City Centre West to East Cycle Link and Street Improvements Project (CCWEL)
Reference number CT2460

FEBRUARY 2021

BASELINE MONITORING AND EVALUATION

THE CITY OF EDINBURGH COUNCIL

SYSTRA

CITY CENTRE WEST TO EAST CYCLE LINK AND STREET IMPROVEMENTS PROJECT (CCWEL)

BASELINE MONITORING AND EVALUATION

IDENTIFICATION TABLE	
Client/Project owner	City of Edinburgh Council
Project	City Centre West to East Cycle Link and Street Improvements Project (CCWEL)
Study	Baseline Monitoring and Evaluation
Type of document	Report
Date	19/02/2021
Reference number	CT2460
Number of pages	164

APPROVAL					
Version	**Name**		**Position**	**Date**	**Modifications**
1	Authors	Jana Haspicova, Sophie Murphy, Aisling O'Riain, Eilidh Stirling, Jorge Molina	Principal, Senior, Assistant, Assistant, Assistant	15/02/2021	
	Checked by	Euan Hamilton-Rigg	Principal / PM	17/02/2021	
	Approved by	David Connolly	Director	19/02/2021	

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

1. INTRODUCTION

1.1.1 SYSTRA Ltd has been commissioned by the City of Edinburgh Council (CEC) to undertake monitoring and evaluation of the City Centre West to East Cycle Link ad Street Improvements project (CCWEL).

1.1.2 The purpose of this report is to present the findings of the data collection and analysis undertaken to establish the monitoring baseline for the project.

1.2 City Centre West to East Cycle Link and Street Improvements

1.2.1 The CCWEL project involves developing a new cycle route which will link the Roseburn path to Leith Walk via the City Centre. The route will be a key part of Edinburgh's Quiet Routes network and form part of National Cycle Network (NCN) Route 1.

1.2.2 The new link will provide improvements for walking, cycling and wheeling[1]. The route will be mostly segregated from traffic and run along key streets including Roseburn Terrace, West Coates, Haymarket Terrace, Melville Street, George Street and York Place. The proposed route is shown in Figure 1.

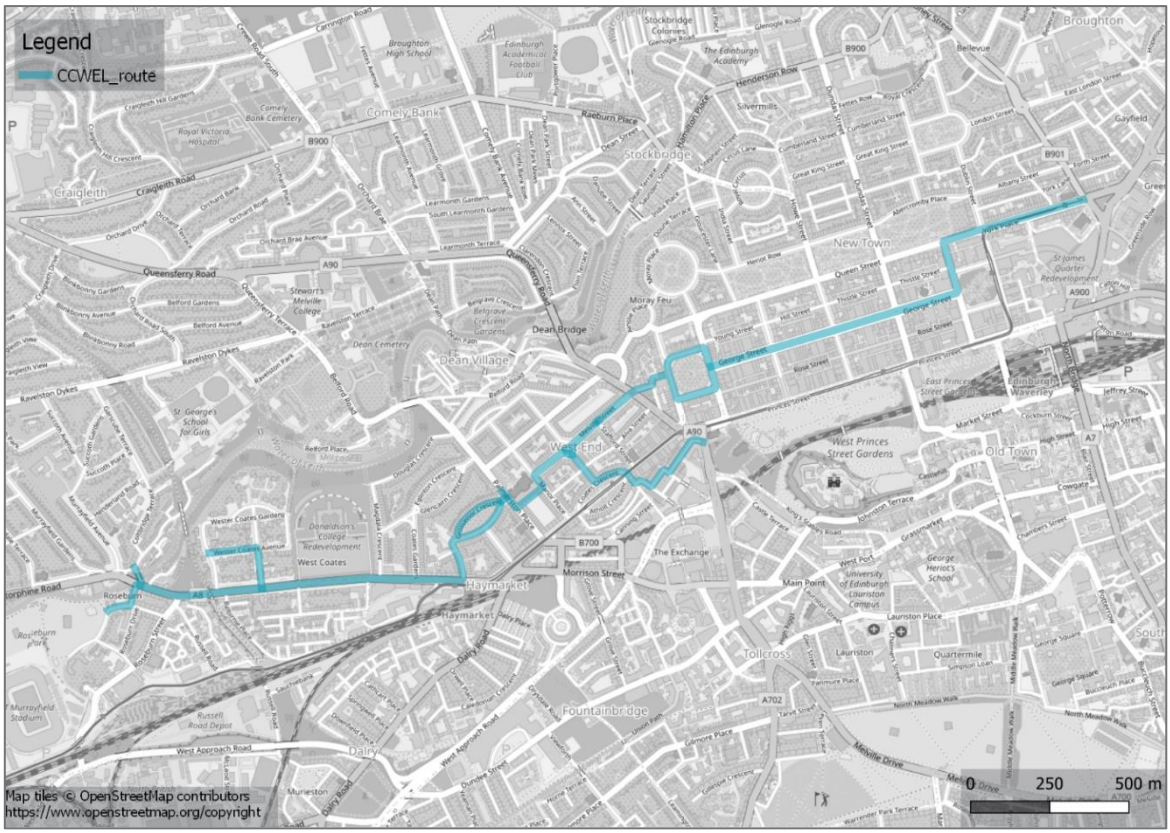


Figure 1. CCWEL route

[1] making progress in a wheelchair, either manual or electric

1.2.3 Other improvements as part of the project include an increased number and quality of road crossings, wider footways and new / improved greenspaces.

1.2.4 The project is being delivered through partnership between CEC and Sustrans Scotland, who are providing funding for project delivery through their Places for Everyone programme (PfE).

1.2.5 It is expected that the project will:

- provide safety benefits for cyclists;
- provide safer routes to schools;
- benefit the local economy through access to shops and services, and improved streetscape;
- improve accessibility for all to services through a more cohesive street environment;
- improve local air quality;
- facilitate way-finding for those not familiar with the city; and
- improve cycle-based access to Edinburgh's city centre, including Haymarket and Waverley railway stations, Rutland Square and Lothian Road.

1.3 Monitoring and evaluation

1.3.1 The aim of the monitoring and evaluation is to provide a thorough and comprehensive set of information against which the overall impact of the project will be assessed. The information will also help to:

- understand the outcomes from the project;
- quantify the scheme's benefits;
- demonstrate value for money; and
- provide valuable insights into what can be expected from other, similar projects in the future.

1.3.2 The objectives of the monitoring and evaluation support the relevant CEC Policy as well as the aims of the Places for Everyone programme, and fall within six themes of Place, Safety, Transport, Environment, Economy, and Public Interest and Awareness.

1.3.3 The outcomes of the monitoring and evaluation are/will be:

- Baseline report (this document);
- Six Month Report;
- Primary Report – 12 months after construction; and
- Follow-up Report – 24 months after construction.

1.4 Data sources

1.4.1 In order to establish a comprehensive and thorough set of data, a range of techniques and data sources were used, including on-street surveys, video surveys, manual and automatic counts, existing data, direct stakeholder engagement and direct assessment and site audits.

1.4.2 The type of data and the timeline for its collection is outlined in Table 1.

Table 1. Project tasks and timeline

Task No.	Survey Description	Baseline	Scheme Completion + 6 months	+ 12 months	+ 24 months
M1	Cycle Survey	✓	✓	✓	×
M2	Pedestrian Interviews	✓	✓	✓	×
M3	Shopper Survey	✓	✓	✓	×
M4	Household Survey	✓	✓	✓	✓
M5	Stakeholder Group Survey	✓	✓	✓	×
M6	Roseburn Primary School Survey	✓	✓	×	×
M7	Trader Interviews	✓	×	✓	×
M8	Taxi Trade Interviews	✓	✓	×	×
M9	Existing Surveys	✓	×	✓	✓
M10	Interaction Analysis	×	✓	✓	✓
M11	Street Video Survey	✓	✓	✓	✓
M11-a	Path Tracing Bolt-on	✓	✓	×	×
M12	Taxi Video Survey	×	✓	✓	×
M13	Auto Counters	×	✓	✓	✓
M14	Parking and Loading Survey	×	×	✓	×
M15	Vacant Premises Count	✓	×	✓	✓
M16	Stats 19 Data	✓	×	×	✓
M17	Bus and Tram Passenger Numbers	✓	×	✓	×
M18	Bus Tracker Data	✓	×	✓	×
M19	Air Quality Monitoring	×	×	✓	✓
M20	TfE Cycle Hire	×	×	✓	×
M21	Access Group Participation	×	✓	×	×
M22	Heritage Organisation Participation	×	✓	×	×
M23	Trial Journeys by Bike	✓	✓	×	×
M24	Adjacent Property Values	×	×	✓	×
M25	Inst of Trees	×	✓	×	×
M26	Street Noise Levels	×	✓	×	×
M27	Impact on GHG Emissions	×	✓	×	×

2. M1 - CYCLE SURVEYS

2.1 Objectives

2.1.1 The purpose of this task was to monitor the contribution of the CCWEL scheme to the following objectives:

- **P.2**[2] Create a high-quality cycle route:
  - That meets cycle route objectives of: safety, comfort, attractiveness, coherence & directness, accessibility & socio-economic impact, streetscape and implementability;
  - Provides an expedient route across the city centre, with journey times rivalling, or bettering private car, and

[2] This numbering system relates to the project brief where objectives are allocated to groups: P for Place, S for Safety, T for Transport, EN for Environment and EC for Economy.

- Integrates with planned segregated facilities on Leith Walk and George Street and with the wider Edinburgh Family Network

- **S.3.** Improve perceptions of safety amongst vulnerable road users in the corridor
- **T.1.** Increase the modal share for cycling in the corridor including:
  - The number of journeys to work made by cycle in the corridor
  - The number, and proportion, of off-peak[3] cycle trips in the corridor
  - The number, and proportion, of women cycling within the corridor
  - The number, and proportion, of people cycling in from deprived areas
  - Widen the age cross-section of people cycling within the corridor

- **T.2.** Improve access to/ from public transport by foot and by bike

2.1.2 The information gathered during this task in respect of these objectives is:

- Experience of users cycling the route regarding route quality
- Perceptions of safety among all users before and after implementation
- Baseline number of women cycling within Project Corridor, and throughout Edinburgh and change post-construction
- Different ages of people cycling within Project Corridor, and throughout Edinburgh and change post construction
- Change in number of people cycling in from deprived areas
- Number and proportion of people on bikes integrating with a form of public transport

2.2 Methodology

2.2.1 Surveys were undertaken at the sites shown in Figure 2.

[3] outside 08:00-09:00 and 17:00-18:00

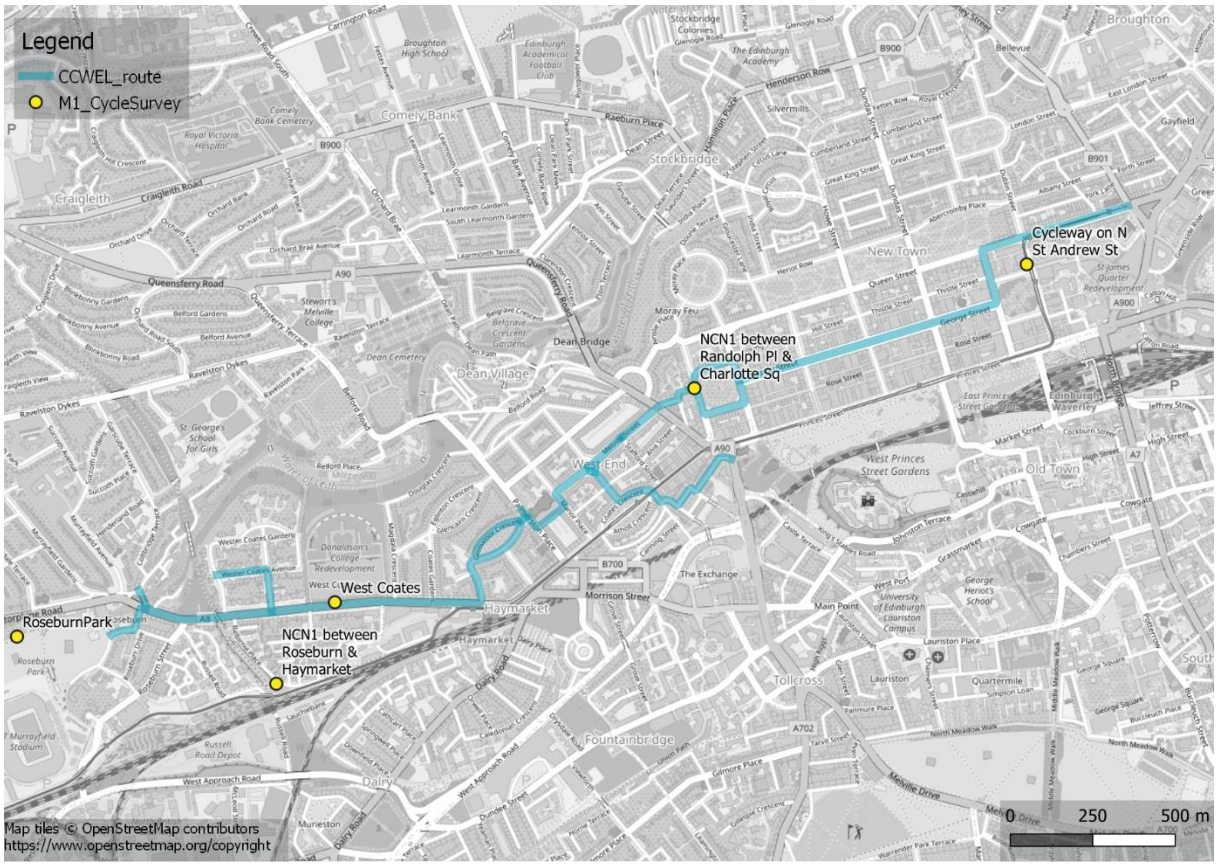


Figure 2. Cycle survey sites

2.2.2 For the site on West Coates, traffic management was required to provide a safe space in the eastbound bus lane in which cyclists could stop and be interviewed. The section of bus lane was closed for the duration of the survey, as illustrated in Figure 3.

Figure 3. Traffic management for cyclist survey on West Coates

2.2.3 Signage to highlight the survey location and the purpose for the survey was installed well upstream of all survey sites.

2.2.4 Cyclists were intercepted when safe to do so, and either completed the questionnaire with the interviewer, or were handed a postcard with an online survey link. In total, 56 interviews were completed on a face-to-face basis and 637 via online self-completion. The face-to-face version of the questionnaire took around 5 minutes for each respondent to complete.

2.3 Data and analysis

M1: Cycling Behaviour

2.3.1 Respondents were asked to state how confident they feel cycling in and around Edinburgh. As shown in Figure 4, almost three-quarters (74.4%, 520) stated they are 'confident cycling in most or all situations'. A further 14.1% (99) said they feel 'confident cycling for local trips' and another 10.3% (72) stated 'I feel confident, but only cycling away from traffic'.

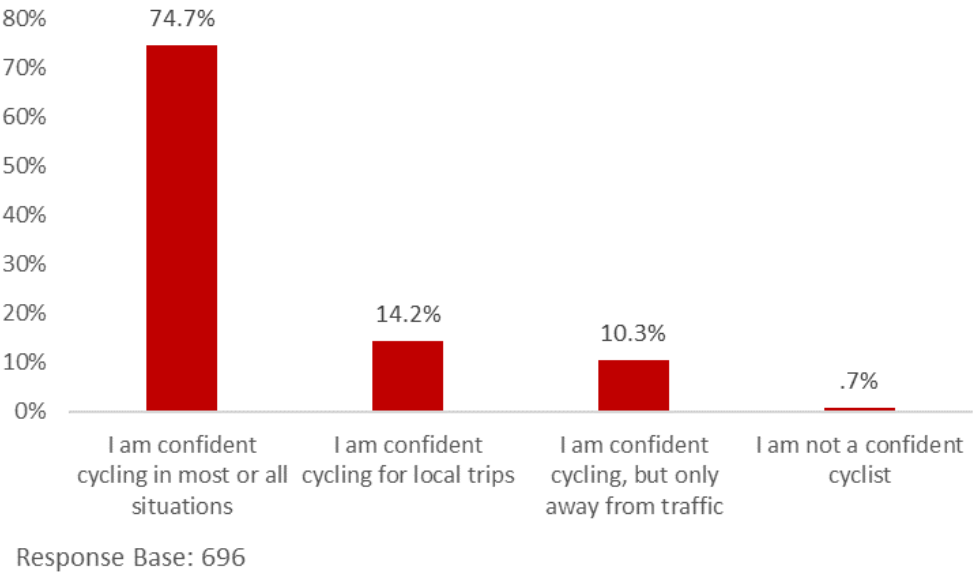


Figure 4. Cycle Survey: Cycle Confidence

2.3.2 Respondents were asked for the purpose of their cycle journey at the time they were interviewed or handed a postcard. Analysis of results in Figure 5 shows that commuting to work and leisure / recreation were the most common responses; 28.7% (200) and 27.9% (194) respectively. Few were travelling for other reasons, such as shopping, socialising, personal business or school commutes. Of all respondents, the majority (92.8%, 646) did not use another mode of transport as part of their journey.

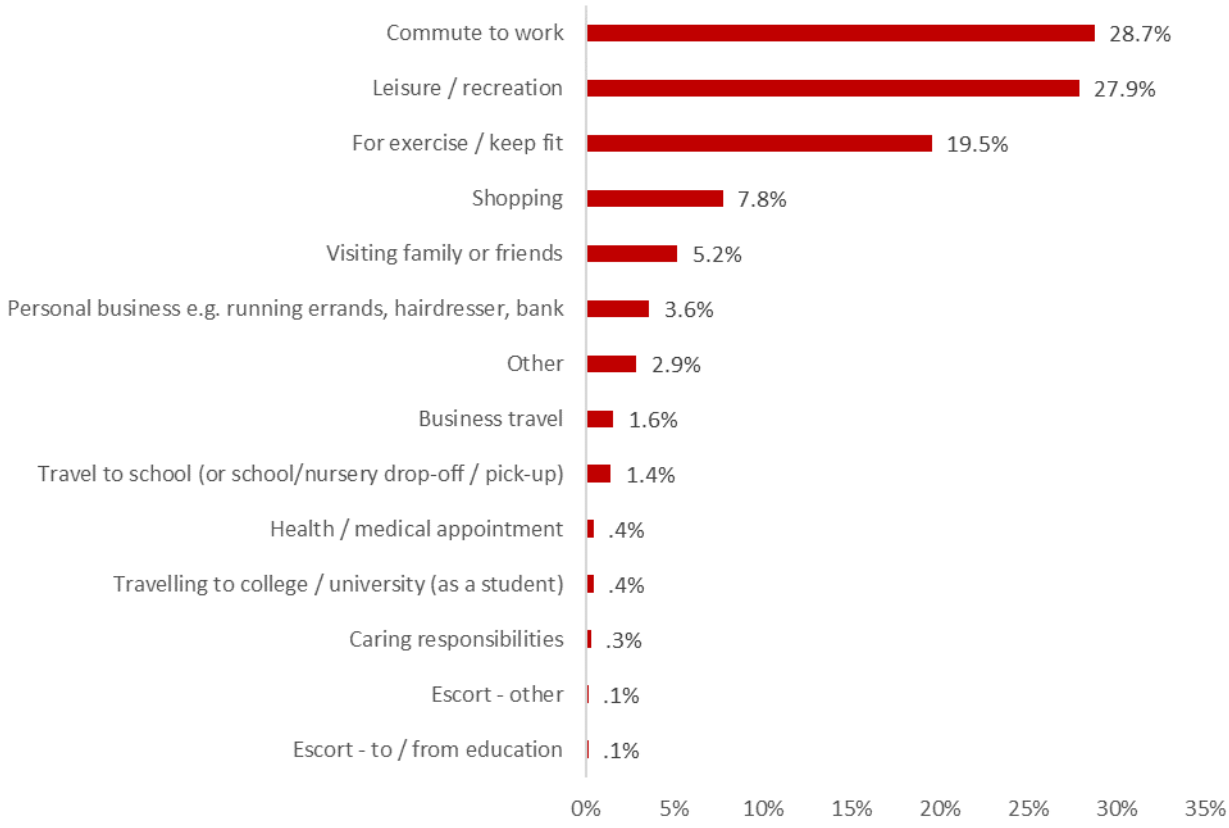


Figure 5. Cycle Survey: Journey Purpose

2.3.3 Respondents were asked how frequently they carry out this journey; close to half (43.2%, 301) made it at least weekly; and just over one in ten (13.6%, 95) did it daily. Of those responding, 83.9% (584) stated they did usually make this journey by bike; though 4.7% (33) stated they usually made the journey by car/van, and 3.7% (26) travelled by foot.

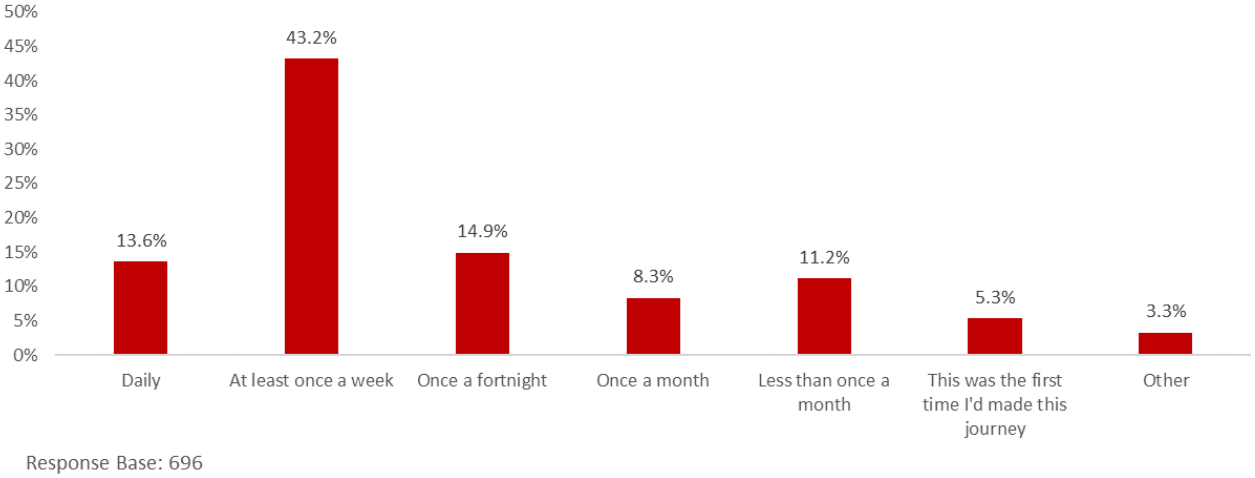


Figure 6. Cycle Survey: Frequency of Travel

2.3.4 To get some insight into the impact of the Covid-19 pandemic, respondents were asked if it had impacted their mode of travel choice, 'If the Covid-19 pandemic hadn't happened, would you have undertaken this journey by a different mode of transport?', the results of which are shown in Figure 7. The majority, 82.5% (574) stated it did not have an impact of their mode of travel. However, this suggests it has been a factor in modal shift for some of the remaining 17.5% (122), with 6.9% (48) stated they would have previously travelled by bus.

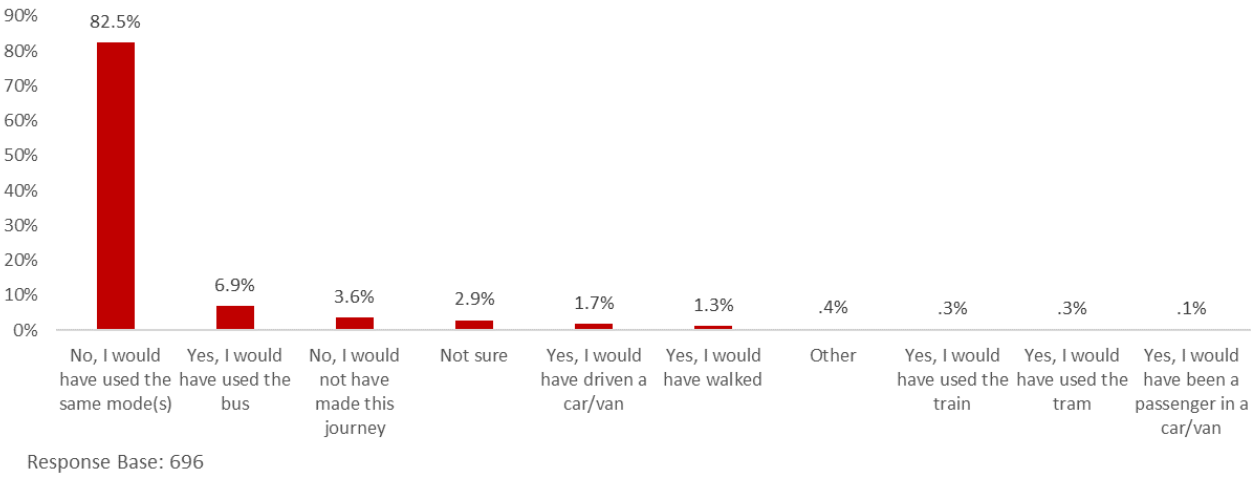


Figure 7. Cycle Survey: Impact of Covid-19

M1: Reasons for Cycling

2.3.5 Figure 8 summarises the reasons people agreed, or disagreed with, in relation to their choice to cycle for this journey. The health benefits / exercise aspect of cycling received the highest level of 'strongly agree' ratings (80.5%, 557) , followed by 'less conflict with motorised traffic than on other routes' (80.5% 448) and 'pleasure / enjoyment' (64.7%, 447). A large proportion agreed with many of the aspects of route safety, with over half 'strongly agreeing' that the 'route feels safe'. The aspects with least agreement were reasons of less pedestrian conflict and the impact of Covid-19.

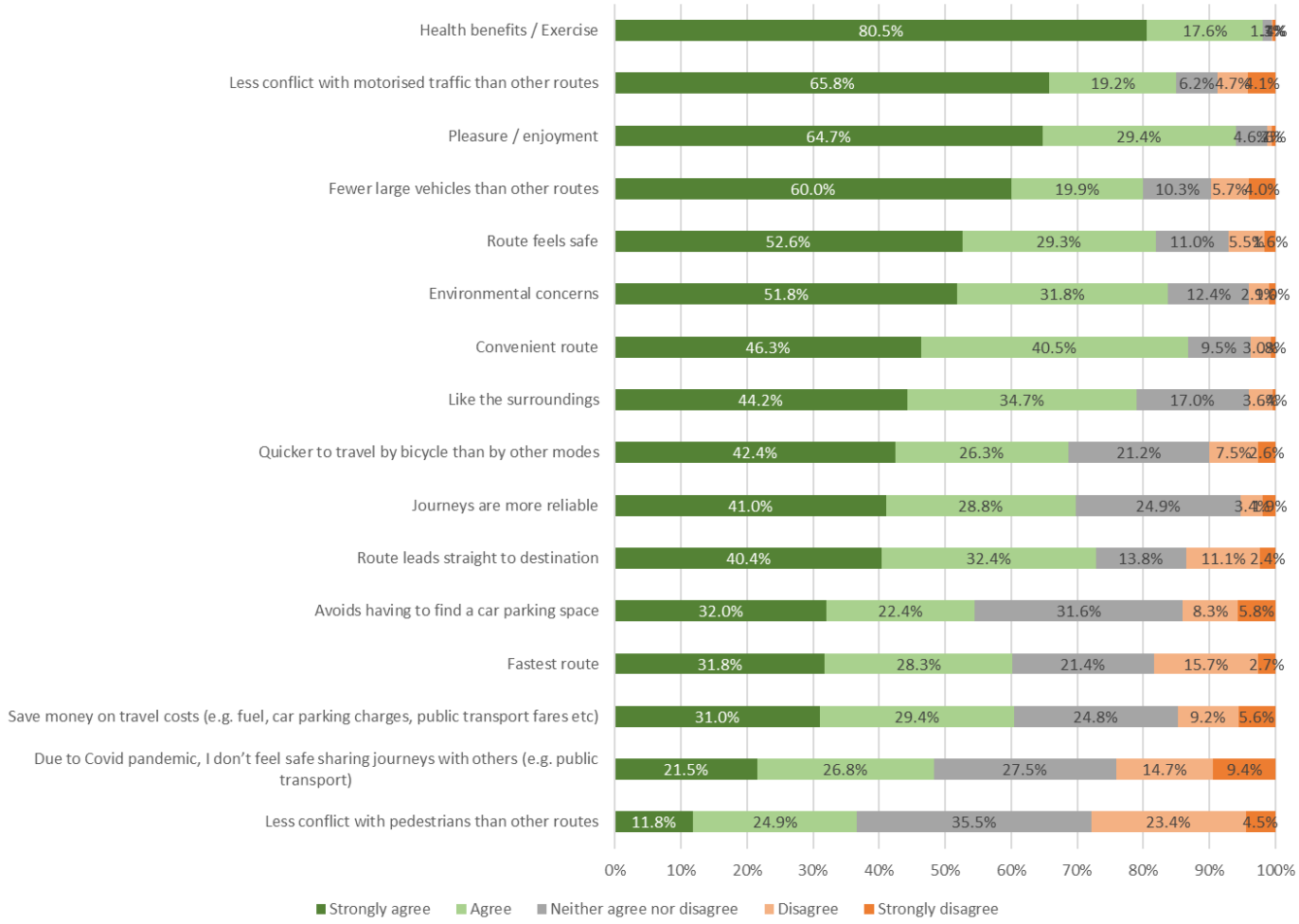


Figure 8. Cycle Survey: Reasons for Cycling for this journey

2.3.6 Cyclists were asked if they had ever witnessed a collision involving a person cycling; and majority, 87.0% (597) stated they had not, with 13% (89) stating that they had witnessed a collision.

M1: Demographics

2.3.7 All respondents were asked some (optional) demographic questions. Almost two-thirds of respondents were male (63.5%, 442) , and a third female (35.5%, 247), with most respondents aged 35-54. Figure 9 summarises the demographics of the cycling survey respondents.

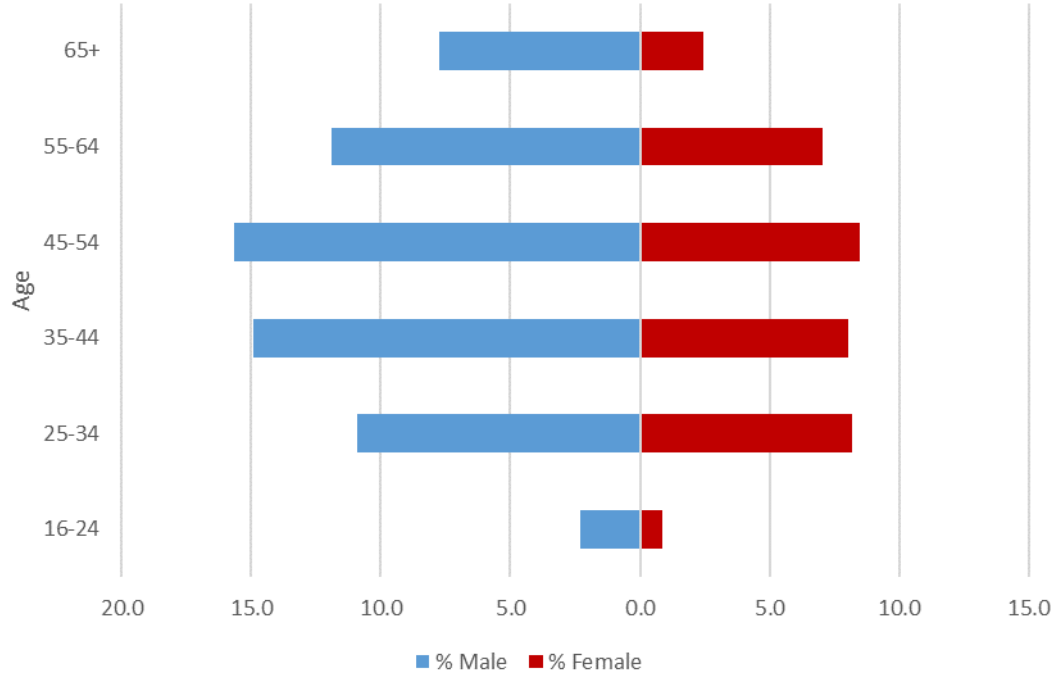


Figure 9. M1 Cycling Survey Demographics

2.3.8 In addition, looking at ethnic groups, 93.1% (647) stated they were 'White'. Two-thirds were employed (part or full time) and 15% in education. The majority, 92.1% (640) stated their day-to-day activities were not limited because of a health problem, disability or lack of provision in the built environment.

3. M2 - PEDESTRIAN INTERVIEWS

3.1 Objectives

3.1.1 The purpose of this task was to monitor the contribution of the CCWEL scheme to the following objectives:

- **P.1** Enhance streets as places that people can enjoy:
  i From the perspective of local residents, and;
  ii For activities other than movement.

- **P.3** Create a good quality safe and attractive environment for pedestrians:
  i Walking standing and sitting, including waiting at stops, and;
  ii Accessing facilities and services.

- **P.5** Respect the positive qualities of the built environment, especially the World Heritage Site.
- **S.3** Improve perceptions of safety amongst vulnerable road users in the corridor
- **T.2** Improve access to/ from public transport by foot and by bike

3.1.2 The information gathered during this task in respect of these objectives is:

- Experience of users in project corridor regarding enjoyment of surroundings
- Experience of pedestrians along route corridor regarding:
  i Safety and attractiveness of surrounding environment;
  ii Accessing public transport along the route corridor;
  iii Accessing facilities and services along the route corridor;

- Experience of users in relation to positive qualities of the built environment;
- Perceptions of safety among all users before implementation; and
- The mode(s) of travel that respondents used to access the survey location.

3.2 Methodology

3.2.1 On-street face-to-face interviews were carried out with street users on Old Coltbridge, Haymarket Terrace, Melville Crescent, Randolph Place and St Andrew's Square. Interviews took place on a mixture of weekdays and weekends between the 27th October and the 21st November, across all times of day. The number of interviews completed is summarised in Table 2.

Table 2. Pedestrian Survey: Responses by Location

LOCATION	NO. OF INTERVIEWS
Old Coltbridge	103
Haymarket Terrace	106
Melville Crescent	118
Randolph Place	118
St Andrew Square	113
Total	**558**

3.2.2 A total of 558 interviews were completed, with over 100 completed in each area. The questionnaire took each respondent around 5 minutes to complete. Respondents were asked: their reason for being in the area, their mode of travel, whether their travel choice has been impacted by Covid-19, and their opinion on several aspects of the local environment (e.g. quality of infrastructure, air quality, safety and ease of crossing the road).

3.2.3 The locations of the pedestrian interviews are shown in Figure 10.

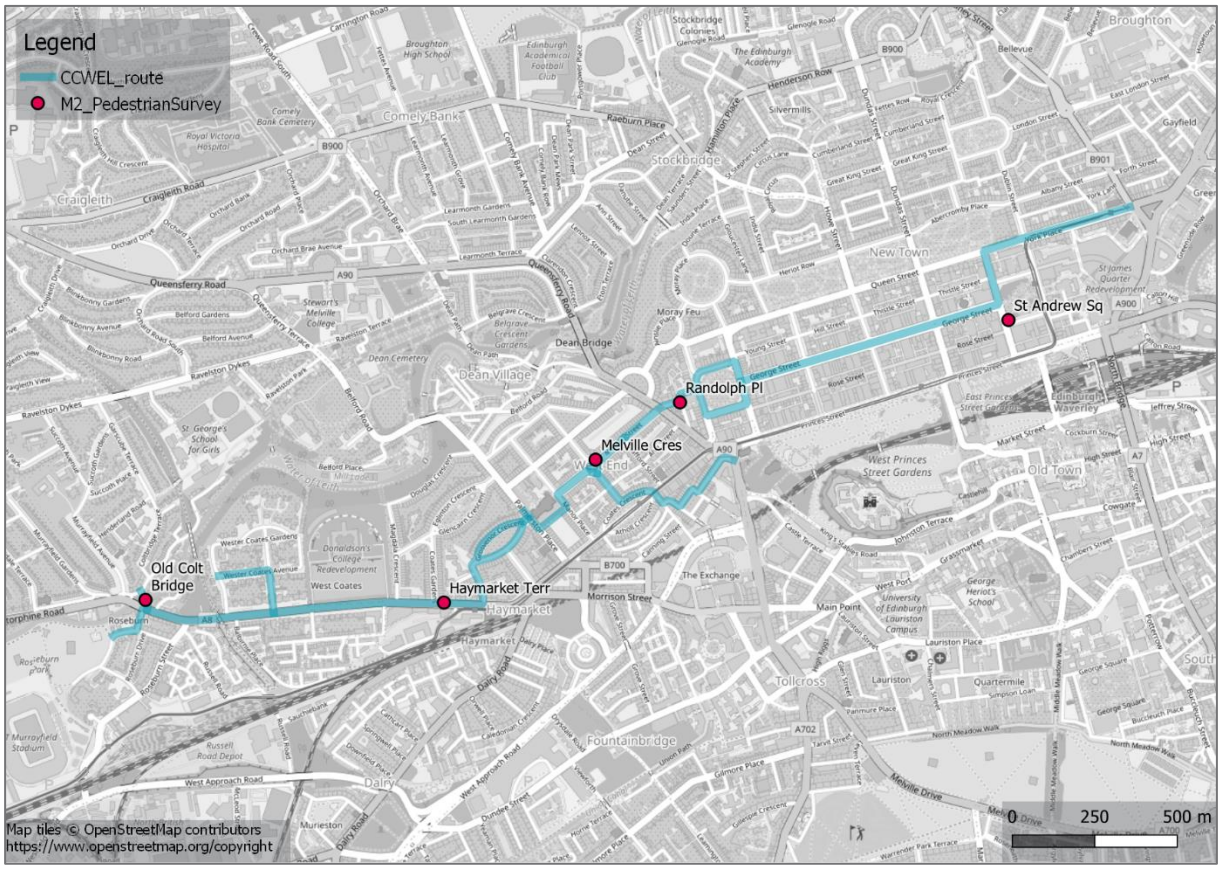


Figure 10. Pedestrian survey sites

3.3 Data and analysis

M2: Journey Purpose

3.3.1 As summarised in Figure 11, around a third of respondents were making journeys for the purposes of 'shopping' (35.5%, 198) and over a quarter were 'commuting to work' (28.0%, 156); these were the most common reasons for being in the study area. Smaller proportions of respondents were in the area to carry out 'personal business' (10.9%, 61) or other activities e.g. 'for exercise / keep fit', 'travel to college / university', 'caring responsibilities'.

