vehicle flows have increased throughout 2021.

Tactran Mode Share Surveys	
Stirling Council Area	GB01T20C61
Survey Report	16/12/2021





# 5.3.13 Table 51 presents the pedestrian flow breakdown for Perth Road in Dunblane.



## 5.3.14 Table 51 shows that pedestrian flows increased throughout 2021.

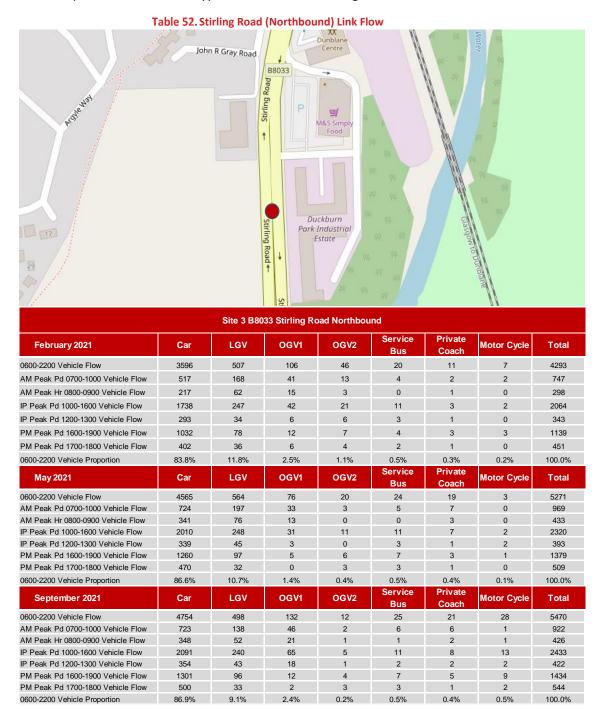
PM Peak Pd 1600-1900 Southbound

Tactran Mode Share Surveys	
Stirling Council Area	GB01T20C61
Survey Report	16/12/2021





5.3.16 Table 52 presents the vehicle type breakdown for Stirling Road northbound in Dunblane.



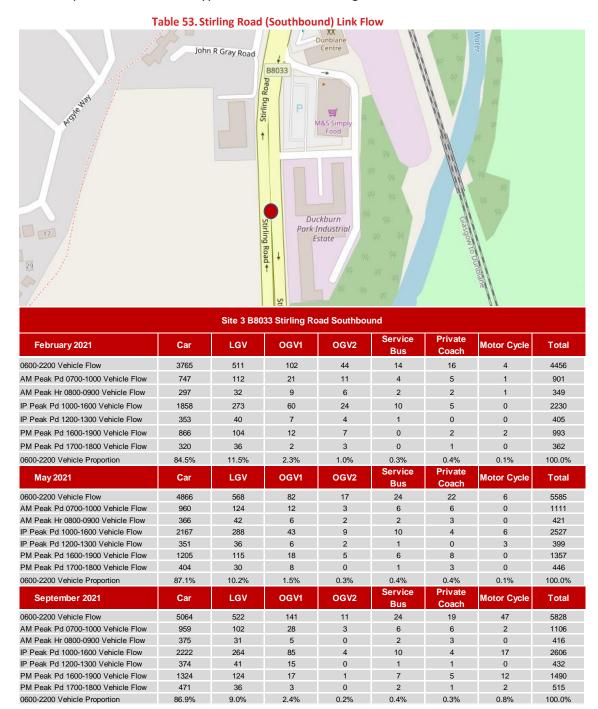
5.3.17 Table 52 shows that car flows were highest in September 2021, steadily increasing throughout 2021.

Tactran Mode Share Surveys	
Stirling Council Area	GB01T20C61
Survey Report	16/12/2021





5.3.19 Table 53 presents the vehicle type breakdown for Stirling Road southbound in Dunblane.



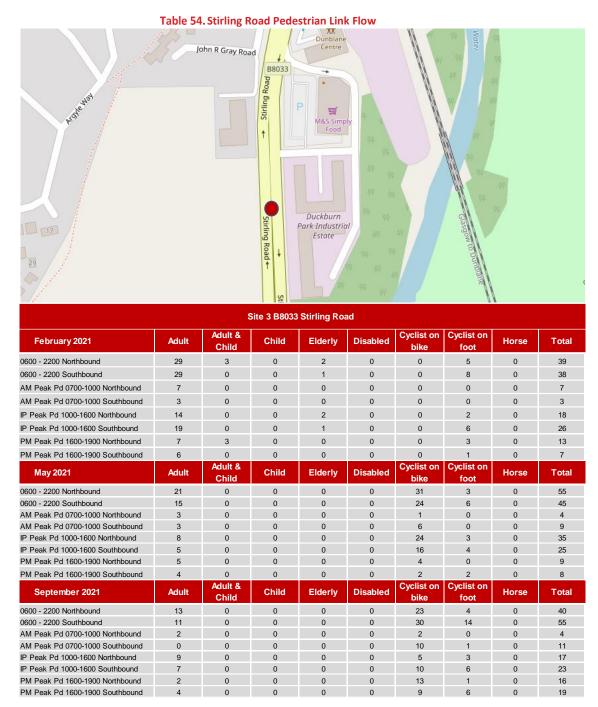
5.3.20 Table 53 shows that vehicle flows have risen throughout 2021 and were highest in September 2021.

Tactran Mode Share Surveys	
Stirling Council Area	GB01T20C61
Survey Report	16/12/2021





# 5.3.22 Table 54 presents the pedestrian flow breakdown Stirling Road in Dunblane.



5.3.23 Table 54 shows that pedestrian flows were relatively consistent throughout 2021.

Tactran Mode Share Surveys	
Stirling Council Area	GB01T20C61
Survey Report	16/12/2021





# **Bridge of Allan**

5.3.24 Table 55 presents the vehicle type breakdown for Henderson Street eastbound in Bridge of

Table 55. Henderson Street (Eastbound) Link Flow rierford Court Myerallan Road Well Road Allanbridge Social Club Р Avenue Park Site 1 Henderson Street Eastbound Private Service LGV OGV1 February 2021 OGV2 Motor Cycle Total

0600-2200 Vehicle Flow AM Peak Pd 0700-1000 Vehicle Flow AM Peak Hr 0800-0900 Vehicle Flow IP Peak Pd 1000-1600 Vehicle Flow IP Peak Pd 1200-1300 Vehicle Flow PM Peak Pd 1600-1900 Vehicle Flow PM Peak Pd 1700-1800 Vehicle Flow 0600-2200 Vehicle Proportion 80.5% 0.5% 0.2% 0.2% 100.0% 12.6% 4.0% 2.1% Service Private May 2021 LGV OGV1 OGV2 Motor Cycle Total Car 0600-2200 Vehicle Flow AM Peak Pd 0700-1000 Vehicle Flow AM Peak Hr 0800-0900 Vehicle Flow IP Peak Pd 1000-1600 Vehicle Flow IP Peak Pd 1200-1300 Vehicle Flow PM Peak Pd 1600-1900 Vehicle Flow PM Peak Pd 1700-1800 Vehicle Flow 0600-2200 Vehicle Proportion 83.7% 11.9% 2.9% 0.5% 0.4% 0.2% 0.3% 100.0% Service Private September 2021 LGV OGV1 OGV2 Car Motor Cycle Total Bus 0600-2200 Vehicle Flow AM Peak Pd 0700-1000 Vehicle Flow AM Peak Hr 0800-0900 Vehicle Flow IP Peak Pd 1000-1600 Vehicle Flow IP Peak Pd 1200-1300 Vehicle Flow PM Peak Pd 1600-1900 Vehicle Flow PM Peak Pd 1700-1800 Vehicle Flow 0600-2200 Vehicle Proportion 83.2% 10.8% 100.0%

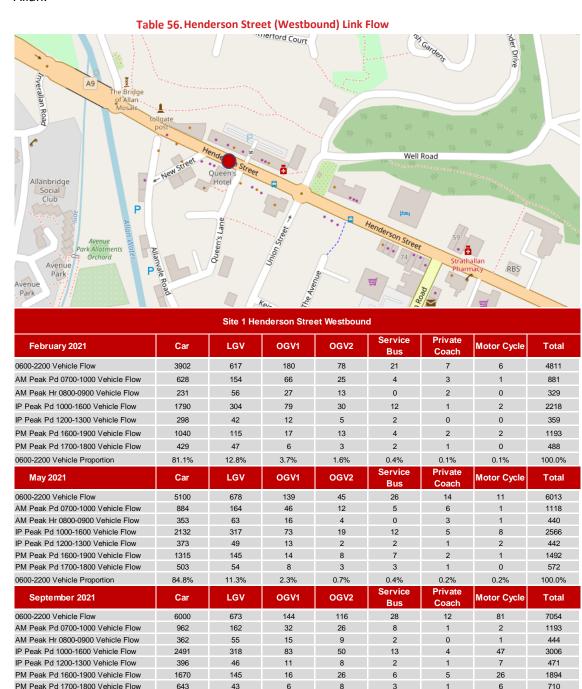
5.3.25 Table 55 shows that vehicle flows have increased throughout 2021.

Tactran Mode Share Surveys	
Stirling Council Area	GB01T20C61
Survey Report	16/12/2021





5.3.27 Table 56 presents the vehicle type breakdown for Henderson Street westbound in Bridge of Allan.



5.3.28 Table 56 shows vehicle flows were highest in September 2021, the proportion of vehicles remained relatively consistent throughout the year.

2.0%

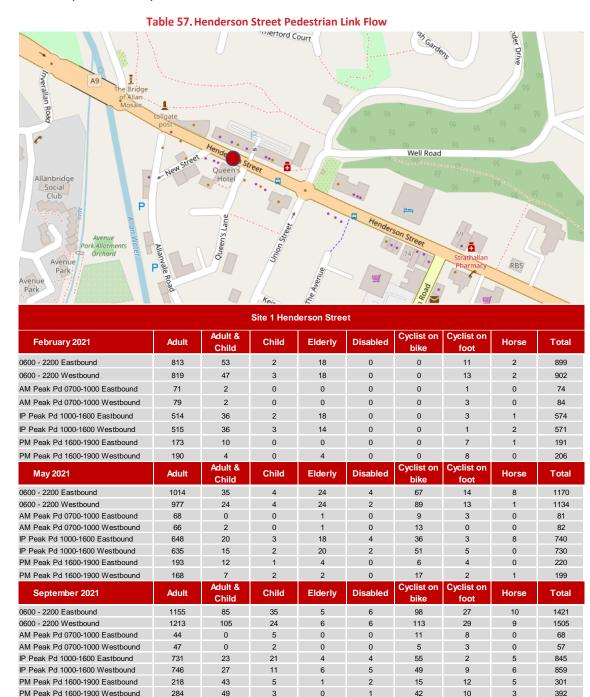
Tactran Mode Share Surveys	
Stirling Council Area	GB01T20C61
Survey Report	16/12/2021

0600-2200 Vehicle Proportion





5.3.30 Table 57 presents the pedestrian breakdown for Henderson Street in Dunblane.



5.3.31 Table 57 shows that the volume of pedestrians increased throughout 2021, with September 2021 having the highest volume.

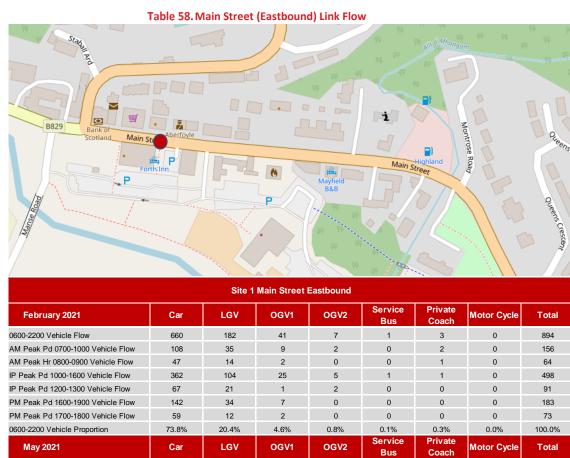
Tactran Mode Share Surveys	
Stirling Council Area	GB01T20C61
Survey Report	16/12/2021





# Aberfoyle

5.3.32 Table 58 presents the vehicle type breakdown for Main Street eastbound in Aberfoyle.



THE FORK THE GOOD GOOD VCHICLE FROM	-71		_	U	U		U	0-1
IP Peak Pd 1000-1600 Vehicle Flow	362	104	25	5	1	1	0	498
IP Peak Pd 1200-1300 Vehicle Flow	67	21	1	2	0	0	0	91
PM Peak Pd 1600-1900 Vehicle Flow	142	34	7	0	0	0	0	183
PM Peak Pd 1700-1800 Vehicle Flow	59	12	2	0	0	0	0	73
0600-2200 Vehicle Proportion	73.8%	20.4%	4.6%	0.8%	0.1%	0.3%	0.0%	100.0%
May 2021	Car	LGV	OGV1	OGV2	Service Bus	Private Coach	Motor Cycle	Total
0600-2200 Vehicle Flow	1028	184	44	6	0	5	9	1276
AM Peak Pd 0700-1000 Vehicle Flow	155	30	7	2	0	2	0	196
AM Peak Hr 0800-0900 Vehicle Flow	67	8	1	1	0	1	0	78
IP Peak Pd 1000-1600 Vehicle Flow	565	96	22	3	0	3	9	698
IP Peak Pd 1200-1300 Vehicle Flow	86	12	7	0	0	0	1	106
PM Peak Pd 1600-1900 Vehicle Flow	223	40	10	1	0	0	0	274
PM Peak Pd 1700-1800 Vehicle Flow	81	19	7	1	0	0	0	108
0600-2200 Vehicle Proportion	80.6%	14.4%	3.4%	0.5%	0.0%	0.4%	0.7%	100.0%
September 2021	Car	LGV	OGV1	OGV2	Service Bus	Private Coach	Motor Cycle	Total
0600-2200 Vehicle Flow	1675	280	53	3	14	9	90	2124
AM Peak Pd 0700-1000 Vehicle Flow	182	43	12	1	4	2	1	245
AM Peak Hr 0800-0900 Vehicle Flow	77	13	6	0	1	1	0	98
IP Peak Pd 1000-1600 Vehicle Flow	774	143	32	1	7	4	39	1000
IP Peak Pd 1200-1300 Vehicle Flow	125	25	5	0	1	0	2	158
PM Peak Pd 1600-1900 Vehicle Flow	485	63	7	0	3	3	28	589
PM Peak Pd 1700-1800 Vehicle Flow	161	26	1	0	1	0	5	194
0600-2200 Vehicle Proportion	78.9%	13.2%	2.5%	0.1%	0.7%	0.4%	4.2%	100.0%

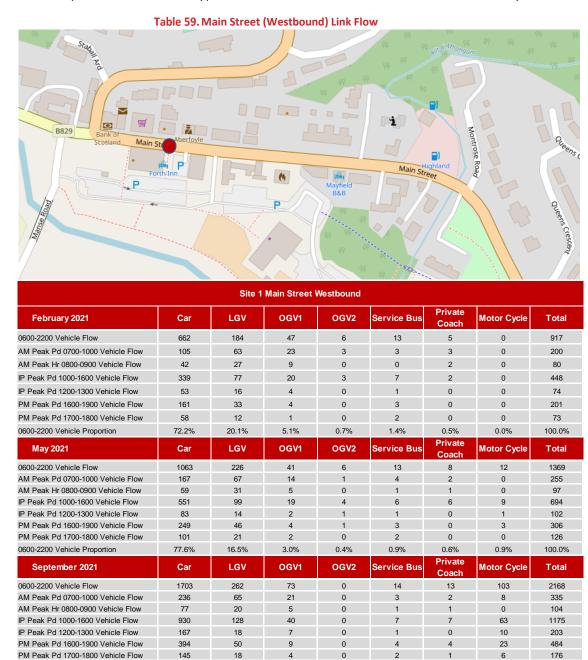
5.3.33 Table 58 shows that vehicle flows have increased throughout 2021.