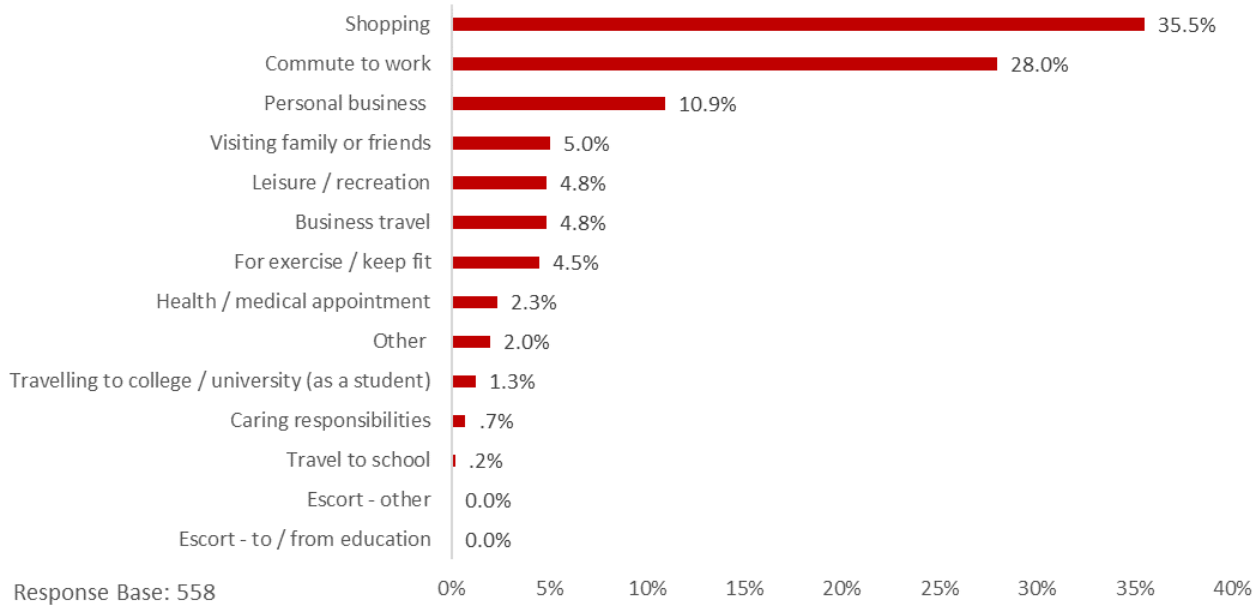


Figure 11. Pedestrian Survey: What is your main reason for being on this street today?

M2: Main Mode of Travel

3.3.2 As shown in Figure 12, the highest proportion (40.9%, 228) of respondents had accessed the survey location on foot. Around 1 in 3 had travelled by public transport (answering 'bus' or 'train': 36.8%, 205), and about 1 in 5 had driven or were a passenger in a 'car / van' (19.9%, 111). Very few (2.2%, 12) of the surveyed pedestrians had cycled to the area.

3.3.3 Respondents were also asked if they would have travelled differently had the Covid-19 pandemic not happened. Of those that travelled by car / van, around 1 in 5 (19%, 21) said they would have travelled by public transport. Of those that cycled, 16.7% (2) would have used the bus instead. This demonstrates evidence of a high level modal shift in response to the pandemic, particularly from car to public transport.

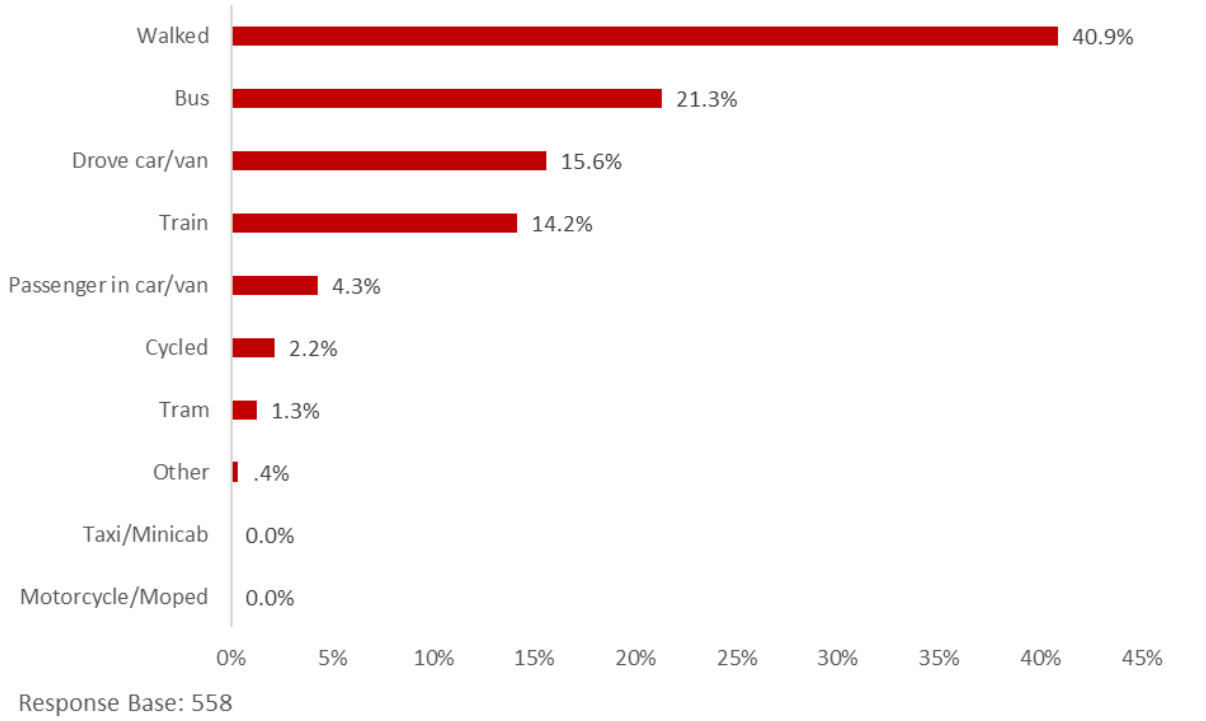


Figure 12. Pedestrian Survey: How did you travel to get to this street today?

M2: Parking

3.3.4 As shown in Figure 13, well over 1/3 (41.2%, 230) of the pedestrian respondents felt there were 'too few' parking spaces, a third felt there were the 'right amount' (33.3%, 186) and a smaller proportion (8.1%, 45) felt there were 'too many' parking spaces.

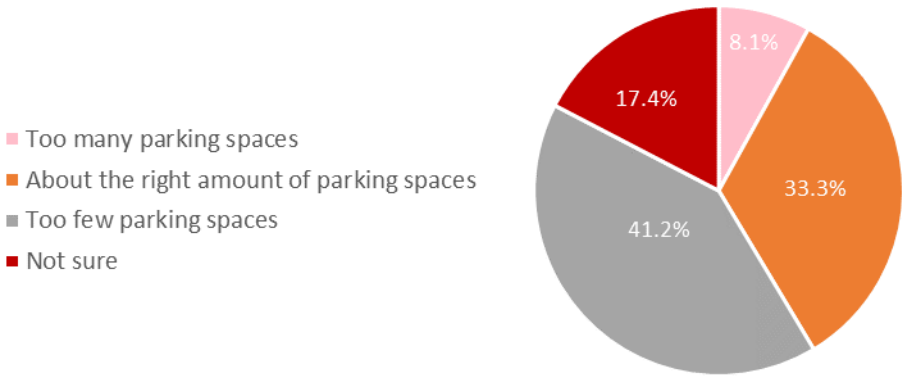


Figure 13. Ped Survey: Do you think there is the right amount of parking spaces on this street?

3.3.5 Figure 14 breaks these results down by street. Respondents on Haymarket Terrace and St Andrews Square were more likely to select 'too few parking spaces' (57.5% and 49.6%

respectively), whereas on Melville Crescent and Randolph Place, fewer respondents selected 'too few parking spaces' with the highest proportion stating there was 'about the right amount' (44.9% and 46.6%).

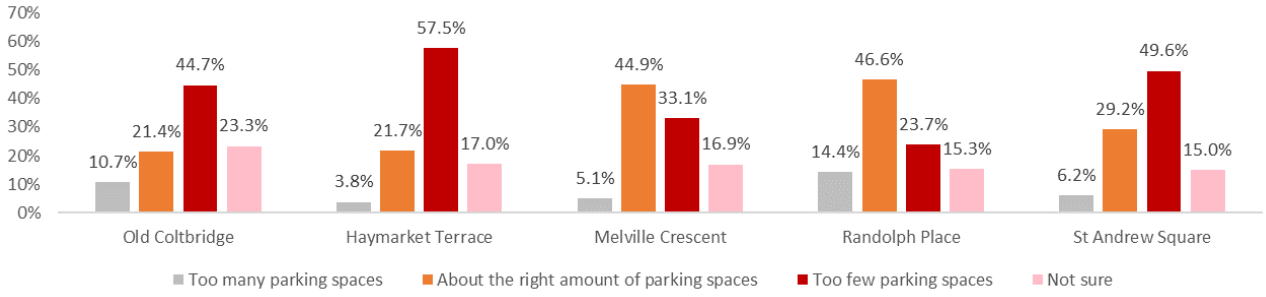


Figure 14. Pedestrian Survey: Parking by Street

M2: Views on the local environment

3.3.6 Respondents were asked to rate a number of different environmental factors from 0-7 where 0 represented "not at all…" and 7 represented "extremely…".

3.3.7 A summary table of all results is provided at the end of this section.

M2: Overall Satisfaction

3.3.8 As shown in Figure 15, overall satisfaction amongst pedestrians was high, with the majority of responses towards the top end of the scale, with a mean score of 5.47. There was no significant difference in the level of satisfaction between those who had mobility issues and those who did not.

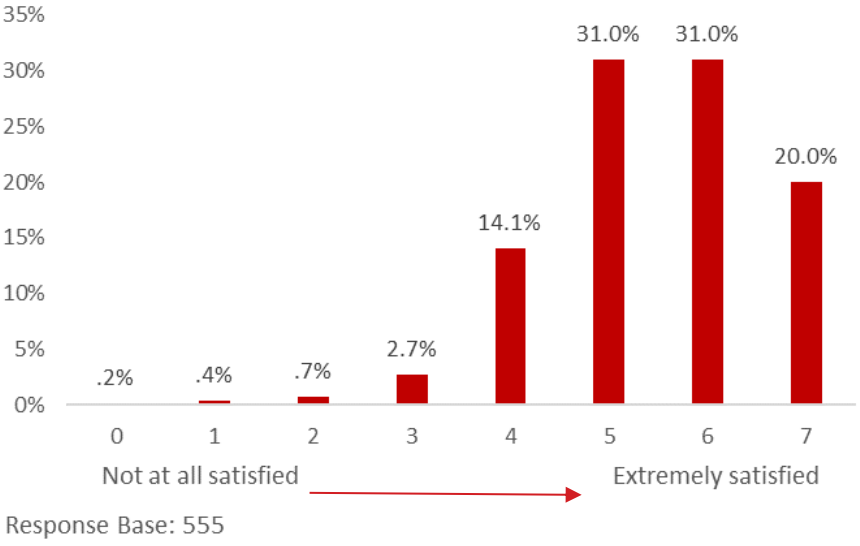


Figure 15. Pedestrian Survey: Overall Satisfaction

3.3.9 Assessing satisfaction by mode of travel, the average satisfaction score was slightly below average for cyclists (75% of cyclists rated 5 or above, compared to 82% of all users) and for car users, but above average (85.1%) for those travelling on foot.

3.3.10 Analysis by street, in Figure 16, shows the overall satisfaction amongst pedestrians at each location was also high, however Haymarket Terrace had highest satisfaction and Old Coltbridge had the lowest satisfaction.

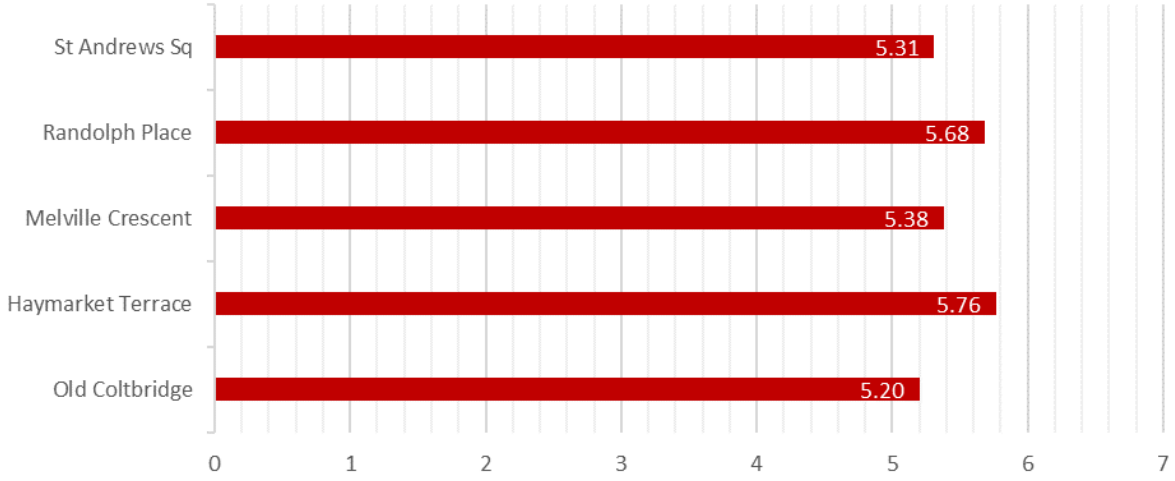


Figure 16. Pedestrian Survey: Satisfaction by Street

M2: Air Quality

3.3.11 Figure 17 shows the range of (perceived) air quality ratings; the overall mean of which is 4.74, one of the lowest scoring metrics. Respondents were most likely to rate it in the mid-range. Air Quality was rated lowest in Randolph Place, but received higher ratings for Haymarket Terrace and Melville Crescent.

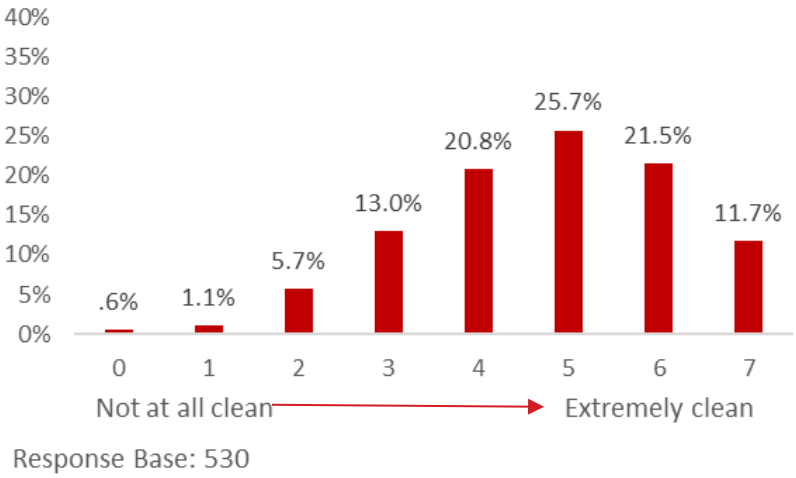


Figure 17. Pedestrian Survey: Air Pollution

M2: Ease of Finding Stopping / Rest Places

3.3.12 Figure 18 shows the range of scores for ease of finding somewhere to stop and/or rest. This received the lowest overall rating of all the environmental metrics, with 17% of respondents rating it '2' or lower. The lowest rating was received in Melville Crescent (average of 3.51) followed by Randolph Place (3.74), but for both Haymarket Terrace and St Andrew's Square this rose close to 5.

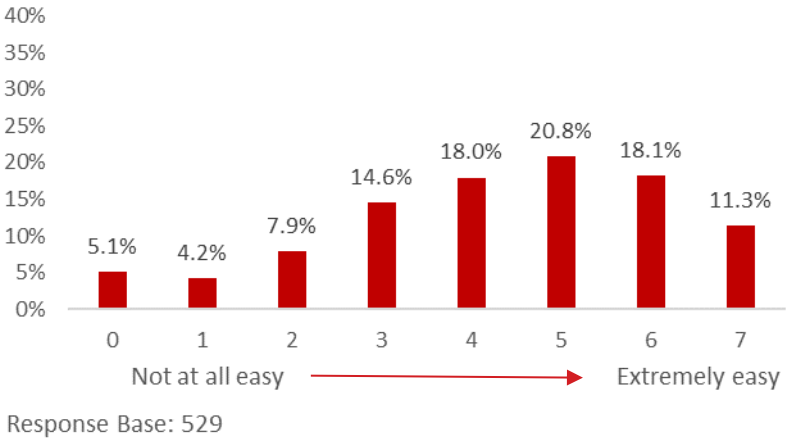


Figure 18. Pedestrian Survey: Ease of finding stopping / resting places

M2: How well maintained / free from litter an area is

3.3.13 This metric received the highest score of the environmental ratings with an average score of 6.1, as summarised in Figure 19. Melville Crescent received a particularly good result, with an average score of 6.43. The lowest rating was in St Andrew's Square, with 5.77.

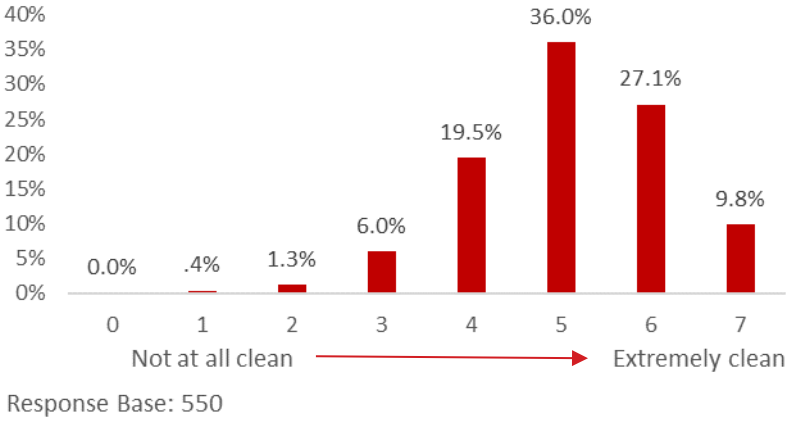


Figure 19. Pedestrian Survey: How well maintained / free from litter an area is

M2: People priority over cars

3.3.14 This metric received relatively low ratings; as summarised in Figure 20. Fewer than half of respondents gave a rating of 5+; the overall average was 4.28. The lowest scores were from respondents in Randolph Place and St Andrew's Square, where the mean score was 4 or below. However, in Haymarket Terrace, the mean was close to 5.

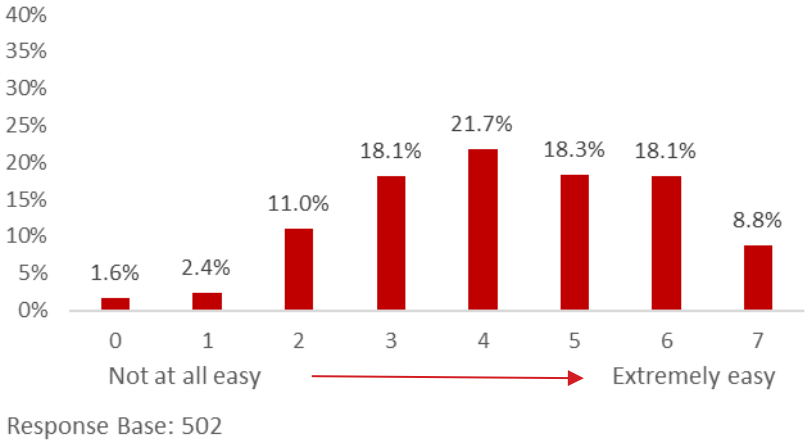


Figure 20. Pedestrian Survey: People Priority over cars

M2: Noise

3.3.15 As shown in Figure 21, noise was also rated generally poorly, with few respondents rating it 'not at all noisy' (12.6%, 70, rating it '5' or above). Of all respondents, 45.9% rated between '0 – Extremely Noisy' and '2' (225). This is the overall lowest rating metric.

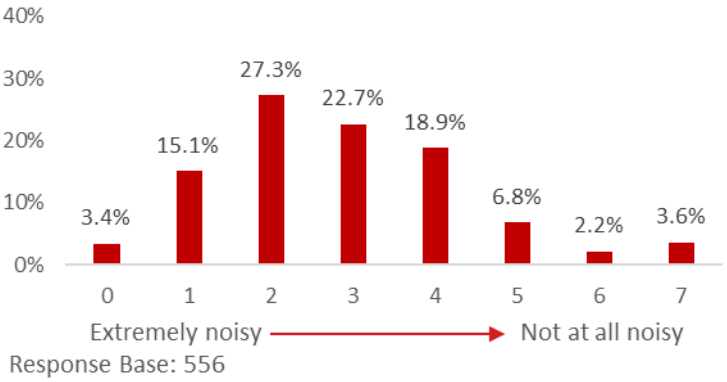


Figure 21. Pedestrian Survey: Noise

M2: Summary Rating Matrices

3.3.16 Figure 22 shows the overall average scores for each metric.

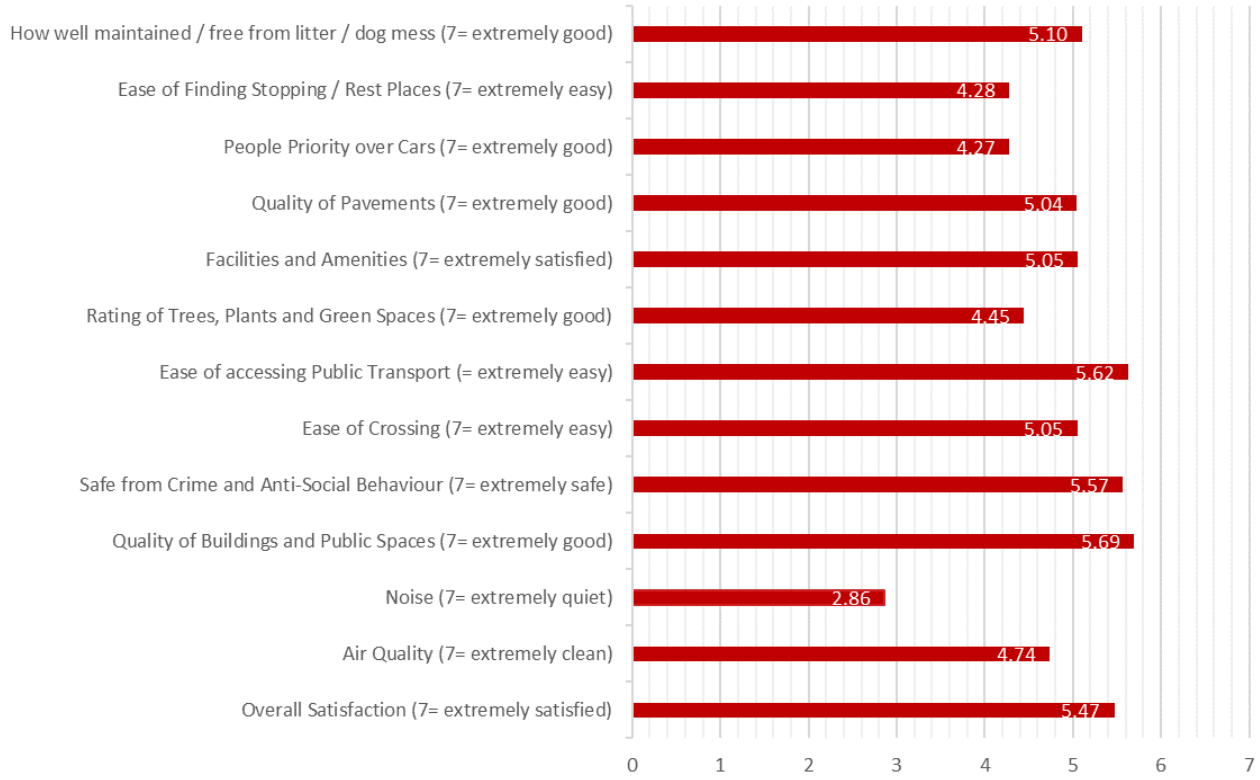


Figure 22. Pedestrian Survey: Summary Ratings

3.3.17 'Street cleanliness', 'quality of buildings and public spaces', and 'access to public transport' received the highest scores, whereas 'people priority over cars', 'ease of finding stopping or resting places', and rating of 'noise' and 'trees, plants and green spaces' scored the lowest. However, overall satisfaction was positive.

3.3.18 As shown in Table 3, some ratings did vary by street. In this table, the three highest ratings for each street are highlighted with green / up arrow, and the three lowest with red / down arrow.

CRITERIA	OLD COLTBRIDGE	HAYMARKET TERRACE	MELVILLE CRESCENT	RANDOLPH PLACE	ST ANDREWS SQ
Overall Satisfaction (7= extremely satisfied)	5.20	5.76	5.38	5.68	5.31
Air Quality (7= extremely clean)	4.45	5.26	5.28	4.08	4.62
Noise (7= extremely quiet)	3.34 ↓	2.48↓	2.94 ↓	2.89 ↓	2.65 ↓
Quality of Buildings and Public Spaces (7= extremely good)	5.39 ↑	5.81 ↑	5.60 ↑	5.84 ↑	5.81 ↑
Safe from Crime and Anti-Social Behaviour (7= extremely safe)	5.60 ↑	5.57 ↑	5.77 ↑	5.71 ↑	5.18 ↑
Ease of Crossing (7= extremely easy)	4.89	5.24	5.43	4.77	4.91
Ease of accessing Public Transport (= extremely easy)	5.30 ↑	6.01 ↑	5.39	5.40	5.95 ↑
Rating of Trees, Plants and Green Spaces (7= extremely good)	4.69	5.39	3.19 ↓	4.46	4.56 ↓
Facilities and Amenities (7= extremely satisfied)	5.20	5.50	4.13	5.43 ↑	5.03
Quality of Pavements (7= extremely good)	4.79	5.63	5.42	4.60	4.78
People Priority over Cars (7= extremely good)	4.12 ↓	4.93 ↓	4.48	3.82 ↓	4.00 ↓
Ease of Finding Stopping / Rest Places (7= extremely easy)	4.33 ↓	4.93 ↓	3.51 ↓	3.74 ↓	4.95
How well maintained / free from litter / dog mess (7= extremely good)	5.14	5.10	5.34	5.14	4.77

Table 3. Pedestrian Survey: Ratings by Street

3.3.19 Figure 23 shows the difference from the average rating (%) for each metric by street. Melville Crescent, followed by Randolph Place, has the greatest negative deviation from the average scores. Haymarket Terrace scores above average for most of the environmental metrics.

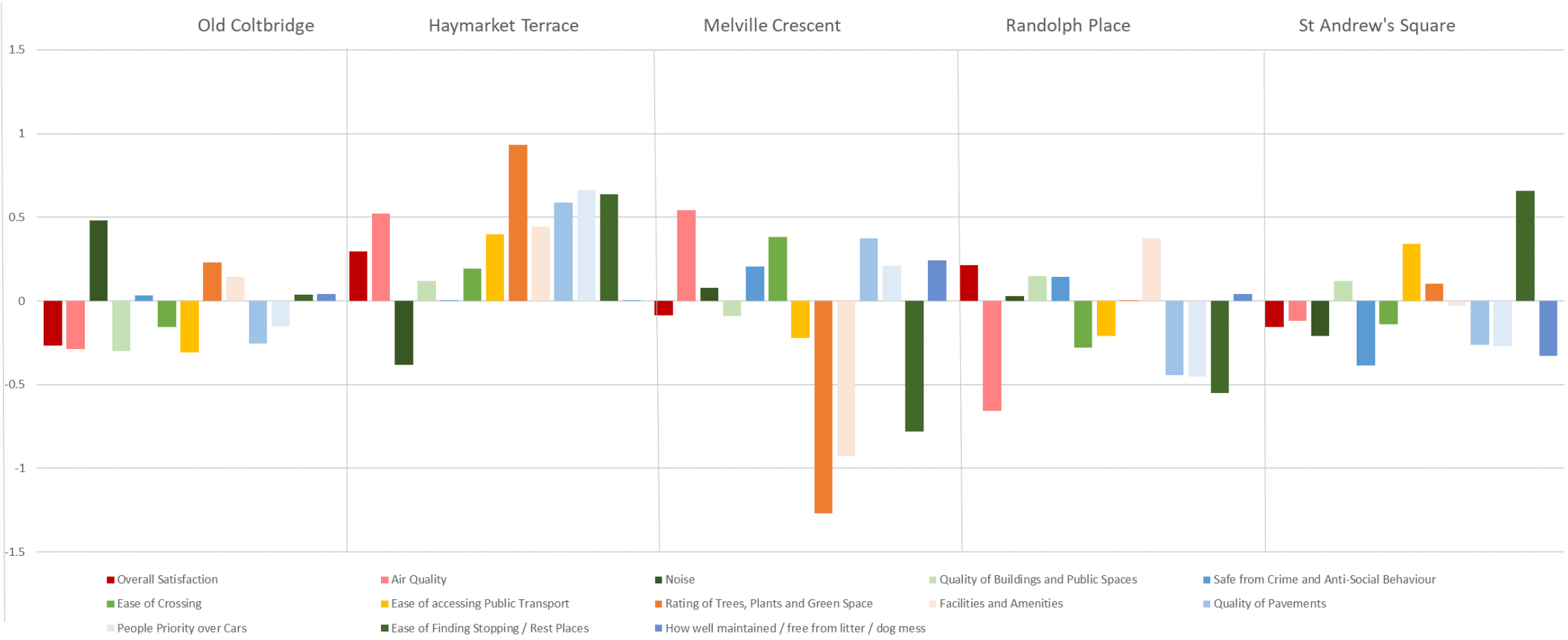


Figure 23. Pedestrian Survey: Difference from Average Metric Rating by Street

3.3.20 Respondent demographics contained a spread of age groups and gender with a 52% / 48% female / male split. Figure 24 summarises the proportion of responses by age and gender. No respondents were in the 16-24 age group. In addition, over three-quarters were Edinburgh residents (71.1%, 397), with the majority of the remainder being Scottish residents (28%, 156). Over 65% (369) stated they were in full or part time employment.

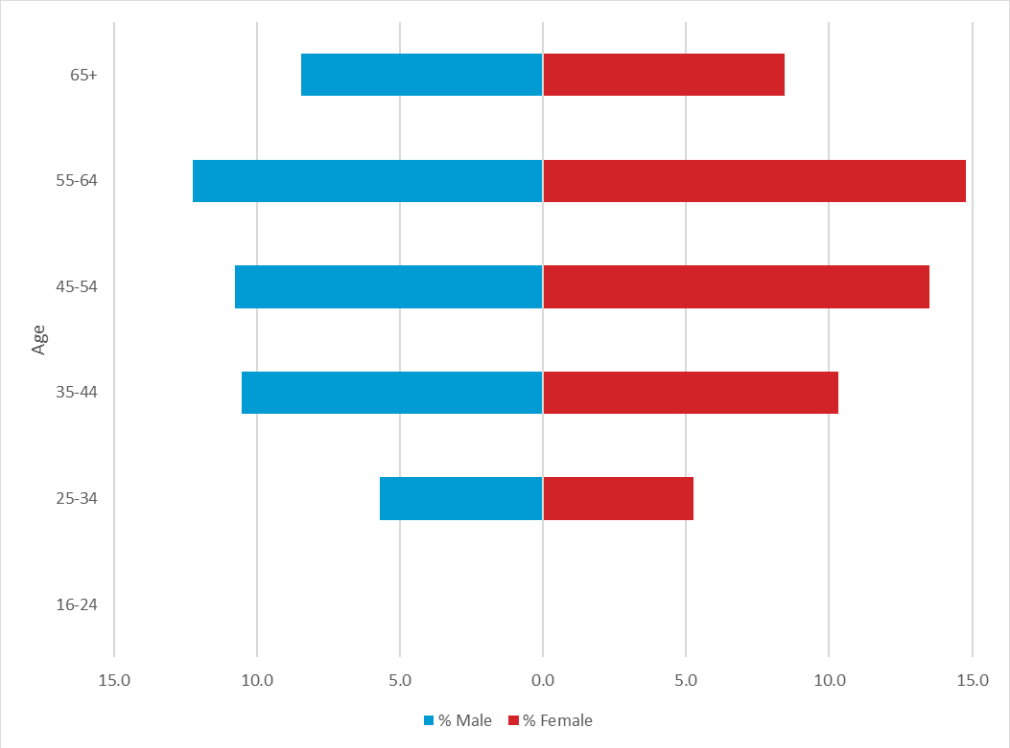


Figure 24. Pedestrian survey - age / gender demographics

4. M3 - SHOPPER SURVEY

4.1 Objectives

4.1.1 The purpose of this task was to monitor the contribution of the CCWEL scheme to the following objectives:

- **EC.2.** Encourage additional spend through improved cycle access to shops in the corridor

4.1.2 The information gathered during this task in respect of these objectives is:

- Spend per head / per month for each transport mode on key shopping streets along corridor

4.2 Methodology

4.2.1 On-street face-to-face interviews were carried out with street users on Roseburn Terrace, Haymarket Terrace, Randolph Place, as well as Gorgie Road and Dalry Road. Interviews took place on a mixture of weekdays and weekends between the 29th October and the 21st November, across all times of day.

LOCATION	NO. OF INTERVIEWS
Roseburn Terrace	122
Haymarket Terrace	122
Randolph Place	126
Gorgie Road (Control)	122
Dalry Road (Control)	120
Total	**612**

Table 4. Pedestrian Survey: Responses by Location

4.2.2 A total of 612 interviews were completed, with a minimum of 120 per area. The questionnaire took each respondent around 5 minutes to complete. Respondents were asked: their reason for being in the area, their mode of travel, whether their travel choice has been impacted by Covid-19, and their opinion on several aspects of the local environment, as well as shops/services visited and approximate spend.

4.2.3 The locations of the shopper surveys are shown in Figure 10.

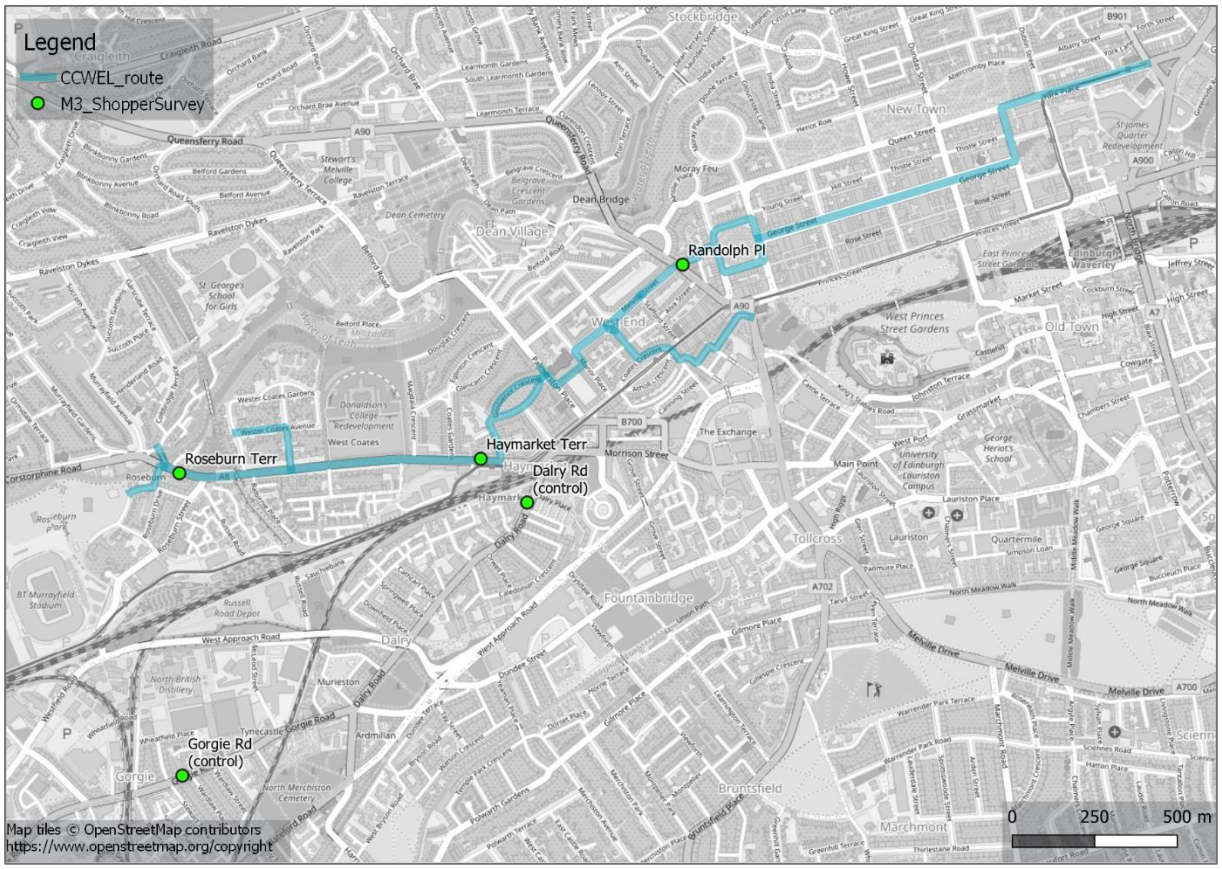


Figure 25. Shopper survey sites

4.3 Data and analysis

M3 – Main Mode of Travel

4.3.1 Main mode of travel for all respondents is shown in Figure 26. The majority of respondents travelled on foot to their shopping destination (63.6%, 389), and 22.4% (137) by public transport (those stating 'bus', 'train' or 'tram). Just over one in ten travelled by car (11.%, 68, stated either 'passenger in car/van' or 'drove car/van').

4.3.2 Analysis on a street-by-street basis shows that the highest levels of travel by foot was seen on Gorgie Road (72.1%, 88) and the lowest levels on Haymarket Terrace (47.5%, 58), where a similar proportion travelled by public transport (40.2%, 49 stating 'bus', 'train' or 'tram). Car use ('drove a car/van' or 'passenger in a car/van') was highest on Gorgie Road (15.6%, 19) and lowest on Randolph Place (8.8%, 11).

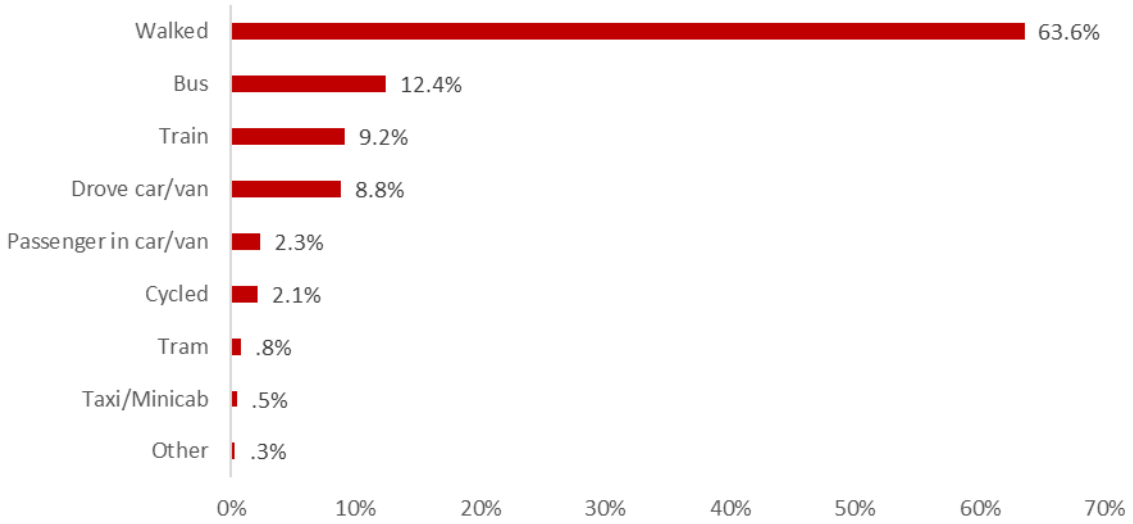


Figure 26. Shopper: Main Mode of Travel

4.3.3 In addition, respondents were asked, 'If the Covid-19 pandemic hadn't happened, would you have travelled by the same mode?'. Although 95.1% (582) of respondents stated they would have used the same mode, small proportions reported a change of mode. Although very small numbers reported a change of mode, a small numbers of car drivers (7.4%, 10) stated they would have previously travelled by bus.

M3 – Frequency of travel and length of visit

4.3.4 The majority of respondents are regular visitors to the interview areas; over 65% (403) stated they visited either 'daily' or '2-5 times per week'.

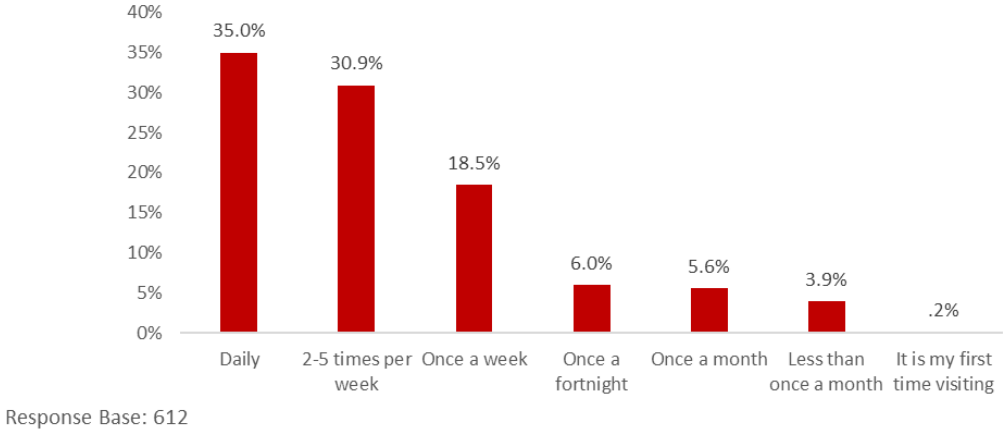


Figure 27. Shopper: Frequency of Visit

4.3.5 'Length of visit' showed more variation, as presented in Figure 28, with a spread of shorter and longer visits.

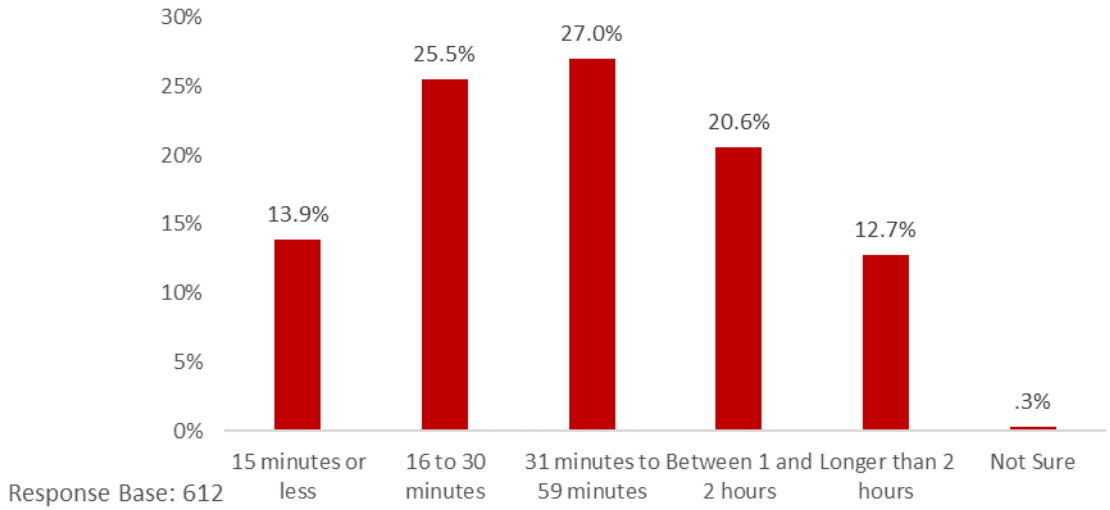


Figure 28. Shopper: Length of Visit

4.3.6 Analysis by street shows that shorter visits (<30 minutes) are most likely on Haymarket Terrace (46.7%, 53 stated '16 or 30 minutes' or '15 minutes or less'), followed by Roseburn Terrace (42.6%, 52). Longer visits were more common on Randolph Place (67, 53.2% state 'Between 1 and 2 hours' or 'Longer than 2 hours').

M3 – Shops visited

4.3.7 Respondents were asked (multi-choice) which shops and services they visited. The most popular selected was cafes (28.3%, 173 respondents stated they visited a café during their shopping trip), followed by convenience-type shops (supermarket, convenience store, or grocers), suggesting a high number of respondents were shopping for essentials rather than leisure. Figure 29 presents the data for this.

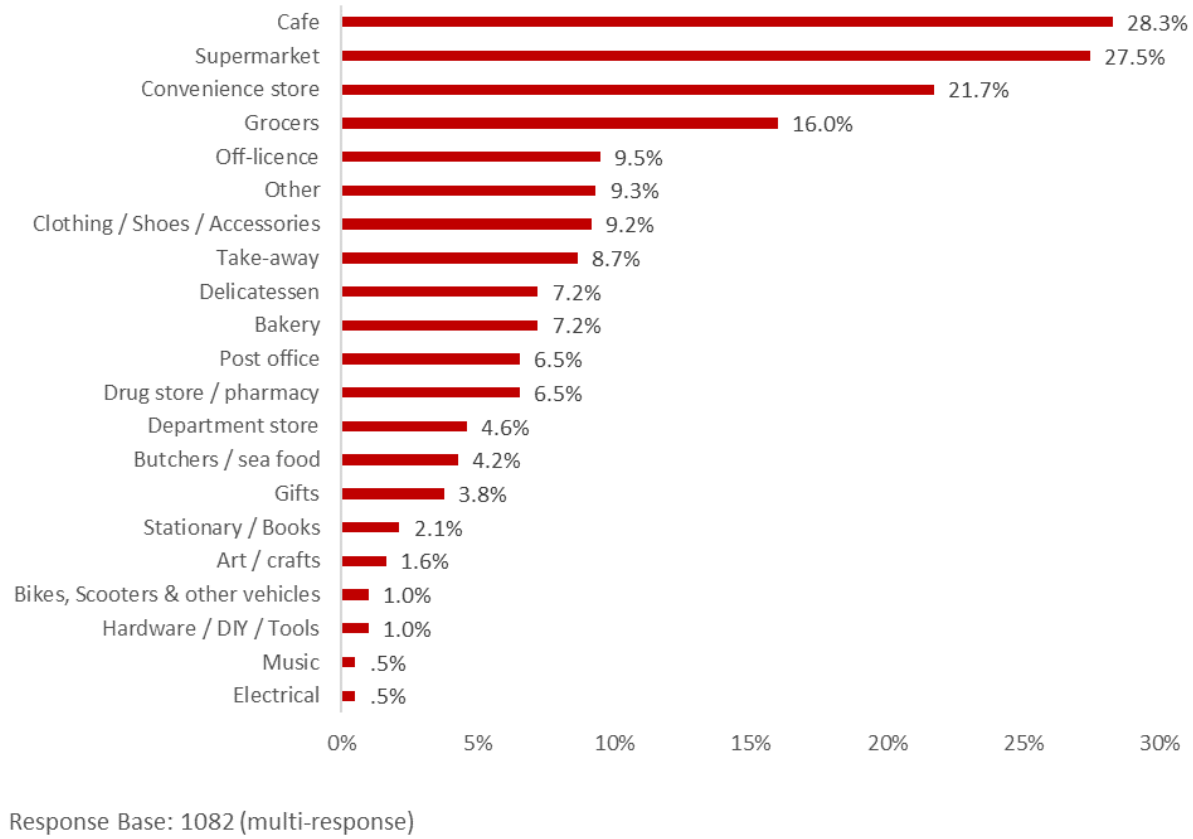


Figure 29. Shopper: Type of shops/services visited (multi-response)

4.3.8 Of those interviewed, half (50%, 306) only visited one shop/service on their visit. Very few (5.7%, 35) visited 4 or more different shops/services during their shopping trip.

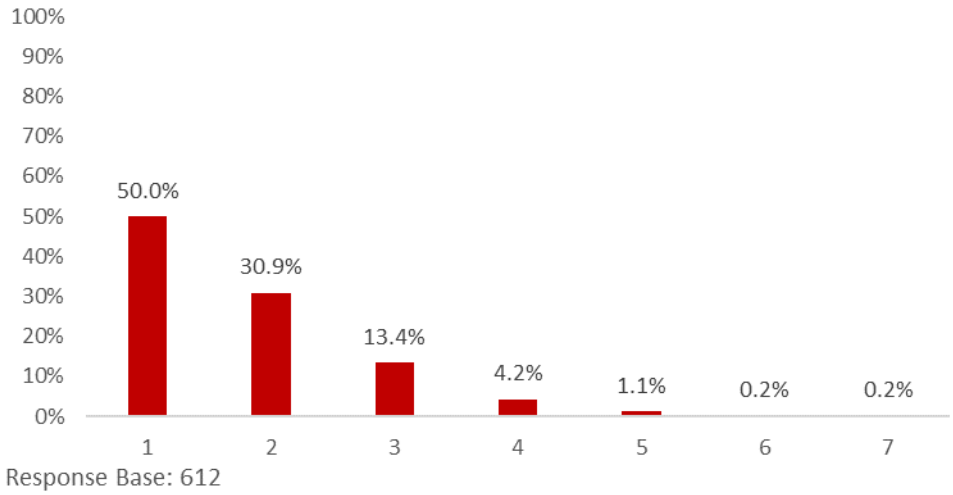


Figure 30. Shopper: Number of shops/services visited

4.3.9 The majority of respondents (46.9%, 287) reported spending '£20 or less' during their shopping trip, as shown in Figure 31. On Dalry Road, this proportion increased to 61.7% (74). Across the entire sample, only 5.9% (36) reported spending over £101 ('£101 to £200' or 'More than £200'). However, both Randolph Place and Haymarket Terrace has higher proportions, 12% (15) and 9% (11) spending over £101.

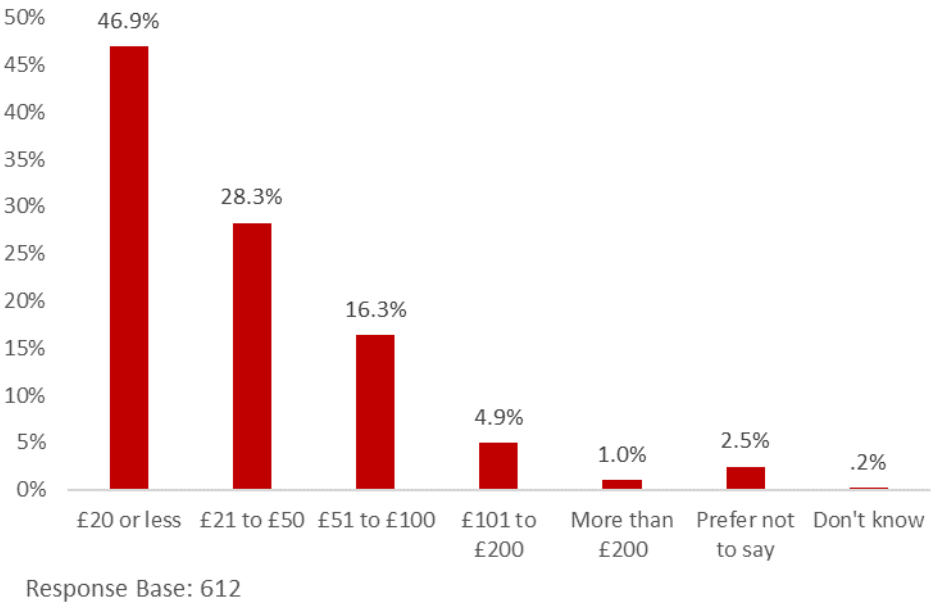


Figure 31. Shopper: Spend

4.3.10 Average spend (mid-point of the range) was calculated by mode; noting the response base by mode also varies. Figure 32 shows the findings; average spend was highest amongst those who were car/van passengers (£66.00), followed by bus users (£62.03) and those who drove a car/van (£56.86). Those travelling on foot, and by bicycle, have a lower average spend of £30.67 and £25.96 respectively.

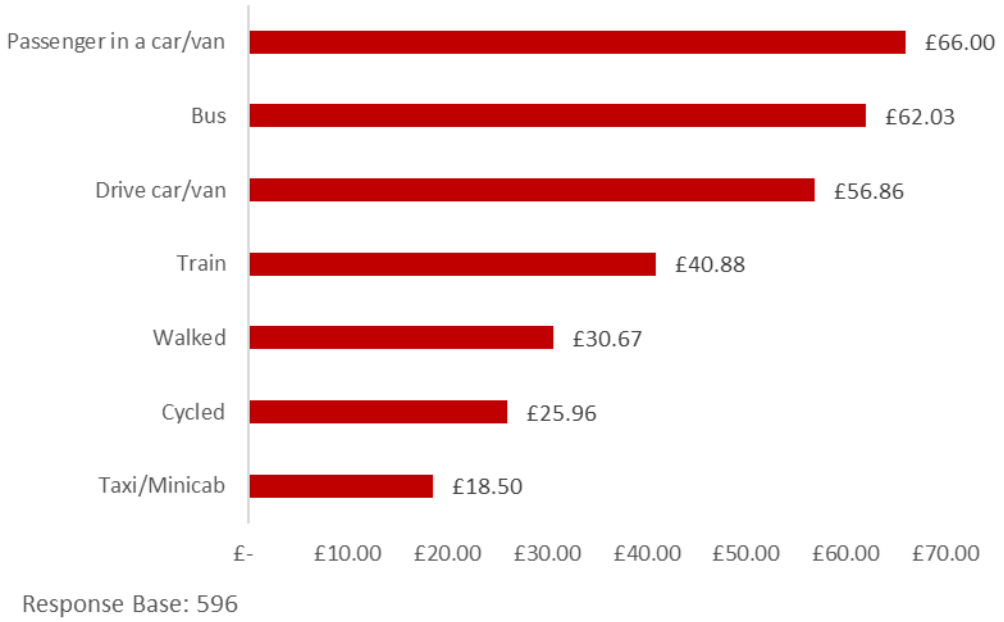


Figure 32. Shopper: Average Spend by Mode

M3 – Satisfaction

4.3.11 Respondents were asked to rate 'Overall, how satisfied are you with the range of facilities and shops on this street today?'. The majority of respondents responded positively, with an overall mean of 5.70.

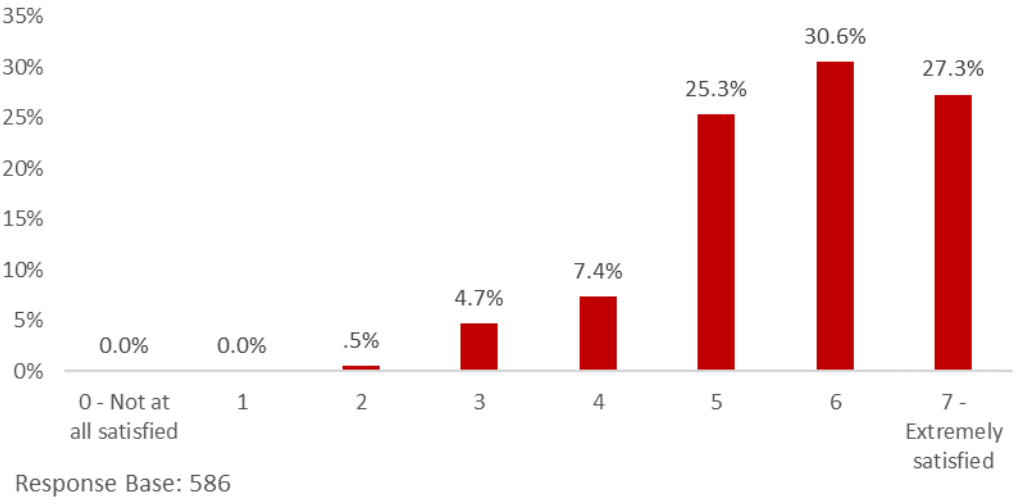


Figure 33. Shopper: Satisfaction Score

4.3.12 Analysis by street, Figure 34, showed a similar positive trend, though both Gorgie Road and Dalry Road scored slightly higher than the streets within the study area, at 6.20 and 5.94 respectively.

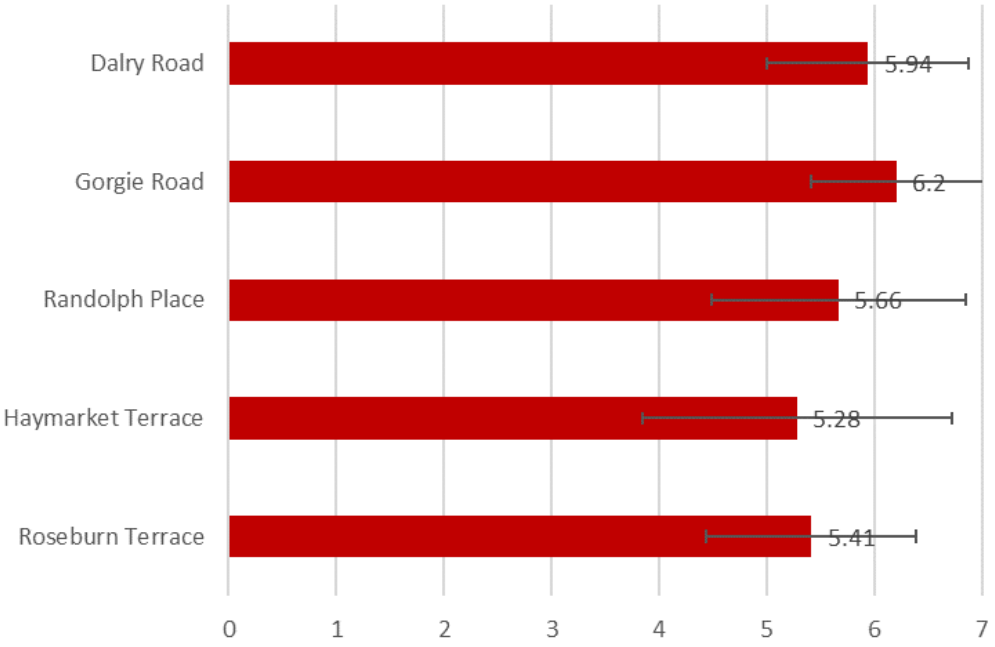


Figure 34. Shopper: Mean Satisfaction by Street

M3 – Comments

4.3.13 Some respondents provided some additional comments regarding their level of satisfaction, a selection of which are shown below, which reflect some of the common themes.

"Would like to see area being kept quite unique in its choice of shops such as the Aga shop" [Randolph Place]

"[I] Like [the] quieter area in centre of street where there are no bus stops at present. [There are] too many bus stops [in other areas]" [Randolph Place]

"More parking spaces and less cost." [Randolph Place]

"Like the atmosphere in the local shops, people are friendly and take time to chat."

"Like small independent shops, can shop quickly, feel safe."

"It's too muddy and difficult to pass and maintain some distance" [Haymarket Terrace]

"Good range of independent specialist shops" [Haymarket Terrace]

"As a local ratepayer I would like to be consulted before changes."

4.3.14 Respondent demographics contained a spread of age group and genders with a 56% / 46% female / male split. No respondents were in the 16-24 age group.

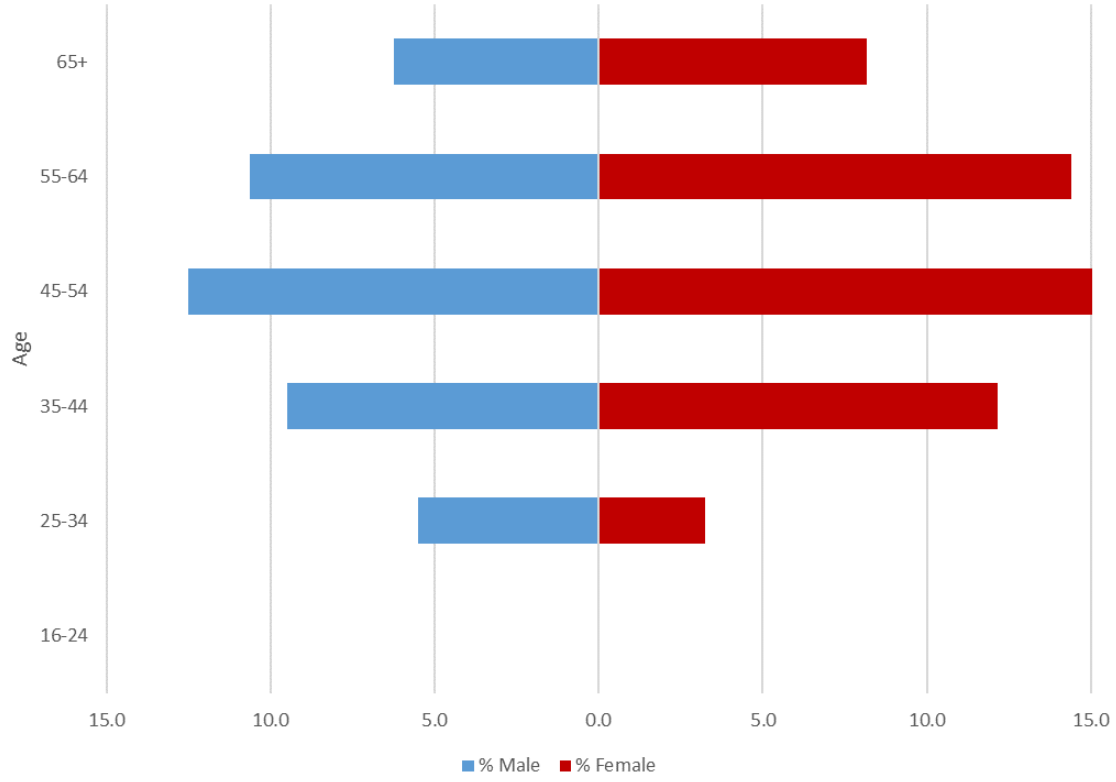


Figure 35. Shopper: Age and Gender

4.3.15 The majority were Edinburgh residents (85.7%, 523), with the majority of the remainder being Scottish residents (11.6%, 71). Over 65% (405) stated they were in full or part time employment.

5. M4 - HOUSEHOLD SURVEYS

5.1 Objectives

5.1.1 The purpose of this task was to monitor the contribution of the CCWEL scheme to the following objectives:

- P.1 Enhance streets as places that people can enjoy from the perspective of local residents
- P.5 Respect the positive qualities of the built environment, especially the World Heritage Site.
- S.5 Improve perceptions of safety amongst local residents in the corridor

- T.1 Increase the modal share for cycling in the corridor including
  - the number, and proportion, of off-peak[1] cycle trips in the corridor
  - widen the age cross-section of people cycling within the corridor
- T.3 Maintain or increase the journey to work mode share for public transport and walking in the corridor
- T.4. Help achieve a 50% or greater non-car driver mode share in new developments in the corridor

5.1.2 The information gathered during this task in respect of these objectives is:

- Experience of local residents regarding sense of 'Place'
- Experience of users in relation to positive qualities of the built environment
- Perceptions of safety among local residents before and after implementation
- Journey to work share by bike of residents of the surrounding area baseline and post-construction
- Different ages of people cycling within Project Corridor, and throughout Edinburgh and change post construction
- Journey to work mode share for walking in the project corridor before and after construction
- Assessment of driver mode share for Donaldson's School development following project completion. Also include Haymarket Yards student housing, if complete.

5.2 Methodology

5.2.1 Surveys were carried out at the Output Areas as shown in Figure 36.

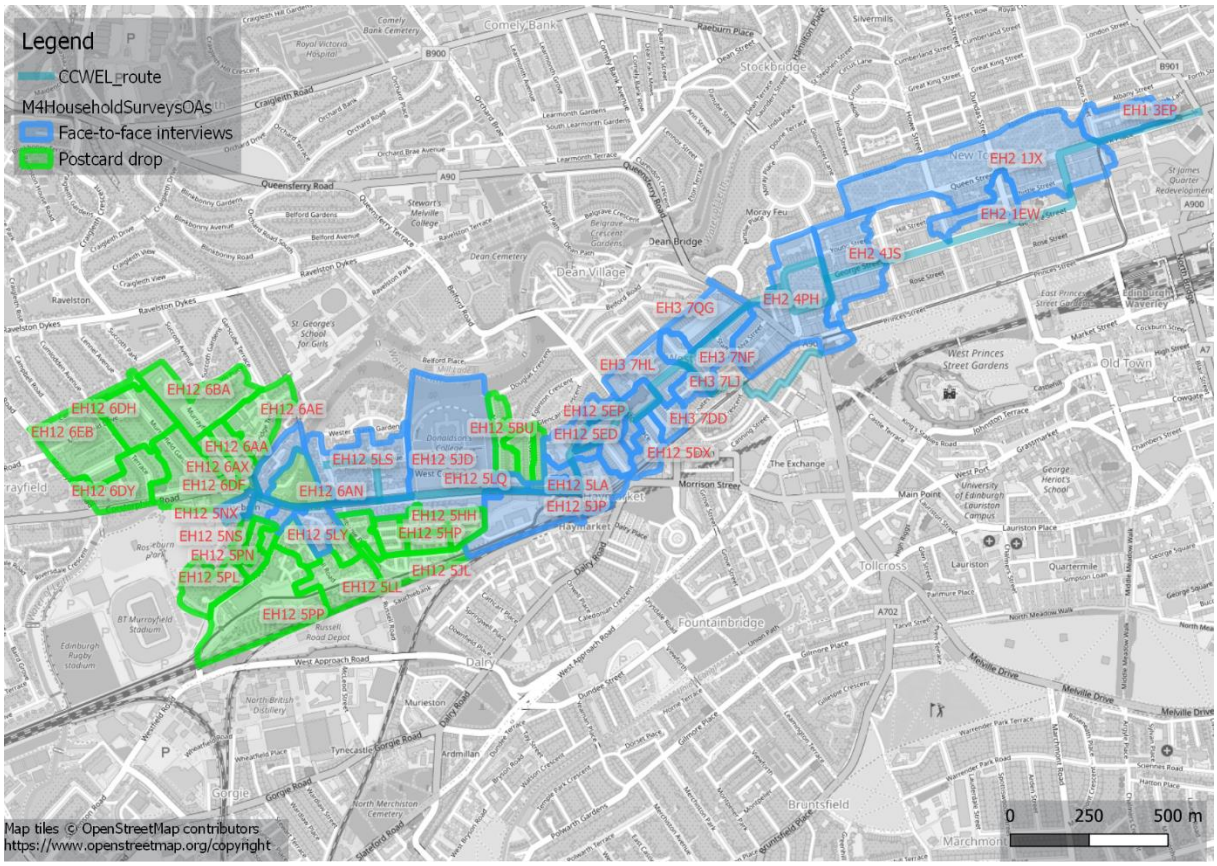


Figure 36. Household survey output areas

5.2.2 25 Output Areas (OAs) were surveyed Face-to-Face by Protel while 26 OAs were surveyed via delivery of postcards containing QR code / weblink to SYSTRA's online survey. Table 5 shows summary statistics for the Output areas surveyed. In total, nearly 2,800 households were included in the survey area. The postcard handout is reproduced in Appendix A.

Table 5. Household survey output area statistics

Survey Method	No. of OAs	Total no. of households	Mean no. of households per OA
Postcard Drop	26	1450	55.8
Face-to-Face interview	25	1340	53.6

5.2.3 A total of 387 responses were included in our weighted analysis. Data was weighted on age and gender (Census data 2011). Table 6 demonstrates the difference between the weighted and unweight age and gender spread. Note that the weighted total is lower than the weighted total because 1) "prefer not to say" responses were excluded and 2) rounding errors further lowered the total.

Table 6. Weighted v Unweighted Sample

UNWEIGHTED					WEIGHTED		
	Female	Male	Total		Female	Male	Total
16-24	19	12	31	16-24	35	33	68
25-34	18	20	39	25-34	40	40	80
35-44	42	30	72	35-44	31	33	64
45-54	58	41	100	45-54	30	30	60
55-64	28	36	64	55-64	24	24	48
65 +	41	42	83	65 +	38	27	65
Prefer not to say	2	0	2				
	208	181	391		198	187	385

5.3 Data and analysis

M4– Awareness of Scheme

5.3.1 Respondents were asked if they had heard of the CCWEL scheme prior to being approached for the survey. Just over half, 57.6% (223) had heard of the scheme; the remainder had not. Those that were not aware were given a summary by the interviewer and provided with information on how to find out more.

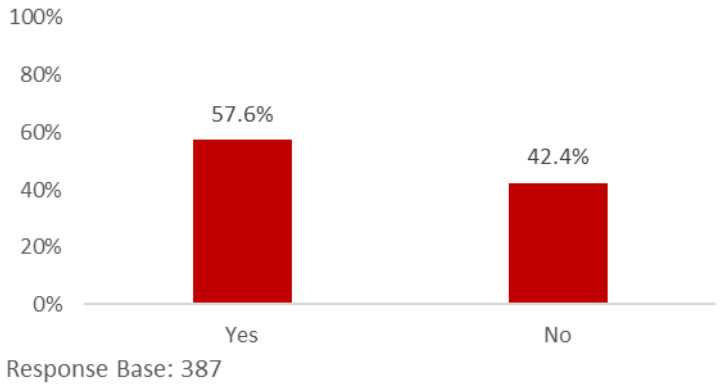


Figure 37. Household: Awareness of Scheme (prior to survey)

5.3.3 Those that were aware of the scheme were asked how they had heard about it; the results are presented in **Error! Reference source not found.** below. The most common source was 'from City of Edinburgh Council' (51.7%, 114), followed by 'word of mouth' (42.4%, 94). Close to a third (28.7%, 64) had heard about it via local media (newspapers, radio, magazines) and a quarter (23.0%, 51) from social media (Facebook, Twitter).

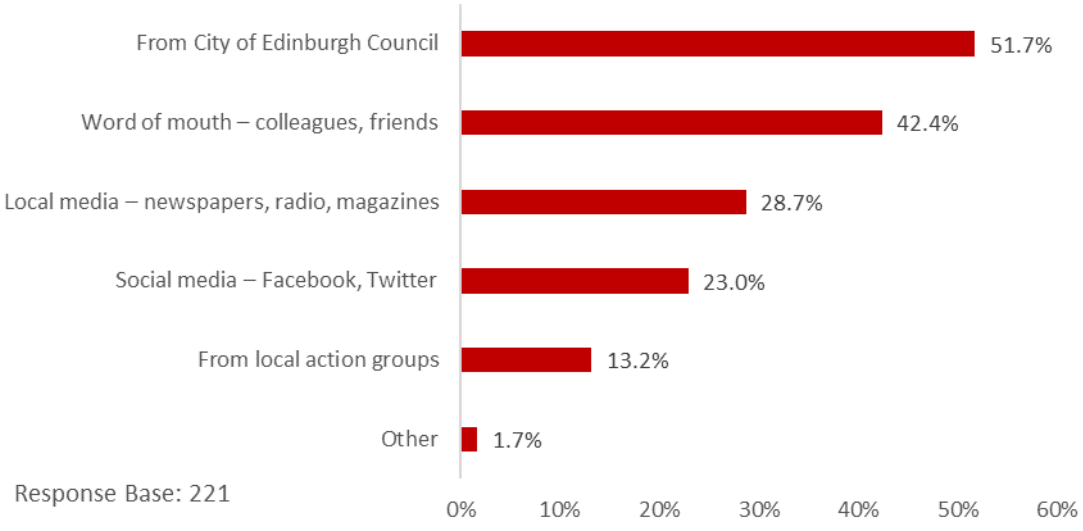


Figure 38. Household: How heard about the scheme

5.3.4 All respondents were asked if they support, or oppose, the scheme. Almost half supported the scheme (49.1%, 190), although 40.3% (156) stated 'don't know'. Only one in ten (10.6%, 41) opposed the scheme (Figure 39).

5.3.5 Cross-tabulating against awareness of the scheme gave the following result: of those that were aware of the scheme prior to the survey, two-thirds were in support of it (62.5%, 139) and 16.6% (37) opposed the scheme. Of those that hadn't heard of it, the majority (66.5%, 109) stated they 'don't know' if they support or oppose the scheme; however, almost a third supported it (31.1%, 51). Very few, less than 3%, opposed the scheme, having no prior knowledge of it.

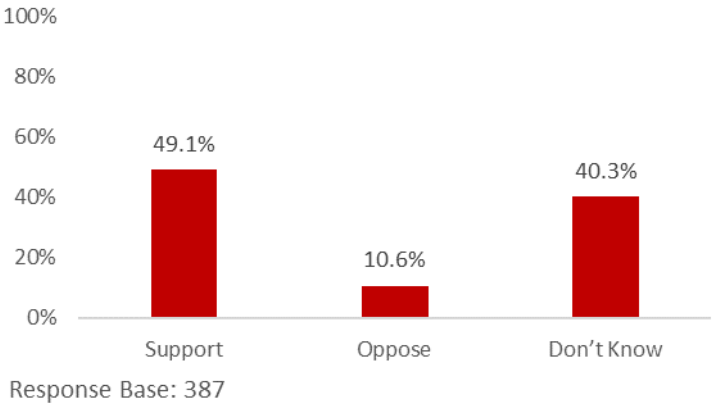


Figure 39. Household: Support of Scheme

5.3.6 Respondents were asked what benefits they thought the scheme would bring to their household. Although 28.4% (110) stated it would bring no benefit, the remainder selected at least one benefit it would bring, shown in Figure 40. The benefit that received the most support was that 'the area will look more attractive', followed by 'easier access to / from my home by cycle'.

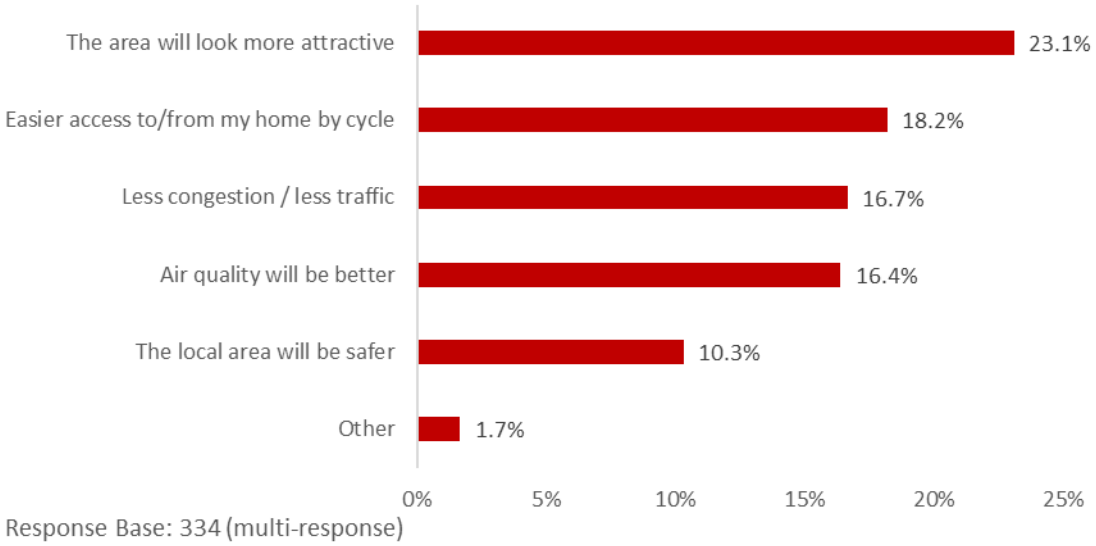


Figure 40. Household: Benefits of Scheme

5.3.7 Respondents were also asked what challenges they felt the scheme would bring to their household. Just over 40% (40.5%, 157) felt that there would be no challenges associated with the scheme. Of those that stated they felt there would be a challenge; there was a spread of responses. Around 1 in 10 felt there would be difficulties with traffic congestion, visitor parking and their own parking. Less than 10% were concerned about safety, loading/delivery activity or pollution (Figure 41).

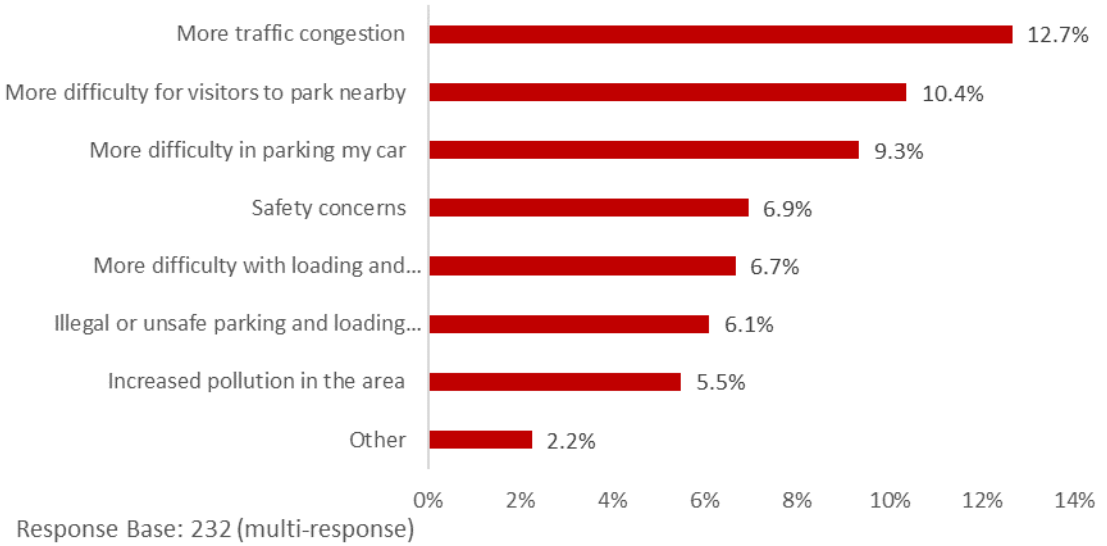


Figure 41. Household: Challenges of Scheme

5.3.8 Respondents were asked if they have access to a car/van and/or a bicycle as illustrated in Figure 42. Only 39.3% (152) have access to a car/van (below the Scotland Census car ownership figure of 60.1%, 2011), although a similar proportion has access to a bicycle (27.6%, 107) (Figure 42).