Tactran Mode Share Surveys	
Stirling Council Area	GB01T20C61
Survey Report	16/12/2021





# 5.3.35 Table 59 presents the vehicle type breakdown for Main Street westbound in Aberfoyle.



3.4%

## 5.3.36 Table 59 shows that vehicle flows have again increased throughout 2021.

78.6%

0600-2200 Vehicle Proportion

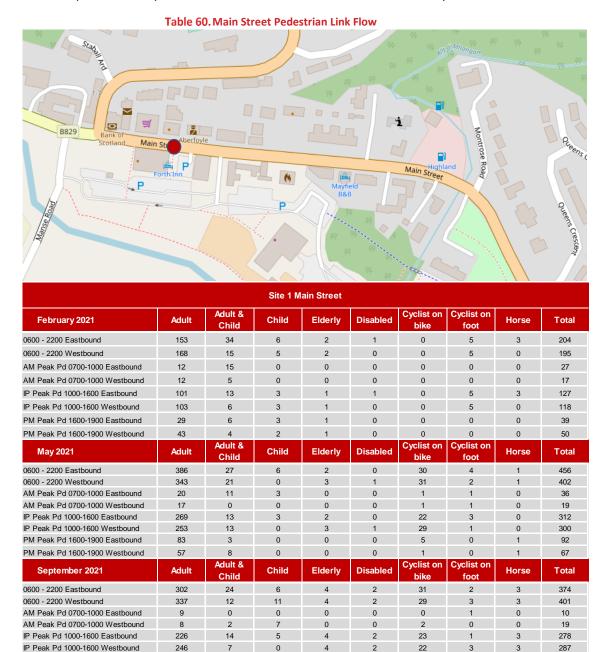
Tactran Mode Share Surveys	
Stirling Council Area	GB01T20C61
Survey Report	16/12/2021

100.0%





# 5.3.38 Table 60 presents the pedestrian breakdown for Main Street in Aberfoyle.



## 5.3.39 Table 60 shows that pedestrian flows were highest in May 2021.

PM Peak Pd 1600-1900 Eastbound

PM Peak Pd 1600-1900 Westbound

Tactran Mode Share Surveys	
Stirling Council Area	GB01T20C61
Survey Report	16/12/2021





#### **Fallin**

0600-2200 Vehicle Flow

AM Peak Pd 0700-1000 Vehicle Flow

AM Peak Hr 0800-0900 Vehicle Flow

IP Peak Pd 1000-1600 Vehicle Flow

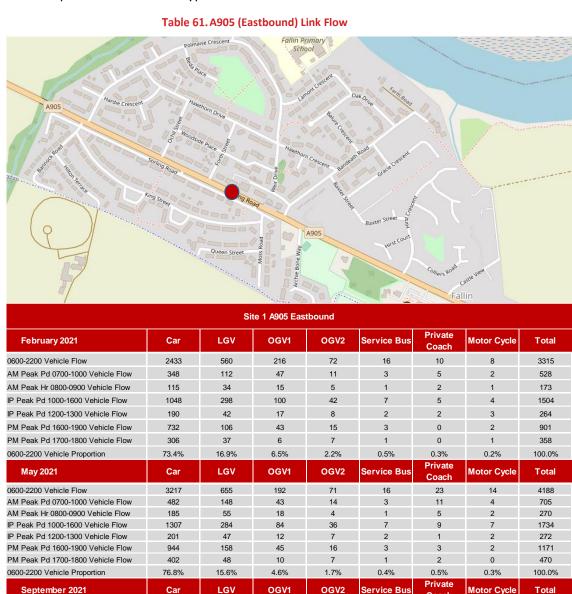
IP Peak Pd 1200-1300 Vehicle Flow

PM Peak Pd 1600-1900 Vehicle Flow

PM Peak Pd 1700-1800 Vehicle Flow

0600-2200 Vehicle Proportion

5.3.40 Table 61 presents the vehicle type breakdown for A905 eastbound in Fallin.



5.3.41 Table 61 shows that vehicle flows were highest in May 2021, compared to February and September 2021.

Tactran Mode Share Surveys	
Stirling Council Area	GB01T20C61
Survey Report	16/12/2021





5.3.43 Table 62 presents the vehicle type breakdown for A905 westbound in Fallin.

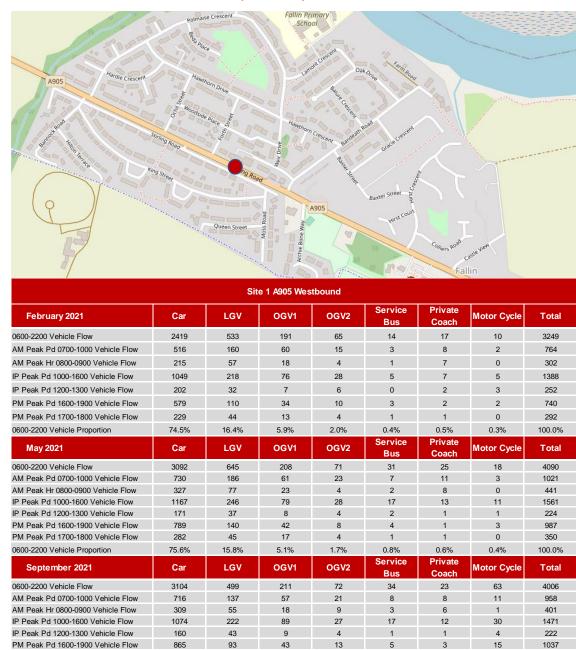


Table 62. A905 (Westbound) Link Flow

5.3.44 Table 62 shows that vehicle flows were again highest in May 2021, compared to February and September 2021.

14

6

0.8%

2

6

418

36

Tactran Mode Share Surveys	
Stirling Council Area	GB01T20C61
Survey Report	16/12/2021

353

77.5%

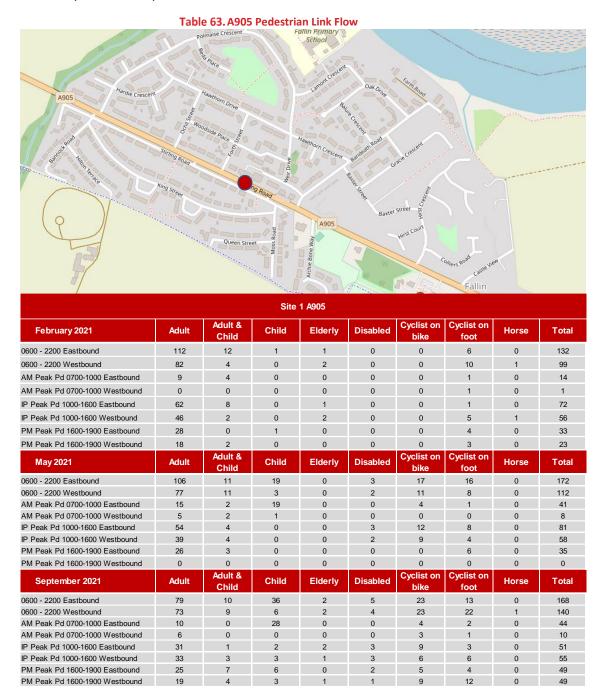
PM Peak Pd 1700-1800 Vehicle Flow

0600-2200 Vehicle Proportion





# 5.3.46 Table 63 presents the pedestrian breakdown for A905 in Fallin.



5.3.47 Table 63 shows that pedestrian flows were highest in May 2021, although September 2021 was very similar.

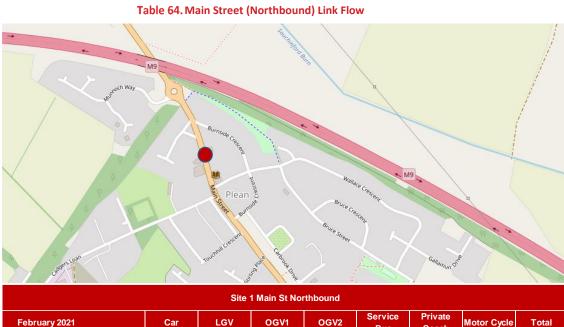
Tactran Mode Share Surveys	
Stirling Council Area	GB01T20C61
Survey Report	16/12/2021





#### Plean

5.3.48 Table 64 presents the vehicle type breakdown for Main Street northbound in Plean.



February 2021 LGV OGV1 OGV2 0600-2200 Vehicle Flow AM Peak Pd 0700-1000 Vehicle Flow AM Peak Hr 0800-0900 Vehicle Flow IP Peak Pd 1000-1600 Vehicle Flow IP Peak Pd 1200-1300 Vehicle Flow PM Peak Pd 1600-1900 Vehicle Flow PM Peak Pd 1700-1800 Vehicle Flow 3.9% 0.8% 0.3% 0.3% 100.0% 0600-2200 Vehicle Proportion 81.8% 11.7% 1.3% LGV OGV1 OGV2 Notor Cycle Total May 2021 Car Bus 0600-2200 Vehicle Flow AM Peak Pd 0700-1000 Vehicle Flow AM Peak Hr 0800-0900 Vehicle Flow IP Peak Pd 1000-1600 Vehicle Flow IP Peak Pd 1200-1300 Vehicle Flow PM Peak Pd 1600-1900 Vehicle Flow PM Peak Pd 1700-1800 Vehicle Flow 0600-2200 Vehicle Proportion 82.2% 11.7% 3.1% 1.0% 1.2% 0.4% 0.4% 100.0% September 2021 LGV OGV1 OGV2 lotor Cycle Total Car 0600-2200 Vehicle Flow AM Peak Pd 0700-1000 Vehicle Flow AM Peak Hr 0800-0900 Vehicle Flow IP Peak Pd 1000-1600 Vehicle Flow IP Peak Pd 1200-1300 Vehicle Flow PM Peak Pd 1600-1900 Vehicle Flow PM Peak Pd 1700-1800 Vehicle Flow 0600-2200 Vehicle Proportion

5.3.49 Table 64 shows that vehicle flows were highest in May 2021, compared to February 2021 and September 2021.

Tactran Mode Share Surveys	
Stirling Council Area	GB01T20C61
Survey Report	16/12/2021





5.3.51 Table 65 presents the vehicle type breakdown for Main Street Southbound in Plean.

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Table 65. Main Street (Southbound) Link Flow

Site 1 Main St Southbound								
February 2021	Car	LGV	OGV1	OGV2	Service Bus	Private Coach	Motor Cycle	Total
0600-2200 Vehicle Flow	3381	449	142	69	34	13	7	4095
AM Peak Pd 0700-1000 Vehicle Flow	725	104	32	14	6	8	1	890
AM Peak Hr 0800-0900 Vehicle Flow	297	36	14	6	2	4	1	360
IP Peak Pd 1000-1600 Vehicle Flow	1307	202	71	33	14	2	3	1632
P Peak Pd 1200-1300 Vehicle Flow	175	35	10	2	2	0	0	224
PM Peak Pd 1600-1900 Vehicle Flow	803	89	21	6	6	2	2	929
PM Peak Pd 1700-1800 Vehicle Flow	287	30	5	2	2	2	1	329
0600-2200 Vehicle Proportion	82.6%	11.0%	3.5%	1.7%	0.8%	0.3%	0.2%	100.0%
May 2021	Car	LGV	OGV1	OGV2	Service Bus	Private Coach	Motor Cycle	Total
0600-2200 Vehicle Flow	4159	509	147	79	62	17	17	4990
AM Peak Pd 0700-1000 Vehicle Flow	842	113	37	24	15	10	4	1045
AM Peak Hr 0800-0900 Vehicle Flow	319	47	16	8	5	3	3	401
P Peak Pd 1000-1600 Vehicle Flow	1731	197	58	36	27	4	9	2062
P Peak Pd 1200-1300 Vehicle Flow	307	29	11	9	4	0	3	363
PM Peak Pd 1600-1900 Vehicle Flow	964	124	30	10	11	3	3	1145
PM Peak Pd 1700-1800 Vehicle Flow	368	47	4	4	4	2	1	430
0600-2200 Vehicle Proportion	83.3%	10.2%	2.9%	1.6%	1.2%	0.3%	0.3%	100.0%
September 2021	Car	LGV	OGV1	OGV2	Service Bus	Private Coach	Motor Cycle	Total
0600-2200 Vehicle Flow	3852	555	120	50	44	20	28	4669
AM Peak Pd 0700-1000 Vehicle Flow	728	148	18	15	9	8	3	929
AM Peak Hr 0800-0900 Vehicle Flow	292	47	4	5	3	3	0	354
P Peak Pd 1000-1600 Vehicle Flow	1534	224	66	22	20	10	12	1888
P Peak Pd 1200-1300 Vehicle Flow	245	29	13	3	2	2	4	298
PM Peak Pd 1600-1900 Vehicle Flow	967	110	23	6	7	0	8	1121
PM Peak Pd 1700-1800 Vehicle Flow	341	32	6	2	3	0	7	391
0600-2200 Vehicle Proportion	82.5%	11.9%	2.6%	1.1%	0.9%	0.4%	0.6%	100.0%

5.3.52 Table 65 shows that again, vehicle flows were highest in May 2021, compared to February 2021 and September 2021.

Tactran Mode Share Surveys	
Stirling Council Area	GB01T20C61
Survey Report	16/12/2021



2021.



## 5.3.54 Table 66 presents the pedestrian breakdown for Main Street in Plean.

**Table 66. Main Street Pedestrian Link Flow Summary** Site 1 - Main St Child February 2021 Adult Elderly Total 0600 - 2200 Northbound 0600 - 2200 Southbound AM Peak Pd 0700-1000 Northbound AM Peak Pd 0700-1000 Southbound IP Peak Pd 1000-1600 Northbound IP Peak Pd 1000-1600 Southbound PM Peak Pd 1600-1900 Northbound PM Peak Pd 1600-1900 Southbound Adult & May 2021 Child Elderly Adult Horse Total 0600 - 2200 Northbound 0600 - 2200 Southbound AM Peak Pd 0700-1000 Northbound AM Peak Pd 0700-1000 Southbound IP Peak Pd 1000-1600 Northbound IP Peak Pd 1000-1600 Southbound PM Peak Pd 1600-1900 Northbound PM Peak Pd 1600-1900 Southbound Adult & Cyclist or September 2021 Adult Child Elderly Disabled Horse Total 0600 - 2200 Northbound 0600 - 2200 Southbound AM Peak Pd 0700-1000 Northbound Ω Ω AM Peak Pd 0700-1000 Southbound IP Peak Pd 1000-1600 Northbound IP Peak Pd 1000-1600 Southbound PM Peak Pd 1600-1900 Northbound

- PM Peak Pd 1600-1900 Southbound 25 8 5 2 0 5 3 0 48

  5.3.55 Table 66 shows that pedestrian flows were highest in May 2021, and lowest in September
- 5.3.56 Table 67 presents the vehicle type breakdown for Cadgers Loan eastbound in Plean.

Tactran Mode Share Surveys	
Stirling Council Area	GB01T20C61
Survey Report	16/12/2021





Site 2 Cadgers Loan Eastbound LGV OGV1 OGV2 Total September 2021 496 0600-2200 Vehicle Flow 395 74 18 2 2 AM Peak Pd 0700-1000 Vehicle Flow 59 0 0 78 11 4 3 AM Peak Hr 0800-0900 Vehicle Flow 25 0 0 29 IP Peak Pd 1000-1600 Vehicle Flow 163 10 IP Peak Pd 1200-1300 Vehicle Flow PM Peak Pd 1600-1900 Vehicle Flow 108 PM Peak Pd 1700-1800 Vehicle Flow 33 39

3.6%

Table 67. Cadgers Loan (Eastbound) Link Flow

5.3.57 Table 67 shows that the highest proportion of vehicles were cars.

79.6%

0600-2200 Vehicle Proportion

5.3.58 Table 68 presents the vehicle type breakdown for Cadgers Loan westbound in Plean.

14.9%

Tactran Mode Share Surveys	
Stirling Council Area	GB01T20C61
Survey Report	16/12/2021





Site 2 Cadgers Loan Westbound LGV OGV1 OGV2 Total September 2021 0600-2200 Vehicle Flow 423 69 21 521 0 AM Peak Pd 0700-1000 Vehicle Flow 62 16 84 3 0 0 AM Peak Hr 0800-0900 Vehicle Flow 26 2 0 31 IP Peak Pd 1000-1600 Vehicle Flow 173 217 IP Peak Pd 1200-1300 Vehicle Flow PM Peak Pd 1600-1900 Vehicle Flow 111 PM Peak Pd 1700-1800 Vehicle Flow 43 10 56 0600-2200 Vehicle Proportion 81.2% 13.2% 4.0%

Table 68. Cadgers Loan (Westbound) Link Flow

- 5.3.59 Table 68 shows that again, the majority of vehicles were cars.
- 5.3.60 Table 69 presents the pedestrian breakdown for Cadgers Loan in Plean.