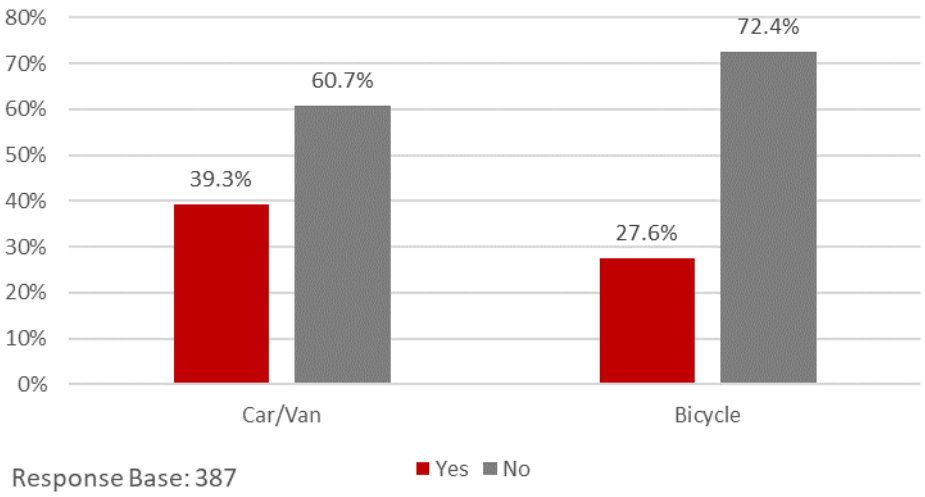


Figure 42. Household: Access to Car/Van/Bicycle

5.3.9 Respondents travelled frequently and infrequently by different modes of transport, demonstrated in Figure 43. Car/van, bus and bicycle were most likely to be used frequently by Edinburgh residents, although half stated they never use a car/van or travel by bicycle.

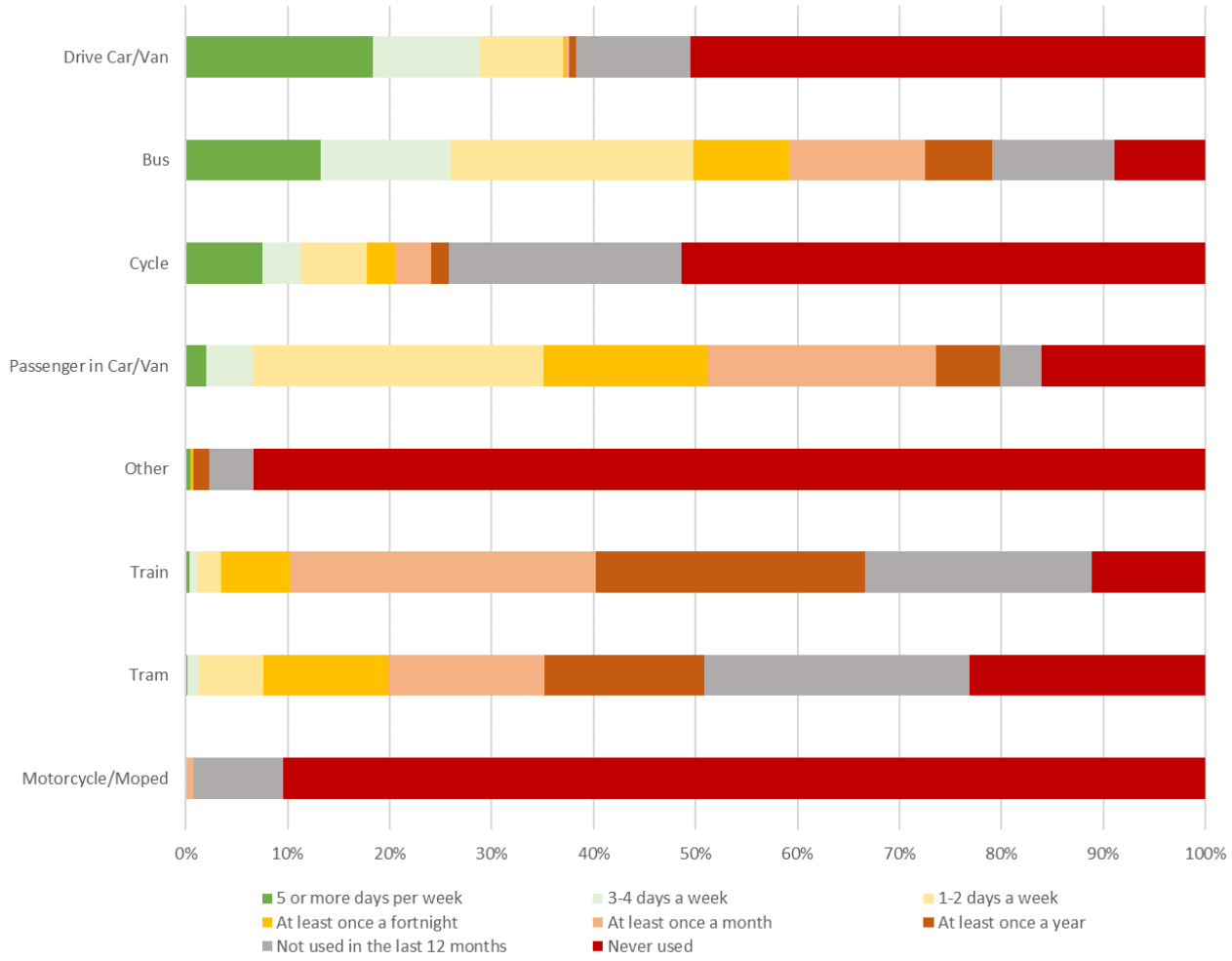


Figure 43. Household: Frequency of Use of Modes of Travel

5.3.10 Those who stated they work, either full time or part time, were asked for their main mode of travel to work. The most common response was 'car/van' (31.3%, 69), followed by those travelling on foot (25.3%, 56) and by bus (24.5%, 54). At present, 8.0% (18) of those interviewed travel by bicycle to work (Figure 44).

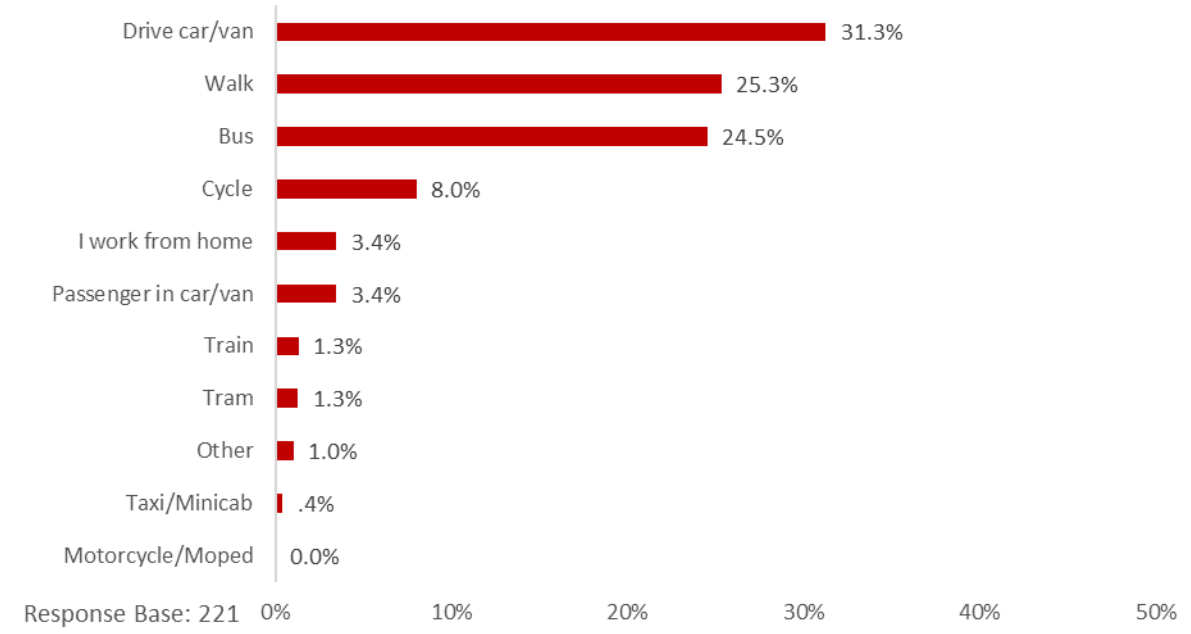


Figure 44. Household: Mode of Travel to Work

M4 – Cycle Behaviour

5.3.11 Those who stated they cycle (excluding those who stated they 'never' cycle) were asked to rate how confident they are with cycling. There was a varied response, although the highest proportion stated they are confident with 'cycling in most or all situations' (41.7%, 53). A fifth stated they were 'not a confident cyclist' (20.5%, 26) and some were only confident in their local area or away from traffic (Figure 45).

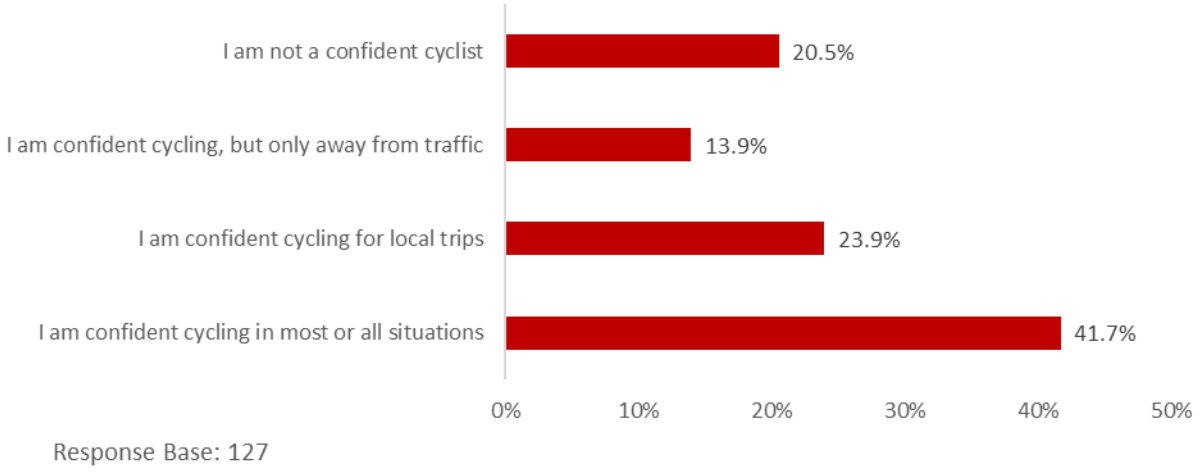


Figure 45. Household: Confidence with Cycling

5.3.12 Respondent that do cycle were asked which of the local cycle routes they have used. Over two thirds had used Roseburn Park, and a similar proportion the existing NCN1 (Roseburn – Haymarket). Around 40% had used the cycleway on North St Andrews Street, and the existing NCN1 between Randolph Place and Charlotte Square (Figure 46).

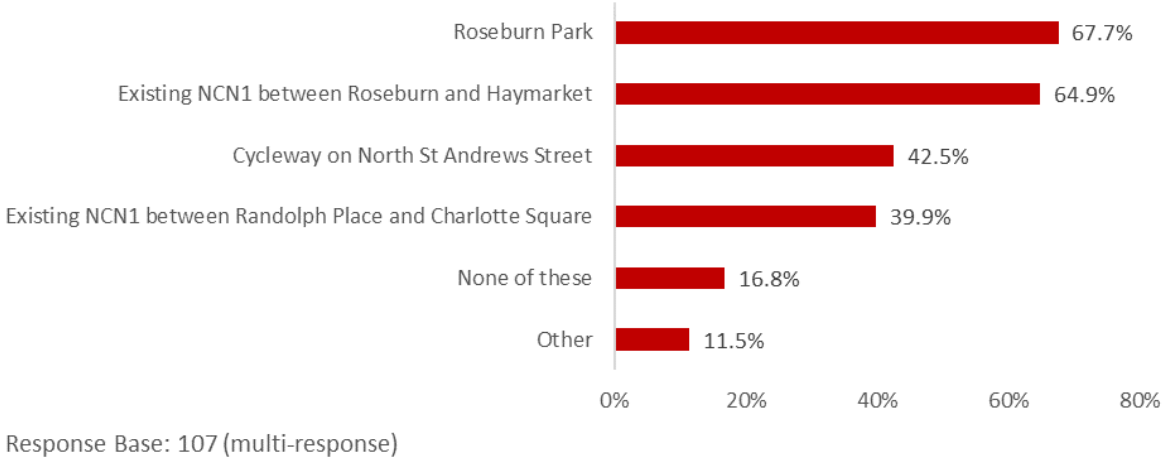


Figure 46. Household: Cycle Routes Used

5.3.13 Those that cycle were asked for their reasons for cycling. Although this received a smaller response rate, the most popular reasons were 'health benefits / exercise' and 'pleasure/enjoyment' (Figure 47).

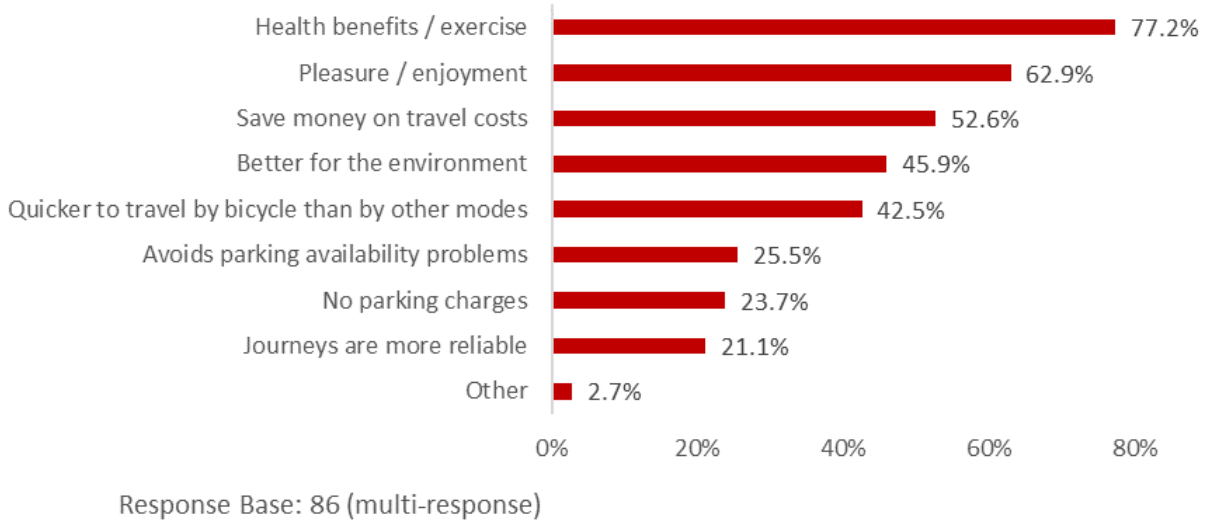


Figure 47. Household: Reasons for Cycling

5.3.14 Those who were classed as non-cyclists were asked why they do not cycle. The main reason was by far lack of access to/ownership of a bike (65.1%, 193 stated this). Aside from this, the three most common responses were 'health or fitness reasons' 'no way to carry luggage or shopping on a bike' and 'concerns about cycling in traffic', selected by around 16% (50) of respondents.

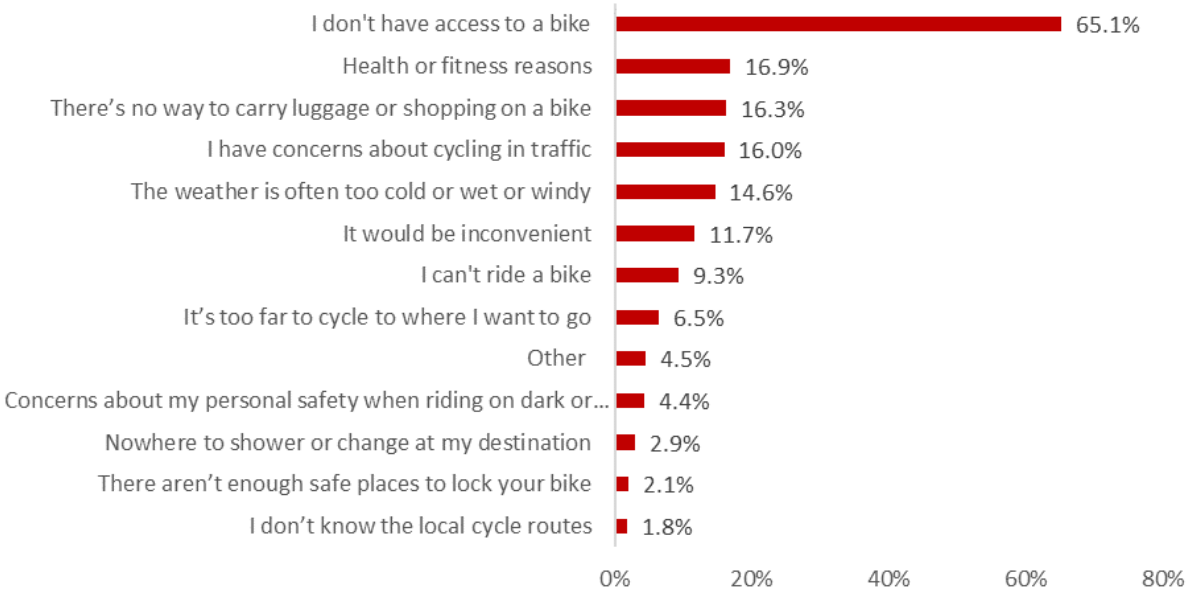


Figure 48. Household: Reasons for not Cycling

M4 - Rating of Local Environment

5.3.15 Respondents were asked to rate a number of different aspects in relation to their local environment. Figure 49 shows the mean score (red bar) and standard deviation (thin grey bar) for each environmental aspect. The aspects receiving the poorest ratings were noise, 'people priority over cars' and 'trees, plants and green spaces'. The highest rated aspects were ease of accessing public transport, and how well maintained / free from litter / dog mess the area is. In terms of overall satisfaction, this had a mean average of 5.61, and just over half (58.5%, 226) rated it a '6' or '7' as shown in Figure 50.

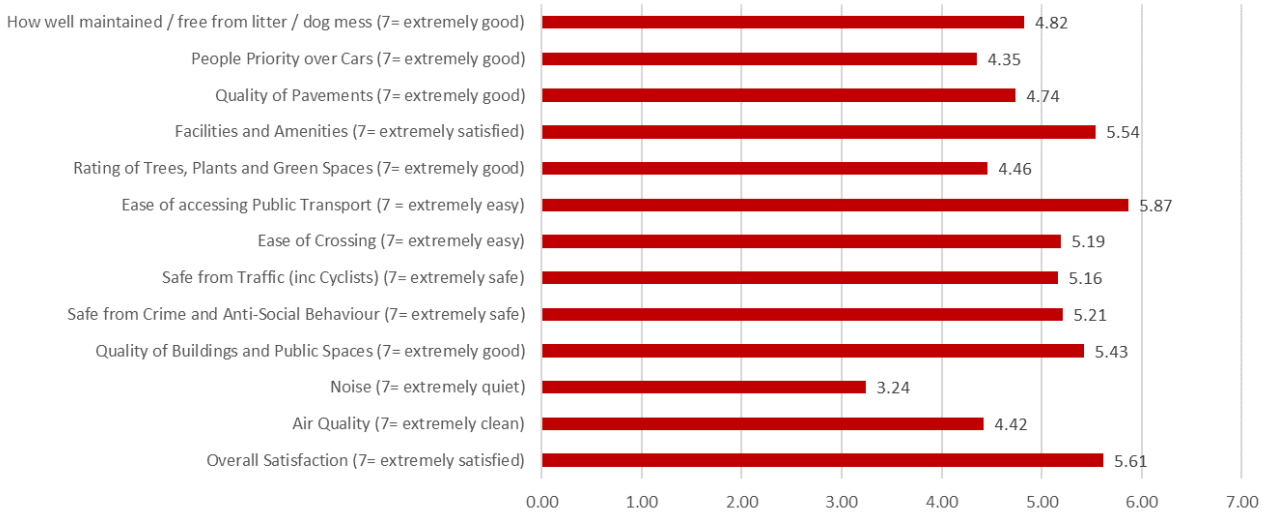


Figure 49. Household: Rating of Local Area

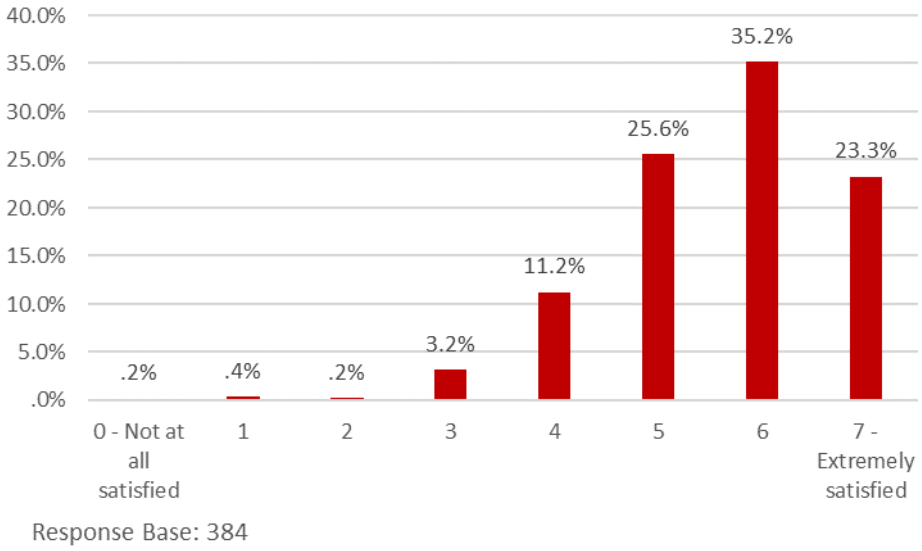


Figure 50. Household: Overall Satisfaction

5.3.16 Addressing parking, respondents were asked to rate the volume of parking spaces in their local area, shown in Figure 51. Respondents were most likely to state 'about the right amount' (42.5%, 164), although over a third, 37.1% (143) stated 'too few parking spaces'. Less than 1 in 10 felt there were too many.

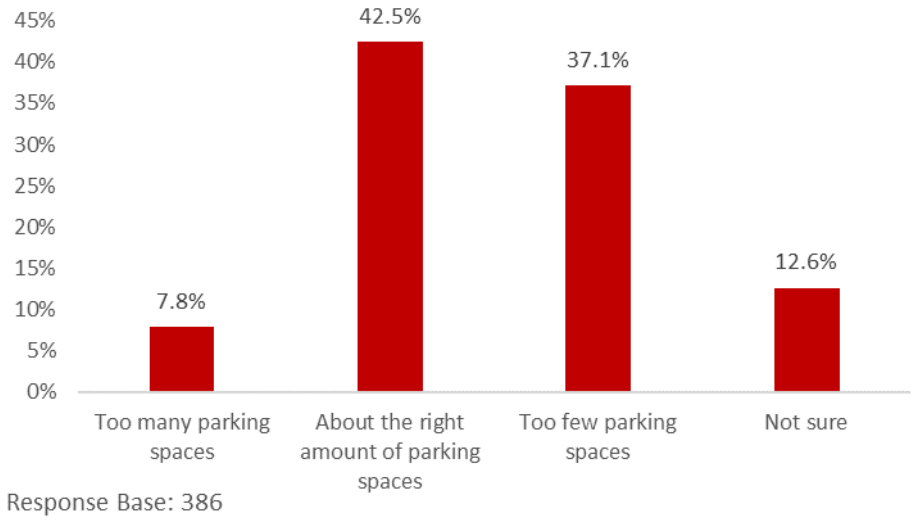


Figure 51. Household: Car Parking

M4 – Demographic

5.3.17 The age and gender of respondents is presented below in Figure 52.

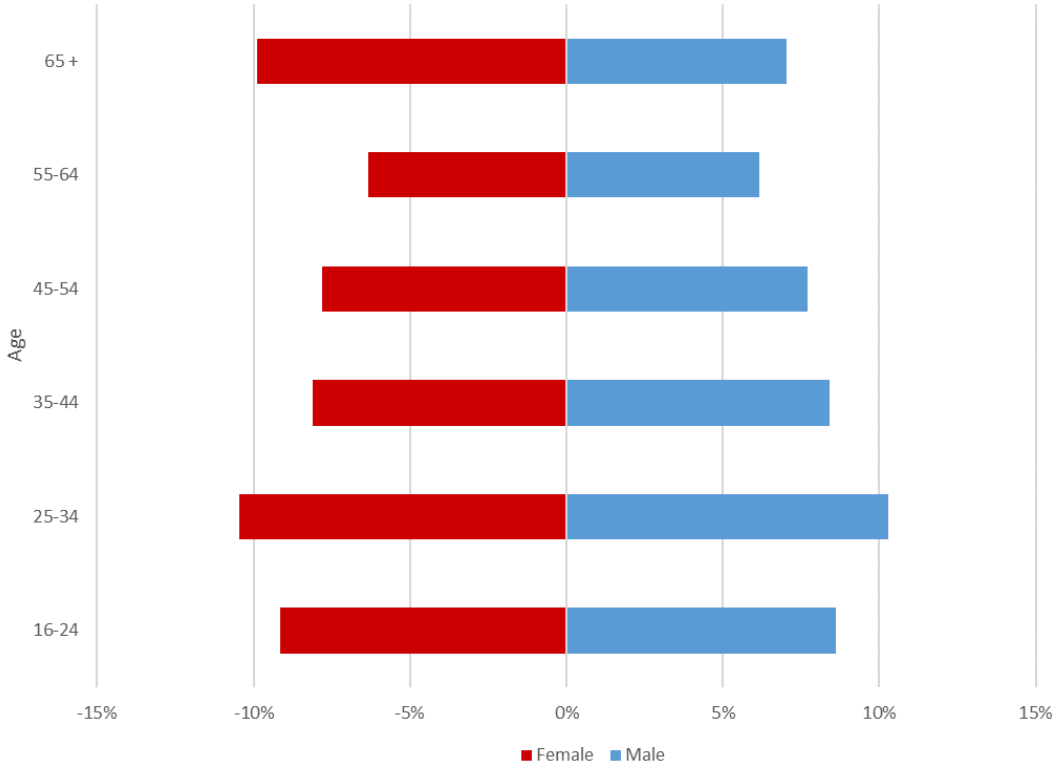


Figure 52. Household: Age and Gender

5.3.18 In addition, the majority of respondents (56%, 217) stated they are employed (full or part time), with a fifth studying and a fifth retired. Over 85% are of White British origin, and 16.% (64) stated their activities are limited a little or a lot by mobility issues.

6. M5 - STAKEHOLDER GROUP SURVEYS

6.1 Objectives

6.1.1 The objective of these interviews was to establish a baseline understanding of support for the CCWEL from representatives of residents, as well as gain an understanding of potential challenges and benefits relating to the CCWEL and how these challenges could be mitigated.

6.1.2 The purpose of this task was therefore to monitor the contribution of the CCWEL scheme to the following objectives:

- P.1 Enhance streets as places that people can enjoy from the perspective of local residents
- P.3 Create a good quality safe and attractive environment for pedestrians:
  - i Walking standing and sitting, including waiting at stops, and;
  - ii Accessing facilities and services.
- P.5 Respect the positive qualities of the built environment, especially the World Heritage Site.
- S.5. Improve perceptions of safety amongst local residents in the corridor

6.1.3 The information gathered during this task in respect of these objectives is:

- Experience of local residents regarding sense of 'Place'
- Experience of pedestrians along route corridor post-construction regarding:
  - Safety and attractiveness of surrounding environment;
  - Accessing public transport along the route corridor, and;
  - Accessing facilities and services along the route corridor
- Experience of users in relation to positive qualities of the built environment
- Perceptions of safety among local residents before and after implementation

6.2 Methodology

6.2.1 Five telephone interviews were undertaken with members of organisations representing local residents, including members of community councils, residents associations, and local amenity groups. Interviews were undertaken throughout November 2020.

6.2.2 The topic guide covered participant organisations' views on:

- Overall support for the CCWEL;
- Challenges and benefits to the local area;
- Challenges and benefits to local residents;
- Challenges related to the construction of the CCWEL;
- The plausibility of increased cycling related to the CCWEL; and
- The progress of the scheme to date including the consultation phase.

6.2.3 All participants sat on a community council, residents association, or amenity society in a residential area that the CCWEL will run through or nearby. Participants discussed the role of their various organisations, which represent residents on a wide range of matters including planning issues, transport, crime, and cycling issues in the local area.

With consent from participants, discussions were voice recorded. Verbatim quotes have been provided throughout this section of the report.

6.3 Data and analysis

Knowledge of CCWEL

6.3.1 All participants were aware of the CCWEL scheme and had knowledge of the route, with varying levels of involvement in the consultation phase. Some had been involved in all stages of the consultation across several years with a deep knowledge of the proposal and how it had changed over time, whilst others had not been involved in any of the consultation phase. Most were only knowledgeable about the section of the CCWEL that will run through or nearby to the area they represent.

Levels of support for the CCWEL

6.3.2 Whilst it was agreed by all participants that there was support amongst their organisations for improving cycling infrastructure in Edinburgh, there were varying levels of support for the CCWEL itself, within and between organisations. Levels of support ranged from advocacy of the scheme to extreme objection to the scheme.

6.3.3 Those who were supportive of the scheme felt that it would offer the opportunity for the residents in the areas they represent to cycle into the city centre safely, and felt this was extremely important given the increase in cycling due to Covid-19. Some also felt that where the traffic was reduced to one lane, traffic would decrease leading to **reduced congestion** and **improved air quality.** However, there were also concerns that if traffic levels did stay the same congestion on local roads would increase.

> *"Providing proper surfaces for people which are not involving them sharing the carriageway with vehicles clearly is a benefit."*

6.3.4 Those organisations that were supportive of the scheme did provide the caveat that although they were generally supportive of the CCWEL, they also envisioned that it may bring about some **challenges** for local residents or the local area. The challenges envisioned by these organisations included:

- The potential for increase congestion on local roads due to reduced traffic lanes;
- Rat-running through residential streets;
- Issues relating to the maintenance of the cycle lanes;
- Safety concerns relating to floating bus stops and combined spaces for cyclists and pedestrians; and

- Concern that in building cycle lanes, space could be taken away from pedestrians or from public transport which is used frequently, especially by older residents.

These issues will be discussed in more detail throughout this chapter.

> *"There's a feeling that promotion of cycling should not overshadow bus use."*
>
> *"Our concern is when we are doing things to create cycle paths, we do not do so at the expense of pedestrians, because there are far more people walking around than there are cycling around."*

6.3.5 Those organisations that were unsupportive of the CCWEL cited various reasons for this objection, including:

- A feeling that due to a large proportion of local residents being elderly and less likely to cycle, they would not benefit from the CCWEL;
- Fears for the safety of older residents with more cyclists in the area and floating bus stops;
- Concerns that the CCWEL route could cause traffic to become congested;
- Concerns over increased air pollution due to congestion;
- Increased rat-running in the area; and
- An increase in one-way streets in the area causing difficulty for local car users.

> *"You're just increasing emissions and so on and congestion."*

6.3.6 Those organisations that were unsupportive of the CCWEL generally cited **CCWEL's route** and **safety concerns for older residents** as being the key issues which fuelled this objection. These issues will be discussed in more detail throughout this chapter of the report.

6.3.7 Those organisation who opposed the CCWEL conceptualised it as a trade-off between these benefits and the perceived challenges that will face the local area, coming to the conclusion that the benefits were not great enough to justify the challenges.

> *"I've yet to meet anyone who thinks it's [disruption to traffic flow and vehicular access] a price worth paying [to realise the scheme's potential to benefit to cyclists in the area]".*

Impacts on the local area

6.3.8 Whilst there was mixed support for the CCWEL, most organisations were able to identify potential benefits to the local area. These included:

- Improvements to the street environment in line with the 'Rejuvenating Roseburn' agenda;
- Potential increases to house prices due to the improved street environment and proximity to the cycle lane;
- Increased safety for pedestrians in certain areas; and

- A potential for reduced traffic in the area due to the reduction of the number of traffic lanes.

6.3.9 Some organisations expressed that they had originally supported the CCWEL, as they felt it would provide a family-friendly cycle route into the city and rejuvenate street spaces in line with the goals of local organisations. However, they felt that the current proposal focuses more on benefitting the economy by supporting commuter cyclists and travel to commercial hubs in the city centre, rather than focusing on benefits for local residents, families, and businesses in areas such as Roseburn and Murrayfield.

6.3.10 All organisations identified potential challenges for the local area, including:

- Reduced trade for local businesses;
- Increased congestion;
- Longer car journeys for residents due to increased restrictions;
- An increase in air pollution; and
- Rat-running.

> *"You're doing something which is good, which is providing a safe route for cyclists, but at the same time if you're causing the traffic to be completely blocked up, then all you then do is you create another hazard in terms of atmospheric pollution."*

6.3.11 Most organisations felt that **local trade** would be negatively impacted in some way through the introduction of the CCWEL scheme. Although there is limited legal parking along Roseburn Terrace, most organisations discussed local residents using load bays to park nearby to shops for quick visits, and felt that the introduction of the CCWEL would prevent this from happening, having a negative impact on local trade. Some also felt that increased parking and loading restrictions along Roseburn Terrace would cause difficulties for businesses receiving deliveries.

> *"People used to stop where they shouldn't really stop to run into the shops, now they won't be able to do that so there is a real concern with passing trade being taken away"*

6.3.12 However, one organisation felt that the CCWEL would benefit local trade as those cycling past shops would be more able to stop and visit compared to those driving or using the bus.

6.3.13 There were also concerns from some that **removing parking spaces** could result in pedestrians and those working in shops being exposed to higher levels of air pollution as this would remove the physical barrier between the pavement and moving cars.

6.3.14 Several organisations were concerned with **increased traffic congestion** in the local area due to the removal of a lane of traffic, though some felt that this could have the opposite effect, acting as a deterrent and reducing traffic levels.

Impacts on residents

6.3.15 Some organisation identified benefits to residents relating to increased **ease and safety of cycling** in the local area. They suggested that the CCWEL could potentially result in more residents cycling more safely, which in turn could reduce car use in the area resulting in numerous positive impacts on residents and the local environment, such as improved air quality and reduced congestion on the roads.

> *"The objective of increasing cycling is something that will be achieved."*

6.3.16 However, others viewed the goal of increasing cycling in Edinburgh as overly optimistic or unrealistic. Some suggested that the residents they represented would be unlikely to benefit from the scheme as the population is largely older and so less likely to take up cycling. Other barriers to cycling identified by the stakeholders included:

- Steep hills;
- Lack of cycle storage;
- Inability to take bicycles on buses; and
- Cold winters.

> *"Cycling grannies would be nice but I don't think we're going to see it."*
>
> *"It is a far too great an optimistic objective that [cycling] will substantially increase, people are going to cycle if they want to anyway and they can easily acquire the skills of a road cyclist."*

6.3.17 However, there were also suggestions as to how these barriers could be minimised. It was suggested by one stakeholder that **e-bike infrastructure** and improved **cycle storage** provisions throughout the city centre could not only incentivise cycling and use of the CCWEL cycle route, but could also allow cyclists to use the route not just as a path through the city, but as a route to explore the city making stops along the way. Increased and improved cycle storage would allow cyclists to do this. Another suggested ensuring that the CCWEL is effectively joined up with **local cycle routes** throughout the city, to ensure cyclists are able to access the route without cycling on footpaths or having to take the bus into the city centre.

> *"We really need to be clear as to how cyclists will join these strategic paths through the centre, otherwise we will have cyclists having to cross over footpaths as there is no viable route for them to join."*

6.3.18 There were various concerns around potential challenges that may face residents as a result of the CCWEL. These concerns fell into two main categories: **safety concerns** and **concerns for car-users**.

6.3.19 All stakeholders shared concerns around the safety of **floating bus stops**, where pedestrians will have to cross a two-way cycle lane to reach a bus stop, in some cases where bus stops

are at the bottom of steep hills. Stakeholders were concerned for the safety of pedestrians, especially those with mobility or visual impairments, older pedestrians, and children. There were also concerns for pedestrian safety where, at certain sections of the CCWEL, there will be little distinction between pedestrian footpaths and the cycle lane, or where there is **shared space**. Many of the stakeholders expressed that older residents were fearful of a small number of aggressive cyclists, so would object to this shared space, or an increase in the number of cyclists in the local area.

6.3.20 Another safety concern related to the crossing of **tram lines**, where interviewees mentioned their potential contribution to serious / fatal accidents involving cyclists in Edinburgh. A final safety concern related to the maintenance of the CCWEL cycle lane. One organisation was concerned that the cycle lane would become unsafe for cyclists to use if it was not properly maintained, through removing leaves and ice, and ensuring the surface remains in a suitable condition.

> *"There's an instinctive **fear of cyclists** - of being knocked down by them. I think the proposed crossing outside the Murrayfield bar at the very far western end of the CCWEL route is seen as a place of potential conflict between cyclists and pedestrians trying to get across the road."*
>
> *"I think if people are wanting to use the bus they'll us it, but there is still an added risk [due to the proposed floating bus stops] especially for, as I said, most of our residents are pension age or getting there."*
>
> *"The concern that people have, particularly people with disabilities or eyesight or mobility issues or wheelchairs or buggies or dogs wanting to get on and off buses, is that they're doing so by **crossing cycle paths**, and that obviously creates very particular concerns for people."*

6.3.21 There were also concerns that residents' **car journeys** would be longer than necessary due to increased road closures and one-way streets in the local area. Some stakeholders feared this would increase congestion and reduce air quality, impacting on local residents.

Construction

6.3.22 Some stakeholders were concerned that the construction of the CCWEL would result in increased **congestion** in the area. Stakeholders feared this construction may have similar impacts to previous construction in the area, which caused significant disruption to residents and local businesses. One stakeholder suggested ensuring there was only one piece of construction occurring in the area at any given time in order to minimise the impact of the construction.

> *"Roadworks in Roseburn Terrace will create serious tailbacks and everything else because when the gas main work was there that was awful. Loading, unloading, quick parking for elderly with disabled badges was completely disrupted. The shops suffered*

> *all sorts of economic downturn, and as I say the tailbacks right along westwards will be awful."*

6.3.23 There were also concerns that construction would cause traffic to be **diverted** into residential streets. This was a particular concern for locations such as Douglas Crescent where there has been a history of damage to basements caused by heavy vehicles using the road. Stakeholders suggested imposing **speed** and **weight limits** on residential roads, where appropriate, to minimise the impact of construction related traffic.

Consultation

6.3.24 Overall, stakeholders were happy with the information they received throughout the consultation phase of the CCWEL. They felt that important information had been shared with them and appreciated Project Officer Rurigdh McMeddes attending community council meetings to explain the progress of the scheme. However, some felt that the maps were confusing and difficult to interpret.

6.3.25 Although they felt they had been kept informed throughout the development of the scheme, some stakeholders felt that their views weren't taken into account during the decision-making processes resulting from the consultation. Some felt that the council had made decisions, especially related to the CCWEL route, prior to the consultations and not taken into account the views of local residents. One residents association also felt that their views hadn't been taken into account as they had to be represented by their community council rather than being consulted with directly.

> *"We want to hear not only '*we will listen to you' *but '*for compelling arguments we will modify the plans'."

7. M6 - ROSEBURN PRIMARY SCHOOL

7.1 Objectives

7.1.1 The purpose of this task was to monitor the contribution of the CCWEL scheme to the following objectives:

- P.1 Enhance streets as places that people can enjoy
  - i From the perspective of local residents, and
  - ii For activities other than movement
- P.3 Create a good quality safe and attractive environment for pedestrians:
  - i Walking standing and sitting, including waiting at stops, especially floating bus stops
  - ii Accessing facilities and services
- S.3 Improve perceptions of safety amongst vulnerable road users in the corridor

7.2 Methodology

7.2.1 On-street interview surveys were carried out on Roseburn Street, in the vicinity of Roseburn Primary School, on Wednesday 11th November and Tuesday 17th November, between 8am – 4pm. All street users were in scope, including those accompanying children to/from school, those passing through and those living or working in the area.

7.2.2 The questionnaire took around 5 minutes to complete; respondents were asked their reason for being in the area, mode of travel, whether their travel choice has been impacted by Covid-19, and several questions rating the environment (including quality of infrastructure, air quality, safety and ease of crossing).

7.3 Data and analysis

7.3.1 In total, 35 interviews were completed. Around a third (31.5%, 11) of respondents were accompanied by a child, but the majority were alone when interviewed.

M6: Journey Purpose

7.3.2 As shown in Figure 53, around a third of respondents were making journeys in relation to the school (34.3%,12), with the majority of the remainder 'shopping' or carrying out 'personal business'.

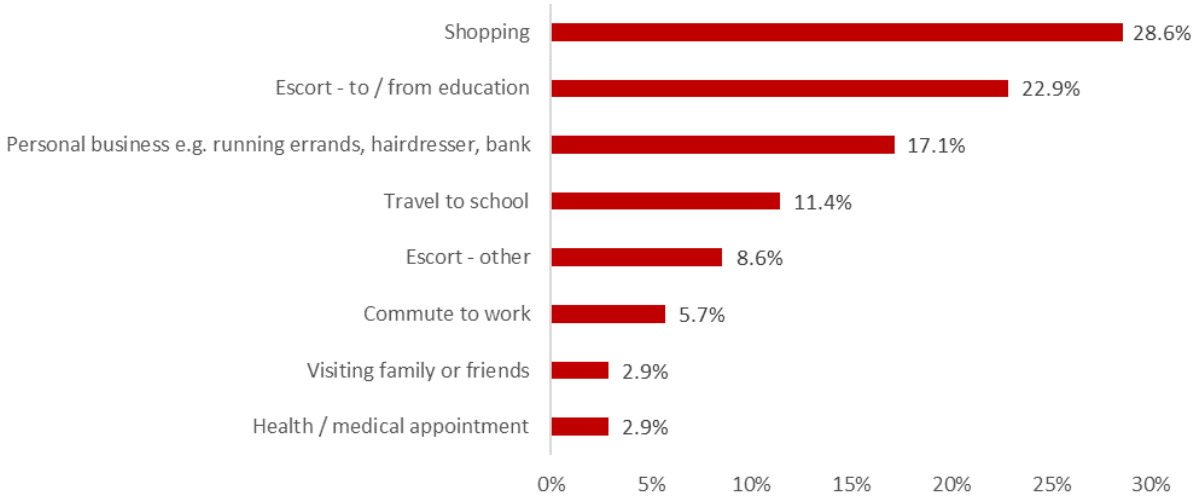


Figure 53. Roseburn Primary: What is your main reason for being on this street today?

M6: Mode of Travel

7.3.3 Respondents were asked for the main mode of travel to the area. L than 6% travelled by car or van, with the majority walked (88.6%, 31) as shown in Figure 54. However, no respondents reported cycling to the area. Almost all (88.6%, 31) school-related journeys were on foot.

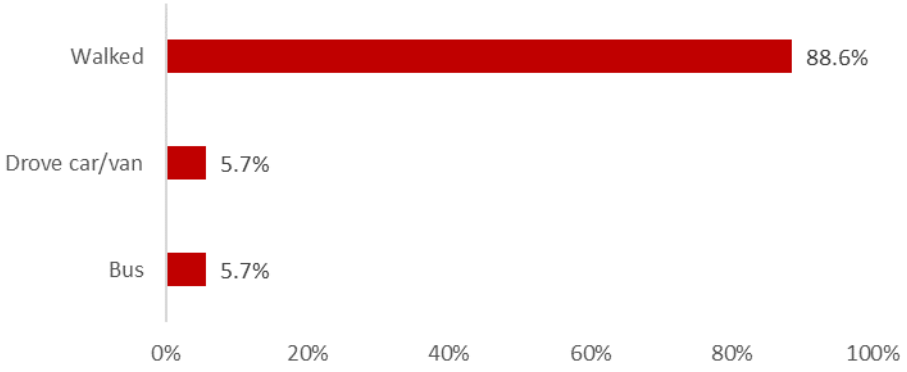


Figure 54. Roseburn Primary: What was your main mode of travel here today?

7.3.4 In additional, nearly all respondents reported that they travel to Roseburn Street on a frequent basis (48.6%, 17, travel daily, and 42.9%, 15, travel at least twice a week).

M6: Views on the local environment

7.3.5 Respondents were asked to rate a number of different environmental factors from 0-7 where 0 represented “not at all…” and 7 “extremely…”. Note that for some questions 1 was the most positive result while for others 7 was the most positive result.

7.3.6 Graphs are provided for metrics with results of particular interest in Figure 55 to Figure 60. A summary table with of all results is provided at the end of this section.

M6: Overall satisfaction

7.3.7 Satisfaction was generally high as shown in Figure 55, with 91.4% (32) respondents rating it ‘5’ or above.

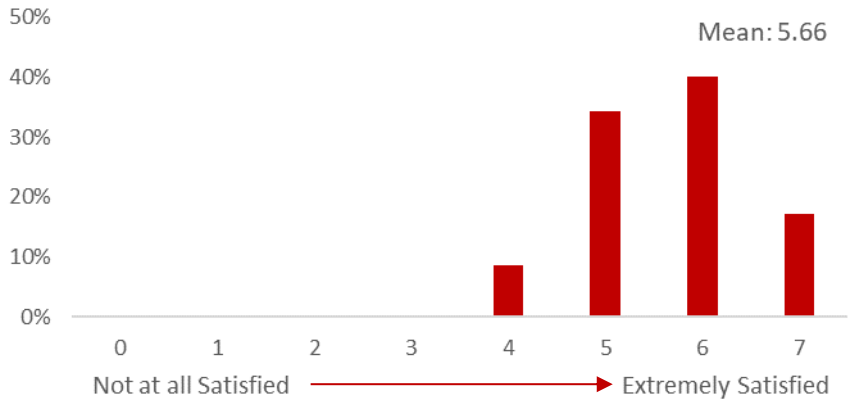


Figure 55. Roseburn Primary: Overall, how satisfied are you with the street?

M6: Parking

7.3.8 As shown in Figure 56, respondents were asked for views on parking spaces on the street. Views varied, though 40% (14) stated that there are ‘too few parking spaces’. However, almost a third (28.6%, 10) felt there were ‘too many’. Around a fifth of respondents felt the number was about right.

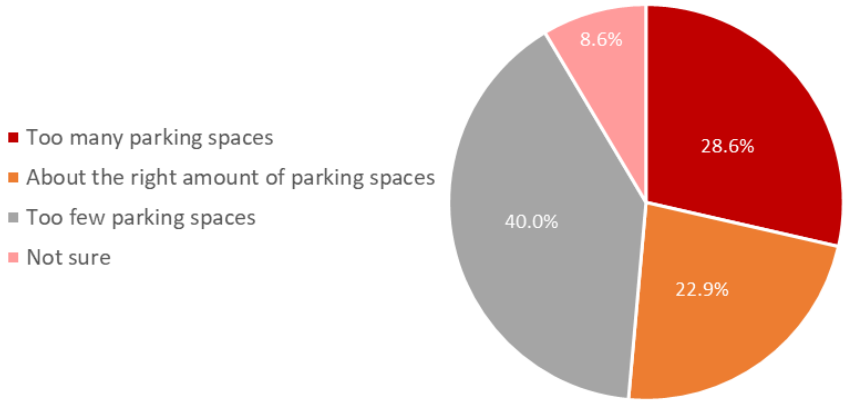


Figure 56. **Roseburn PS: Do you think there is the right number of parking spaces on the street?**

M6: Air Quality

7.3.9 As shown in Figure 57, respondents had mixed views on the level of air quality on Roseburn Street, with around a quarter rating it as 1-3, close to 'not at all clean'. However, almost half (48.6%, 17) did rate it as 6 or 7, towards 'extremely clean'.

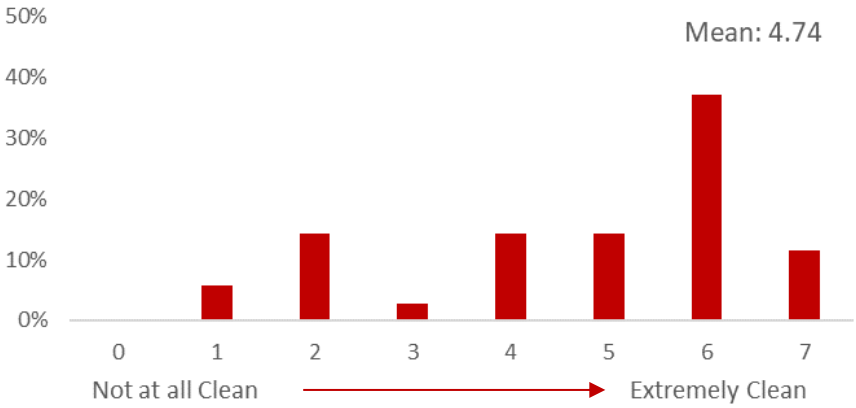


Figure 57. **Roseburn Primary: How clean do you think the air on this street today?**

M6: Noise

7.3.10 Mixed responses were also received for the noise metric, as summarised in Figure 58, with around half of respondents rating it towards the lower part of the scale, suggesting ambient noise is high.

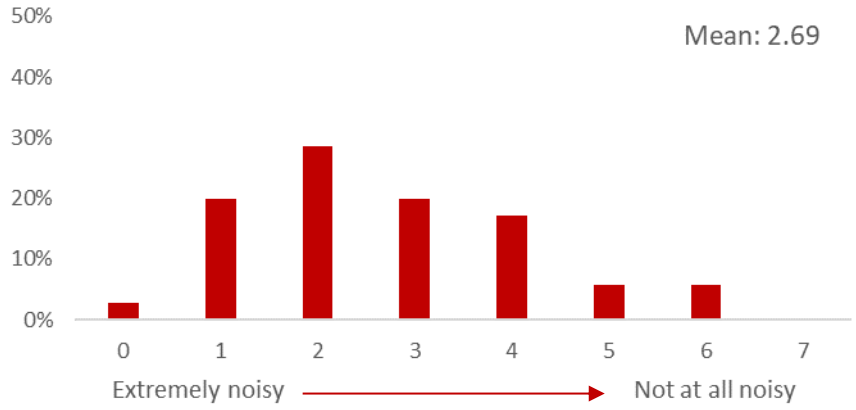


Figure 58. **Roseburn Primary: How noisy are you finding this street today?**

M6: People priority over vehicles/traffic

7.3.11 Figure 59 shows that although almost half of respondents agreed, to some extent, that people on street are given a good level of priority over cars and traffic, a similar proportion rated this '3' or '4', suggesting the perceived level of priority people have (over cars) is average.

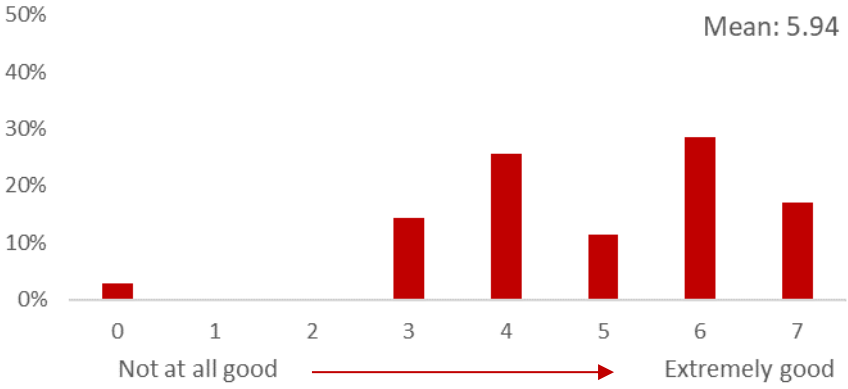


Figure 59. **Roseburn PS: Do you feel that people are given priority over traffic on this street?**

M6: Sitting / resting

7.3.12 Figure 60 shows that although many respondents gave a high rating to 'ease of finding somewhere to stop, rest or sit', a notable proportion rated this low on the scale, suggesting a lack of (or perceived lack of) suitable street furniture.

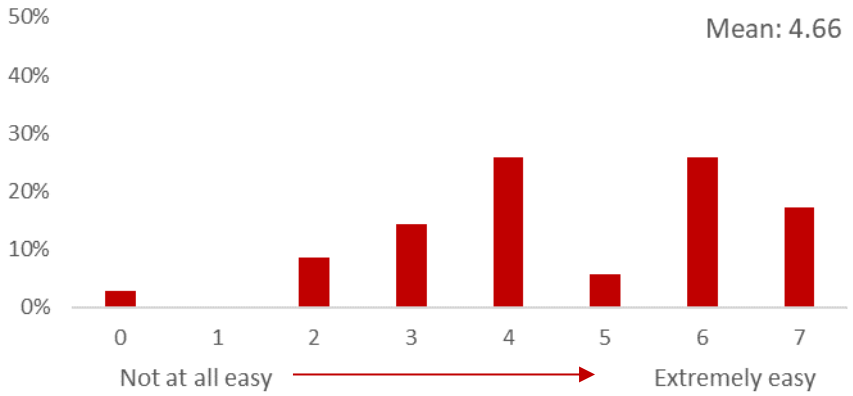


Figure 60. **Roseburn PS: How easy would it be for you to find somewhere to stop, sit or rest on this street?**

M6: Overall Ratings

7.3.13 Figure 61 shows a summary of the overall ratings for Roseburn Street's environment.

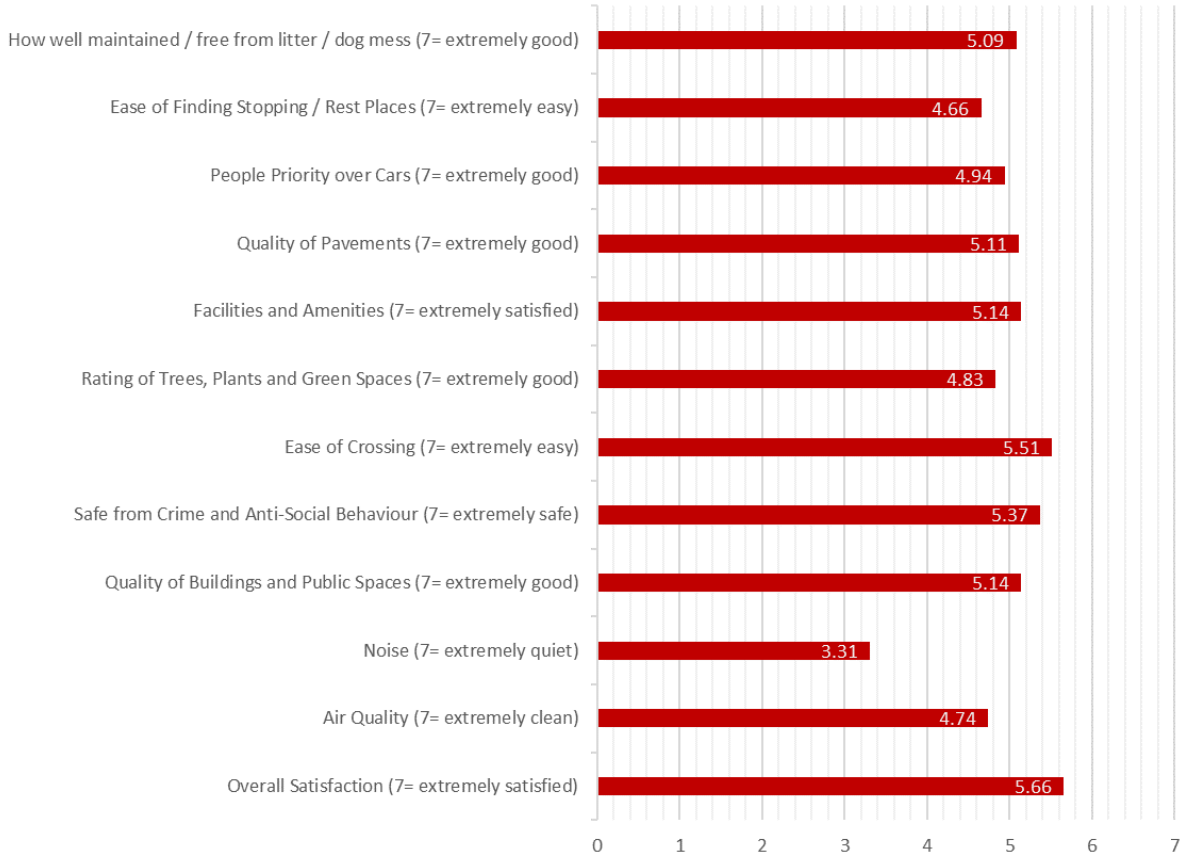


Figure 61. **Roseburn Primary – Summary of overall ratings**

7.3.14 The age and gender split of respondents is shown in Figure 62 All but one respondent was a resident of Edinburgh, with the majority living in the EH12 5 postcode, close to the study area. No respondents reported any disability or mobility impairment and no respondents stated that they had changed their mode of travel due to Covid-19.

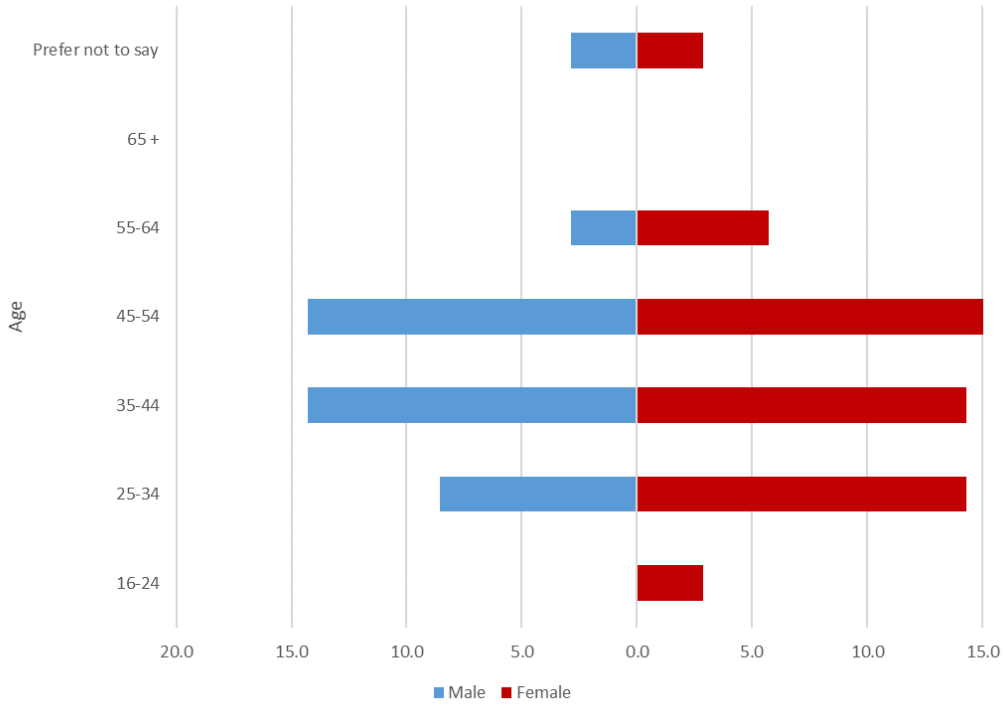


Figure 62. Roseburn Primary – Age and Gender

7.4 Summary

7.4.1 Roseburn Street is already a place with a low-level of car use, including for school-related trips. Despite the location of the school, it is an area that has a high number of shoppers and those carrying out personal business using the area. Although satisfaction with the area in general was high, some dissatisfaction with air quality, noise, people priority over cars and street furniture was observed.

8. M7 - TRADER INTERVIEWS

8.1 Objectives

8.1.1 Trader interviews were conducted to feed the following objectives:

- T.8. As far as possible, meet demand for car parking and loading to facilitate the needs of businesses and residents
- EC.1. Enhance retail vitality in the project corridor
- EC.2. Encourage additional spend through improved cycle access to shops in the corridor

8.1.2 Therefore data was collected to allow assessment of the following metrics during the interviews:

- Trader perception of impact of scheme on loading
- Change in retail turnover and assessment of retail success following completion
- Perceived change in number of shoppers coming by bike

8.2 Methodology

8.2.1 Trader interviews were carried out for premises near the sites shown in Figure 63. Sites on Dalry Road and Gorgie Road were used as control sites (away from the CCWEL route).

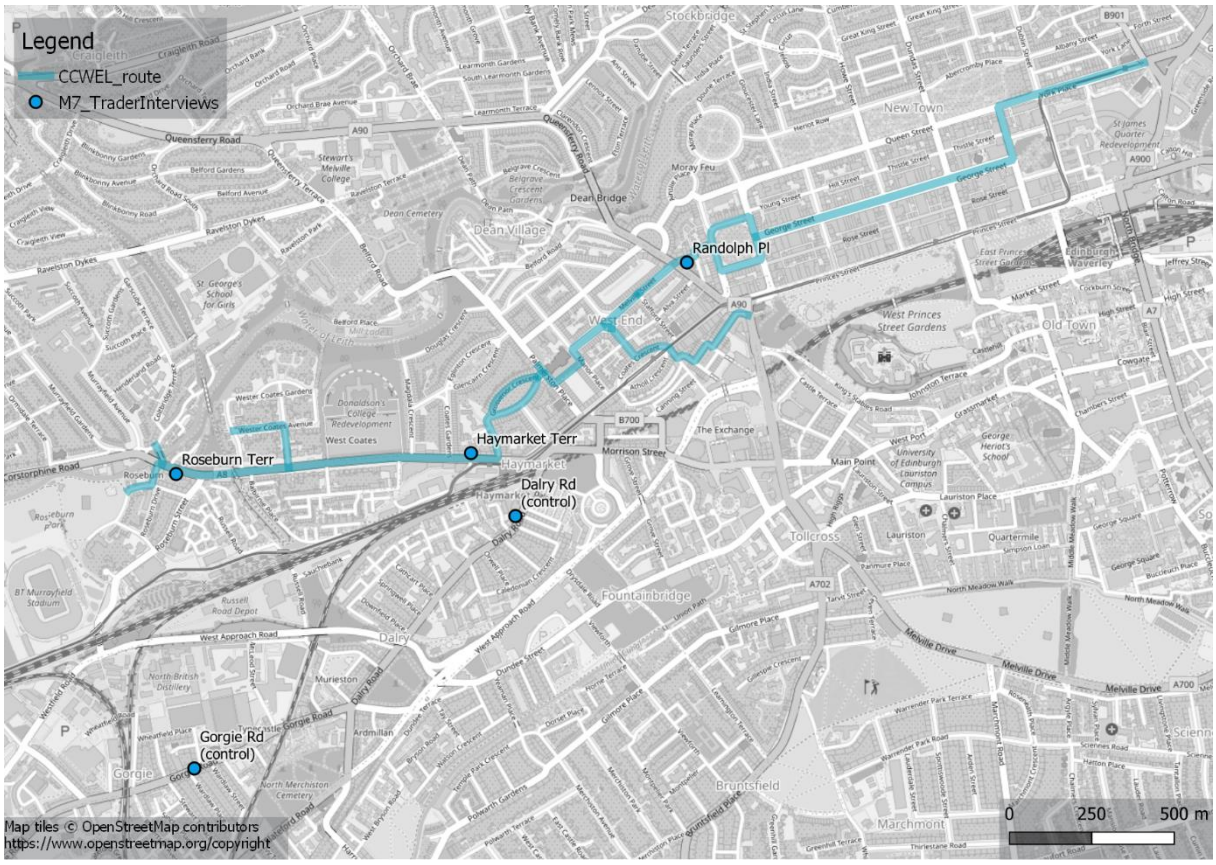


Figure 63. Trader interview sites

8.3 Data and Analysis

8.3.1 The number of responses obtained for this survey was relatively low at 15, as such low confidence applies to all percentages quoted in this section. As shown in Figure 64, respondents were asked to select the main use of their premises. Nearly half (47%, 7) of those who answered the question **offered services** as the main use of their premises. A further third (33%, 5) of respondents stated that the main use of their premises was some kind of **shop** that was not a convenience or charity shop. The remaining respondents offered food and drink consumed on site (13%, 2), or ran charity shops (7%, 1).

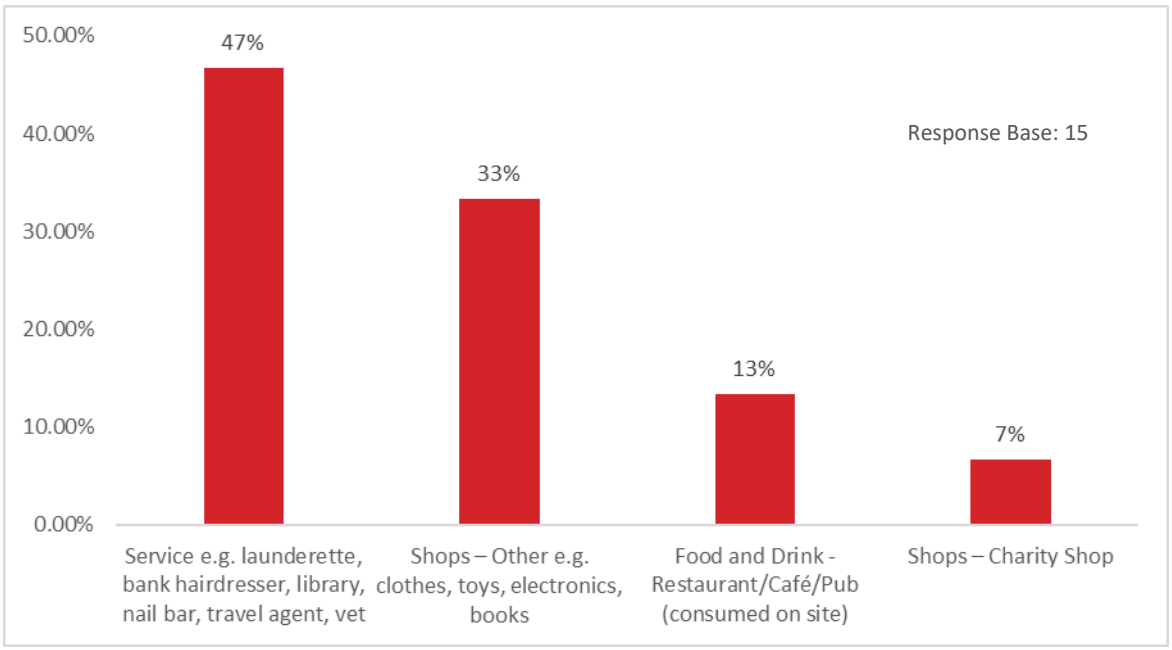


Figure 64. Trader Survey: Main use of business premises

8.3.2 Respondents were asked **how long they had traded** at their current location. Figure 65 shows that one third of respondents (33%, 5) had been trading at their current location for between three and five years. Around one quarter (27%, 4) of respondents had been trading at their current location for more than twenty years, whilst 20% (3) of respondents had been doing so for both six to ten years, and eleven to twenty years. No respondents had been trading at their current location for less than three years.

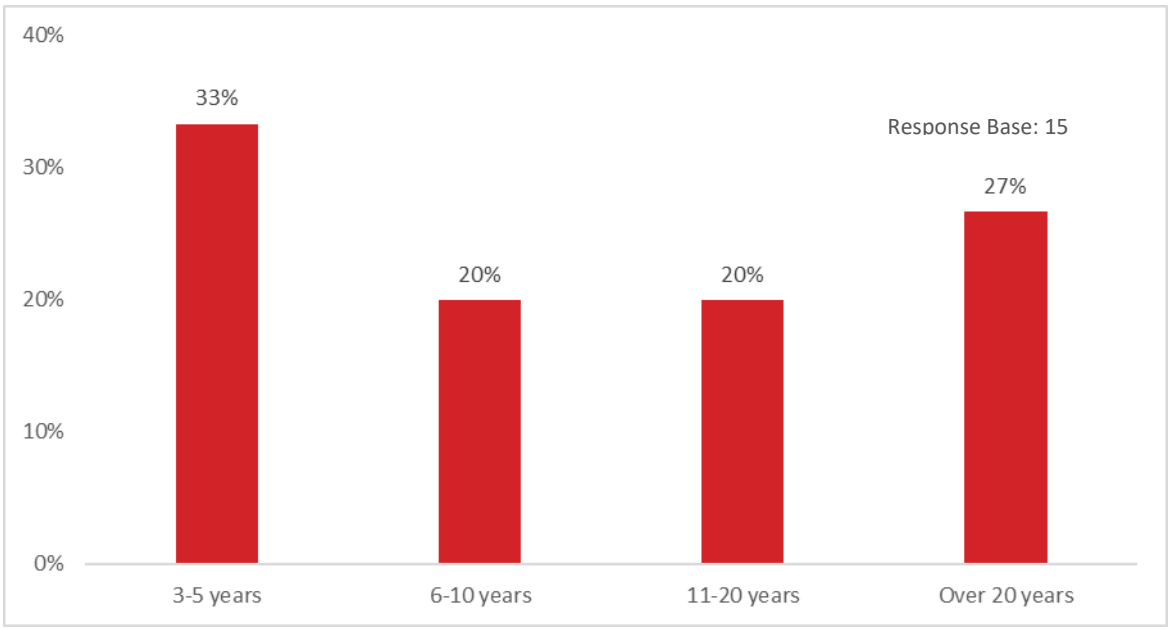


Figure 65. Trader Survey: Length of time trading at current premises

8.3.3 Respondents were asked **how many employees usually travel to the premises** on the busiest day of the week. The most common response was between one and two employees, with 40% (6) of respondents selecting this answer. This was followed by three to four employees (27%, 4) and five to six employees (20%, 3). The least common responses were seven to eight employees, and nine to ten employees (7%, 1). No respondents stated that more than ten employees usually visit the premises on the busiest day of the week. On average, businesses had 4 employees travelling to the premises on the busiest day of the week. These responses are outlined in Figure 66.

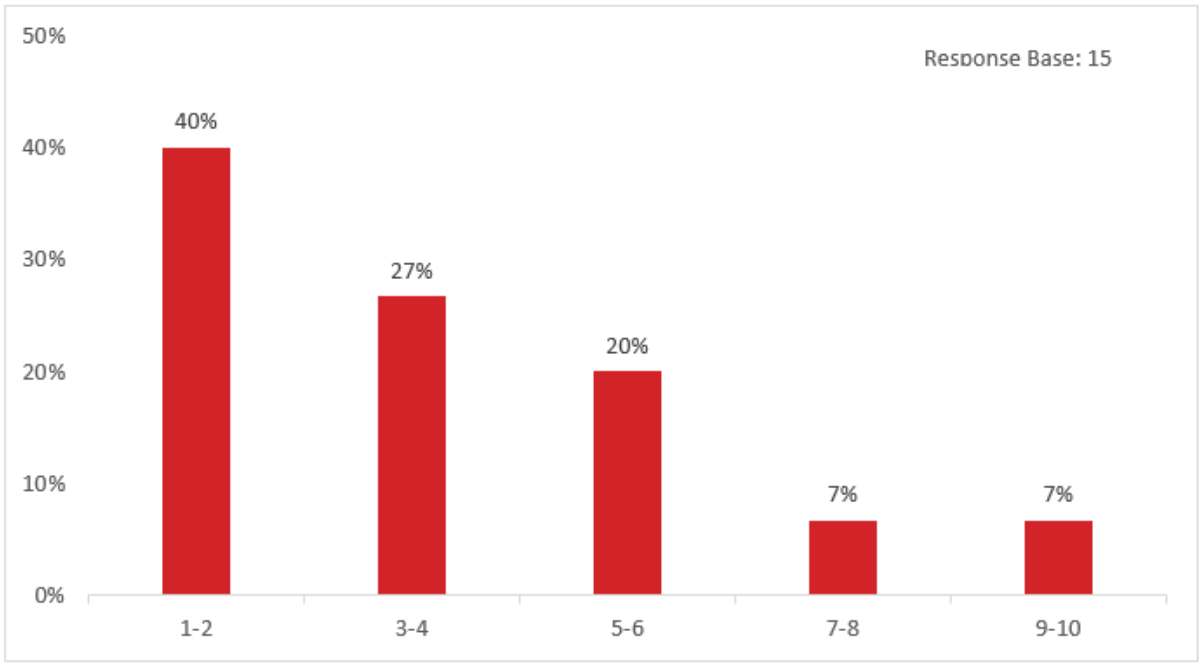


Figure 66. Trader Survey: Number of employees travelling to premises on busiest day

8.3.4 Respondents were asked to **estimate what percentage of staff travel by each mode** on a typical day. As outlined in Figure 67, respondents estimated that the most common way in which staff travel is by car or van, as a driver (35%). The second most common way of travelling to work was estimated to be walking (25%). The least common ways of travelling to work were estimated to be as a passenger in a car or van (2%) and by tram (1%).

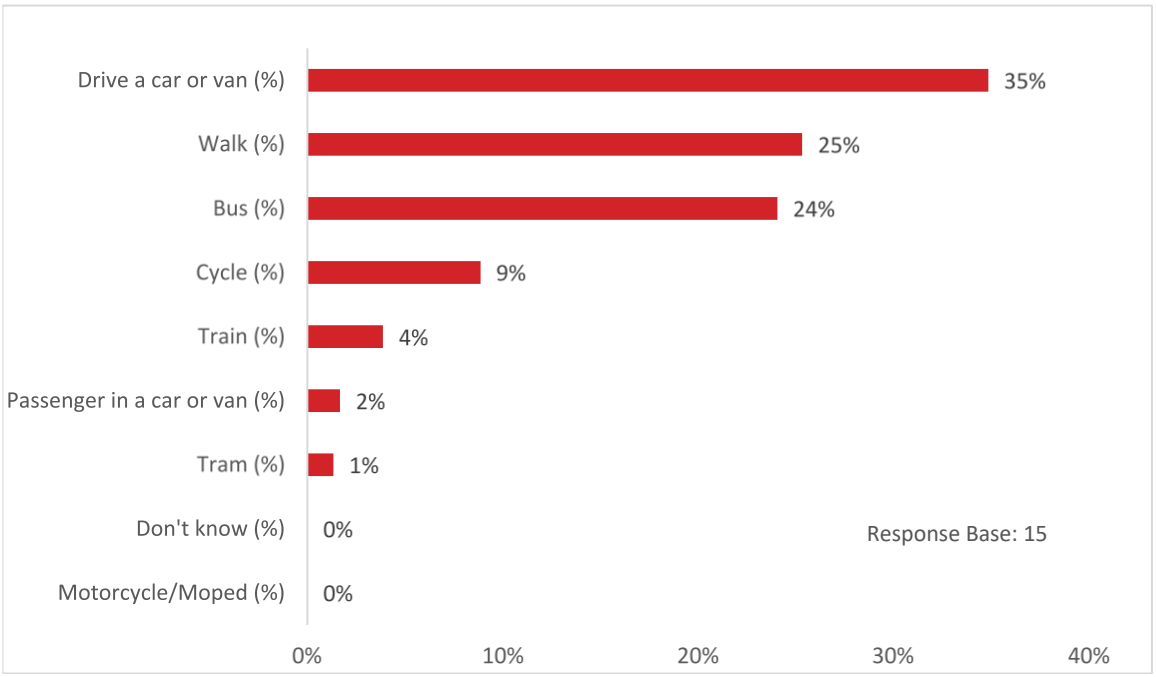


Figure 67. Trader Survey: Estimation of employee travel to work modes

8.3.5 The vast majority of respondents (87%, 13) were aware of the City Centre West to East Link. Very few (13%, 2) were unaware, as outlined in Figure 68.

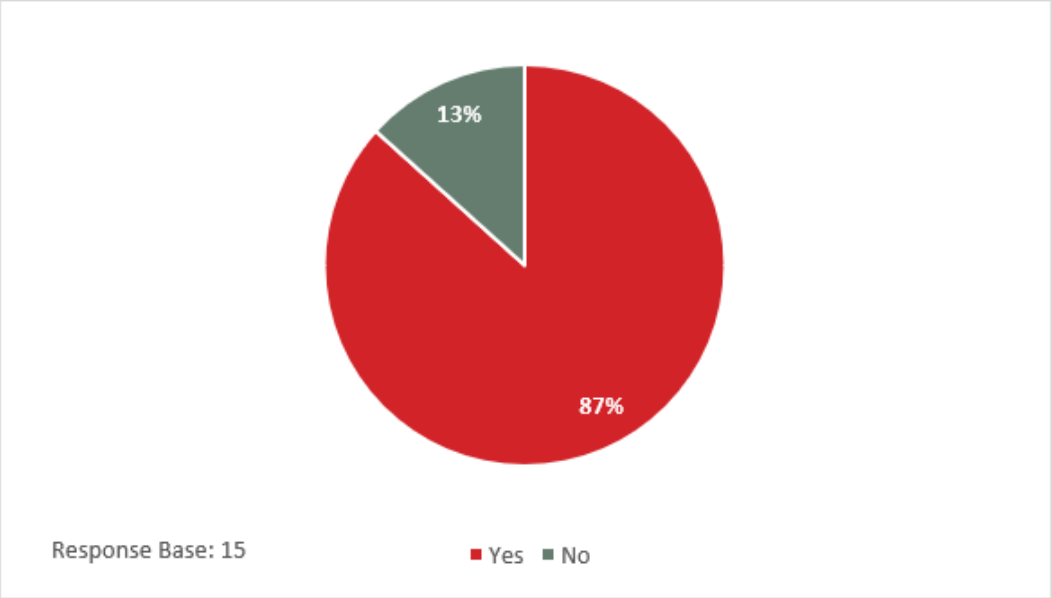


Figure 68. Trader Survey: Awareness of the CCWEL

8.3.6 Those respondents who stated that they were aware of the City Centre West to East link were then asked via what sources they had heard about the scheme. Hearing about the scheme via Edinburgh City Council and word of mouth were the most common (69%, 9). This was followed by 'from local action groups' (31%, 4); local media (23%, 3); and Social media (8%, 1), as illustrated in Figure 69. Around one quarter (23%, 3) of respondents also indicated that they had heard about the CCWEL from an 'other' source. These other sources were:

- Project Officer for the City of Edinburgh Council - Rurigdh McMeddes; and
- A local residents committee.