Tactran Mode Share Surveys	
Stirling Council Area	GB01T20C61
Survey Report	16/12/2021





Site 2 - Cadgers Loan Adult & Adult Child Elderly Disabled September 2021 Horse Child 0600 - 2200 Eastbound 33 52 9 0 0600 - 2200 Westbound 11 3 0 70 AM Peak Pd 0700-1000 Eastbound 0 0 0 0 0 AM Peak Pd 0700-1000 Westbound IP Peak Pd 1000-1600 Eastbound IP Peak Pd 1000-1600 Westbound PM Peak Pd 1600-1900 Eastbound 2 0 0 16 PM Peak Pd 1600-1900 Westbound

**Table 69. Cadgers Loan Pedestrian Link Flow Summary** 

5.3.61 Table 69 shows that the westbound pedestrian flow was higher than the eastbound in September 2021.

Tactran Mode Share Surveys	
Stirling Council Area	GB01T20C61
Survey Report	16/12/2021





#### Callander

5.3.62 Table 70 presents the vehicle type breakdown for Main Street eastbound in Callander.



Site 1 Main Street Eastbound February 2021 Car LGV OGV1 OGV2 Motor Cvcl Total 0600-2200 Vehicle Flow AM Peak Pd 0700-1000 Vehicle Flow AM Peak Hr 0800-0900 Vehicle Flow IP Peak Pd 1000-1600 Vehicle Flow IP Peak Pd 1200-1300 Vehicle Flow PM Peak Pd 1600-1900 Vehicle Flow PM Peak Pd 1700-1800 Vehicle Flow 0600-2200 Vehicle Proportion 68.5% 20.6% 4.9% 4.6% 0.5% 0.6% 0.2% 100.0% May 2021 Car LGV OGV1 OGV2 Motor Cycle Total Bus 0600-2200 Vehicle Flow AM Peak Pd 0700-1000 Vehicle Flow AM Peak Hr 0800-0900 Vehicle Flow IP Peak Pd 1000-1600 Vehicle Flow IP Peak Pd 1200-1300 Vehicle Flow PM Peak Pd 1600-1900 Vehicle Flow PM Peak Pd 1700-1800 Vehicle Flow 0600-2200 Vehicle Proportion 77.4% 14.4% 3.5% 3.2% 0.5% 0.2% 0.8% 100.0% Service Private OGV1 OGV2 September 2021 LGV Motor Cycle Total Car Bus 0600-2200 Vehicle Flow AM Peak Pd 0700-1000 Vehicle Flow AM Peak Hr 0800-0900 Vehicle Flow IP Peak Pd 1000-1600 Vehicle Flow IP Peak Pd 1200-1300 Vehicle Flow PM Peak Pd 1600-1900 Vehicle Flow PM Peak Pd 1700-1800 Vehicle Flow 0600-2200 Vehicle Proportion 81.3% 9.6% 2.6% 0.2% 100.0%

5.3.63 Table 70 shows that vehicle flows were significantly higher in September 2021, compared to May 2021 and February 2021.

Tactran Mode Share Surveys	
Stirling Council Area	GB01T20C61
Survey Report	16/12/2021



PM Peak Pd 1700-1800 Vehicle Flow

AM Peak Pd 0700-1000 Vehicle Flow

AM Peak Hr 0800-0900 Vehicle Flow

IP Peak Pd 1000-1600 Vehicle Flow

IP Peak Pd 1200-1300 Vehicle Flow

PM Peak Pd 1600-1900 Vehicle Flow

PM Peak Pd 1700-1800 Vehicle Flow

0600-2200 Vehicle Proportion

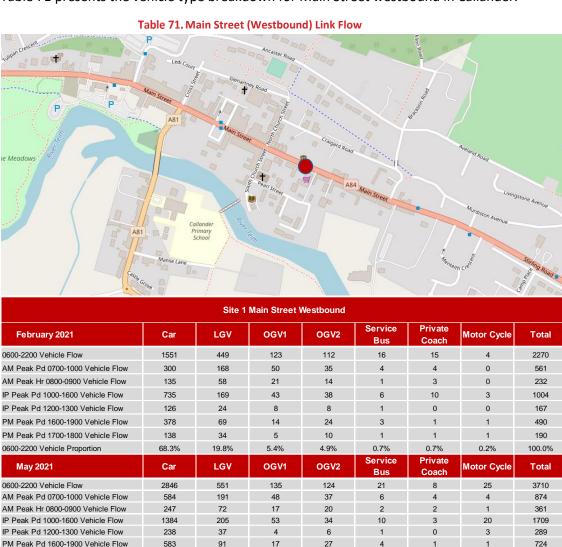
0600-2200 Vehicle Proportion

September 2021

0600-2200 Vehicle Flow



5.3.65 Table 71 presents the vehicle type breakdown for Main Street westbound in Callander.



3.3%

OGV2

0.6%

Service

0.3%

0.2%

Private

0.7%

Motor Cycle

5.3.66 Table 71 shows that vehicle flows were significantly higher in September 2021, compared to May and February 2021.

Tactran Mode Share Surveys	
Stirling Council Area	GB01T20C61
Survey Report	16/12/2021

76.7%

77.3%

14.9%

LGV

11.3%

3.6%

OGV1

3.3%

100.0%





5.3.68 Table 72 presents the pedestrian breakdown for Main Street in Callander.

The Manual Steel Pedestral Link Flow

Arcaser Road

Arcase

**Table 72. Main Street Pedestrian Link Flow** 

Site 1 Main Street									
February 2021	Adult	Adult & Child	Child	Elderly	Disabled	Cyclist on bike	Cyclist on foot	Horse	Total
0600 - 2200 Eastbound	332	41	0	3	1	0	14	2	393
0600 - 2200 Westbound	319	51	3	3	2	0	12	0	390
AM Peak Pd 0700-1000 Eastbound	14	0	0	0	0	0	0	0	14
AM Peak Pd 0700-1000 Westbound	17	20	1	0	0	0	1	0	39
IP Peak Pd 1000-1600 Eastbound	187	34	0	3	1	0	1	1	227
IP Peak Pd 1000-1600 Westbound	175	27	2	3	2	0	6	0	215
PM Peak Pd 1600-1900 Eastbound	88	7	0	0	0	0	12	1	108
PM Peak Pd 1600-1900 Westbound	80	4	0	0	0	0	5	0	89
May 2021	Adult	Adult & Child	Child	Elderly	Disabled	Cyclist on bike	Cyclist on foot	Horse	Total
0600 - 2200 Eastbound	559	37	43	5	9	15	16	0	684
0600 - 2200 Westbound	548	57	21	7	7	18	15	0	673
AM Peak Pd 0700-1000 Eastbound	32	1	0	1	1	0	0	0	35
AM Peak Pd 0700-1000 Westbound	55	28	6	1	1	2	7	0	100
IP Peak Pd 1000-1600 Eastbound	369	30	41	4	5	12	8	0	469
IP Peak Pd 1000-1600 Westbound	348	26	13	4	5	13	2	0	411
PM Peak Pd 1600-1900 Eastbound	106	6	2	0	3	1	3	0	121
PM Peak Pd 1600-1900 Westbound	95	3	2	1	1	2	3	0	107
September 2021	Adult	Adult & Child	Child	Elderly	Disabled	Cyclist on bike	Cyclist on foot	Horse	Total
0600 - 2200 Eastbound	755	71	84	7	5	24	16	4	966
0600 - 2200 Westbound	726	84	56	5	4	29	12	1	917
AM Peak Pd 0700-1000 Eastbound	33	0	3	0	0	1	0	0	37
AM Peak Pd 0700-1000 Westbound	42	31	16	0	0	3	5	0	97
P Peak Pd 1000-1600 Eastbound	386	45	64	6	4	12	11	4	532
P Peak Pd 1000-1600 Westbound	415	27	29	4	2	17	4	1	499
PM Peak Pd 1600-1900 Eastbound	186	18	16	1	1	9	0	0	231
PM Peak Pd 1600-1900 Westbound	160	18	10	0	1	8	3	0	200

5.3.69 Table 72 shows that pedestrian flows were significantly higher in September 2021, reflecting the seasonality of the area.

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#### Killearn

0600-2200 Vehicle Proportion

May 2021.

5.3.70 Table 73 presents the vehicle type breakdown for Main Street northbound in Killearn.

Table 73. Main Street (Northbound) Link Flow Killearn Kirkhouse Site 1 Main Street Northbound Service February 2021 LGV OGV1 OGV2 0600-2200 Vehicle Flow 1016 167 26 1234 AM Peak Pd 0700-1000 Vehicle Flow AM Peak Hr 0800-0900 Vehicle Flow 82 10 97 IP Peak Pd 1000-1600 Vehicle Flow 436 85 IP Peak Pd 1200-1300 Vehicle Flow 69 16 3 0 89 PM Peak Pd 1600-1900 Vehicle Flow 287 38 0 331 PM Peak Pd 1700-1800 Vehicle Flow 126 16 144 2.1% 0.2% 0.3% 0.2% 100.0% 0600-2200 Vehicle Proportion 82.3% 13.5% 1.3% LGV OGV1 OGV2 Total May 2021 Car Notor Cycle 188 1575 0600-2200 Vehicle Flow 1328 27 8 16 5 3 AM Peak Pd 0700-1000 Vehicle Flow 268 30 6 2 3 3 0 312 AM Peak Hr 0800-0900 Vehicle Flow 131 11 4 0 0 150 IP Peak Pd 1000-1600 Vehicle Flow 526 105 15 3 6 657 IP Peak Pd 1200-1300 Vehicle Flow 79 14 96 PM Peak Pd 1600-1900 Vehicle Flow 392 42 6 3 450 PM Peak Pd 1700-1800 Vehicle Flow 161 12 0 0 178 3 0600-2200 Vehicle Proportion 84.3% 11.9% 1.7% 0.5% 1.0% 0.3% 0.2% 100.0% September 2021 LGV OGV1 OGV2 lotor Cycl Total Car Bus 0600-2200 Vehicle Flow 1579 199 29 2 17 5 18 1849 AM Peak Pd 0700-1000 Vehicle Flow 311 62 5 0 4 3 0 385 AM Peak Hr 0800-0900 Vehicle Flow 27 IP Peak Pd 1000-1600 Vehicle Flow 641 763 84 18 11 IP Peak Pd 1200-1300 Vehicle Flow 133 115 13 3 0 PM Peak Pd 1600-1900 Vehicle Flow 485 440 34 3 0 PM Peak Pd 1700-1800 Vehicle Flow 149 165 11 Ω

5.3.71 Table 73 shows that vehicle flows were higher in September 2021, compared to February and

Tactran Mode Share Surveys	
Stirling Council Area	GB01T20C61
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5.3.73 Table 74 presents the vehicle type breakdown for Main Street southbound in Killearn.

Site 1 Main Street Southbound

Table 74. Main Street (Southbound) Link Flow

Site 1 Main Street Southbound								
February 2021	Car	LGV	OGV1	OGV2	Service Bus	Private Coach	Motor Cycle	Total
0600-2200 Vehicle Flow	821	132	38	4	17	1	7	1020
AM Peak Pd 0700-1000 Vehicle Flow	168	25	7	1	4	0	0	205
AM Peak Hr 0800-0900 Vehicle Flow	74	11	4	0	1	0	0	90
IP Peak Pd 1000-1600 Vehicle Flow	382	71	25	3	5	1	6	493
P Peak Pd 1200-1300 Vehicle Flow	45	10	4	1	1	0	1	62
PM Peak Pd 1600-1900 Vehicle Flow	202	28	6	0	5	0	1	242
PM Peak Pd 1700-1800 Vehicle Flow	92	9	1	0	1	0	0	103
0600-2200 Vehicle Proportion	80.5%	12.9%	3.7%	0.4%	1.7%	0.1%	0.7%	100.0%
May 2021	Car	LGV	OGV1	OGV2	Service Bus	Private Coach	Motor Cycle	Total
0600-2200 Vehicle Flow	1152	159	25	5	18	3	6	1368
AM Peak Pd 0700-1000 Vehicle Flow	239	24	10	3	3	1	2	282
AM Peak Hr 0800-0900 Vehicle Flow	112	11	2	0	1	1	1	128
IP Peak Pd 1000-1600 Vehicle Flow	445	76	10	2	7	1	1	542
IP Peak Pd 1200-1300 Vehicle Flow	62	12	2	1	1	0	0	78
PM Peak Pd 1600-1900 Vehicle Flow	322	40	5	0	5	1	3	376
PM Peak Pd 1700-1800 Vehicle Flow	147	17	2	0	1	0	2	169
0600-2200 Vehicle Proportion	84.2%	11.6%	1.8%	0.4%	1.3%	0.2%	0.4%	100.0%
September 2021	Car	LGV	OGV1	OGV2	Service Bus	Private Coach	Motor Cycle	Total
0600-2200 Vehicle Flow	1273	168	24	5	18	3	14	1505
AM Peak Pd 0700-1000 Vehicle Flow	302	41	6	0	4	2	1	356
AM Peak Hr 0800-0900 Vehicle Flow	131	16	2	0	1	1	1	152
P Peak Pd 1000-1600 Vehicle Flow	472	76	14	5	5	1	9	582
P Peak Pd 1200-1300 Vehicle Flow	68	10	5	0	1	0	1	85
PM Peak Pd 1600-1900 Vehicle Flow	320	36	1	0	4	0	3	364
PM Peak Pd 1700-1800 Vehicle Flow	144	6	0	0	2	0	0	152
0600-2200 Vehicle Proportion	84.6%	11.2%	1.6%	0.3%	1.2%	0.2%	0.9%	100.0%

5.3.74 Table 74 shows that vehicle flows were higher in September 2021, compared to May and February 2021.

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### 5.3.76 Table 75 presents the pedestrian breakdown for Main Street in Killearn.