8.3.7 One participant also noted that they felt communication around the CCWEL has been lacking since the pandemic.

> *"it's all gone quiet since the pandemic. No notification of roadworks coming."*

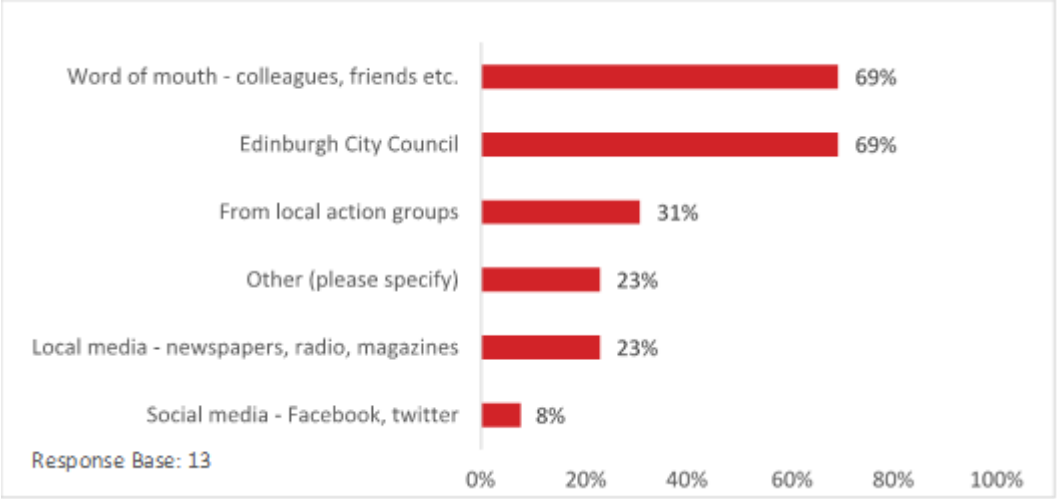


Figure 69. Trader Survey: Where respondents heard about the CCWEL

8.3.8 All respondents were asked **whether they support or oppose the CCWEL scheme**. As shown in Figure 70, around half (53%, 8) of respondents opposed the scheme, with around one quarter (27%, 4) stating that they were unsure, and only one in five (20%, 3) showing support for the scheme.

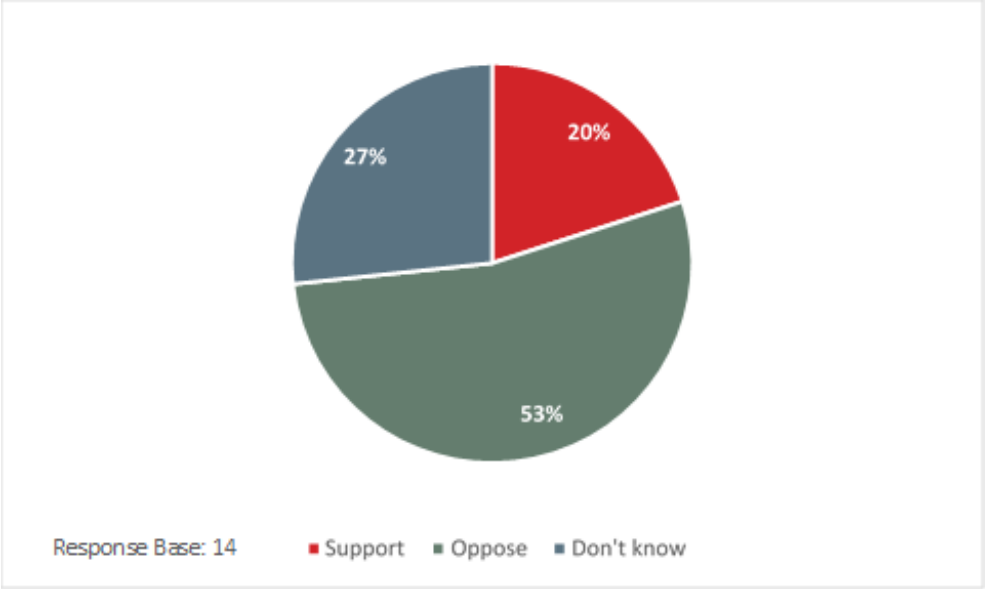


Figure 70. Trader Survey: Support of the CCWEL

8.3.9 When asked whether they felt there would be any **benefits to their business** once the scheme is complete, around half (53%, 8) of respondents felt that there would be no benefits at all. Of those who felt that there would be at least one benefit, just over half (57%, 4) felt that trade would increase. A little less than half of these respondents (42%, 3) felt that the scheme would improve the attractiveness of the area, and the same number felt that pedestrian crossings would be improved. Figure 71 outlines the remaining responses.

8.3.10 Some respondents (28%, 2) felt that the CCWEL would have another positive impact on business, not listed in the question. One respondent felt that overall, an increase in cycle lanes in the city would offer an improvement, and make the **city more efficient**, though they felt the impact of the scheme would depend on how well it is **implemented**. Another respondent felt that their business would achieve a **higher profile** through greater exposure as a result of the scheme.

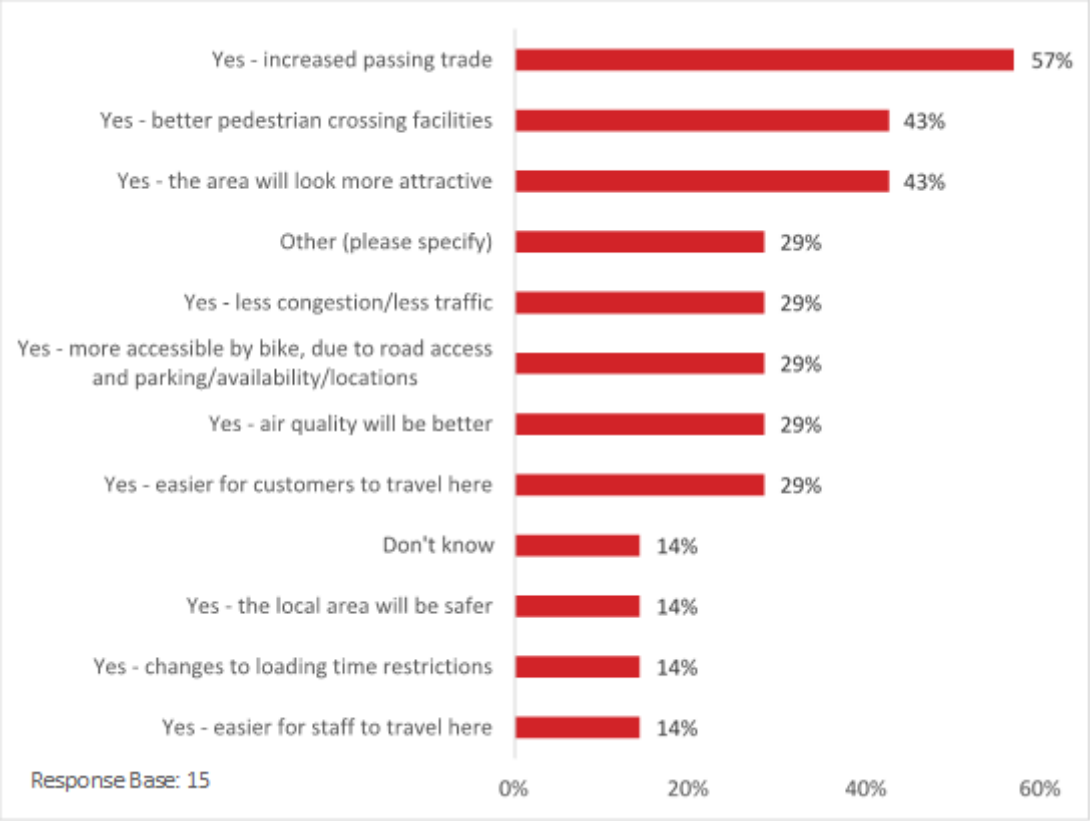


Figure 71. Trader Survey: Benefits to business due to the CCWEL

8.3.11 Respondents were then asked for any further comments on the benefits of the scheme to their businesses. Those who responded to this question identified a benefit to business that passing trade would increase. However, one participant anticipated a negative impact on business, as they felt the CCWEL would make it more difficult for customers to bring in heavy goods to the premises, as these need to be transported by car or van.

8.3.12 Participants were then asked whether they felt there would be **any challenges to their businesses** once the scheme is completed. All participants who answered this question felt there would be some challenges or were unsure. Around three quarters (73%, 11) of those who answered the question felt that the scheme would cause challenges relating to the **location of loading and deliveries**. This was followed by around two thirds of respondents anticipating customers finding it **difficult to find parking**, and the same number of respondents felt their business would face challenges around **the timing of loading and deliveries**. The remaining responses are outlined in Figure 72.

8.3.13 This respondents who indicated that there would be 'other' challenges brought about by the scheme identified:

- Concerns over **idling taxis** on the street;
- **Complications for deliveries**, such as loading bays being removed;
- General concerns over the **impact on customers**;
- Increases in **congestion** in the local area; and
- Road safety concerns including **increased risk of road accidents**.

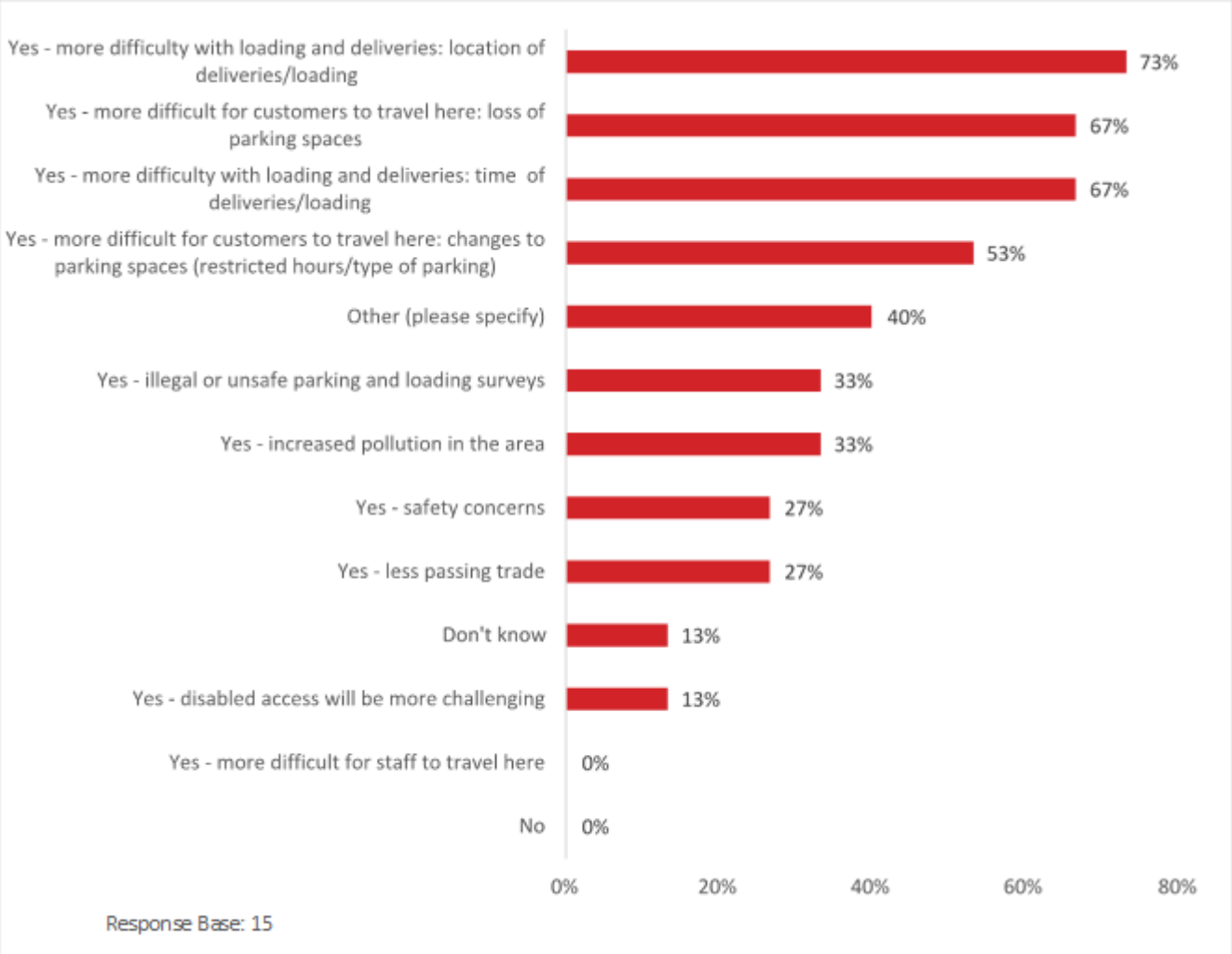


Figure 72. Trader Survey: Challenges for business due to the CCWEL

8.3.14 Respondents were then asked for any other comments around challenges that the CCWEL might pose to their businesses. Respondents identified the following concerns;

- Concerns over disruption caused by **construction** of the scheme;
- Increased **congestion,** causing **delays to public transport;**
- Customers being unable/unlikely to visit business premises by bicycle, for example due to being unable to carry products home;

- Increased **pollution;** and
- **Reduction in available parking** leading to a loss of business.

8.3.15 Respondents were asked to rate the statement "**The current loading facilities meet the needs of my business."** On a scale of 0 to 7, where 0 is 'do not agree' and 7 is 'strongly agree'. Respondents gave an average rating of 4.7.

8.3.16 When asked to provide any additional comments on this statement, respondents' comments included:

- **General satisfaction** with existing loading/unloading facilities;
- Comments on the need for vans to park on Haymarket Terrace to address issues with the drains;
- **Dissatisfaction with the use of loading bays** by other businesses;
- Justifications for needing loading/unloading spaces, for example stating that many customers need to park for a short time to pick up takeaways; and
- Concerns over **lack of parking or loading/unloading** spaces available – especially during normal business hours.

8.3.17 Respondents were then asked to rate the statement "**The current parking facilities meet the needs of my business/customers**." on a scale of 0 to 7, where 0 is 'do not agree' and 7 is 'strongly agree'. Respondents gave an average rating of 3.3.

8.3.18 When asked to provide any additional comments on this statement, respondents' comments included:

- Dissatisfaction with the **availability of parking**;
- Dissatisfaction with the **cost of parking**;
- Rejection of plans to remove parking facilities, based on their benefits to business and accessibility; and
- Support for a wider strategy for **city centre parking**, such as the introduction of underground parking.

8.3.19 To understand the impacts of the CCWEL on business, respondents were asked whether they felt **the scheme would impact footfall** once it is complete. They were asked to exclude any impacts of the Covid-19 pandemic and recovery for this question. 80% (12) of the respondents who answered this question felt that the scheme would have some kind of impact on footfall, illustrated in Figure 73.

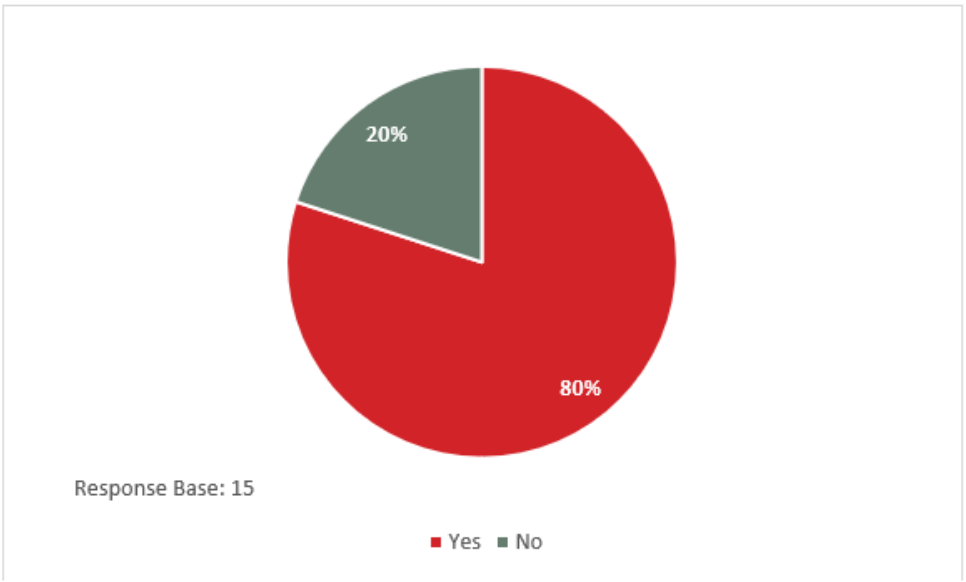


Figure 73. Trader Survey: Impact on CCWEL on footfall

8.3.20 Those who felt that footfall would be impacted were then asked whether they felt it would increase or decrease as a result of the scheme. More respondents felt that footfall would decrease than increase (58%, 7, compared to 42%, 5), as illustrated in Figure 74. However, the sample size is too small here for this difference to be statistically significant.

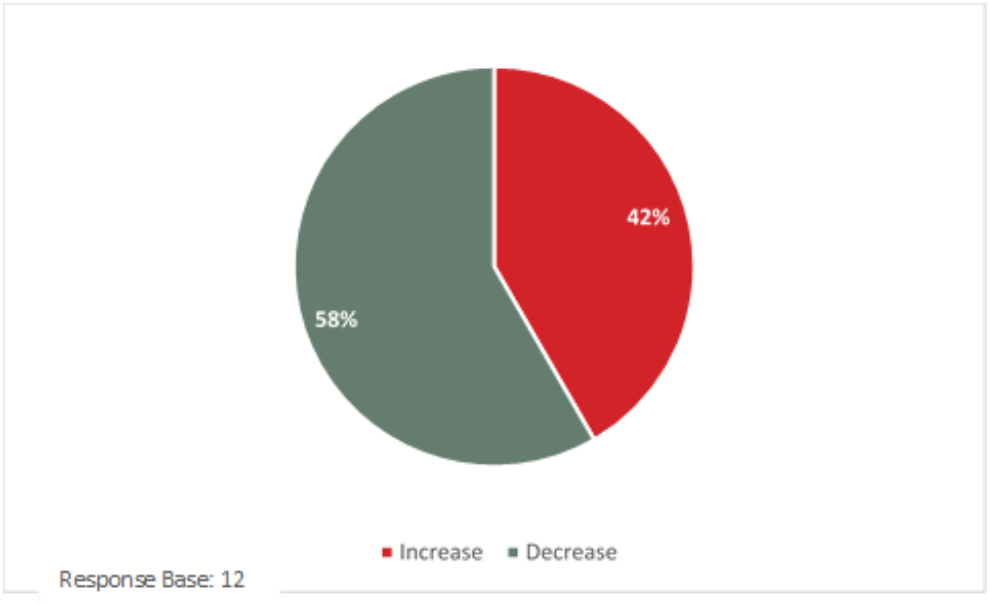


Figure 74. Trader Survey: Impact of CCWEL on footfall – increase or decrease

8.3.21 Of those who felt footfall would increase, three respondents made an estimate as to how much footfall would increase. These estimates ranged from a 10% increase to a 15% increase, with an average estimate of 12%.

8.3.22 Of those who felt footfall would decrease following the implementation of the scheme, four respondents made an estimate as to how much footfall would decrease. These estimated range from a 15% decrease to a 50% decrease, with an average estimate of 30%.

8.3.23 Respondents were then asked whether they felt **the scheme would have any impact on the takings of the business**. 80% (12) of the respondents who answered this question felt that the scheme would have an impact on their takings, as illustrated in Figure 75.

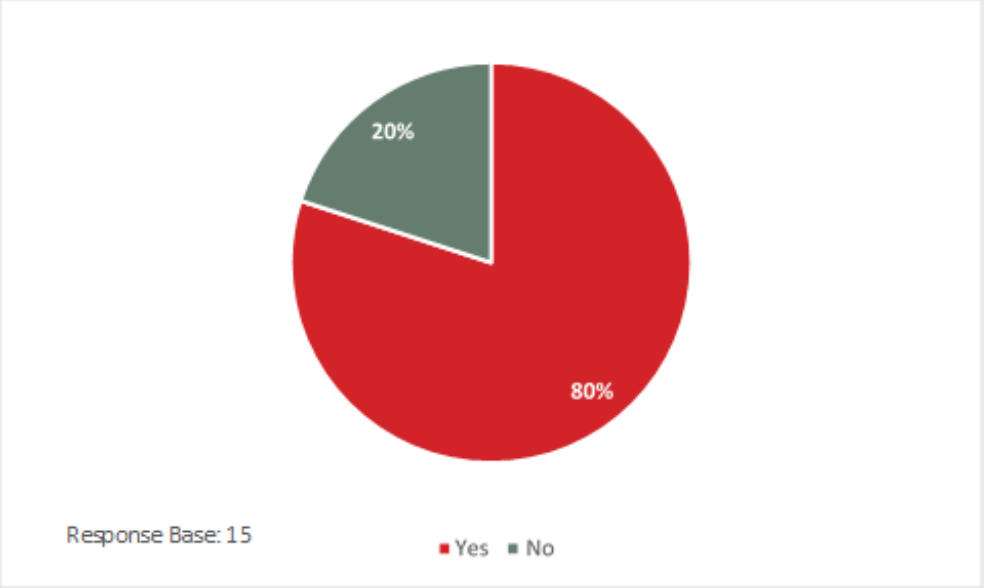


Figure 75. Trader Survey: Impact of CCWEL on takings

8.3.24 Of those who felt the scheme would have an impact on takings, two thirds (67%, 8) felt that takings would decrease as a result of the scheme, whilst one-third (33%, 4) felt that they would increase, as illustrated in Figure 76.

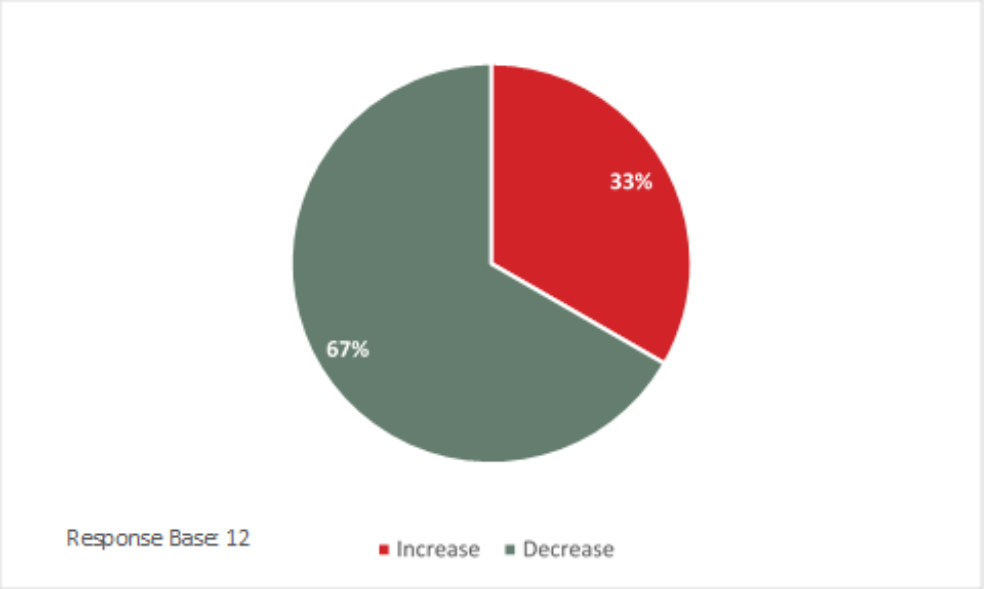


Figure 76. Trader Survey: Impact of CCWEL on takings – increase or decrease

8.3.25 Those who felt the scheme will cause an increase in takings were then asked to estimate how much takings would increase by. Estimates of the increase in takings ranged from 5% to 15%, with an average estimate of 8.3%.

8.3.26 Those who felt the scheme will result in a decrease in takings were asked to estimate how much takings would decrease by. Estimates ranged from a 20% decrease to a 50% decrease, with an average estimate of a 35% decrease.

8.3.27 Respondents were then asked, if they were willing and able, **to estimate the amount of revenue their received through their business** premises in the tax year April 2019 to March 2020. Of those who answered the question, four respondents provided an estimate. These ranged from £45,000 to £600,000, with an average estimate of £201,250.

8.3.28 Respondents were asked if they are expecting to **make any changes to their operations** at these premises once the CCWEL project is complete. Nearly half (46.6%, 7) of responses said they were not planning to make any changes, and around one quarter (26.6%, 3) said they were unsure. No respondents indicated that they planned to make any changes to operating hours, staffing, deliveries or suppliers. Around one quarter (26.6%, 4) of respondents indicated that they would make some other change to how their business currently operates, examples of these changes include:

- Changes in response to Covid-19; and
- Introducing pavement seating.

8.3.29 In order to gauge the current levels of business, respondents were asked to **estimate how many customers/members of the public access their business** premises on the busiest day of a typical week. Answers ranged from 2 to 90 customers, with an average estimate of 42 customers.

8.3.30 At the end of the survey, respondents were asked to provide any further comments on the CCWEL scheme. Eleven respondents provided further comments, which included:

- General **rejection of the CCWEL scheme;**
- Requests for **maintenance and improvement** works in the local area, such as fixing pavements and street lamps;
- Requests for **improved communication** around the CCWEL scheme and the works that will take place;
- Comments around the **implementation** of the scheme, such as advocating for good project management;
- Comments expressing **uncertainty** around the impacts of the scheme;
- Concerns over **increased pollution;**
- Concerns over negative **impacts on local business**; and
- Comments expressing that there is no need for additional cycle paths.

9. M8A -TAXI GROUP INTERVIEWS

9.1 Objectives

9.1.1 The objective of these interviews was to establish a baseline understanding of support for the CCWEL from representatives of the taxi trade, as well as gaining an understanding of views on the proposed relocation of taxi ranks, and potential impacts on taxi supply and demand.

9.2 Methodology

9.2.1 Two telephone interviews were undertaken with representatives of the taxi trade, one a Union Representative and one a Secretary for a large taxi company operating in Edinburgh. Interviews were undertaken in November and December 2020.

9.2.2 In recruiting participants for this portion of the research, we reached out to various taxi companies, trade organisation, and union representatives across Edinburgh. However, due to the increase in home-working and that the various representatives are themselves taxi drivers (and therefore often not working from the office which they used as their contact address), it was a challenge to get in touch with these representatives of the taxi trade. Whilst we had aimed to recruit five participants for this round of interviews, it was only possible to interview **two**. The findings in this section should therefore be considered qualitative, rather than quantitative. NB Interviews with a much-larger sample of individual taxi drivers are reported in Section 10 below.

9.2.3 The topic guide covered participant organisations' views on:

- Existing trends and levels of demand within the trade;
- Views on the CCWEL, including the proposed relocation of taxi ranks;
- Views on the impacts of the CCWEL project on demand; and
- The perceived plausibility of increasing cycling in Edinburgh.

9.2.4 Both participants were members of taxi organisations operating in Edinburgh city centre.

9.2.5 With consent from participants, discussions were voice recorded. Verbatim quotes have been provided throughout this section of the report..

9.3 Data and analysis

Existing Trends and Demand

9.3.1 When asked about the current industry trends, all participants identified the impacts of the Covid-19 pandemic, as well the impacts of new government low emissions policies as having significant negative impacts on the taxi trade in Edinburgh. One participant felt that the impact of these factors meant that taxi drivers are currently only making roughly 20% of their pre-Covid income.

9.3.2 Participants felt that these two factors in combination have had a significant impact on the financial viability of trade, in that drivers have had to make significant investments into newer and more expensive vehicles to meet the regulations around age-limits, emission levels, and accessibility, and the subsequent drop in demand due to Covid-19 has left drivers with a significant financial shortfall.

> *"The biggest challenge at the moment is survival, trade has been decimated quite simply, this is on the backdrop of the Scottish government and by default, local councils, aspirations towards **low emission zones** and things like that."*
>
> *"[Edinburgh Council] have brought in **age standards**, which has taken a lot of the older vehicles off the road, a lot of owners have subsequently bought new vehicles costing in excess of eight hundred pounds a month.. and then Covid comes along.. so it is pretty desperate for a lot of guys."*
>
> *"It's not just Covid, it's the total way that they're running our city."*

9.3.3 One participant also highlighted that pre-Covid there was a significant problem with congestion in the city centre, having a negative impact on taxi drivers as well as trade in the area. They felt that this congestion was due to policies around promoting cycling in the city centre.

Views on the CCWEL

9.3.4 Participant organisations had **mixed views** on the CCWEL overall. One participant expressed that whilst his organisation **supported the CCWEL** overall, they felt taxis had not been considered or prioritised in the planning of the scheme. Whilst another participant organisation was **strongly against the CCWEL**, largely due to an objection towards cyclists in the city. Both participants were concerned over the impact of the CCWEL on those with disabilities relating to their mobility.

9.3.5 The participant representing the supportive organisation expressed that they understand the motivations of the council, and the aspirations to **improve cycle paths and walkways**, especially in the context of the Covid-19 pandemic. However, they felt that in some cases the council took these aspirations too far, causing **congestion** even with the lower traffic levels due to Covid-19, and felt that this would have a **negative environmental impact**. There was also a concern around a lack of consideration for taxis in the plans. It was felt that if the plans led to increased congestion in the city centre, this would negatively impact the taxi trade as well as those with mobility related disabilities who rely on taxis for transport.

> *"We understand the aspirations of the council to provide cycle and walkways."*
>
> *"Some of them we consider to be farcical I think if this was normal times Edinburgh council would be under serious pressure to take some of them away, but they're getting away with it because traffic volumes are significantly lower, but even at that there is*

serious congestion *on routes where there shouldn't be any, and that's adding to* ***emissions.***"

"The concerns are that taxis seem to be an afterthought."

"Road space is at a premium, and very often we are a casualty of the changes."

9.3.6 The participant representing the organisation that is against the CCWEL was concerned over the impact of increased cycling in the city centre on those with disabilities. This participant felt that laws banning cycling on the pavement are not currently enforced in the city centre, meaning some pedestrians with mobility and/or sight impairments are now unable to leave their homes independently for fear of being hit by a bicycle. He feared that this issue would only increase after the introduction of the CCWEL due to the policy encouraging more cyclists into the city centre. He did not feel that the scheme would encourage cyclists to use the cycle lanes instead of pavements.

"Where I live, there's a blind man and because of the cycle lane where he is he's virtually housebound now, because he's scared to go out.

Relocation of Taxi Ranks

9.3.7 All participants were very supportive of the relocation of the Dalry Road taxi rank to the entrance of Haymarket Station. They felt that the existing Dalry Road taxi rank is out of sight of the station, rarely used, and a cause of congestion, whereas the new placement outside of the station would provide easy access to passengers and increase demand for taxis in the area. However, there were some concerns relating to the feeder rank, including:

- Potential confusion for passengers over which rank to use, which could be remedied by clear and frequent signage;
- Concerns over the technology used on the feeder rank; and
- Concerns of over-ranking vehicles (i.e. vehicles not able to immediately enter the rank proper) encroaching into the bus stop next to the rank.

"*People come out of the station and they think* 'who's first, is it the car outside the station or is it the car on the opposite side of the road' *so that's a bit confusing."*

"The rank outside the station is definitely a win, *as long as the technology works at the feeder rank. My concern would be on the other side of the road, any over-ranking would take the vehicles into the bus stop."*

"You should be able to step off your train and into a taxi."

Impact of the CCWEL on the Wider Area

9.3.8 All participants felt that the CCWEL would have a **negative impact on businesses** in the local area, largely due to a feeling that it would disincentivise people from driving into the city centre due to increased congestion, impacting on passing trade. They did not expect an increase in cycling in the city centre to have a positive impact on trade, as it was felt that cyclists do not make stops to visit local shops. One participant also felt that the CCWEL project would negatively impact local businesses through making it more difficult for them to receive deliveries.

> *"People are not coming into town to shop, because they think '*what's the point, I can't stop' *because they can't bring their car."*

9.3.9 One participant felt that if the area was **fully pedestrianised**, this would have a positive impact on trade, but felt that the "half-measure" of improving cycling infrastructure without pedestrianisation would have a negative impact on trade.

> *"Unless somewhere is genuinely a pedestrianised area, I think businesses suffer, and we've seen that in the past with the tram and the tram lines, and we're seeing it now with Leith Walk. The businesses there are suffering because there's no vehicle access. The passing trade disappears overnight."*
>
> *"If it's a mixture of the two then it's problematic for the business."*

Taxi Supply and Demand

9.3.10 Overall, participants felt that the CCWEL will have a **positive impact on taxi demand**, largely due to the removal of the existing Dalry Road and Haymarket Terrace taxi ranks and their replacement with a new rank directly outside of Haymarket Station complemented by a feeder rank on Morrison Street. They felt that as long as the rank is accompanied by adequate signage, it would lead to an increased in the number of passengers using taxis in the city centre.

> *"I think that's an enhancement on what we have now, because at the moment people come out, they wander about, they have to look to the left to see the rank [on Haymarket Terrace at Roseberry Crescent], I know there's signage within the station but people go a bit blank when they arrive somewhere and they have to be directed, and they have to cross the road."*
>
> *"The fact that it's on the doorstep is welcomed, particularly as I said if they've got mobility issues or there's a wheelchair requirement then that's great."*

9.3.11 There were concerns that construction of the CCWEL scheme could have some negative impacts on demand, making it harder for passengers to find the taxi ranks. However, the impact was seen to be limited as most of those visiting the station would be regular travellers who would be able to quickly figure out an alternative route to the taxi rank.

9.3.12 Both participants felt that **taxi supply is likely to decrease** in the coming years, due to a combination of several factors, including:

- The impacts of Covid-19;
- The high cost of purchasing/leasing and maintaining taxis in Edinburgh; and
- Competition with private hire vehicles.

9.3.13 One participant felt that the impacts of Covid-19 would make it **difficult to meet the demand** for taxis during the night-time in the future. This is because night-time demand has dropped significantly due to the impacts of the Covid-19 pandemic, meaning far fewer drivers are working the night shift. The participant explained that drivers who had previously worked the night shift have now gotten used to, and prefer, the lifestyle that comes along with working the day shift and so will be unlikely to return to the night shift once demand picks up again. He shared that his company was already having trouble covering the night shift even with the current reduced demand. This is likely to have a **negative impact on businesses** that 'double-shift' their vehicles, as currently the use of vehicles on day and night shift is needed to cover the costs of recent upgrades to a younger fleet.

> *"There's nobody working night shift right now, because there's no economy there, some night shift drivers have just walked away from the trade and gotten another job. Other night shift drivers are now working the day shift and have gotten used to that lifestyle and aren't wanting to return back to the night shift. So it will be difficult for us to meet the demand for the night shift."*

9.3.14 All participants felt that the cost of purchasing/leasing and maintaining a taxi in Edinburgh would have an impact on taxi supply. They felt that due to legislation around age limits, accessibility, and environmental impacts of vehicles, **taxis are becoming more expensive** to purchase and lease, making the trade less financially viable. One participant also specifically identified the impact of annual taxi inspections as a key concern. He felt that annual inspections were being overcharged for, and that they should be free whilst taxi drivers are still suffering financial impacts from Covid-19, in order to help them recoup their losses.

> *"I reckon 90% of the taxis in Edinburgh, people are driving their last taxis, they won't buy another one."*

9.3.15 One participant also felt that **competition with private hire** is having a significant impact on taxi supply, as it is making the trade less financially viable. This is due to private hire drivers being able to charge lower fares than hackney taxi drivers and the much lower financial investment required.

> *"The barriers to entry for private hire have never been easier."*

Impact of the CCWEL on Cycling

9.3.16 When asked about their organisation's views on the impact of the CCWEL on cycling, the participants had mixed views. One participant felt that the CCWEL scheme **will increase the number of cyclists in the city centre**, deterring other visitors from travelling into the city centre unless there is a significant increase in enforcement of pavement cycling.

> *"It's going to stop people coming into the city centre to shop, and even people coming into the city for leisure. […] If you're likely to get hit by a bicycle you're not going to come into the city centre, it's too dangerous."*

9.3.17 Another participant felt that the CCWEL would be **unlikely to significantly increase cycling**, though they viewed it as a step in a positive direction towards improving road safety for existing cyclists.

> *"[Edinburgh Council is] creating an environment where everybody should be jumping on their bikes and cycling to work, but the reality of that happening in Edinburgh when it's bucketing rain is slim to none, so I don't think it will have the impact that the authors of all these schemes think."*

10. M8B - TAXI DRIVER INTERVIEWS

10.1 Objectives

10.1.1 The purpose of this task was to monitor the contribution of the CCWEL scheme to the following objectives:

- T.7 Enable taxis to operate

10.1.2 The information gathered during this task in respect of these objectives is:

- Ease of operation for taxi drivers and companies within the project corridor

10.2 Methodology

10.2.1 Taxi drivers were interviewed at the ranks shown in Figure 77 on Monday 9th and Tuesday 10th December. A total of **40** interviews were completed.

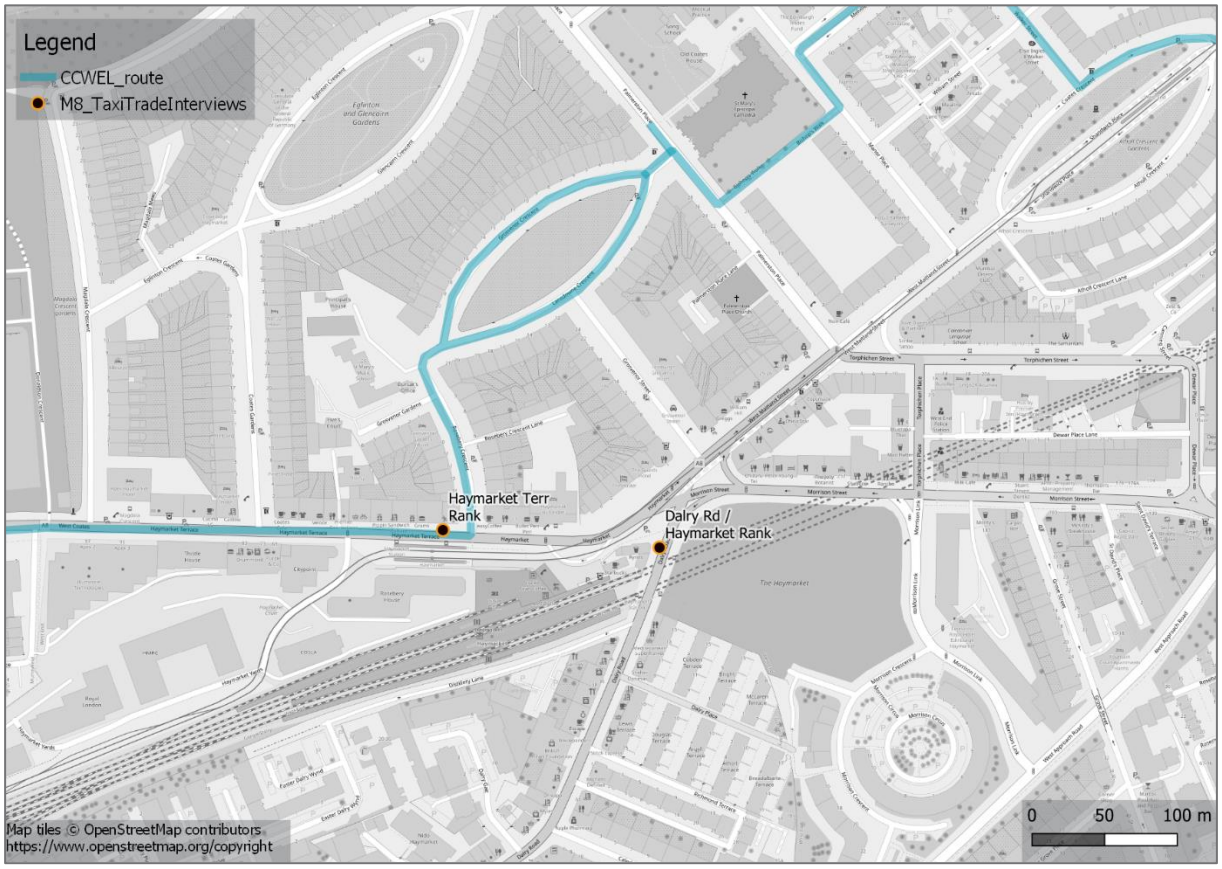


Figure 77. Taxi driver interview sites

10.3 Data and analysis

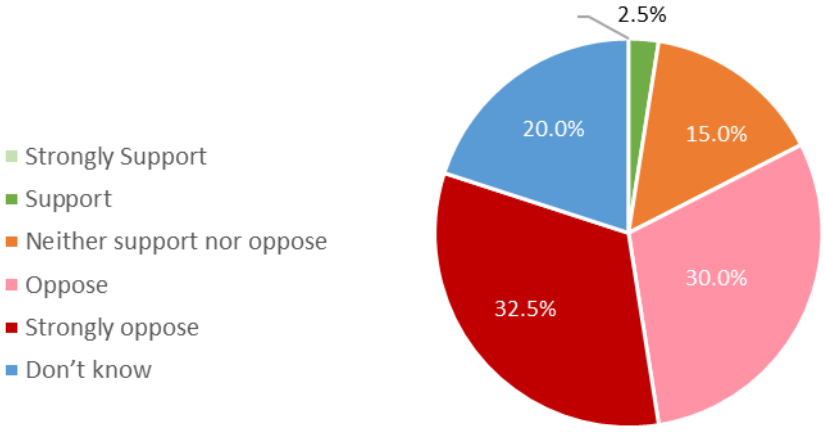
Respondents

10.3.1 The majority of taxi drivers interviewed stated they owned their own taxi, and that taxi driving was their single source of income. The majority (77.5%, 31) had been in the trade 6 years or more, and half of those over 10 years.

10.3.2 All of those interviewed were aware of the CCWEL project, and all were also aware of the proposals to relocate the taxi ranks around Haymarket Station.

Views of Relocation of Taxi Ranks

10.3.3 Almost two-thirds (65.5%, 25) opposed the taxi rank relocation, of which half 'strongly opposed' it. Only one respondent supported the relocation, with the remainder being indifferent ('neither support or oppose', or 'don't know'). Results are summarised in Figure 78.

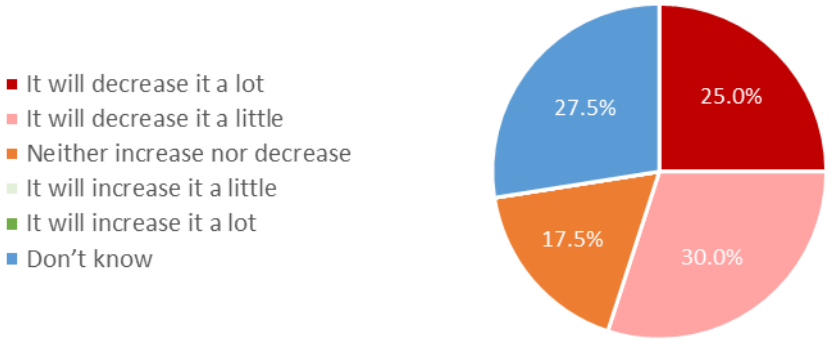


Response Base: 40

Figure 78. Taxi Drivers: To what extent do you support relocation of the taxi ranks?

Impact on taxi use

10.3.4 Respondents were asked the extent to which they think the relocation will increase or decrease taxi use by customers. As shown in Figure 79, over half (55%, 22) felt it will decrease taxi use. No respondents felt it would increase taxi use to any extent, though some (17.5%, 7) felt there would be no change.



Response Base: 40

Figure 79. Taxi Drivers: To what extent do you think it will increase or decrease taxi use in the area?

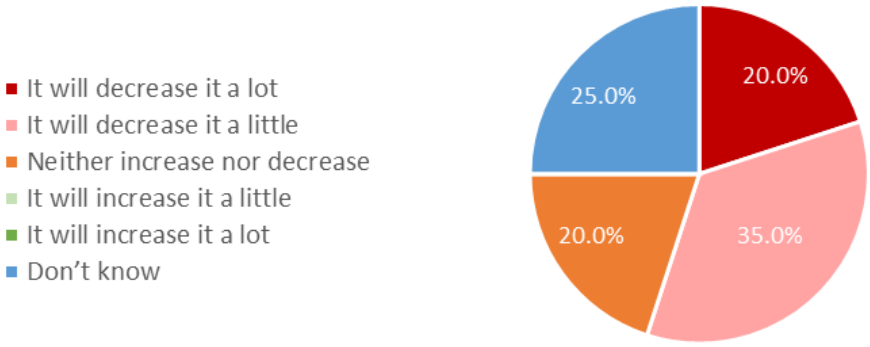
10.3.5 Those who felt it would decrease taxi trade were asked their reasons for this. The responses to this question are shown in Table 7. The most commonly selected reason was 'less accessible, e.g. to disabled passengers or those with heavy bags', followed by 'more difficult for passengers to find the rank'.

Table 7. Taxi Drivers: Reasons for decrease in taxi use

REASON	% OF RESPONDENTS AGREEING WITH REASON
Less accessible to e.g. disabled passengers, those with heavy bags	81.8%
More difficult for passengers to find the rank	77.3%
More competition with other modes of transport	54.5%
Further from Haymarket Station	45.5%
Taxis likely to get caught in congestion – slower, more costly journeys	36.4%
More competition with private hire / Uber	36.4%
New ranks are further from shops/businesses/pubs & restaurants/other attractions	27.3%

Impact on taxi numbers operating in area

10.3.6 Respondents were asked the extent to which they think the taxi rank relocation will increase or decrease use of the ranks by drivers. As per impact on taxi use, the majority of drivers felt that the relocation was likely to decrease the number of taxis operating in the area (55%, 22). However, 20% (8) felt it would have no impact and a quarter of respondents were unsure. Results are summarised in Figure 80.



Response Base: 40

Figure 80. Taxi Drivers: To what extent do you think it will increase or decrease taxis operating in the area?

10.3.7 The most common reason reported by respondents for a decrease in taxis operating in the area was 'impact on drivers – being unwilling to relocate, congestion and competition' (Table 8).

Table 8. Taxi Drivers: Reasons for decrease in taxis operating in the area

REASON	% OF RESPONDENTS AGREEING WITH REASON
Driver unwilling to relocate so will base themselves elsewhere	59.1%
More difficult for taxi drivers to access the rank - congestion	50.0%
Increase competition with private hire / Uber	45.5%
Driver unwilling to relocate so will change industry	31.8%

10.3.8 Responses to questions regarding the current taxi rank arrangements are summarised in Figure 81 to Figure 85. Taxi drivers are on the whole satisfied with the current taxi rank arrangements, in terms of how they work for themselves, passengers and local road users.

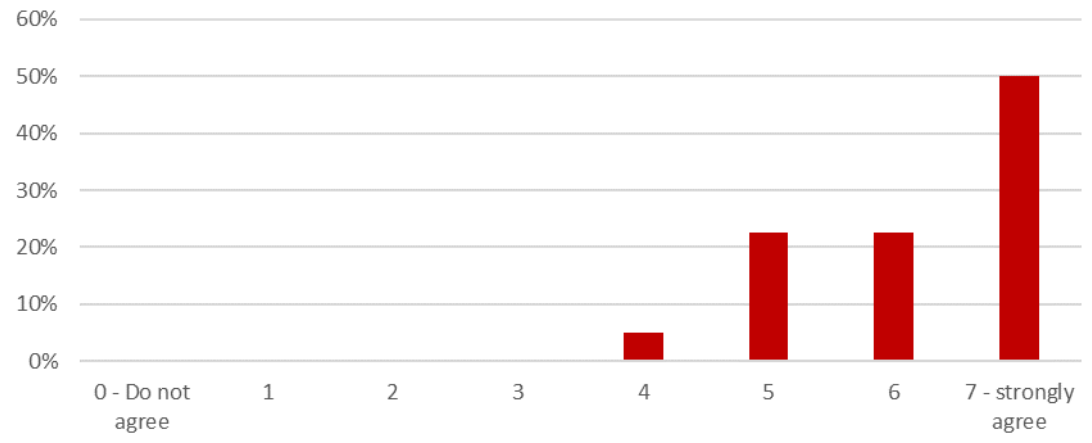


Figure 81. Taxi Drivers: "The current taxi rank arrangements meet the needs of taxi users."

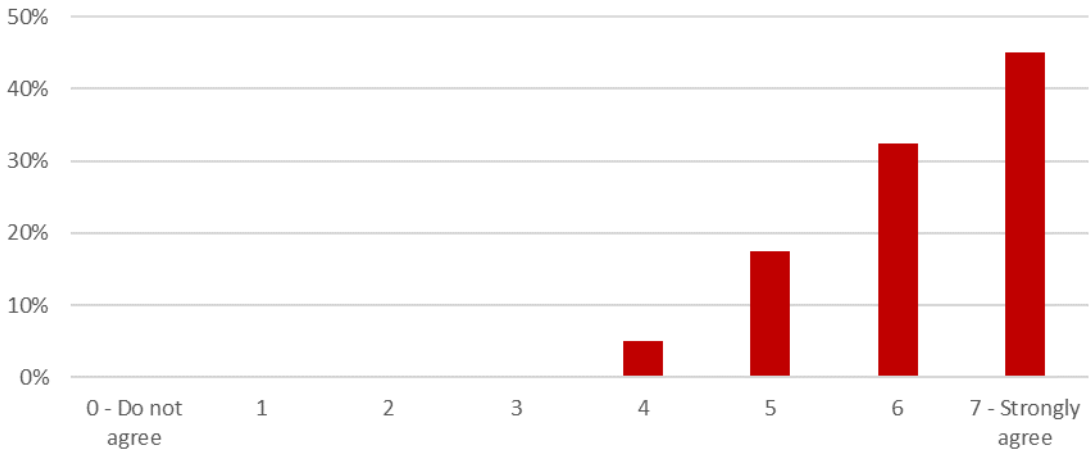


Figure 82. Taxi Drivers: "The current taxi rank arrangements meet the needs of taxi drivers."

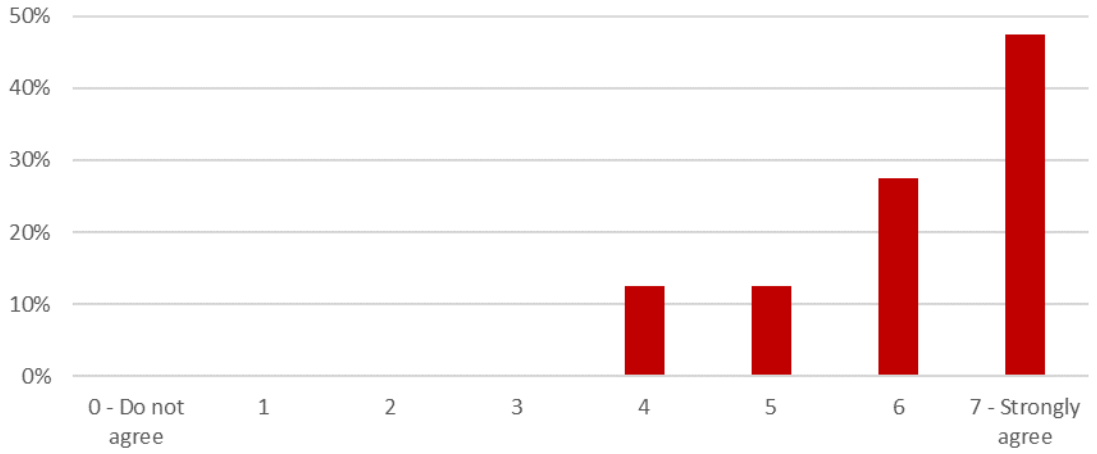


Figure 83. Taxi Drivers: "The current taxi rank arrangements meet the needs of disabled passengers."

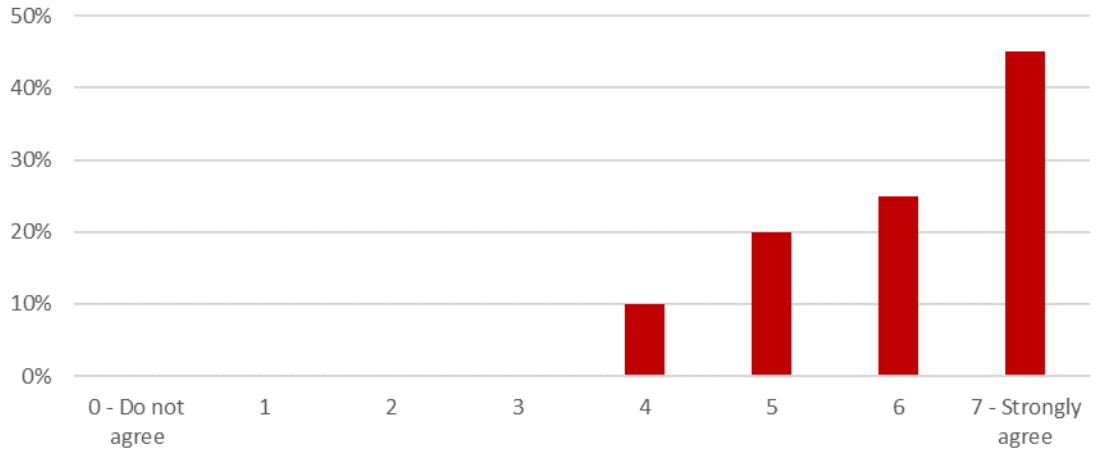


Figure 84. Taxi Drivers: "The current taxi rank arrangements meet the needs of all road users, including pedestrians and cyclists."

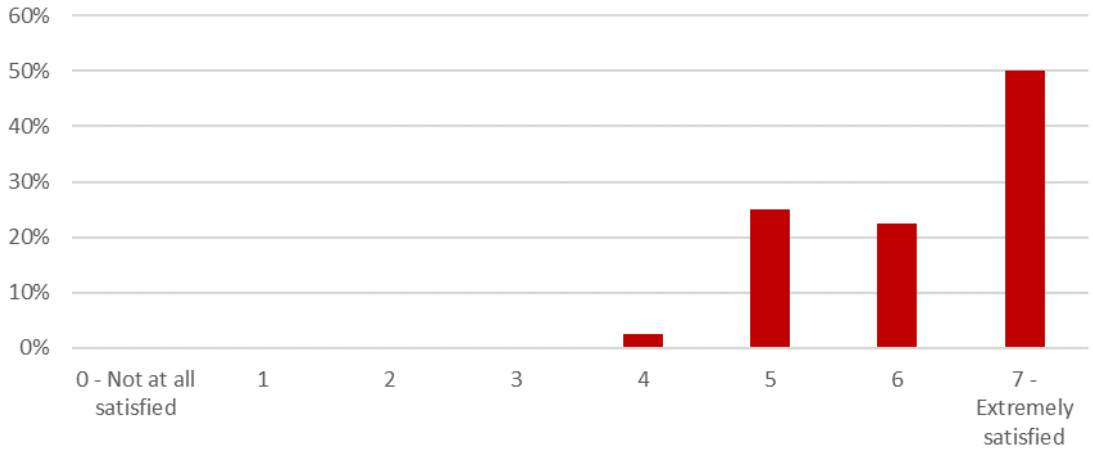
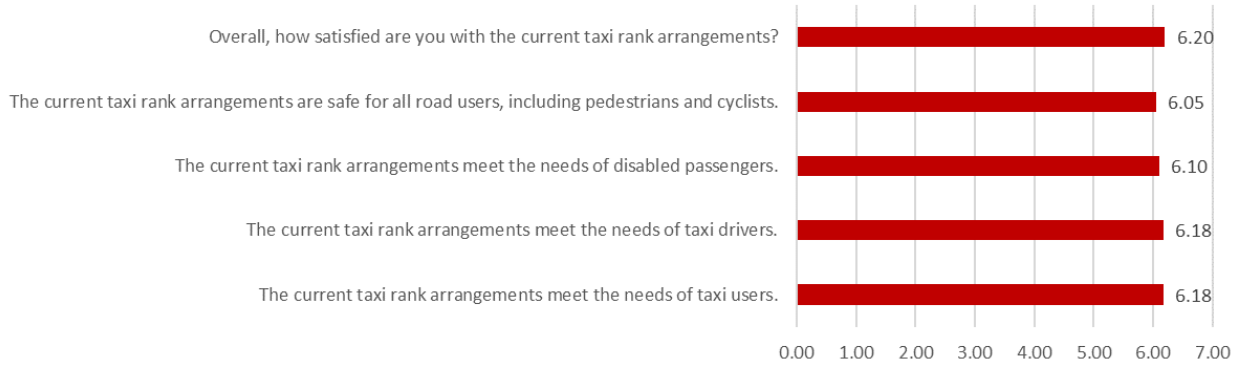


Figure 85. Taxi Drivers: "Overall, how satisfied are you with the current taxi rank arrangements?"



10.3.9 The mean average for each question is presented in Figure 86. For all metrics, the mean score was close to 6, with overall satisfaction at 6.20.

Figure 86. Taxi Drivers: Rating Metrics – Mean Average

Further Comments

10.3.10 At the end of the survey, taxi drivers were asked for any additional comments they had regarding the proposals for the relocation of ranks. Nine respondents made comments relating to the relocation being bad for business, seven felt it was an impractical proposal and three were concerned about the impact on disabled people.

> "I think it's going to be too far from the station for people to walk, they will call private [hire cars] to pick them up right at the door"

"It's going to be too far for people to walk to get a taxi so they will use another method of transport"

"It will be disastrous for us drivers"

10.4 Summary

10.4.1 The majority of taxi drivers interviewed were not supportive of the proposals, and felt it would have a detrimental effect on taxi trade (both for drivers and passengers). Much of this related to reasons of accessibility from the station, in terms of both distance and ease of access.

11. M9 - EXISTING SURVEYS

11.1 Objectives

11.1.1 The aim is to use existing data to help assess trends and perceptions of Edinburgh residents towards cycling across Edinburgh. The data feeds into the following study objectives:

- T.1 - Significantly increase the modal share for cycling in the corridor.
  - i Increase the number of journeys to work made by cycle in the corridor
  - ii Increase the number of off-peak cycle trips in the corridor
  - iii Increase the number of women cycling within the corridor
  - iv Increase the number of people cycling in from deprived areas
  - v Widen the age cross-section of people cycling within the corridor;
- T.9 - Increase the number of children and young people walking or cycling to school within the project corridor

11.1.2 The information gathered during this task in respect of these objectives is:

- Baseline number of women cycling within Project Corridor, and throughout Edinburgh and change post-construction
- Different ages of people cycling within Project Corridor, and throughout Edinburgh and change post construction
- Number of children and young people walking or cycling to Roseburn Primary School and St George's School for Girls before and after construction

11.2 Methodology

11.2.1 The data that was collated and analysed is summarised in Table 9.

Table 9. Data sources for M9 analysis

DATA	COLLECTION FREQUENCY	POINT FOR COMPARISON
Census[4]	Every 10 years (last was 2011)	Mode of travel to work (employed residents - excluding those who work mainly at or from home and full-time students)
Hands up Survey[5]	Annual	Proportion of journeys to school by mode
Edinburgh Bike Life[6]	Every 2 years (Autumn)	All
Scottish Household Survey[7]	Annual (August)	Employed adults usual method of travel to work (16+ and excluding those working from home) Number of trips by different distances for all journey purposes and modes, Edinburgh
Edinburgh People Survey[8]	Annual (Spring)	Q5 Activities in the last 4 weeks Q19b How many days in the last week have you cycled? (of all those surveyed) Q21 How do you usually travel to your main place of work or study (including school)?

11.2.2 In addition, data was made available from a street video survey conducted on behalf of CEC in June 2019 This survey covered a series of more than 100 junctions across Edinburgh city centre as shown in Figure 87. The survey provides junction turning counts (classified by vehicle type) for one weekday and one weekend day.

[4] www.scotlandscensus.gov.uk/
[5] Sustrans
[6] https://www.sustrans.org.uk/bike-life/bike-life-edinburgh/
[7] https://www.transport.gov.scot/publication/transport-and-travel-in-scotland-2019-results-from-the-scottish-household-survey/
[8] https://www.edinburgh.gov.uk/say/edinburgh-people-survey/1

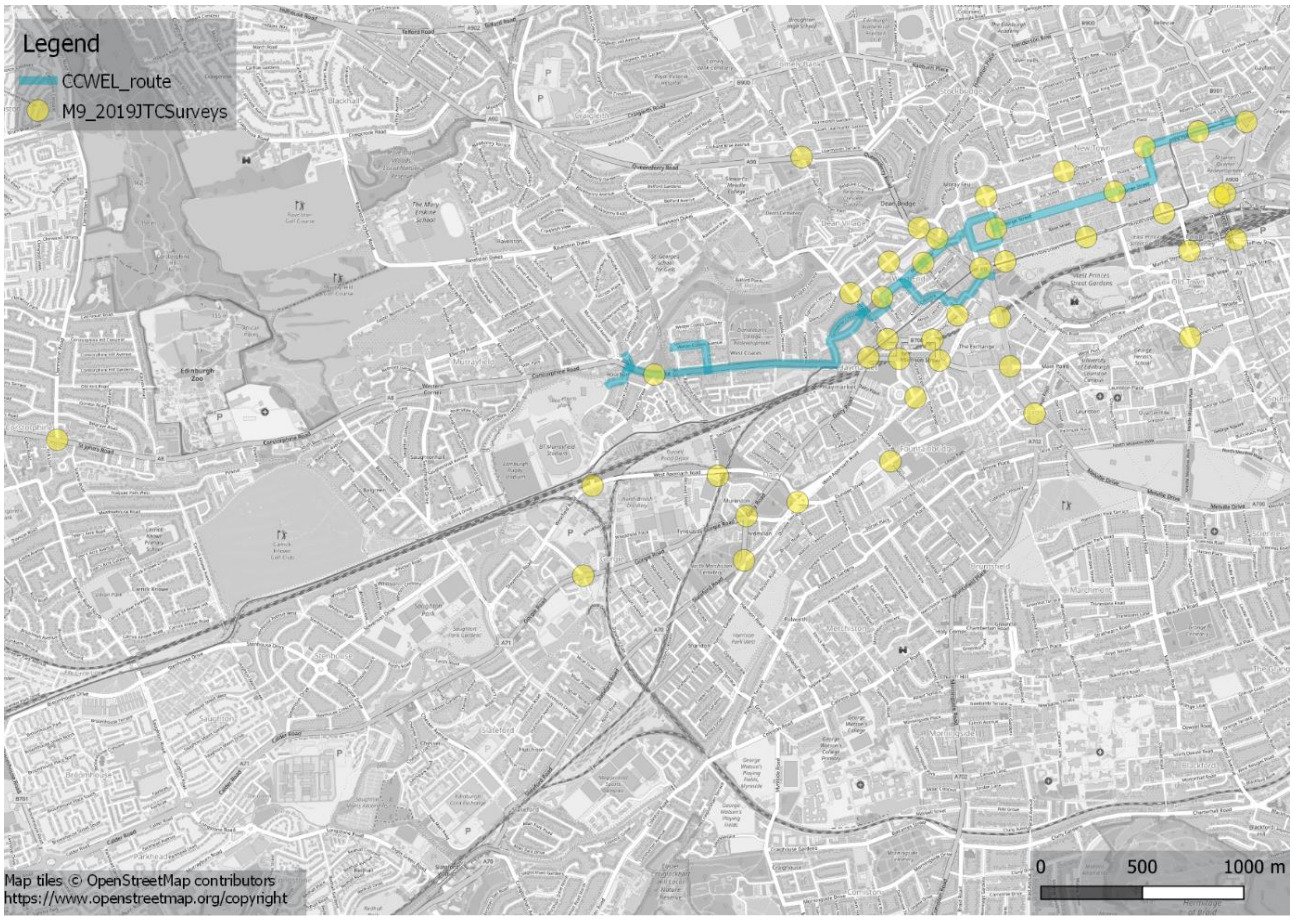


Figure 87. 2019 Junction Turning Count sites

11.3 Data and analysis

Census (2011)

11.3.1 Analysis of the 2011 Census table "Transport to place of work or study" yielded the cycling mode shares shown in Table 10. "City of Edinburgh" is defined by the Local Authority boundary while "Central Edinburgh" is defined by the Scottish Parliamentary Constituency boundary (Figure 88) which neatly encapsulates the CCWEL route.

Figure 88. Census: Central Edinburgh constituency boundary

Table 10. Cycling mode share from Census (2011)

CLASSIFICATION	SCOTLAND	CITY OF EDINBURGH	CENTRAL EDINBURGH
Males & Females / all ages	1.4%	4.3%	4.4%
Females / all ages	0.6%	2.5%	3.1%
Males / all ages	2.1%	5.9%	5.4%
Males & Females / 16 to 24	0.9%	2.1%	2.8%
Males & Females / 25 to 34	1.7%	4.8%	4.5%
Males & Females / 35 to 49	1.7%	5.4%	5.1%
Males & Females / 50 to 64	1.0%	3.1%	3.9%
Males & Females / 65 to 74	0.6%	1.2%	1.6%

11.3.2 The results show that, in 2011, Edinburgh had a much higher cycling mode share than Scotland as a whole at over 4%. Central Edinburgh had similar cycling mode shares to City of Edinburgh although notably a slightly (+0.6%) higher female cyclist mode share. In Edinburgh Central, the highest mode share amongst the different age groups was 5.1% in the 35-49 group.

Scottish Household Survey (2018-2019)

11.3.3 Cycle mode share information from the Scottish Household Survey (SHS) "Table 1 - usual method travel to work (for employed adults not working from home)" is summarised in Table 11 for 2018 and 2019.

Table 11. SHS – bicycle is usual method of travel to work

YEAR	SCOTLAND	CITY OF EDINBURGH
2018	2.8%	7%
2019	2.7%	9%

11.3.4 Compared to the low, static mode share for Scotland as a whole, Edinburgh showed an positive change to cycling's share of the 'usual method of travel top work' responses, up from 7% to 9%.

11.3.5 The SHS travel diary "Table 16 – SHS Travel Diary – Main mode of travel", yielded the results shown in Table 12 for main mode of travel (as opposed to mode for travel to work).

Table 12. SHS – bicycle is main mode of travel

YEAR	SCOTLAND	CITY OF EDINBURGH
2018	1.4%	5%
2019	1.2%	4%

11.3.6 Unlike the rise in travel to work proportion, it appears that there was a drop in people using a bicycle as their main mode of travel from 2018 to 2019. The result for Scotland and Edinburgh both show this drop between 2018 and 2019. Analysis of Scottish data from SHS from 2008-2019[9] however suggests that use of the bicycle as a main mode of travel is on the increase. Figure 89 shows this trend with an average increase in bicycle mode share of 0.04% / year.

[9] https://www.transport.gov.scot/publication/transport-and-travel-in-scotland-results-from-the-scottish-household-survey-1/table-td2-main-mode-percentage-of-journeys-made-by-main-mode-1-of-travel-2008-2018-2/

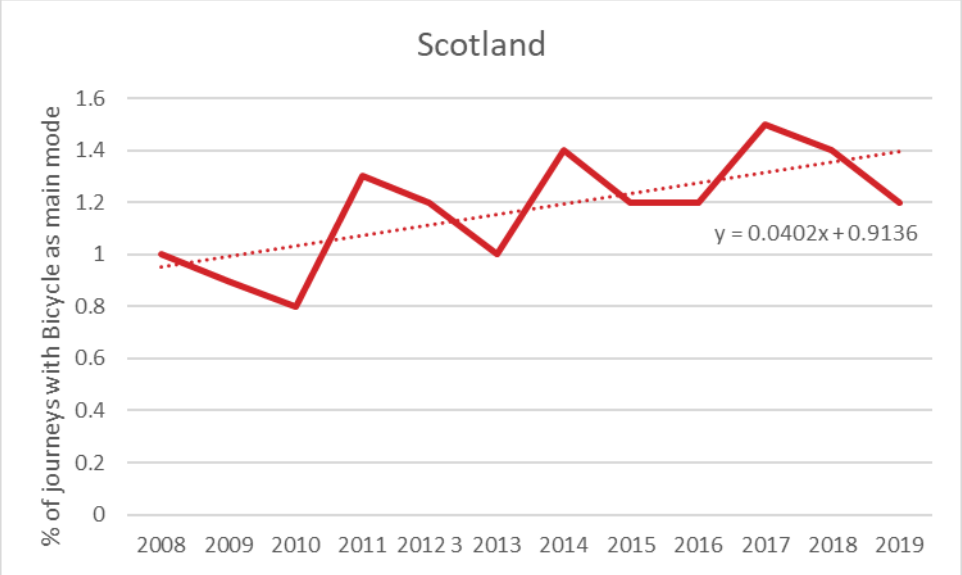


Figure 89. SHS – bicycle as main mode of travel 2008-2019

Bike Life Edinburgh (2019)

11.3.7 The Bike Life Edinburgh 2019 report contains many facts and figures on how the residents of Edinburgh use bikes as transport and for leisure. We present here a summary of some of the key findings:

- 17% of women resident in Edinburgh cycle at least once a week (vs. 30% of men)
- 71% of women think that cycle safety needs improving (vs. 68% of men)
- 9% of residents cycle at least five or more days a week (agreeing with similar SHS 2019 metric "bike as usual method of travel to work")
- 70% of respondents thought that safety needed to be improved for cyclists

11.3.8 Table 13 shows the proportion of Edinburgh residents by age group that cycle at least once a week. This broadly agrees with the 2011 Census in that the 36-45 group has the highest proportion of regular cyclists.

Table 13. Bike Like 2019 – "cycle at least once a week" by age group

AGE GROUP	CYCLE AT LEAST ONCE A WEEK
16-25	24%
26-35	25%
36-45	36%
46-55	26%

56-65	17%
Over 65	10%

Edinburgh People Survey (2018)

11.3.9 The Edinburgh People Survey (latest published data available is 2018) asked respondents several questions relating to cycling. These are summarised as follows:

- 9% of respondents had cycled in the last 4 weeks
- Those who cycle did so on 3.1 days in a week on average
- 51% of cyclists felt safe using the roads in Edinburgh

Hands Up Survey (2017-2019)

11.3.10 The Hands Up Survey data for pupils' travel to school using active modes in Edinburgh was extracted for the latest 3 years available by year group. The data is summarised in Table 14 below.

Table 14. Hands Up Survey - travel to schools in Edinburgh by active modes

Year Group	Year	Walk	Cycle	Scooter / Skate	Park & Stride[10]	Active
P1-P4	2017	50.5%	7.6%	9.3%	8.8%	67.4%
	2018	51.0%	7.3%	10.6%	8.4%	69.0%
	2019	48.7%	8.3%	11.4%	11.2%	68.3%
P5-P7	2017	58.0%	6.3%	6.1%	9.4%	70.4%
	2018	59.2%	6.0%	6.3%	8.3%	71.5%
	2019	56.4%	7.6%	6.9%	10.6%	70.9%
S1-S3	2017	55.2%	4.6%	*	3.5%	59.8%
	2018	46.7%	2.3%	0.0%	4.6%	49.0%
	2019	43.0%	2.0%	*	7.0%	44.9%
S4-S6	2017	55.6%	2.9%	*	3.7%	58.5%
	2018	46.8%	1.4%	*	4.3%	48.2%
	2019	42.3%	2.3%	0.6%	7.1%	45.2%

11.3.11 Results for 2019 show between 2.3% and 8.3% of pupils travel to school in Edinburgh by bike, with primary school pupils much more likely to cycle than those in secondary school.

11.3.12 Figure 90 shows the active mode share by year and year group. Primary school children are more likely to travel to school by active mode at around 70%. The active share drops by around 20% for secondary pupils.

[10] Defined by Sustrans as "driven part of the way by car and walk the rest"

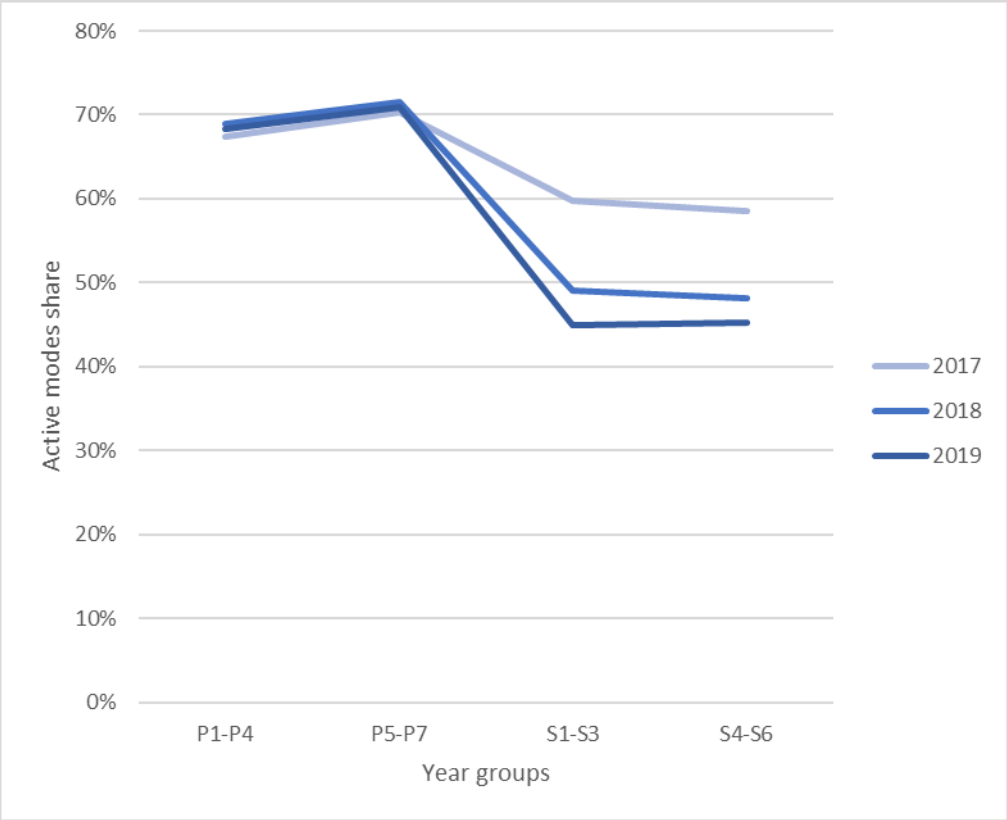


Figure 90. Hands Up Survey – active mode share by year and year group

11.3.13 Edinburgh data gathered since 2008 is summarised for all year groups in Figure 91. The total share for active modes (defined as Walking, Cycling and Scooter / Skate) are presented as the dashed line. The mode share for active modes has been relatively static at ~60% since 2008, with a drop in "Walk" share made up for by increases in "Scooter / Skate" and "Cycle" shares.

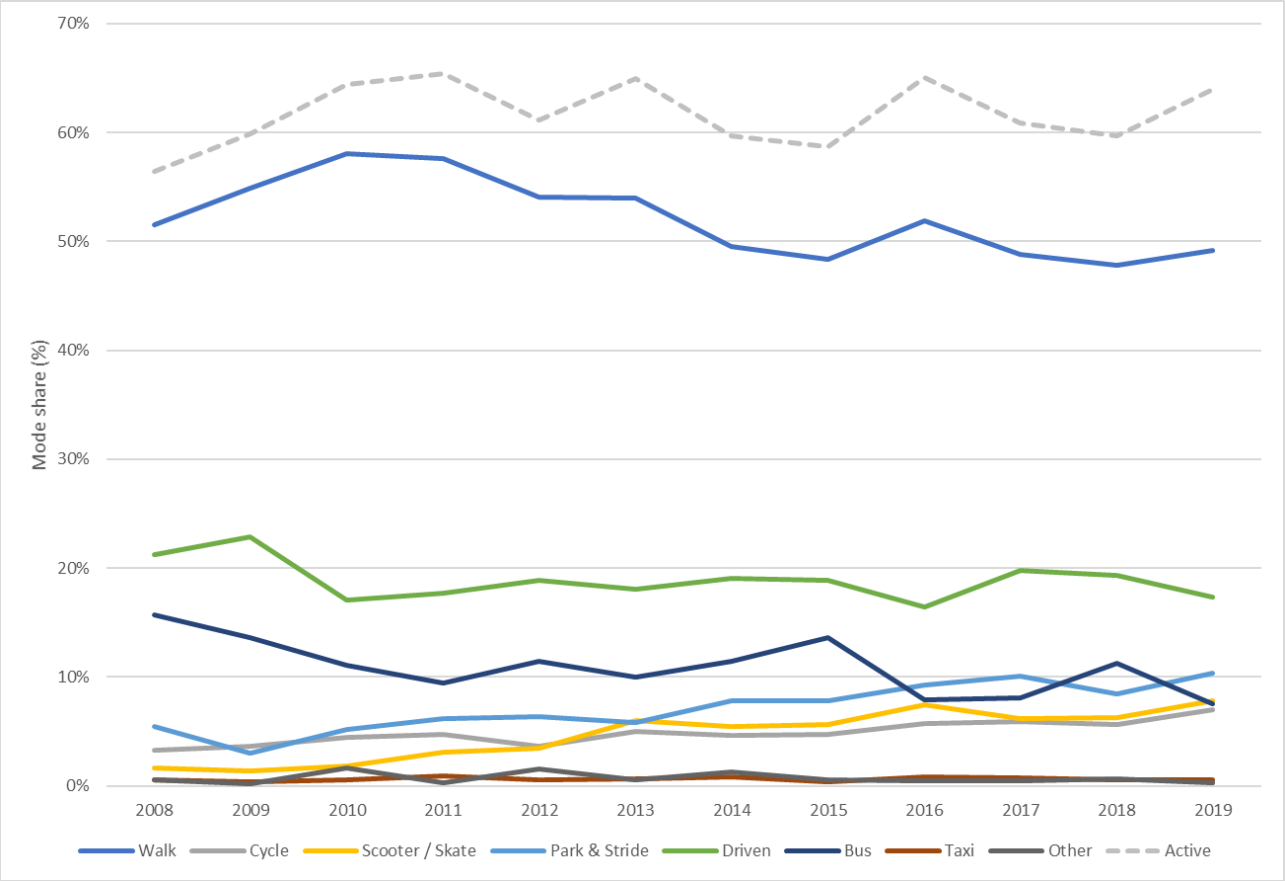


Figure 91. Hands Up Survey – travel to school in Edinburgh since 2008

11.3.14 Results for Roseburn Primary School (P1-P7 pupils), which is on the CCWEL corridor, are shown in Table 15. Similar to the previous analyses, "Active" is defined as Walk, Cycle or Scooter / Skate.