**Table 75. Main Street Pedestrian Flow Summary** Site 1 Main Street Adult & Cyclist on Cyclist on February 2021 Adult Child Total Elderly 0600 - 2200 Northbound 0600 - 2200 Southbound AM Peak Pd 0700-1000 Northbound AM Peak Pd 0700-1000 Southbound IP Peak Pd 1000-1600 Northbound IP Peak Pd 1000-1600 Southbound PM Peak Pd 1600-1900 Northbound PM Peak Pd 1600-1900 Southbound May 2021 Child Elderly Disabled Adult Horse Total 0600 - 2200 Northbound 0600 - 2200 Southbound AM Peak Pd 0700-1000 Northbound AM Peak Pd 0700-1000 Southbound IP Peak Pd 1000-1600 Northbound IP Peak Pd 1000-1600 Southbound PM Peak Pd 1600-1900 Northbound PM Peak Pd 1600-1900 Southbound Adult & Cyclist or Cyclist or September 2021 Adult Child Elderly Disabled Horse Total 0600 - 2200 Northbound 0600 - 2200 Southbound AM Peak Pd 0700-1000 Northbound Ω Ω Ω AM Peak Pd 0700-1000 Southbound IP Peak Pd 1000-1600 Northbound IP Peak Pd 1000-1600 Southbound PM Peak Pd 1600-1900 Northbound

#### 5.3.77 Table 75 shows that pedestrian flows were highest in September 2021.

Tactran Mode Share Surveys	
Stirling Council Area	GB01T20C61
Survey Report	16/12/2021





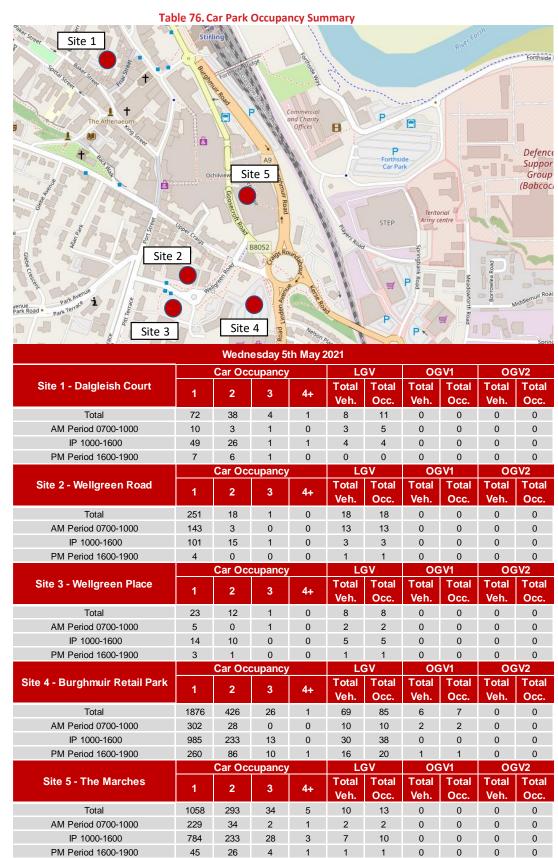
# 6. CAR PARK OCCUPANCY SURVEYS

# 6.1 Stirling Parking

- 6.1.1 Five locations within Stirling were selected for car park occupancy surveys. The survey analysis is detailed below:
- 6.1.2 For each of the car park occupancy surveys, the summary information is as follows:
  - Site Number
  - 0 Site Location
  - **Total Vehicle Occupancy**
  - AM Period Occupancy 07:00-10:00
  - 0 IP Period Occupancy 10:00-16:00
  - 0 PM Period Occupancy 16:00-19:00
- 6.1.3 Table 76 presents car park occupancy for the five surveyed parking areas in Stirling.







Tactran Mode Share Surveys	
Stirling Council Area	GB01T20C61
Survey Report	16/12/2021





# 7. SCHOOL PARKING

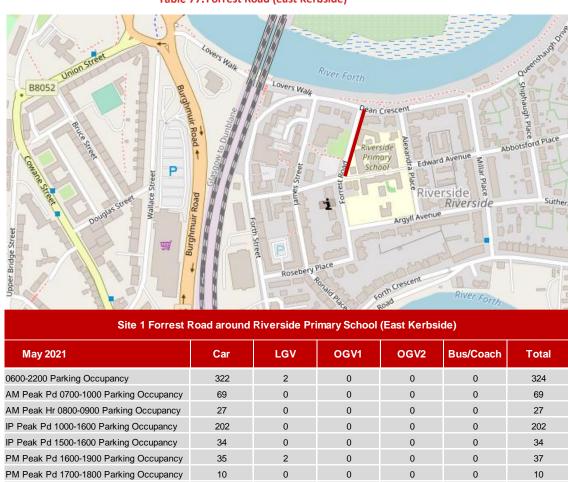
# 7.1 Riverside Primary School

- 7.1.1 Surveys were undertaken in May 2021 and September 2021 to monitor the number of parked vehicles on Forrest Road, near to the entrance of Riverside Primary School in Stirling.
- 7.1.2 Table 77 below presents the cumulative parking totals for the east kerbside on Forrest Road.





Table 77. Forrest Road (east Kerbside)



3	-	-	-	-	-	-
IP Peak Pd 1500-1600 Parking Occupancy	34	0	0	0	0	34
PM Peak Pd 1600-1900 Parking Occupancy	35	2	0	0	0	37
PM Peak Pd 1700-1800 Parking Occupancy	10	0	0	0	0	10
0600-2200 Vehicle Proportion	99.4%	0.6%	0.0%	0.0%	0.0%	100.0%
September 2021	Car	LGV	OGV1	OGV2	Bus/Coach	Total
0600-2200 Vehicle Flow	282	64	0	0	0	346
AM Peak Pd 0700-1000 Vehicle Flow	57	12	0	0	0	69
AM Peak Hr 0800-0900 Vehicle Flow	20	4	0	0	0	24
IP Peak Pd 1000-1600 Vehicle Flow	157	24	0	0	0	181
IP Peak Pd 1200-1300 Vehicle Flow	24	4	0	0	0	28
PM Peak Pd 1600-1900 Vehicle Flow	35	12	0	0	0	47
PM Peak Pd 1700-1800 Vehicle Flow	14	4	0	0	0	18
0600-2200 Vehicle Proportion	81.5%	18.5%	0.0%	0.0%	0.0%	100.0%
Difference	Car	LGV	OGV1	OGV2	Bus/Coach	Total
0600-2200 Vehicle Flow	-40	62	0	0	0	22
AM Peak Pd 0700-1000 Vehicle Flow	-12	12	0	0	0	0
AM Peak Hr 0800-0900 Vehicle Flow	-7	4	0	0	0	-3
IP Peak Pd 1000-1600 Vehicle Flow	-45	24	0	0	0	-21
IP Peak Pd 1200-1300 Vehicle Flow	-10	4	0	0	0	-6
PM Peak Pd 1600-1900 Vehicle Flow	0	10	0	0	0	10

7.1.3 Table 77 shows that there was a slight increase in parked vehicles across the day on the east side of Forrest Road in Stirling. There was a slight reduction in the number of parked cars, but an increase in parked LGV's.

Tactran Mode Share Surveys	
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PM Peak Pd 1700-1800 Vehicle Flow





7.1.4 Table 78 below presents the cumulative parking totals for the west kerbside on Forrest Road.

Table 78. Forrest Road (west Kerbside)



Site 1 Forrest Road around Riverside Primary School (West Kerbside) May 2021 LGV OGV1 OGV2 Bus/Coach Car **Total** 0600-2200 Parking Occupancy 538 529 9 0 0 0 AM Peak Pd 0700-1000 Parking Occupancy 117 0 0 0 0 117 AM Peak Hr 0800-0900 Parking Occupancy 42 0 42 IP Peak Pd 1000-1600 Parking Occupancy 307 0 0 315 IP Peak Pd 1500-1600 Parking Occupancy 46 0 48 PM Peak Pd 1600-1900 Parking Occupancy 70 0 0 71 PM Peak Pd 1700-1800 Parking Occupancy 25 0 0 0 0 25 0600-2200 Vehicle Proportion 98.3% 1.7% 0.0% 0.0% 0.0% 100.0% September 2021 Car LGV OGV1 OGV2 Bus/Coach **Total** 0600-2200 Vehicle Flow 589 2 1 0 0 592 AM Peak Pd 0700-1000 Vehicle Flow 121 122 0 AM Peak Hr 0800-0900 Vehicle Flow 44 0 0 44 IP Peak Pd 1000-1600 Vehicle Flow 355 0 356 IP Peak Pd 1200-1300 Vehicle Flow 49 0 0 0 0 49 PM Peak Pd 1600-1900 Vehicle Flow 79 0 0 0 80 PM Peak Pd 1700-1800 Vehicle Flow 29 29 0600-2200 Vehicle Proportion 99.5% 0.3% 0.2% 0.0% 0.0% 100.0% Difference Car LGV OGV1 OGV2 Bus/Coach **Total** 0600-2200 Vehicle Flow 60 -7 1 0 0 54 AM Peak Pd 0700-1000 Vehicle Flow 4 0 0 0 5 AM Peak Hr 0800-0900 Vehicle Flow 2 0 0 0 0 2 IP Peak Pd 1000-1600 Vehicle Flow 48 -7 0 41 IP Peak Pd 1200-1300 Vehicle Flow 3 -2 0 0 0 1 PM Peak Pd 1600-1900 Vehicle Flow 9 0 0 0 0 9 PM Peak Pd 1700-1800 Vehicle Flow 4 0 1.2% -1.3%

7.1.5 Table 78 shows that there was a slight increase in parked vehicles across the day on the west side of Forrest Road in Stirling.

Tactran Mode Share Surveys	
Stirling Council Area	GB01T20C61
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# 8. FOOTWAY SURVEYS REVIEW

### 8.1 Overview

- 8.1.1 Five sites were surveyed within Stirling. For each of the footway surveys, the summary information is as follows:
  - Site Number
  - Site Location
  - Total Flow Directional daily flow (over survey period)
  - Flow by Pedestrian Type (Adult, Adult and Child, Elderly, Disabled, Cyclist, Cyclist on foot, Horse)
  - AM Peak Flow 07:00-10:00 Footway Flow
  - Interpeak Flow 10:00-16:00 Footway Flow
  - PM Peak Flow 16:00-19:00 Footway Flow.

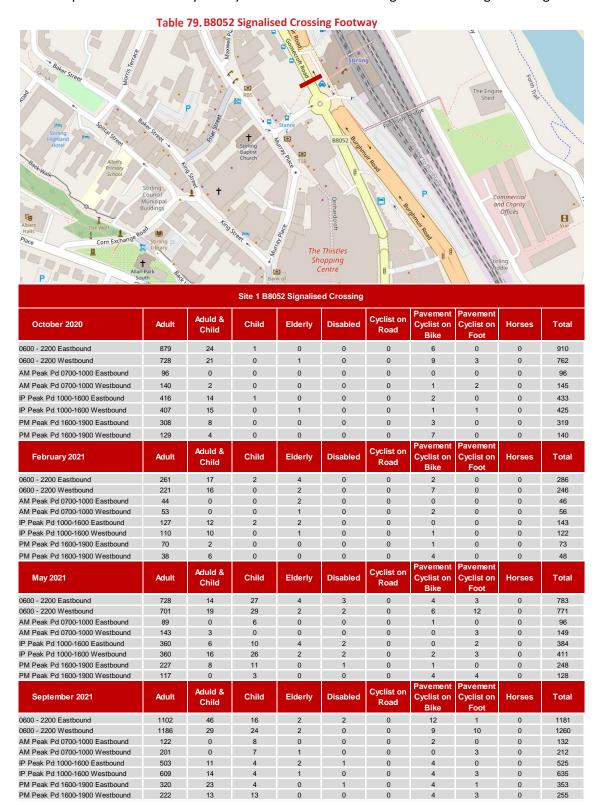
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# 8.3 Results of Footway Surveys

#### 8.3.1 Table 79 presents the footway survey information for B8052 signalised crossing in Stirling.



Tactran Mode Share Surveys	
Stirling Council Area	GB01T20C61
Survey Report	16/12/2021





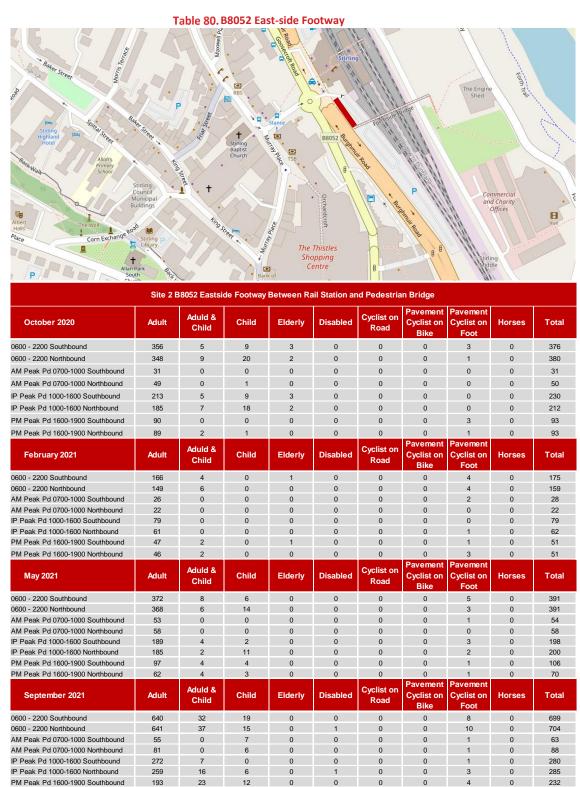
8.3.2	Table 79 shows that eastbound is the dominant movement at this survey location during each
	of the surveyed periods, except in September 2021 when the directional surveys are relatively
	consistent.

Tactran Mode Share Surveys	
Stirling Council Area	GB01T20C61
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8.3.4 Table 80 presents footway survey information for B8052 east-side footway (between Rail Station and pedestrian bridge) in Stirling.



8.3.5 Table 80 shows that pedestrian flows were significantly lower in February 2021.

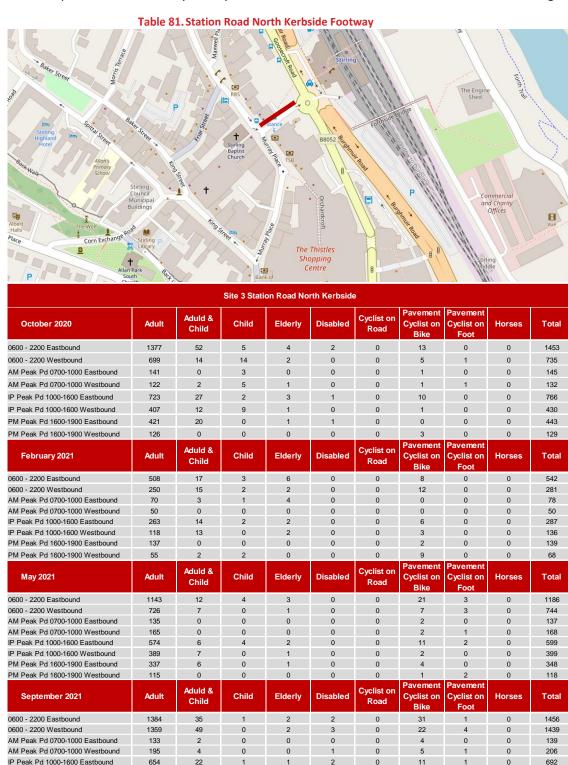
Tactran Mode Share Surveys	
Stirling Council Area	GB01T20C61
Survey Report	16/12/2021

PM Peak Pd 1600-1900 Northbound





8.3.7 Table 81 presents the footway survey information for Station Road north kerbside in Stirling.



8.3.8 Table 81 shows that eastbound is the dominant movement at this survey location during each of the surveyed periods. Pedestrians flows were significantly lower in February 2021.

Tactran Mode Share Surveys	
Stirling Council Area	GB01T20C61
Survey Report	16/12/2021

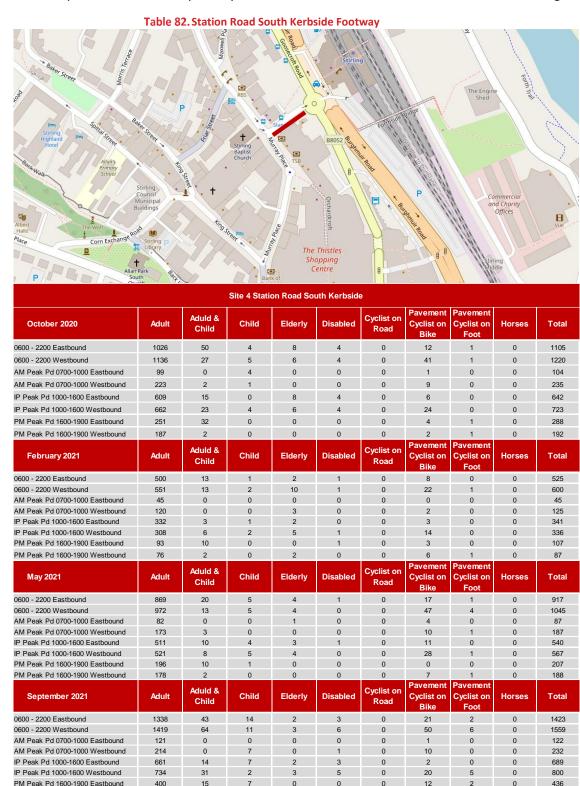
IP Peak Pd 1000-1600 Westbound

PM Peak Pd 1600-1900 Eastbound





8.3.10 Table 82 presents the footway survey information for Station Road south kerbside in Stirling.



8.3.11 Table 82 that southbound is the dominant movement at this survey location during each of the surveyed periods. Pedestrians flows were significantly lower in February 2021.

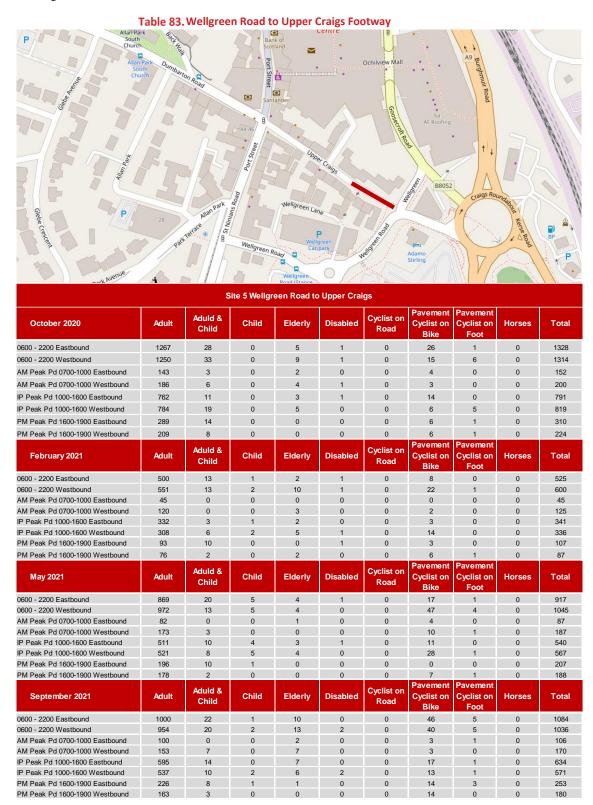
Tactran Mode Share Surveys	
Stirling Council Area	GB01T20C61
Survey Report	16/12/2021

PM Peak Pd 1600-1900 Westbound





8.3.13 Table 83 presents the footway survey information for Wellgreen Road to Upper Craigs in Stirling.



8.3.14 Table 83 shows that pedestrian flows were significantly lower in February 2021.

Tactran Mode Share Surveys	
Stirling Council Area	GB01T20C61
Survey Report	16/12/2021





## 9. MODE SHARE SURVEYS

# 9.1 Survey Periods

- 9.1.1 Surveys were undertaken between 06:00 and 22:00.
- 9.1.2 Analysis has been undertaken for the following time periods so results are comparable with a previous study undertaken by Stirling Council in 2019.
  - O AM Peak 07:30 09:30
  - O Inter Peak 11:00 14:00
  - PM Peak 16:00 18:00

#### 9.2 Rail Station Counts

- 9.2.1 Entry and exit counts were undertaken at Stirling Railway Station on Wednesday 5<sup>th</sup> May 2021. Surveys were undertaken between 06:00 and 22:00.
- 9.2.2 The results were classified by the following:
  - Adult
  - Adult & Child
  - Child
  - Elderly
  - O Disabled
  - Cyclist on Bike
  - Cyclist on Foot.
- 9.2.3 Table 84 presents a summary of the entry and exit counts.

**Table 84. Stirling Railway Station Entry/Exit Counts** 

Stirling Rail Stn	Station Entrance	Station Exit	Total Entry	Total Exit
06:00 - 22:00	1,290	1360	1,290	1,360
07:30 - 09:30	177	171	177	171
11:00 - 14:00	292	291	292	291
16:00 - 18:00	259	274	259	274

- 9.2.4 Table 84 shows that over the 16 hour period (0600-2200hrs), there was a total of 1,290 pedestrians entering Stirling Railway Station and 1,360 pedestrians exiting:
  - In the AM peak period (07:30 09:30), 177 pedestrians entered the station and 171 departed the station.
  - In the Inter peak period (11:00 14:00), 292 pedestrians entered the station and 291 departed the station.
  - O In the PM peak period (16:00 − 18:00), 259 pedestrians entered the station and 274 departed the station.





#### 9.3 Bus Station Counts

9.3.1 Bus station counts were not undertaken in Stirling.

## 9.4 Bus Occupancy Counts

- 9.4.1 Bus occupancy surveys were undertaken inbound and outbound to and from Stirling at each of the classified turning count sites COP1 to COP13, as shown in Figure 12.
- 9.4.2 Bus occupancy data was gathered for one day, Wednesday 5<sup>th</sup> May 2021, between 06:00 and 22:00.
- 9.4.3 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.
- 9.4.4 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:

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

- 9.4.5 Vehicles where the occupancy was not visible (e.g. where coaches had dark tinted windows) were excluded from the analysis.
- 9.4.6 Table 85 below presents the bus occupancy at each of the cordon points around Stirling city centre in the AM peak period (07:30 09:30).





Table 85. Bus & Coach Cordon Occupancy (AM Peak 07:30 - 09:30)

			Inbound			(	Outbound	
AM Peak Period (07:30-09:30)	Mode	Total Vehicles	Total Passengers	Average Occupancy	Mode	Total Vehicles	Total Passengers	Average Occupancy
COP1	Bus	38	288	8	Bus	0	0	0
COI 1	Coach	0	0	0	Coach	0	0	0
COP2	Bus	0	0	0	Bus	0	0	0
001 2	Coach	0	0	0	Coach	0	0	0
COP3	Bus	0	0	0	Bus	33	146	4
001 3	Coach	0	0	0	Coach	0	0	0
COP4	Bus	2	15	8	Bus	0	0	0
COI 4	Coach	0	0	0	Coach	0	0	0
COP5	Bus	0	0	0	Bus	5	23	5
COFS	Coach	0	0	0	Coach	0	0	0
COP6	Bus	1	18	18	Bus	1	8	8
COFO	Coach	0	0	0	Coach	0	0	0
COP7	Bus	0	0	0	Bus	0	0	0
COF1	Coach	0	0	0	Coach	1	0	0
COP8	Bus	17	194	11	Bus	16	147	9
COF6	Coach	1	4	4	Coach	0	0	0
COP9	Bus	19	227	12	Bus	17	188	11
COP9	Coach	1	4	4	Coach	1	0	0
COP10	Bus	29	257	9	Bus	27	177	7
COPTO	Coach	5	59	12	Coach	3	17	6
COP11	Bus	12	71	6	Bus	42	240	6
COLLI	Coach	4	35	9	Coach	4	45	11
COP12	Bus	6	8	1	Bus	5	23	5
OOF 12	Coach	3	4	1	Coach	5	21	4
COP13	Bus	0	0	0	Bus	1	8	8
COP 13	Coach	0	0	0	Coach	0	0	0

- 9.4.7 Table 85 shows that the corridor with the highest bus and coach occupancy was COP10, Goosecroft Road.
- 9.4.8 The average inbound bus occupancy in the AM peak was 6 passengers and the average coach occupancy was 3 passengers. In the outbound direction, the average bus occupancy was 5 passengers and the average coach had 2 passengers onboard.





9.4.9 Table 86 presents the same information for the Inter peak period (11:00 - 14:00).

Table 86. Bus & Coach Cordon Occupancy (Inter Peak 11:00 – 14:00)

			Inbound			(	Outbound	
IP Peak Period (11:00-14:00)	Mode	Total Vehicles	Total Passengers	Average Occupancy	Mode	Total Vehicles	Total Passengers	Average Occupancy
COP1	Bus	55	473	9	Bus	0	0	0
	Coach	0	0	0	Coach	0	0	0
COP2	Bus	0	0	0	Bus	0	0	0
001 2	Coach	0	0	0	Coach	0	0	0
COP3	Bus	0	0	0	Bus	48	360	8
001 3	Coach	0	0	0	Coach	0	0	0
COP4	Bus	7	8	1	Bus	0	0	0
001 4	Coach	0	0	0	Coach	0	0	0
COP5	Bus	0	0	0	Bus	7	8	1
COFS	Coach	0	0	0	Coach	0	0	0
COP6	Bus	2	0	0	Bus	2	36	18
COFO	Coach	0	0	0	Coach	0	0	0
COP7	Bus	0	0	0	Bus	0	0	0
COI 1	Coach	0	0	0	Coach	1	0	0
COP8	Bus	22	228	10	Bus	21	228	11
001 0	Coach	0	0	0	Coach	0	0	0
COP9	Bus	25	258	10	Bus	23	309	13
001 9	Coach	0	0	0	Coach	1	0	0
COP10	Bus	41	336	8	Bus	41	354	9
COI 10	Coach	0	0	0	Coach	0	0	0
COP11	Bus	19	164	9	Bus	65	620	10
00111	Coach	1	4	4	Coach	0	0	0
COP12	Bus	7	15	2	Bus	7	8	1
001 12	Coach	3	31	10	Coach	3	0	0
COP13	Bus	0	0	0	Bus	7	23	3
001 13	Coach	0	0	0	Coach	0	0	0

- 9.4.10 Table 86 shows that bus and coach occupancy was again highest on corridor COP10, Goosecroft Road in the inter peak period.
- 9.4.11 The average inbound bus occupancy in the inter peak was 4 passengers and the average coach occupancy was 1 passenger. In the outbound direction, the average bus occupancy was 6 passengers and the average coach had no passengers onboard.





9.4.12 Table 87 presents the same information for the PM peak (16:00 - 18:00).

Table 87. Bus & Coach Cordon Occupancy (PM Peak 16:00 – 18:00)

			Inbound			(	Outbound	
PM Peak Period (16:00-18:00)	Mode	Total Vehicles	Total Passengers	Average Occupancy	Mode	Total Vehicles	Total Passengers	Average Occupancy
COP1	Bus	40	324	8	Bus	0	0	0
	Coach	0	0	0	Coach	0	0	0
COP2	Bus	0	0	0	Bus	0	0	0
001 2	Coach	0	0	0	Coach	0	0	0
COP3	Bus	0	0	0	Bus	33	257	8
001 3	Coach	0	0	0	Coach	0	0	0
COP4	Bus	5	0	0	Bus	0	0	0
001 4	Coach	0	0	0	Coach	0	0	0
COP5	Bus	0	0	0	Bus	5	8	2
COFS	Coach	0	0	0	Coach	0	0	0
COP6	Bus	2	18	9	Bus	2	36	18
COFO	Coach	0	0	0	Coach	0	0	0
COP7	Bus	0	0	0	Bus	0	0	0
COI 1	Coach	0	0	0	Coach	0	0	0
COP8	Bus	15	150	10	Bus	17	201	12
COI 0	Coach	0	0	0	Coach	0	0	0
COP9	Bus	17	191	11	Bus	19	252	13
COI 9	Coach	0	0	0	Coach	0	0	0
COP10	Bus	27	180	7	Bus	27	303	11
COI 10	Coach	1	14	14	Coach	2	14	7
COP11	Bus	12	53	4	Bus	47	381	8
00111	Coach	4	55	14	Coach	3	17	6
COP12	Bus	5	23	5	Bus	4	8	2
001 12	Coach	11	28	3	Coach	5	41	8
COP13	Bus	0	0	0	Bus	5	30	6
001 13	Coach	0	0	0	Coach	0	0	0

- 9.4.13 Table 87 shows that bus occupancy during the PM Peak period was again highest on COP10 (Goosecroft Road).
- 9.4.14 The average inbound bus occupancy in the PM peak was 4 passengers and the average coach occupancy was 2 passengers. In the outbound direction, the average bus occupancy was 6 passengers and the average coach had 2 passengers onboard.





# 9.5 Vehicle Occupancy Counts

- 9.5.1 Vehicle occupancy counts were undertaken inbound and outbound to and from Stirling at each of the classified turning count sites COP1 to COP13, as shown in Figure 12.
- 9.5.2 Vehicle occupancy data was gathered for one day, Wednesday 5<sup>th</sup> May 2021, between 06:00 and 22:00.
- 9.5.3 Table 88 below presents the vehicle occupancy and sample rates at each of the inbound cordon points around Stirling city centre in the AM peak period (07:30 09:30).

Table 88. Vehicle Cordon Occupancy Inbound (AM Peak 07:30 - 09:30)

AM Peak Period (06:30-09:30)	Mode	Vehicle Total	Observed Vehicles	Sample Rate	Number of Occupants	Average Occupancy		Mode	Vehicle Total	Observed Vehicles	Sample Rate	Number of Occupants	Average Occupancy
	Car	229	56	24.5%	67	1.20		Car	377	83	22.0%	106	1.28
	LGV	55	23	41.8%	27	1.17	COP8	LGV	65	22	33.8%	25	1.14
COFI	OGV1	14	8	57.1%	9	1.13	COF6	OGV1	12	11	91.7%	11	1.00
	OGV2	0	0	-	0	-		OGV2	0	0	-	0	-
	Car	3	2	66.7%	2	1.00		Car	822	179	21.8%	212	1.18
CODA	LGV	1	0	0.0%	0	-	COP9	LGV	195	60	30.8%	69	1.15
COP2	OGV1	1	1	100.0%	1	1.00	COP9	OGV1	41	20	48.8%	27	1.35
	OGV2	0	0	-	0	-		OGV2	5	5	100.0%	5	1.00
	Car		-	-	-	-		Car	527	108	20.5%	129	1.19
COP2	LGV		-	-	-	-	COP10	LGV	82	32	39.0%	40	1.25
COPS	OGV1	-	-	-	-	-	COPTO	OGV1	25	17	68.0%	20	1.18
	OGV2	-	-	-	-	-		OGV2	0	0	-	0	-
	Car	166	50	30.1%	81	1.62		Car	217	53	24.4%	78	1.47
COD4	LGV	45	20	44.4%	25	1.25	COP11	LGV	32	21	65.6%	27	1.29
COP4	OGV1	11	8	72.7%	8	1.00	COPTI	OGV1	6	5	83.3%	7	1.40
	OGV2	0	0	-	0	-		OGV2	1	1	100.0%	2	2.00
	Car	141	39	27.7%	47	1.21		Car	671	147	21.9%	196	1.33
CODE	LGV	47	21	44.7%	26	1.24	COP12	LGV	139	48	34.5%	59	1.23
COPS	OGV1	7	6	85.7%	6	1.00	COP12	OGV1	29	17	58.6%	21	1.24
	OGV2	1	0	-	0	-		OGV2	14	10	71.4%	10	1.00
	Car	298	73	24.5%	91	1.25		Car	0	0	-	0	-
CODE	LGV	76	31	40.8%	40	1.29	COP13	LGV	0	0	-	0	-
COP6	OGV1	18	14	77.8%	17	1.21	COP13	OGV1	0	0	-	0	-
	OGV2	1	1	100.0%	1	1.00		OGV2	0	0	-	0	-
	Car	135	40	29.6%	57	1.43							
CODZ	LGV	23	16	69.6%	21	1.31							
COPI	OGV1	3	3	100.0%	5	1.67							
	OGV2	0	0	-	0	-							

9.5.4 Table 88 shows that in the AM peak period, inbound towards Stirling city centre, the average car occupancy was 1.29 persons, LGV 1.23 persons, OGV1 1.20 persons and OGV 2 1.25 persons.





9.5.5 Table 89 presents the same information for the inter peak period (11:00 - 14:00).

Table 89. Vehicle Inbound Cordon Occupancy (Inter Peak 11:00 – 14:00)

Inter Peak Period	Mode	Vehicle Total	Observed Vehicles	Sample Rate	Number of Occupants	Average Occupancy		Mode	Vehicle Total	Observed Vehicles	Sample Rate	Number of Occupants	Average Occupancy
(11.00-14.00)	Car	812	186	22.9%	244	1.31		Car	690	165	23.9%	224	1.36
Inter Peak Period (11:00-14:00)  COP1  COP2  COP3  COP4	LGV	93	35	37.6%	39	1.11		LGV	96	37	38.5%	44	1.19
COP1	OGV1	26	18	69.2%	22	1.22	COP8	OGV1	19	11	57.9%	13	1.18
	OGV2	0	0	-	0	-		OGV2	0	0	-	0	-
	Car	35	19	54.3%	22	1.16		Car	1271	279	22.0%	326	1.17
0000	LGV	9	6	66.7%	6	1.00	COP9	LGV	172	57	33.1%	75	1.32
COP2	OGV1	1	0	-	0	-	COP9	OGV1	38	25	65.8%	31	1.24
	OGV2	0	0	-	0	-		OGV2	7	6	85.7%	6	1.00
	Car			-	-	-		Car	1099	236	21.5%	322	1.36
COB3	LGV	-	-	-	-	-	COP10	LGV	107	46	43.0%	56	1.22
001 3	OGV1	-	-	-	-	-	001 10	OGV1	28	20	71.4%	24	1.20
	OGV2	-	-	-	-	-		OGV2	4	3	75.0%	3	1.00
	Car	265	73	27.5%	103	1.41		Car	402	101	25.1%	139	1.38
COP4	LGV	38	24	63.2%	27	1.13	COP11	LGV	47	25	53.2%	31	1.24
001 4	OGV1	10	7	70.0%	8	1.14	001 11	OGV1	16	12	75.0%	16	1.33
	OGV2	0	0	-	0	-		OGV2	1	1	100.0%	1	1.00
	Car	240	68	28.3%	92	1.35		Car	1083	227	21.0%	300	1.32
COP5	LGV	37	24	64.9%	29	1.21	COP12	LGV	125	54	43.2%	61	1.13
00.0	OGV1	8	6	75.0%	7	1.17	001 12	OGV1	48	25	52.1%	28	1.12
	OGV2	1	1	100.0%	1	1.00		OGV2	28	15	53.6%	15	1.00
	Car	634	150	23.7%	201	1.34		Car	0	0	-	0	-
COP6	LGV	98	34	34.7%	41	1.21	COP13	LGV	0	0	-	0	-
001 0	OGV1	28	19	67.9%	23	1.21	001 10	OGV1	0	0	-	0	-
	OGV2	5	3	60.0%	3	1.00		OGV2	0	0	-	0	-
	Car	193	61	31.6%	74	1.21							
COP7	LGV	31	26	83.9%	37	1.42							
	OGV1	2	2	100.0%	3	1.50							
	OGV2	0	0	-	0	-						326 75 31 6 322 56 24 3 139 31 16 1 300 61 28 15 0 0	

9.5.6 Table 89 shows that in the inter peak period, inbound towards Stirling city centre, the average car occupancy was 1.31 persons, LGV 1.20 persons, OGV1 1.23 persons and OGV 2 1.0 persons.





9.5.7 Table 90 presents the same information for the PM peak period (16:00 - 18:00).

Table 90. Vehicle Inbound Cordon Occupancy (PM Peak 16:00 – 18:00)

PM Peak Period (16:00-18:00)	Mode	Vehicle Total	Observed Vehicles	Sample Rate	Number of Occupants	Average Occupancy		Mode	Vehicle Total	Observed Vehicles	Sample Rate	Number of Occupants	Average Occupancy
	Car	539	120	22.3%	177	1.48		Car	546	127	23.3%	158	1.24
	LGV	43	7	16.3%	10	1.43	COP8	LGV	45	31	68.9%	39	1.26
001 1	OGV1	5	5	100.0%	5	1.00	0010	OGV1	11	7	63.6%	8	1.14
	OGV2	0	0	-	0	-		OGV2	0	0	-	0	-
	Car	43	20	46.5%	22	1.10		Car	960	209	21.8%	259	1.24
COP2	LGV	2	1	50.0%	1	1.00	COP9	LGV	116	41	35.3%	54	1.32
001 2	OGV1	0	0	-	0	-	001 3	OGV1	10	9	90.0%	10	1.11
	OGV2	0	0	-	0	-		OGV2	1	1	100.0%	1	1.00
	Car	-	-	-	-	-		Car	648	139	21.5%	183	1.32
COB3	LGV	-	-	-	-	-	COP10	LGV	55	25	45.5%	32	1.28
001 3	OGV1	-	-	-	-	-	COI 10	OGV1	12	10	83.3%	14	1.40
	OGV2	-	-	-	-	-		OGV2	0	0	-	0	-
	Car	249	62	24.9%	88	1.42		Car	269	68	25.3%	95	1.40
COB4	LGV	29	18	62.1%	19	1.06	COP11	LGV	37	17	45.9%	19	1.12
001 4	OGV1	5	4	80.0%	4	1.00	00111	OGV1	7	6	85.7%	8	1.33
	OGV2	0	0	-	0	-		OGV2	0	0	-	0	-
	Car	190	50	26.3%	65	1.30		Car	858	185	21.6%	241	1.30
COP5	LGV	18	15	83.3%	18	1.20	COP12	LGV	103	36	35.0%	38	1.06
001 0	OGV1	2	2	100.0%	2	1.00	001 12	OGV1	19	11	57.9%	12	1.09
	OGV2	0	0	-	0	-		OGV2	13	9	69.2%	9	1.00
	Car	421	102	24.2%	131	1.28		Car	0	0	-	0	-
CORE	LGV	63	26	41.3%	30	1.15	COP13	LGV	0	0	-	0	-
001 0	OGV1	13	10	76.9%	11	1.10	COI 13	OGV1	0	0	-	0	-
	OGV2	0	0	-	0	-		OGV2	0	0	-	0	-
	Car	135	39	28.9%	53	1.36							
COPT	LGV	19	13	68.4%	16	1.23							
0011	OGV1	1	1	100.0%	1	1.00							
	OGV2	0	0	-	0	-							

9.5.8 Table 90 shows that in the PM peak period, inbound towards Stirling city centre, the average car occupancy was 1.31 persons, LGV 1.19 persons, OGV1 1.12 persons and OGV 2 1.00 persons.





9.5.9 Table 91 below presents the vehicle occupancy and sample rates at each of the outbound cordon points around Stirling city centre in the AM peak period (07:30 – 09:30).

Table 91. Vehicle Cordon Occupancy Outbound (AM Peak 07:30 – 09:30)

AM Peak Period (06:30-09:30)	Mode	Vehicle Total	Observed Vehicles	Sample Rate	Number of Occupants	Average Occupancy		Mode	Vehicle Total	Observed Vehicles	Sample Rate	Number of Occupants	Average Occupancy
	Car	8	6	75.0%	6	1.00		Car	378	84	22.2%	97	1.15
	LGV	1	1	100.0%	1	1.00	COP8	LGV	52	24	46.2%	27	1.13
COFI	OGV1	0	0	-	0	-	COF	OGV1	20	10	50.0%	11	1.10
	OGV2	0	0	-	0	-		OGV2	0	0	-	0	-
	Car	27	15	55.6%	15	1.00		Car	617	132	21.4%	153	1.16
COP2	LGV	3	2	66.7%	3	-	COP9	LGV	122	42	34.4%	53	1.26
COFZ	OGV1	1	1	100.0%	1	1.00	COFS	OGV1	24	17	70.8%	20	1.18
	OGV2	0	0	-	0	-		OGV2	1	0	0.0%	0	-
	Car	136	37	27.2%	49	1.32		Car	239	72	30.1%	85	1.18
COB3	LGV	28	19	67.9%	21	-	COP10	LGV	50	31	62.0%	36	1.16
001 3	OGV1	6	4	66.7%	4	1.00	COI 10	OGV1	14	11	78.6%	13	1.18
	OGV2	0	0	-	0	-		OGV2	1	1	100.0%	1	1.00
	Car	0	0	-	0	-		Car	406	93	22.9%	110	1.18
COP4	LGV	0	0	-	0	-	COP11	LGV	81	30	37.0%	33	1.10
001 4	OGV1	0	0	-	0	-	001 11	OGV1	24	17	70.8%	22	1.29
	OGV2	0	0	-	0	-		OGV2	0	0	-	0	-
	Car	137	42	30.7%	53	1.26		Car	846	177	20.9%	233	1.32
COPS	LGV	34	20	58.8%	24	1.20	COP12	LGV	216	58	26.9%	64	1.10
001 3	OGV1	11	8	72.7%	9	1.13	COI 12	OGV1	54	25	46.3%	30	1.20
	OGV2	0	0	-	0	-		OGV2	26	13	50.0%	15	1.15
	Car	232	57	24.6%	68	1.19		Car	135	38	28.1%	52	1.37
COP6	LGV	114	36	31.6%	41	1.14	COP13	LGV	43	23	53.5%	28	1.22
001 0	OGV1	25	16	64.0%	20	1.25	001 10	OGV1	9	5	55.6%	5	1.00
	OGV2	2	1	50.0%	1	1.00		OGV2	1	1	100.0%	1	1.00
	Car	150	44	29.3%	50	1.14							
COP7	LGV	42	23	54.8%	32	1.39							
00//	OGV1	6	4	66.7%	6	1.50							
	OGV2	1	1	-	1	-							

9.5.10 Table 91 shows that in the AM peak period, outbound from Stirling city centre, the average car occupancy was 1.19 persons, LGV 1.17 persons, OGV1 1.17 persons and OGV 2 1.04 persons.

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9.5.11 Table 92 presents the same information for the inter peak period (11:00 - 14:00).

Table 92. Vehicle Inbound Cordon Occupancy (Inter Peak 11:00 – 14:00)

Inter Peak Period (11:00-14:00)	Mode	Vehicle Total	Observed Vehicles	Sample Rate	Number of Occupants	Average Occupancy		Mode	Vehicle Total	Observed Vehicles	Sample Rate	Number of Occupants	Average Occupancy
	Car	18	14	77.8%	17	1.21		Car	698	158	22.6%	200	1.27
COP1	LGV	4	3	75.0%	4	1.33	COP8	LGV	79	36	45.6%	45	1.25
COP1	OGV1	0	0	-	0	-	COP8	OGV1	18	11	61.1%	16	1.45
	OGV2	0	0	-	0	-		OGV2	1	0	-	0	-
	Car	38	24	63.2%	29	1.21		Car	1212	271	22.4%	322	1.19
COP2	LGV	6	4	66.7%	4	1.00	COP9	LGV	192	68	35.4%	78	1.15
COP2	OGV1	1	0	-	0	-	COPS	OGV1	42	25	59.5%	31	1.24
	OGV2	0	0	-	0	-		OGV2	7	5	71.4%	5	1.00
	Car	475	114	24.0%	143	1.25		Car	1135	250	22.0%	334	1.34
COP3	LGV	44	26	59.1%	30	1.15	COP10	LGV	85	37	43.5%	42	1.14
0013	OGV1	12	9	75.0%	11	1.22	COI 10	OGV1	24	19	79.2%	25	1.32
	OGV2	0	0	-	0	-		OGV2	2	1	50.0%	1	1.00
	Car	0	0	-	0	-		Car	919	210	22.9%	260	1.24
COP4	LGV	0	0	-	0	-	COP11	LGV	115	45	39.1%	55	1.22
0014	OGV1	0	0	-	0	-	001 11	OGV1	30	19	63.3%	24	1.26
	OGV2	0	0	-	0	-		OGV2	1	0	0.0%	0	-
	Car	391	101	25.8%	128	1.27		Car	1370	302	22.0%	396	1.31
COP5	LGV	57	33	57.9%	40	1.21	COP12	LGV	199	60	30.2%	70	1.17
0010	OGV1	14	12	85.7%	15	1.25	001 12	OGV1	71	34	47.9%	40	1.18
	OGV2	0	0	-	0	-		OGV2	28	19	67.9%	19	1.00
	Car	547	131	23.9%	169	1.29		Car	267	69	25.8%	94	1.36
COP6	LGV	85	38	44.7%	44	1.16	COP13	LGV	40	29	72.5%	34	1.17
001 0	OGV1	24	17	70.8%	19	1.12	001 13	OGV1	11	10	90.9%	12	1.20
	OGV2	7	5	71.4%	5	1.00		OGV2	1	1	100.0%	2	2.00
	Car	330	83	25.2%	115	1.39							
COP7	LGV	39	21	53.8%	24	1.14							
00.7	OGV1	3	1	33.3%	1	1.00							
	OGV2	0	0	-	0	-							

9.5.12 Table 92 shows that in the inter peak period, outbound from Stirling city centre, the average car occupancy was 1.28 persons, LGV 1.17 persons, OGV1 1.22 persons and OGV 2 1.20 person.





9.5.13 Table 93 presents the same information for the PM peak period (16:00 - 18:00).

Table 93. Vehicle Inbound Cordon Occupancy (PM Peak 16:00 – 18:00)

PM Peak Period (16:00-18:00)	Mode	Vehicle Total	Observed Vehicles	Sample Rate	Number of Occupants	Average Occupancy		Mode	Vehicle Total	Observed Vehicles	Sample Rate	Number of Occupants	Average Occupancy
	Car	13	9	69.2%	12	1.33		Car	563	122	21.7%	144	1.18
COP1	LGV	1	1	100.0%	1	1.00	COP8	LGV	65	19	29.2%	23	1.21
001 1	OGV1	0	0	-	0	-	001 0	OGV1	7	7	100.0%	7	1.00
	OGV2	0	0	-	0	-		OGV2	0	0	-	0	-
	Car	25	17	68.0%	20	1.18		Car	979	196	20.0%	263	1.34
COP2	LGV	2	2	100.0%	2	1.00	COP9	LGV	113	44	38.9%	51	1.16
001 2	OGV1	0	0	-	0	-	001 3	OGV1	18	12	66.7%	14	1.17
	OGV2	0	0	-	0	-		OGV2	0	0	-	0	-
	Car	350	80	22.9%	107	1.34		Car	728	160	22.0%	211	1.32
COP3	LGV	20	9	45.0%	10	1.11	COP10	LGV	49	26	53.1%	32	1.23
001 3	OGV1	3	2	66.7%	2	1.00	001 10	OGV1	10	6	60.0%	7	1.17
	OGV2	0	0	-	0	-		OGV2	0	0	-	0	-
	Car	0	0	-	0	-		Car	741	163	22.0%	214	1.31
COP4	LGV	0	0	-	0	-	COP11	LGV	60	23	38.3%	26	1.13
001 4	OGV1	0	0	-	0	-	001 11	OGV1	14	11	78.6%	14	1.27
	OGV2	0	0	-	0	-		OGV2	0	0	-	0	-
	Car	279	68	24.4%	91	1.34		Car	1066	222	20.8%	286	1.29
COP5	LGV	36	21	58.3%	25	1.19	COP12	LGV	184	48	26.1%	52	1.08
001 3	OGV1	6	6	100.0%	7	1.17	COI 12	OGV1	25	14	56.0%	16	1.14
	OGV2	0	0	-	0	-		OGV2	10	7	70.0%	7	1.00
	Car	417	96	23.0%	131	1.36		Car	183	50	27.3%	68	1.36
COP6	LGV	51	22	43.1%	24	1.09	COP13	LGV	15	10	66.7%	12	1.20
001 0	OGV1	4	3	75.0%	3	1.00	001 13	OGV1	2	2	100.0%	3	1.50
	OGV2	0	0	-	0	-		OGV2	0	0	-	0	-
	Car	272	69	25.4%	105	1.52							
COP7	LGV	30	18	60.0%	24	1.33							
00.7	OGV1	1	1	100.0%	2	2.00							
	OGV2	0	0	-	0	-							

9.5.14 Table 93 shows that in the PM peak period, inbound towards Stirling city centre, the average car occupancy was 1.32 persons, LGV 1.14 persons, OGV1 1.24 persons and OGV 2 1.00 person.





# 9.6 Results of Mode Share Surveys

- 9.6.1 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
  - O By Mode both by vehicle and by person.

### **Mode Share By Time Period**

9.6.2 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 07:30 – 09:30
 Inter-peak 11:00 – 14:00
 PM Peak 16:00 – 18:00

Full Day 07:30 – 09:30, 11:00 – 14:00 and 16:00 – 18:00

#### Mode Share By Mode

- 9.6.3 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
- 9.6.4 Within each site assessed, traffic is analysed routing inbound and outbound to and from the town/city.
- 9.6.5 In order to consider the volume of inbound and outbound trips to and from Stirling, the following assumptions and data usage was applied:
  - Sites COP1 to COP13 were assessed to represent the points of entry and exit to the city.
  - Bus/coach passengers which entered Stirling were assumed to be destinating in Stirling
- 9.6.6 The following figures present the Stirling mode share distribution, calculated from the survey data as detailed above. Figure 18 and Figure 19 present the AM Peak mode share by vehicle by direction and Figure 20 and Figure 21 present the AM Peak mode share by person by direction.
- 9.6.7 Each figure presents the mode share by vehicle type for the four survey periods (October 2020, February 2021, May 2021 and September 2021) and compares to the previous survey in April 2019. The inbound mode share by person is presented for May 2021 as this was the

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only survey that captured vehicle occupancy and is compared against the previous results in April 2019.

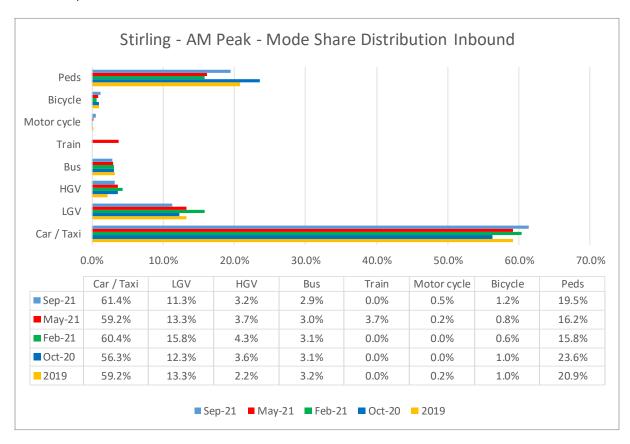


Figure 18. Stirling Mode Share Distribution Inbound – AM Peak

- 9.6.8 Figure 18 shows that the mode share of vehicles remained relatively consistent over the four survey periods. The results for rail are only included in May 2021 as bus station and rail station surveys were only undertaken at this point.
- 9.6.9 The proportion of pedestrians varied between 16% and 24% across all of the surveys, whilst the proportion of cyclists remained around 1% in all of the surveys.
- 9.6.10 The total number of vehicles and pedestrians surveyed in each year was 5,699 in April 2019, 3,344 in October 2021, 3,023 in February 2021, 4,570 in May 2021 and 4,604 in September 2021.





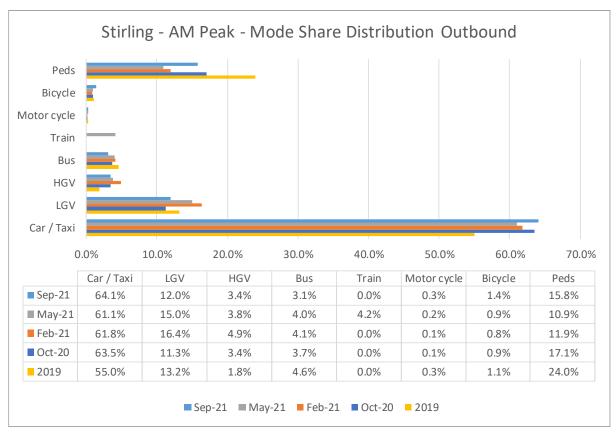


Figure 19. Stirling Mode Share Distribution Outbound – AM Peak

- 9.6.11 Figure 19 shows that the majority of people heading out of Stirling did so by car and taxi. Total bus usage was around 4% in the AM peak, rail was around 4%, bicycle 1% and walking between 11% and 17%.
- 9.6.12 The total number of vehicles and pedestrians surveyed in each year was 3,836 in April 2019, 4,099 in October 2021, 3,281 in February 2021, 4,263 in May 2021 and 5,059 in September 2021.





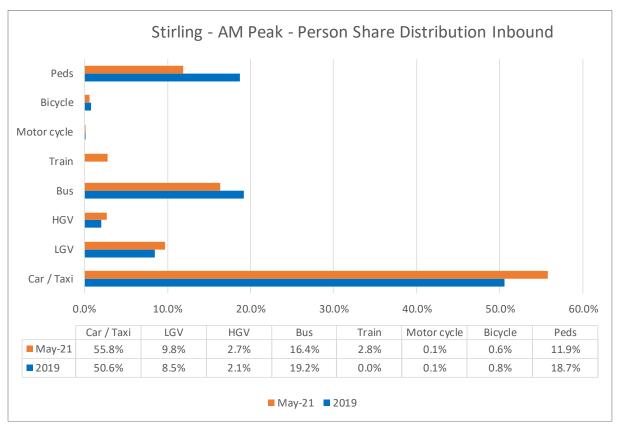


Figure 20. Stirling Person Share Distribution Inbound – AM Peak

- 9.6.13 Figure 20 shows that in the AM peak, the person mode share of vehicles remained relatively consistent over the survey periods. The biggest differences are seen in car usage and walking between 2019 and May 2021.
- 9.6.14 The total volume of people observed was 6,345 in April 2019 and 6,215 in May 2021.

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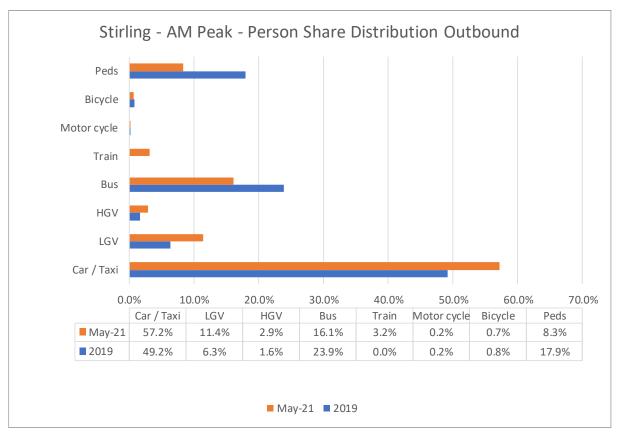


Figure 21. Stirling Person Share Distribution Outbound – AM Peak

- 9.6.15 Figure 21 shows that the majority of people heading out of Stirling did so by car and taxi. Total bus usage reduced to around 16%, and walking reduced to around 8% whilst car usage increased from around 49% to 57%.
- 9.6.16 The total volume of people observed was 5,126 in April 2019 and 5,591 in May 2021.
- 9.6.17 Figure 22 and Figure 23 present the Inter Peak mode share by vehicle by direction and Figure 24 and Figure 25 present the Inter Peak mode share by person by direction.
- 9.6.18 Each figure presents the mode share by vehicle type for the four survey periods (October 2020, February 2021, May 2021 and September 2021) and compares to the previous survey in 2019. The inbound mode share by person is presented for May 2021 as this was the only survey that captured vehicle occupancy and is compared against the previous results in 2019.





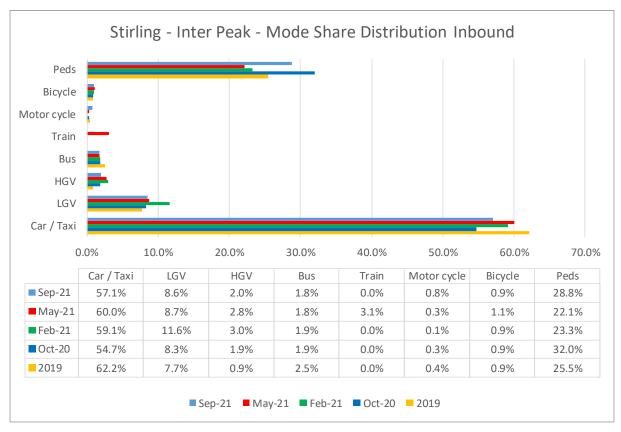


Figure 22. Stirling Mode Share Distribution Inbound – Inter Peak

- 9.6.19 Figure 22 shows that the mode share of vehicles remained relatively consistent over the four survey periods. The results for rail are only included in May 2021 as bus station and rail station surveys were only undertaken at this point.
- 9.6.20 The proportion of pedestrians varied between 22% and 32% across all of the surveys, whilst the proportion of cyclists remained around 1% in all of the surveys.
- 9.6.21 The total number of vehicles and pedestrians surveyed in each year was 7,359 in April 2019, 7,841 in October 2021, 6,290 in February 2021, 9,329 in May 2021 and 9,605 in September 2021.





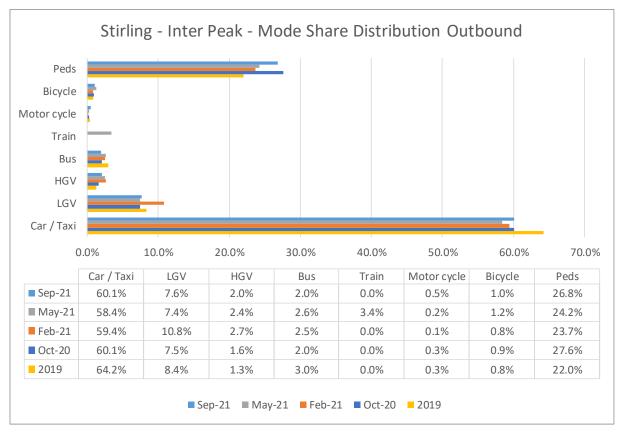


Figure 23. Stirling Mode Share Distribution Outbound – Inter Peak

- 9.6.22 Figure 23 shows that the majority of people heading out of Stirling did so by car and taxi. Total bus usage was around 3% in the inter peak, rail was around 3%, bicycle 1% and walking around 24%.
- 9.6.23 The total number of vehicles and pedestrians surveyed in each year was 6,384 in April 2019, 10,681 in October 2021, 7,552 in February 202, 8,508 in May 2021 and 11,375 in September 2021.





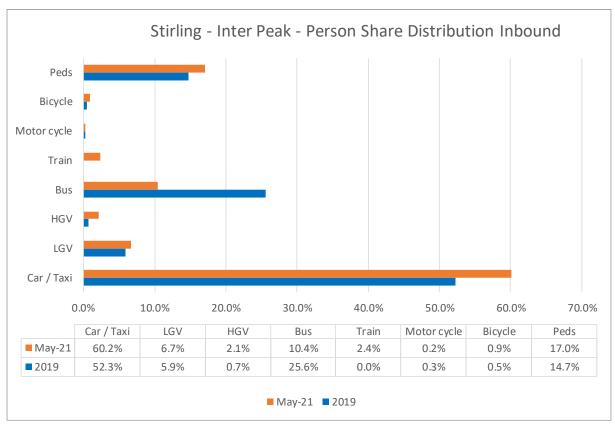


Figure 24. Stirling Person Share Distribution Inbound – Inter Peak

- 9.6.24 Figure 24 shows that in the Inter peak, the person mode share of vehicles remained relatively consistent over the survey periods. The biggest differences are seen in car usage and bus usage between 2019 and May 2021.
- 9.6.25 The total volume of people observed was 12,714 in April 2019 and 12,101 in May 2021.





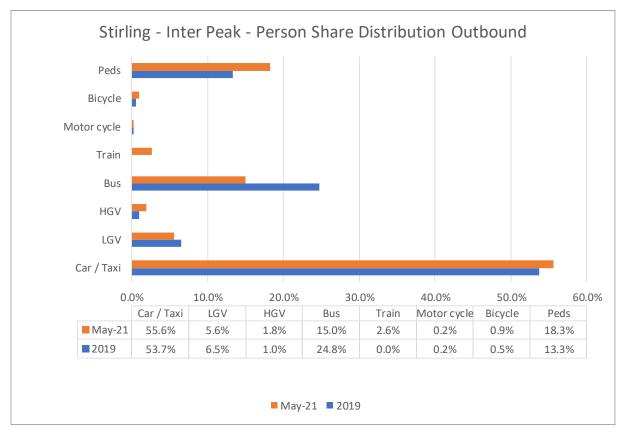


Figure 25. Stirling Person Share Distribution Outbound – Inter Peak

- 9.6.26 Figure 25 shows that the majority of people heading out of Stirling did so by car and taxi. Total bus usage reduced to around 15%, and walking increased to around 18% whilst car usage remained relatively consistent.
- 9.6.27 The total volume of people observed was 10,559 in April 2019 and 11,293 in May 2021.
- 9.6.28 The following figures present the Stirling mode share distribution, calculated from the survey data as detailed above. Figure 26 and Figure 27 present the PM Peak mode share by vehicle by direction and Figure 28 and Figure 29 present the PM Peak mode share by person by direction.
- 9.6.29 Each figure presents the mode share by vehicle type for the four survey periods (October 2020, February 2021, May 2021 and September 2021) and compares to the previous survey in 2019. The inbound mode share by person is presented for May 2021 as this was the only survey that captured vehicle occupancy and is compared against the previous results in 2019.

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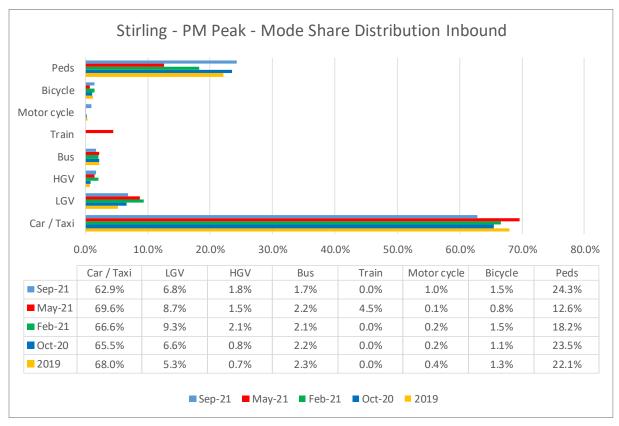


Figure 26. Stirling Mode Share Distribution Inbound – PM Peak

- 9.6.30 Figure 26 shows that the mode share of vehicles remained relatively consistent over the four survey periods. The results for rail are only included in May 2021 as bus station and rail station surveys were only undertaken at this point.
- 9.6.31 The proportion of pedestrians varied between 13% and 24% similar across all of the surveys, whilst the proportion of cyclists remained around 1% in all of the surveys.
- 9.6.32 The total number of vehicles and pedestrians surveyed in each year was 5,044 in April 2019, 5,181 in October 2021, 4,164 in February 2021, 6,120 in May 2021 and 6,899 in September 2021.





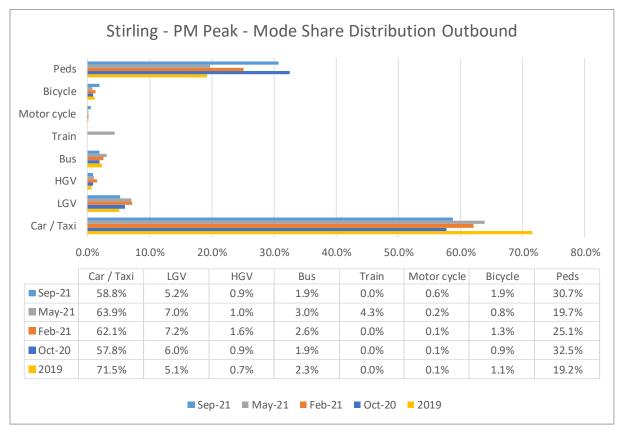


Figure 27. Stirling Mode Share Distribution Outbound – PM Peak

- 9.6.33 Figure 27 shows that the majority of people heading out of Stirling did so by car and taxi. Total bus usage was around 3% in the PM peak, rail was around 4%, bicycle 1% and walking between 19% and 33%.
- 9.6.34 The total number of vehicles and pedestrians surveyed in each year was 4,741 in April 2019, 8,456 in October 2021, 5,385 in February 2021, 5,994 in May 2021 and 9,075 in September 2021.

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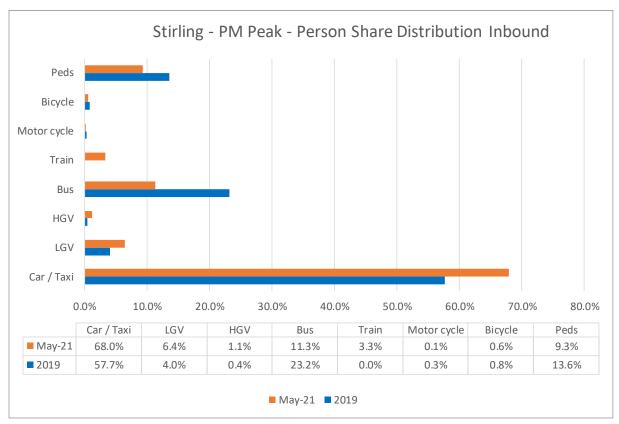


Figure 28. Stirling Person Share Distribution Inbound – PM Peak

- 9.6.35 Figure 28 shows that in the PM peak, the person mode share of vehicles remained relatively consistent over the survey periods. The biggest differences are seen in car usage, bus usage and walking between 2019 and May 2021.
- 9.6.36 The total volume of people observed was 8,233 in April 2019 and 8,332 in May 2021.





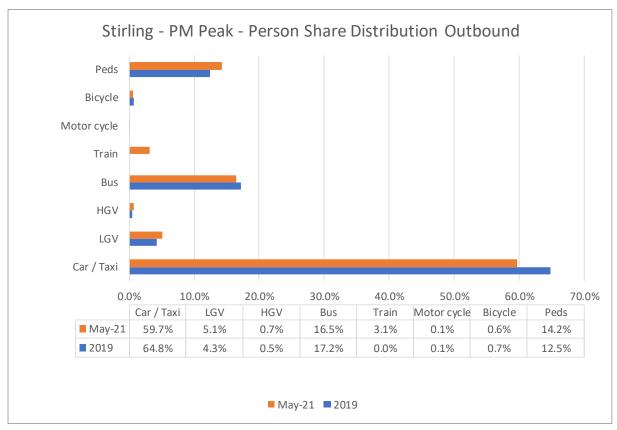


Figure 29. Stirling Person Share Distribution Outbound – PM Peak

- 9.6.37 Figure 29 shows that the majority of people heading out of Stirling did so by car and taxi. Total bus usage remained around 16%, walking around 13% whilst car usage decreased from around 65% to 60%.
- 9.6.38 The total volume of people observed was 7,290 in April 2019 and 8,313 in May 2021.
- 9.6.39 The following figures present the Stirling mode share distribution, calculated from the survey data as detailed above. Figure 30 and Figure 31 present the full day mode share by vehicle by direction and Figure 32 and Figure 33 present the full day mode share by person by direction.
- 9.6.40 Each figure presents the mode share by vehicle type for the four survey periods (October 2020, February 2021, May 2021 and September 2021) and compares to the previous survey in April 2019. The inbound mode share by person is presented for May 2021 as this was the only survey that captured vehicle occupancy and is compared against the previous results in April 2019.

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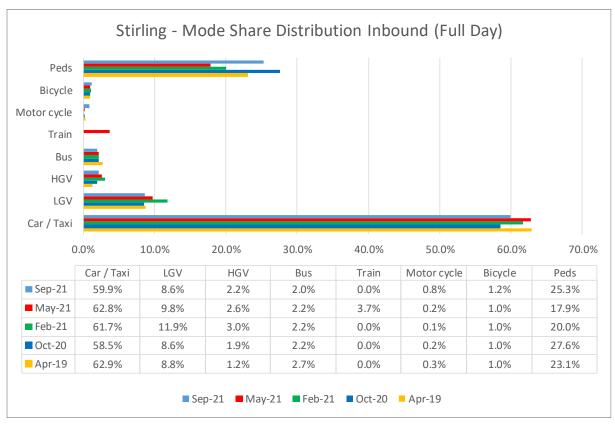


Figure 30. Stirling Mode Share Distribution Inbound – Full Day

- 9.6.41 Figure 30 shows that the mode share of vehicles remained relatively consistent over the four survey periods. The results for rail are only included in May 2021 as bus station and rail station surveys were only undertaken at this point.
- 9.6.42 The proportion of pedestrians varied between 18% and 28% similar across all of the surveys, whilst the proportion of cyclists remained around 1% in all of the surveys.
- 9.6.43 The total number of vehicles and pedestrians surveyed in each year was 18,102 in April 2019, 16,366 in October 2021, 13,477 in February 2021, 20,019 in May 2021 and 21,108 in September 2021.





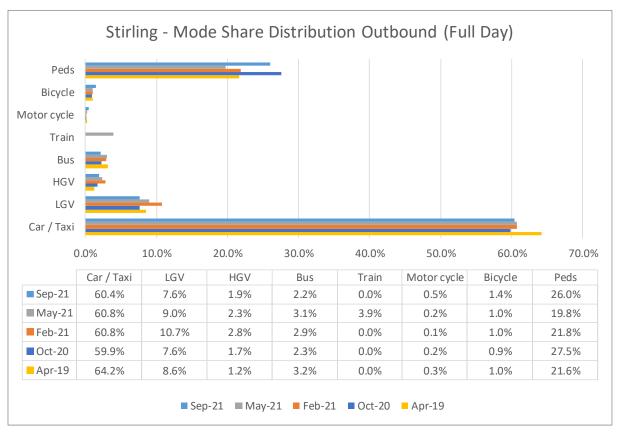


Figure 31. Stirling Mode Share Distribution Outbound – Full Day

- 9.6.44 Figure 31 shows that the majority of people heading out of Stirling did so by car and taxi. Total bus usage was around 3% across the day, rail was around 4%, bicycle 1% and walking between 20% and 28%.
- 9.6.45 The total number of vehicles and pedestrians surveyed in each year was 14,961 in April 2019, 23,236 in October 2021, 16,218 in February 2021, 18,765 in May 2021 and 25,509 in September 2021.

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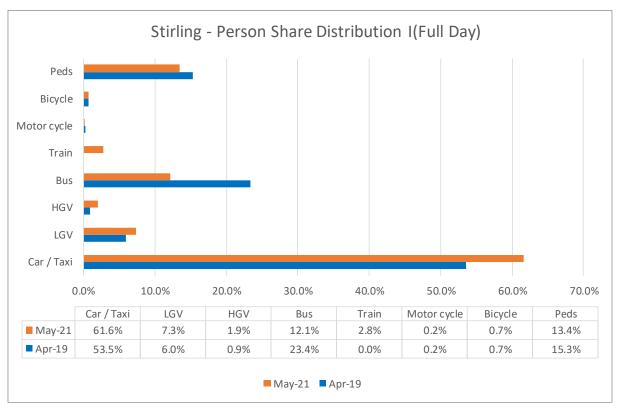


Figure 32. Stirling Person Share Distribution Inbound – Full Day

- 9.6.46 Figure 32 shows that across the day, the person mode share of vehicles remained relatively consistent over the survey periods. The biggest differences are seen in car usage, bus usage and walking between April 2019 and May 2021.
- 9.6.47 The total volume of people observed was 27,292 in April 2019 and 26,648 in May 2021.

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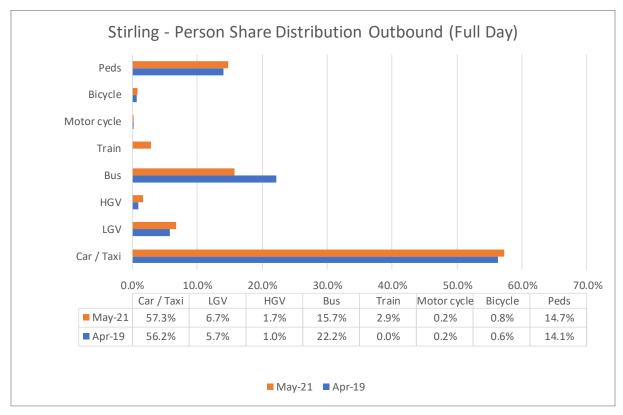


Figure 33. Stirling Person Share Distribution Outbound – Full Day

- 9.6.48 Figure 33 shows that the majority of people heading out of Stirling did so by car and taxi. Total bus usage dropped to around 16%, walking remained around 14% whilst car usage increased slightly from around 56% to 57%.
- 9.6.49 The total volume of people observed was 22,975 in April 2019 and 25,197 in May 2021

# 9.7 Dunblane Vehicle Occupancy

9.7.1 Vehicle occupancy surveys were undertaken in Dunblane on Wednesday 5<sup>th</sup> May 2021 between 06:00 and 22:00 at the following locations:

Site 1 B8033 Perth Road, north of bridgeSite 2 B8033 Stirling Road, south of bridge

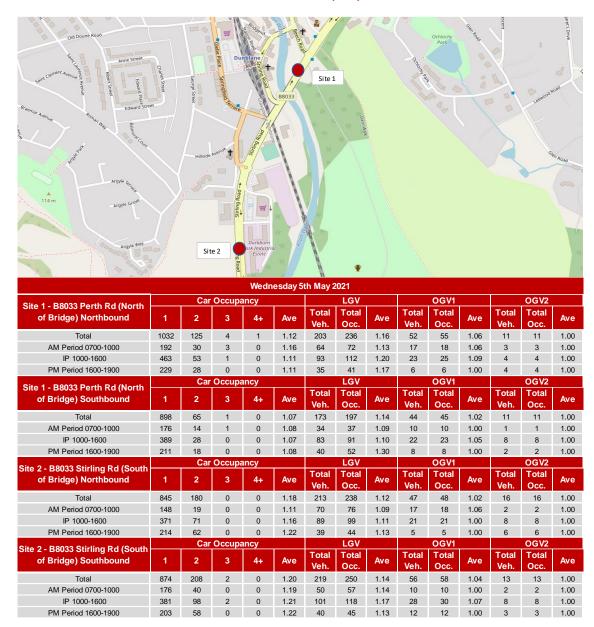
9.7.2 Table 94 below presents the results of the vehicle occupancy surveys.

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**Table 94. Dunblane Vehicle Occupancy** 



9.7.3 Table 94 shows that across the day, car occupancy varied between 1.07 and 1.22 occupants throughout Dunblane, LGV was between 1.09 and 1.30, OGV1 between 1.00 and 1.09 and OGV2 was 1.00 occupant at all sites throughout the day.

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# 10. SUMMARY & FINDINGS

# 10.1 Summary

- 10.1.1 SYSTRA Ltd (SYSTRA) was commissioned by Tactran to undertake traffic surveys through various sites in the Angus, Dundee, Perth & Kinross, & Stirling area.
- 10.1.2 The types of surveys undertaken for this study were:
  - Pedestrian Behaviour and volume counts
  - Link count and speed surveys
  - O Classified Turning Counts (including cyclists & pedestrians)
  - Rail Station Counts
  - Bus Station Counts
  - Bus Occupancy Counts
  - Vehicle Occupancy Counts.
- 10.1.3 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

- 10.1.4 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.

# 10.2 Findings

# **Pedestrian Behaviour and Volume Counts**

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

# **Stirling**

- On the east side footpath of Upper Craigs, over the 3 days In October 2020, 38% of pedestrians had no conflict, 58% pass within 2 metres of each other, 3 % pass with a space over 2 metres and 1 % cross the road.
- On the west side footpath of Upper Craigs, over the 3 days In October 2020, 83% of pedestrians had no conflict, 15% pass within 2 metres of each other and 2 % pass with a space over 2 metres.
- Pedestrian volume surveys indicate that in general the lowest flows were observed in February 2021 and the highest volumes were recorded in September 2021.

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# **Link Count and Speed Surveys**

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

# Stirling

- The mean speed of traffic on Murray Place (Site 1) and Upper Craigs (Site 2) went up in February 2021 and returned to November 2020 levels in May 2021 and September 2021.
- Millennium Way (Site 3) mean speeds went down in May 2021 from February 2021 and continued declining in September 2021 in a northbound direction.
- Murray Place (Site 4) average speeds remained the same in February, May and September 2021.
- Mean speeds on Causewayhead Road (Site 5) northbound went down in May and September 2021, while southbound went up in May 2021 when compared to February 2021, before showing a rapid decline in September 2021.
- The mean speed on Forrest Road (Site 6) was 17.3mph northbound and 13.6mph southbound in September 2021.
- The mean speed on Argyll Avenue (Site 7) was 15.9mph eastbound and 20.1mph westbound in September 2021

#### **Dunblane**

- Northbound directions for all three sites remained the same in February, May and September 2021
- Southbound mean speeds increased in May 2021 from February 2021 for Stirling Road (Site 3).
- Southbound mean speeds increased in May 2021 from February 2021 for the B8033 (Sites 2).

# **Bridge of Allan**

 Mean speeds decreased in both directions on Henderson Street throughout 2021 as the traffic flow increased.

# **Aberfoyle**

Mean speeds on Main Street increased in the westbound direction between February and May 2021 before decreasing in September 2021, however remained the same for traffic heading eastbound in February and May 2021 before decreasing in September 2021.

# Fallin

 A905 mean speeds increased for eastbound traffic from February to May 2021 but decreased in September 2021, however remained the same for traffic heading westbound before showing a decrease in September 2021.





#### Plean

- Mean speeds on Main Street increased in the northbound direction between February and May 2021, before decreasing in September 2021 however remained the same for traffic heading southbound between February and May 2021 before decreasing in September 2021
- The mean speed eastbound on Cadgers Loan in September 2021 was 29.3mph and 28.8mph in the westbound direction.

## Callander

• In May 2021, mean speeds had decreased in both directions on Main Street, when compared to February 2021. The reduction in speeds continued in September 2021.

## Killearn

Mean speeds increased on Main Street in the northbound direction between February and May 2021 before reducing in September 2021, however decreased for traffic heading southbound, when comparing February, May and September 2021.

# Gargunnock

- Mean speeds increased in both May 2021 and September 2021 from February 2021 in both eastbound and westbound directions for Manse Brae.
- The mean speed northbound on Station Road in September 2021 was 18.5mph and 19.2mph in the southbound direction

# **Mode Share Surveys (Stirling)**

- 10.2.3 The results of the mode share surveys in Stirling indicate that the mode share has remained consistent over the three surveys, car usage in each period has been around 60%, the volume of cyclists has remained below 1% and pedestrians have remained consistent at around 15% to 20%. The mode share by person surveys indicated:
  - In the 2021 AM peak the majority of people travelling inbound were doing so by car/taxi (55.8%), LGV accounted for around 10% of people and HGV around 3%. In terms of public transport bus accounted for around 16% of people and train under 3%. Cycling and walking accounted for just under 13%, cycling at 0.6% and walking at 11.9% of all people heading inbound towards Stirling city centre.
  - In the 2021 AM peak the majority of people travelling outbound were again doing so by car/taxi (57.2%), LGV accounted for around 11% of people and HGV around 3%. In terms of public transport bus accounted for around 16% of people and train around 3%. Cycling and walking accounted for around 9%, cycling at 0.7% and walking at 8.3% of all people heading outbound from Stirling city centre.
  - In the 2021 inter-peak, the majority of people travelling inbound were doing so by car/taxi (60.2%), LGV accounted for 7% of people and HGV around 2%. In terms of public transport bus accounted for around 10% of people and train under 3%.





- Cycling and walking accounted for just under 18%, cycling at 0.9% and walking at 17% of all people heading inbound towards Stirling city centre.
- In the 2021 inter-peak, the majority of people travelling outbound were again doing so by car/taxi (55.6%), LGV accounted for around 6% of people and HGV around 2%. In terms of public transport bus accounted for around 15% of people and train under 3%. Cycling and walking accounted for just under 20%, cycling at 0.9% and walking at 18.3% of all people heading outbound from Stirling city centre.
- In the 2021 PM peak, the majority of people travelling inbound were doing so by car/taxi (68.0%), LGV accounted for slightly under 7% of people and HGV around 1.1%. In terms of public transport bus accounted for around 11.3% of people and train under 4%. Cycling and walking accounted for just under 10%, cycling at 0.6% and walking at 9.3% of all people heading inbound towards Stirling city centre.
- In the 2021 PM peak, the majority of people travelling outbound were doing so by car/taxi (59.7%), LGV accounted for around 8% of people and HGV around 0.7%. In terms of public transport bus accounted for around 17% of people and train around 3%. Cycling and walking accounted for just under 15%, cycling at 0.6% and walking at 14.2% of all people heading outbound from Stirling city centre.
- Across the day in May 2021, the majority of people travelling inbound were doing so by car/taxi (61.6%), LGV accounted for slightly over 7% of people and HGV around 2%. In terms of public transport bus accounted for around 12% of people and train under 3%. Cycling and walking accounted for just over 14%, cycling at 0.7% and walking at 13.4% of all people heading inbound towards Stirling city centre.
- Across the day in 2021, the majority of people travelling outbound were doing so by car/taxi (57.3%), LGV accounted for around 7% of people and HGV almost 2%. In terms of public transport bus accounted for around 16% of people and train around 3%. Cycling and walking accounted for just over 15%, cycling at 0.8% and walking at 14.7% of all people heading outbound from Stirling city centre.





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