Table 15. Hands Up Survey – travel to Roseburn Primary by active modes

Year	Walk	Cycle	Scooter / Skate	Park & Stride	Driven	Bus	Taxi	Other	Active
2017	47%	11%	10%	16%	11%	2%	*	*	68%
2018	67%	4%	7%	6%	13%	*	0%	*	78%
2019	63%	11%	5%	11%	7%	3%	*	*	78%

12. M11 - STREET VIDEO SURVEY

12.1 Objectives

12.1.1 Street video survey were commissioned to feed the following objectives:

- T.1 Increase the modal share for cycling in the corridor
- T.5. Help avoid growth in motorised traffic on roads in the corridor
- T.6. Avoid excessive delay to general traffic, with particular regard to pollution and to knock-on effects on public transport to the western end of the project corridor
- EC.3. Increase footfall in shopping streets within project corridor

12.1.2 This was accomplished by collecting the following data:

- T.1 Number of people cycling in project corridor, baseline and post construction.
- T.1 Baseline number of off-peak cycle trips in the corridor, and number following construction
- T.5 Levels of traffic throughout project corridor
- T.6 Queue lengths at junctions throughout project corridor before and after implementation
- EC.3. Footfall on relevant shopping streets before and after construction

12.1.3 In addition, "path tracing" of pedestrian, cyclist and vehicular movements at three junctions was commissioned (via image recognition analysis of street video footage) to provide a visual representation of how users progress through the junctions and to allow assessment of:

- Assessment of pedestrian crossings / identification of pedestrian desire lines away from crossings
- Assessment of any issues which could affect cyclist / vehicular conflict

12.2 Methodology

12.2.1 Surveyed locations are shown in Figure 92 to Figure 94. Surveys comprised:

- Automatic Traffic Counters (ATCs)
- Junction Turning Counts (JTCs)
- Queue length surveys
- Manual vehicle occupancy (mode share) surveys
- Path tracing analysis

12.2.2 The survey locations are summarised in Table 16 below.

Table 16. Street video survey locations

SURVEY TYPE	SURVEY DATES	LOCATIONS
ATCs	28/9/20 – 4/10/20	Ellersley Road Murrayfield Roadd Corstorphine Road Roseburn Terrace Coltbridge Terrace Henderland Road Roseburn Place Chester Street
JTCs	1/10/20 & 3/10/20	Roseburn Street / Russell Road Magdala Crescent / Haymarket Terrace Randolph Place / Queensferry Street / Melville Street
JTCs with Queues	1/10/20 & 3/10/20	Murrayfield Avenue / Roseburn Terrace / Corstorphine Road Roseburn Terrace / Roseburn Street Haymarket Junction Charlotte Square / George Street St Andrew Square / George Street
Occupancy / Mode Share	1/10/20 & 3/10/20	West Coates Haymarket Terrace Melville Street York Place Dalry Road
Path Tracing	1/10/20	Randolph Place / Queensferry Street / Melville Street Charlotte Square / George Street Roseburn Terrace / Roseburn Street

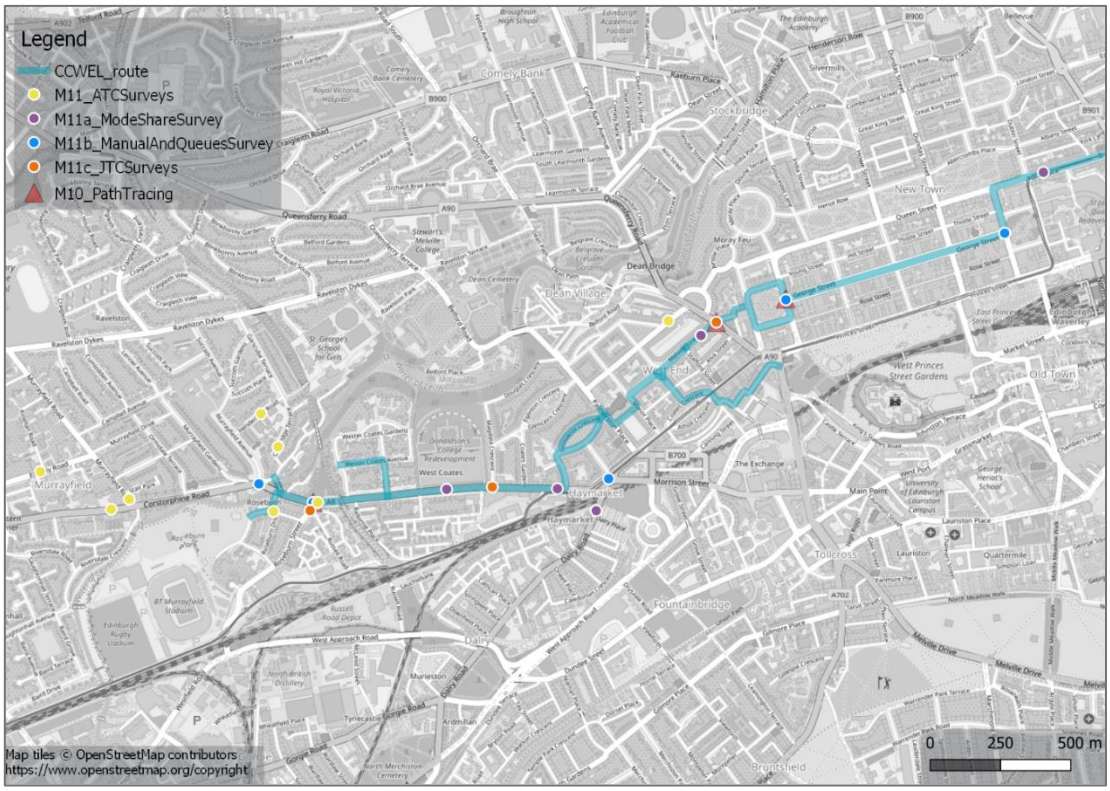


Figure 92. Street survey sites

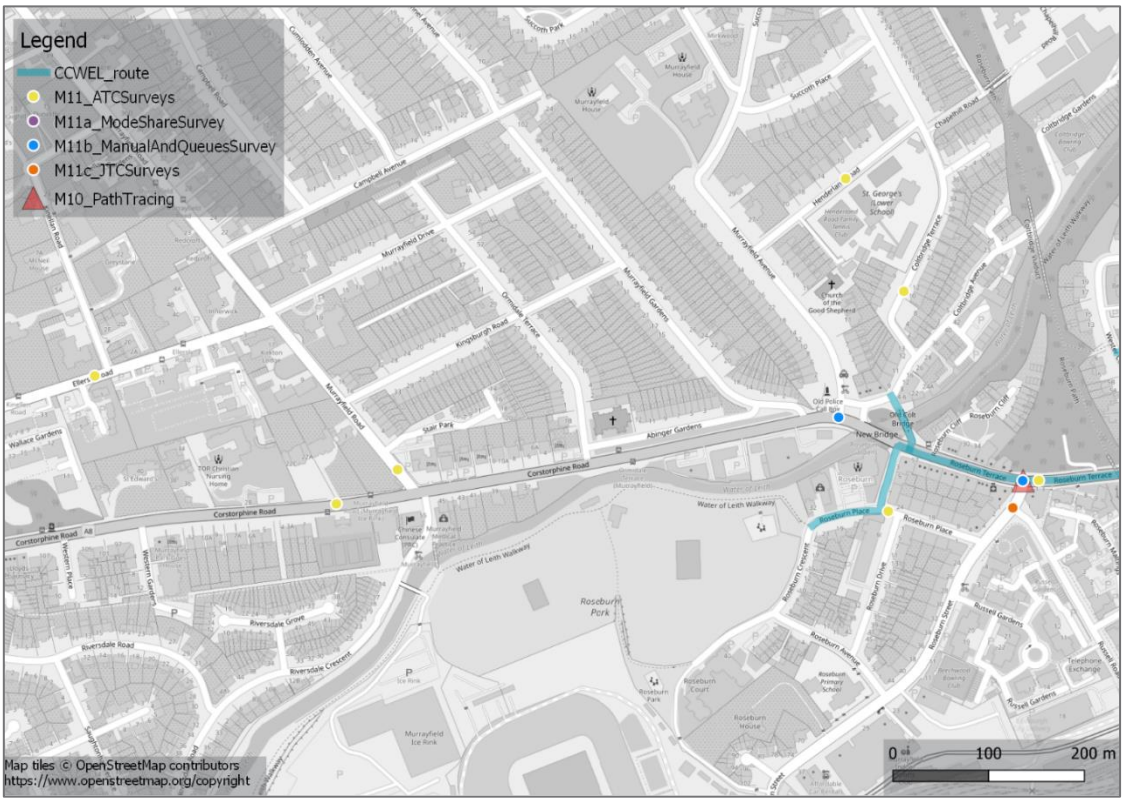


Figure 93. Street survey sites – Roseburn detail

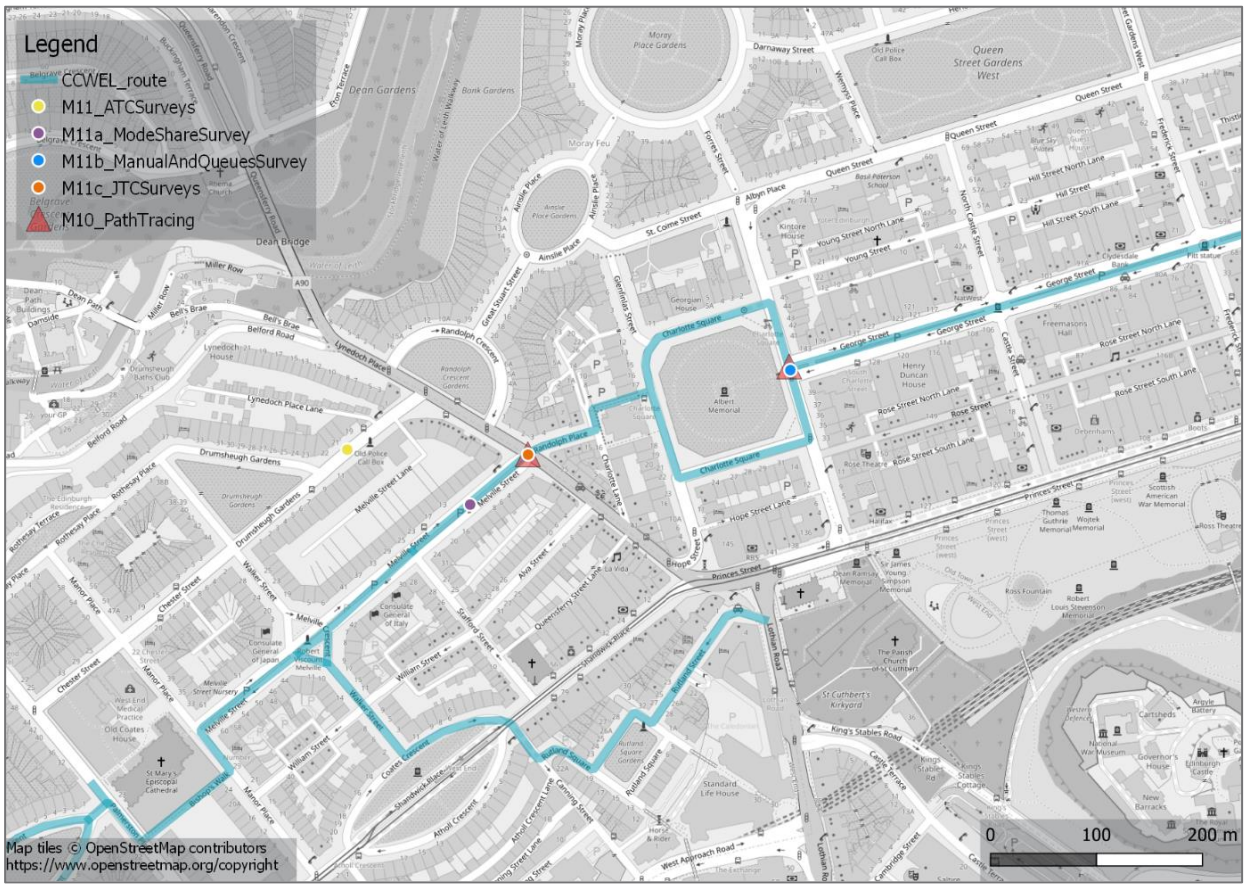


Figure 94. Street survey sites – West End detail

12.3 Data and analysis

Automatic Traffic Count (ATC) data

12.3.1 Analysis of the ATC data collected provided the following information:

- Levels of cycling in the project corridor; and
- Levels of traffic throughout the project corridor.

12.3.2 Table 17 summarises the ATC cycle count data. Please note that this categorisation includes **bicycles and motorcycles** as ATCs, are unable to differentiate between them (although from the surveys that are able to make this distinction, the number of cyclists is around 10x higher than motorcyclists in the study area).

Table 17. ATC cycle flow summary

SITE NO.	LOCATION	DAILY CYCLE FLOWS (0000-2359)		OFF-PEAK CYCLE FLOWS (1000-1600)	
		WEEKDAY	SATURDAY	WEEKDAY	SATURDAY
Site A	Ellersly Road - Between Kinellan Road and Guardians Wood	74	12	24	2
Site B	Murrayfield Road - North of A8 Corstorphine Road	45	7	19	7
Site C	A8 Western Terrace - West of Murrayfield Road	179	67	63	31
Site D	A8 Roseburn Terrace - East of Roseburn Street	467	170	159	68
Site E	Coatbridge Terrace - North of Murrayfield Place Junction	40	7	17	3
Site F	Henderland Road - Midway Between Murrayfield Avenue and Coltbridge Terrace	5	1	2	0
Site G	Roseburn Place - Between Roseburn Gardens and Roseburn Drive	339	66	127	36
Site H	Drumsheugh Gardens - South of Lynedoch Place Lane	164	29	60	18
	Total	**1313**	**359**	**471**	**165**

12.3.3 ATC data was also analysed to give an indication of the total traffic levels. This analysis is summarised as profiled traffic flows in Figure 95 and Figure 96. Weekday data clearly shows the morning and evening peak periods while the weekend data shows traffic flows are higher during the middle of the day.

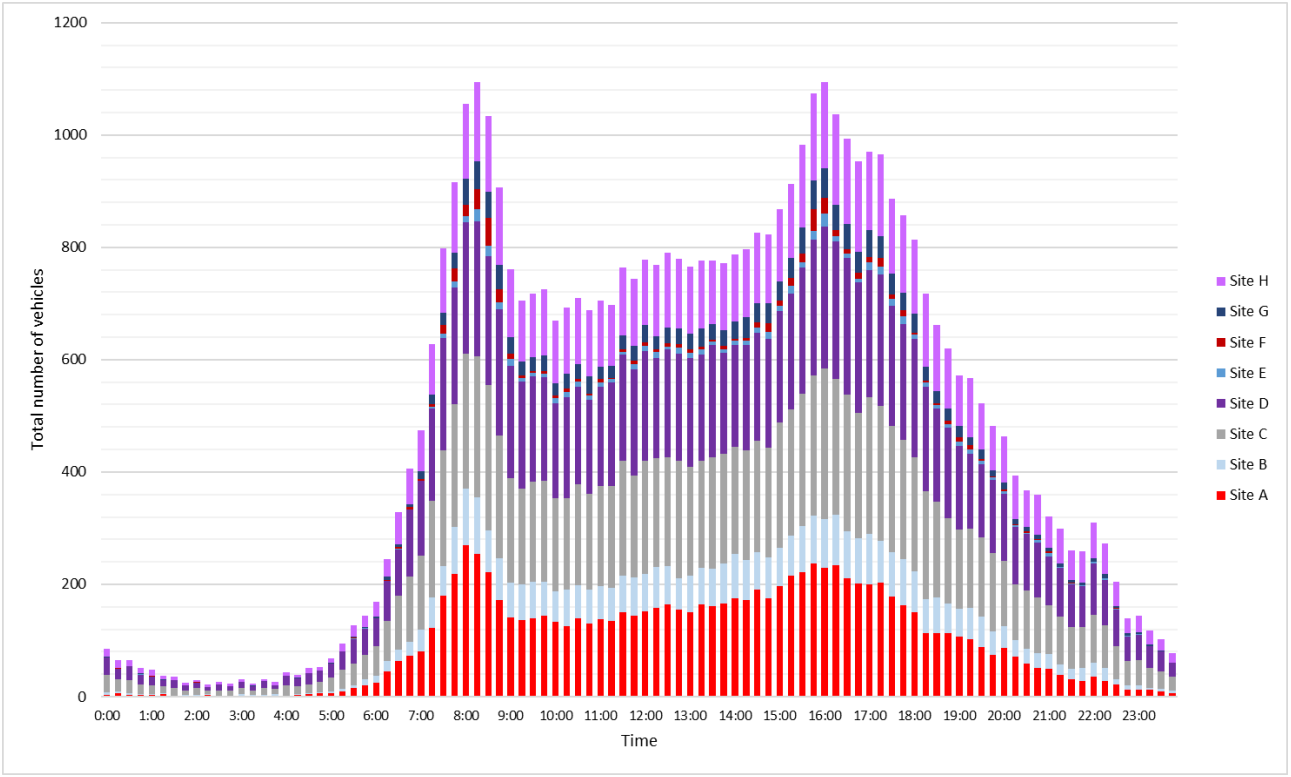


Figure 95. ATCs - weekday traffic volume profile

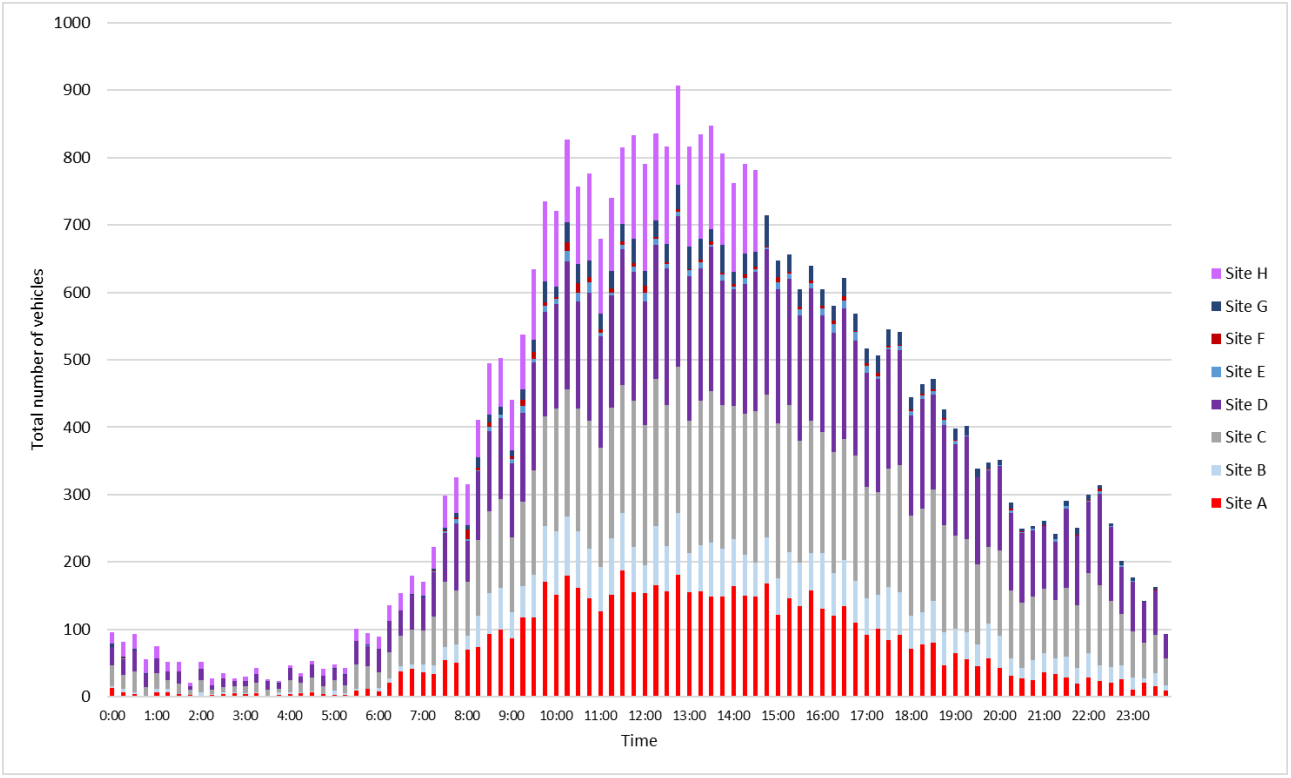


Figure 96. ATCs – weekend traffic volume profile

12.3.4 JTC data has been analysed and is summarised in Appendix B. Traffic profile graphs in Figure 131 and Figure 132 show the level of traffic across the project corridor.

12.3.5 Weekday cycle flows are summarised in Figure 97 which shows the cycle flows for all surveyed JTC junctions every 15 minutes from 0700-1900. It is clear from this summary that cycle traffic is heavier in the evening than in the morning.

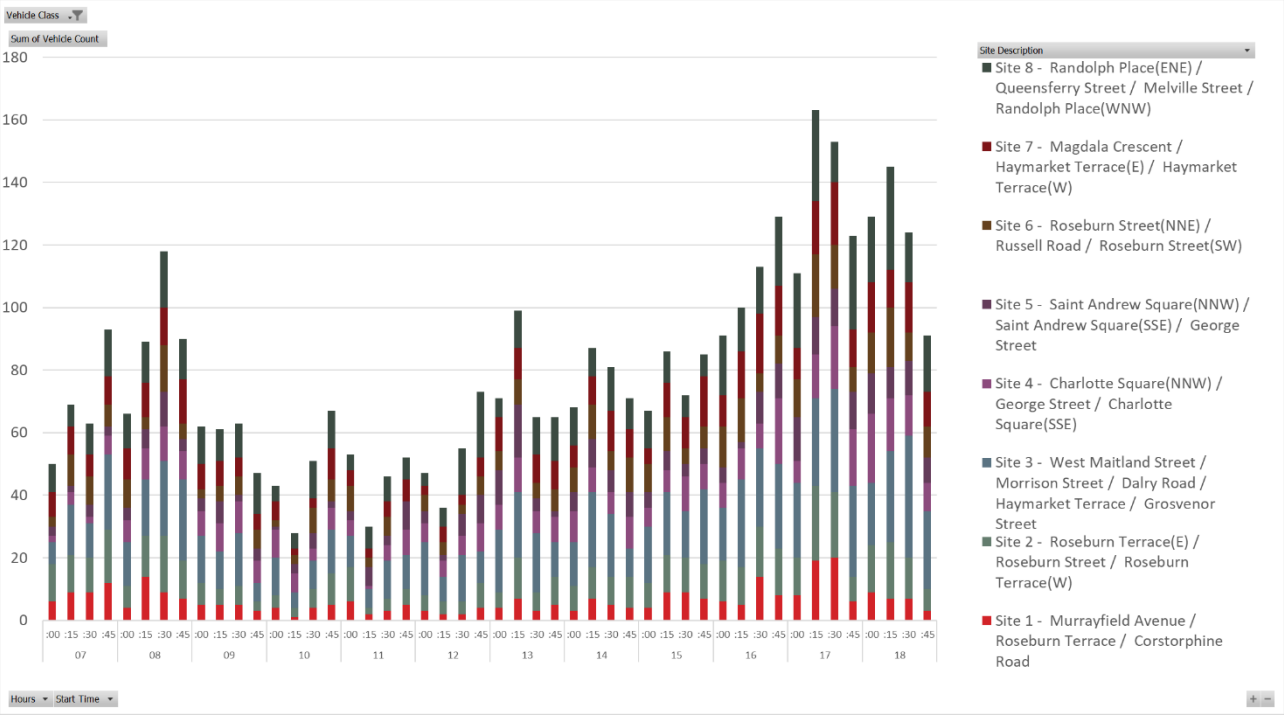


Figure 97. JTC – weekday cycle flows (no. of cycles per 15mins)

12.3.6 Weekend cycle flows are summarised in Figure 98, which shows the cycle flows for all surveyed JTC junctions every 15 minutes from 0700-1900. Cycle flows at the weekend are similar throughout the day.

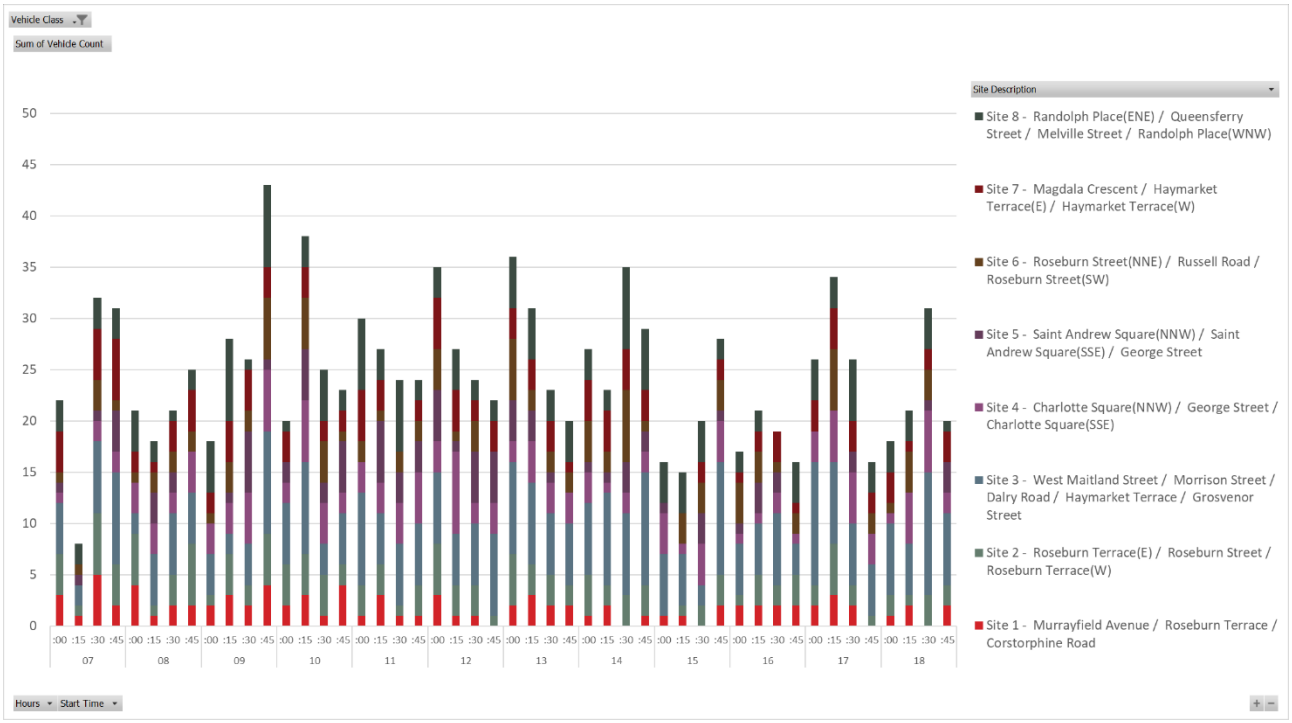


Figure 98. JTCs – weekend cycle flows (no. of cycles per 15mins)

12.3.7 Traffic queue length survey data is presented in Appendix B as a series of figures showing the maximum queues for each site (weekday and weekend) for each hour from 0700-1900. Maximum queues for each approach to the junctions area presented. As an example, the result for Haymarket junction on a weekday is shown in Figure 99.

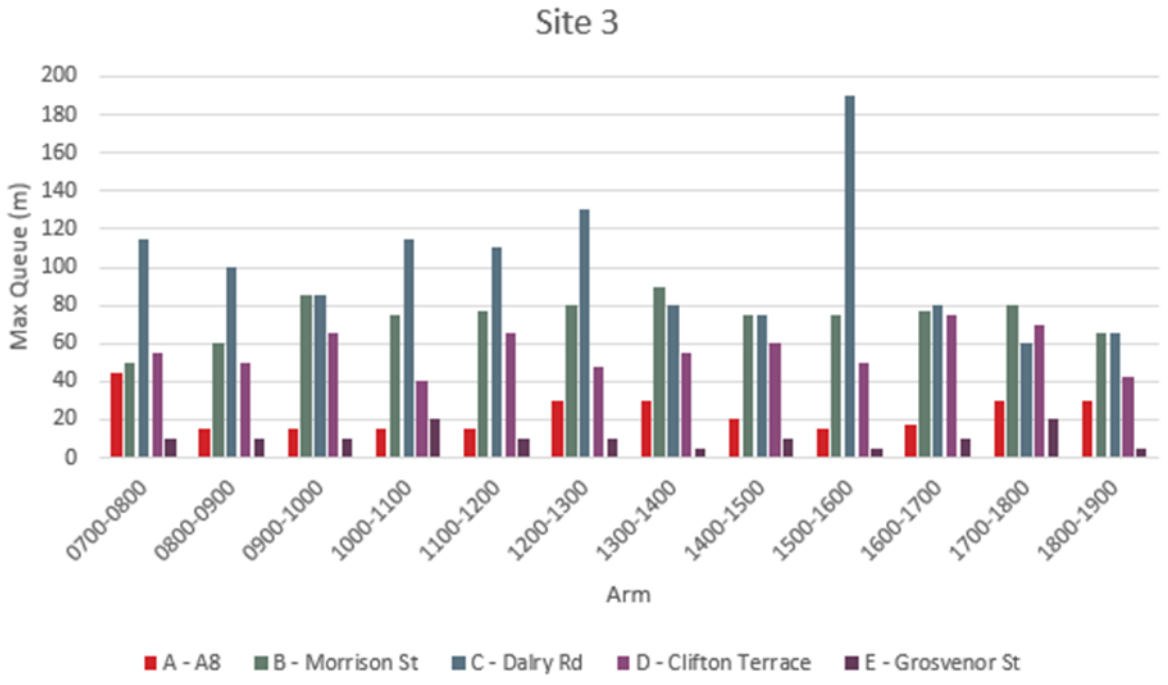


Figure 99. Maximum weekday queue lengths at Haymarket junction

12.3.8 Occupancy surveys assess the number of people (rather than number of vehicles) using the road at the survey point. The results from this survey are summarised in Appendix B. Figure 133 to Figure 142 show the detailed results for each survey location.

12.3.9 The results of the weekday occupancy survey are summarised in Table 18. This shows that the majority of people across the surveyed sites travel on bus with around 60% of the total in AM and PM periods. Cyclists (PC) account for 2-3% of the total.

Table 18. Vehicle Occupancy Survey – people flows by vehicle class (weekday)

VEHICLE CLASS	AM (0700 - 1000)	AM PEOPLE PER HOUR	%	PM (1600 - 1900)	PM PEOPLE PER HOUR	%
CAR	5420	1807	26.4%	7922	2641	33.5%
LGV	2022	674	9.8%	1091	364	4.6%
OGV1	256	85	1.2%	54	18	0.2%
OGV2	60	20	0.3%	18	6	0.1%
MC	48	16	0.2%	80	27	0.3%
PC	395	132	1.9%	708	236	3.0%
Bus	12365	3659	60.1%	13740	4580	58.2%
Total	**20566**	**6392**	**100.0%**	**23613**	**7871**	**100.0%**

12.3.10 The results of the weekend occupancy survey are summarised in Table 19. This shows that the majority of people across the surveyed sites travel on bus with 50-55% of the total. Cyclists (PC) account for 1% of the total.

Table 19. Vehicle Occupancy Survey – people flows by vehicle class (weekend)

VEHICLE CLASS	AM (0700 - 1000)	AM PEOPLE PER HOUR	%	PM (1600 - 1900)	PM PEOPLE PER HOUR	%
CAR	3347	1116	33.5%	8859	2953	47.0%
LGV	611	204	6.1%	348	116	1.8%
OGV1	79	26	0.8%	13	4	0.1%
OGV2	24	8	0.2%	1	0	0.0%
MC	10	3	0.1%	21	7	0.1%
PC	130	43	1.3%	161	54	0.9%
Bus	5780	1927	57.9%	9450	3150	50.1%
Total	**9981**	**3327**	**100.0%**	**18853**	**6284**	**100.0%**

Path Tracing

12.3.11 Path tracing is a technique that allows visualisation of the volume and direction of vehicle and pedestrian traffic captured during any video survey work. The system assesses objects passing through the camera's field of vision, classifies them and plots their routes via the medium of trace lines overlaid onto a background image from the relevant camera.

12.3.12 Video footage or three junctions was assessed via the path tracing software:

- Roseburn Terrace / Roseburn St
- Queensferry St / Melville St
- George St / Charlotte Sq

12.3.13 Figure 100, Figure 101 and Figure 102 show examples of paths traced from around 1 hour of video footage for each of these junctions. In each figure=, the top image includes only walking and cycling paths while the bottom image includes all recorded modes. In the legend for these figures:

- PC = Pedal cycle,
- MC = Motorcycle,
- LGV = Light Goods Vehicle
- OGV = Other (heavy) Goods Vehicle.

Figure 100. Roseburn Gardens / Roseburn Terrace - paths - morning peak (top: active modes, bottom: all modes)

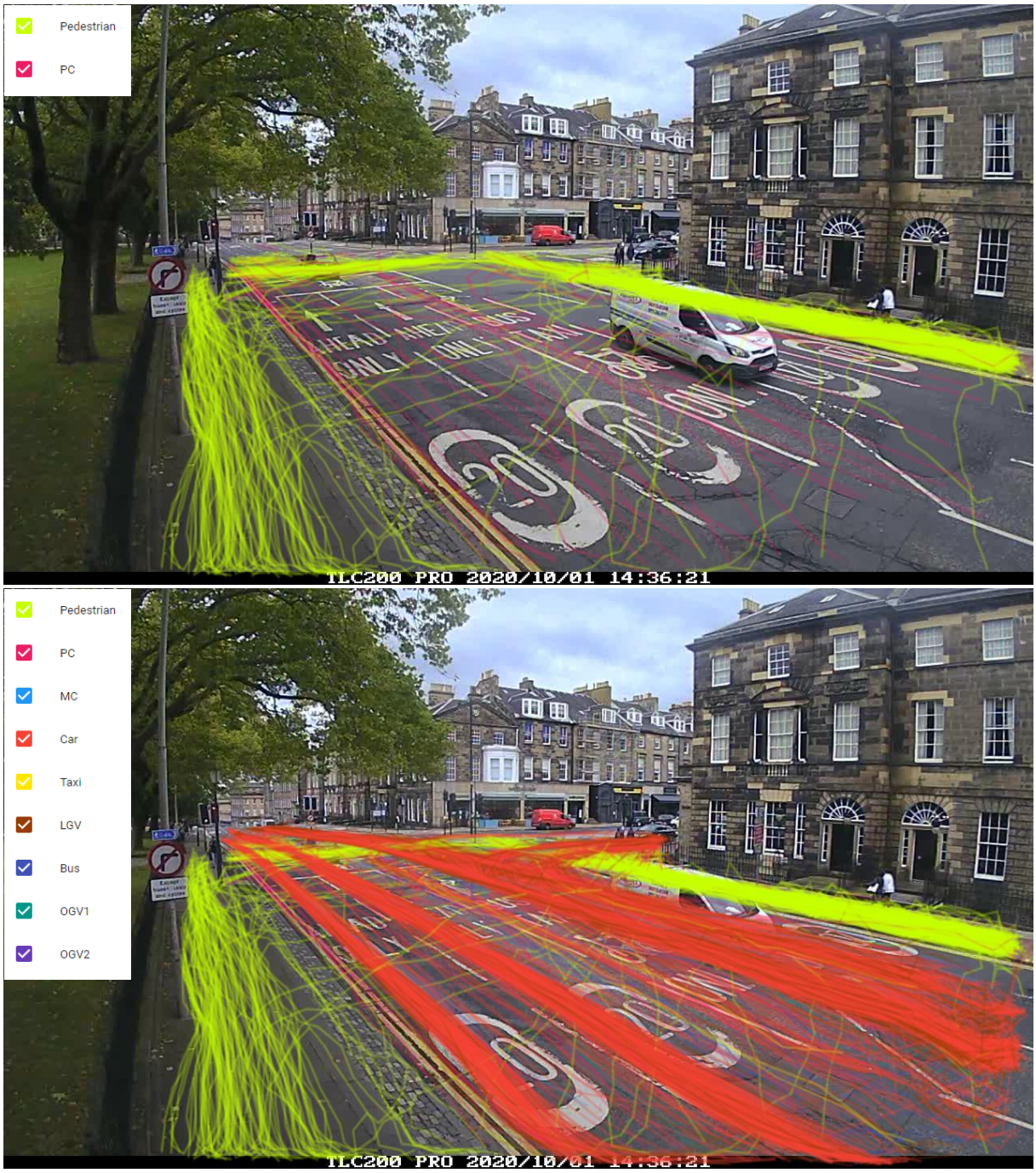


Figure 101. George St / Charlotte Sq - paths – interpeak (top: active modes, bottom: all modes)

Figure 102. Queensferry St / Melville St – paths – evening peak (top: active modes, bottom: all modes)

12.3.14 Notable features of the paths include:

1. On **Roseburn Terrace**: most bicycles progressing westbound forced into direct conflict with motor vehicles in middle of road because of westbound lane allocation. Eastbound, most bicycles have some space between them and motor traffic.
2. **Pedestrians crossing Roseburn Terrace** despite no crossing facility being available

3. A number of pedestrians crossing **Charlotte Square** away from signalised crossing – although the majority do use the crossing
4. Relatively high proportion of **cyclists turning right into George St**
5. **Pedestrians on Queensferry St** cross on the both west side at Melville St and at the uncontrolled crossing at Randolph Pl. There are relatively few pedestrian paths away from the established crossing points.

13. M13 - AUTO COUNTERS – CYCLISTS AND PEDESTRIANS

13.1 Objectives

13.1.1 Auto cycle counter data were collated to feed the following objectives:

- T.1 Increase the modal share for cycling in the corridor

13.1.2 This was accomplished by the following analyses:

- Number of people cycling in project corridor, baseline and post construction.
- Baseline number of off-peak cycle trips in the corridor, and number following construction

13.2 Methodology

13.2.1 Various auto cycle counters are located around Edinburgh and are maintained by CEC. The counters on the CCWEL route are located at the locations shown in Figure 103. The count data generated by these counters is accessible through a web interface. Count data was therefore downloaded and summarised to provide an indication of historical and current cycle volumes at the counter locations.

13.2.2 We report on hourly data for 2 months for which good quality data were available for all three sites: pre-Covid (Feb 2020) and post-Covid (Nov 2020). We also report on the Average Daily Traffic (ADT) figures generated by the web interface with the last 4 years' data. Note that for ADT we have included the cycle mode share reported for each site (i.e. to remove pedestrian and motorcycle counts).

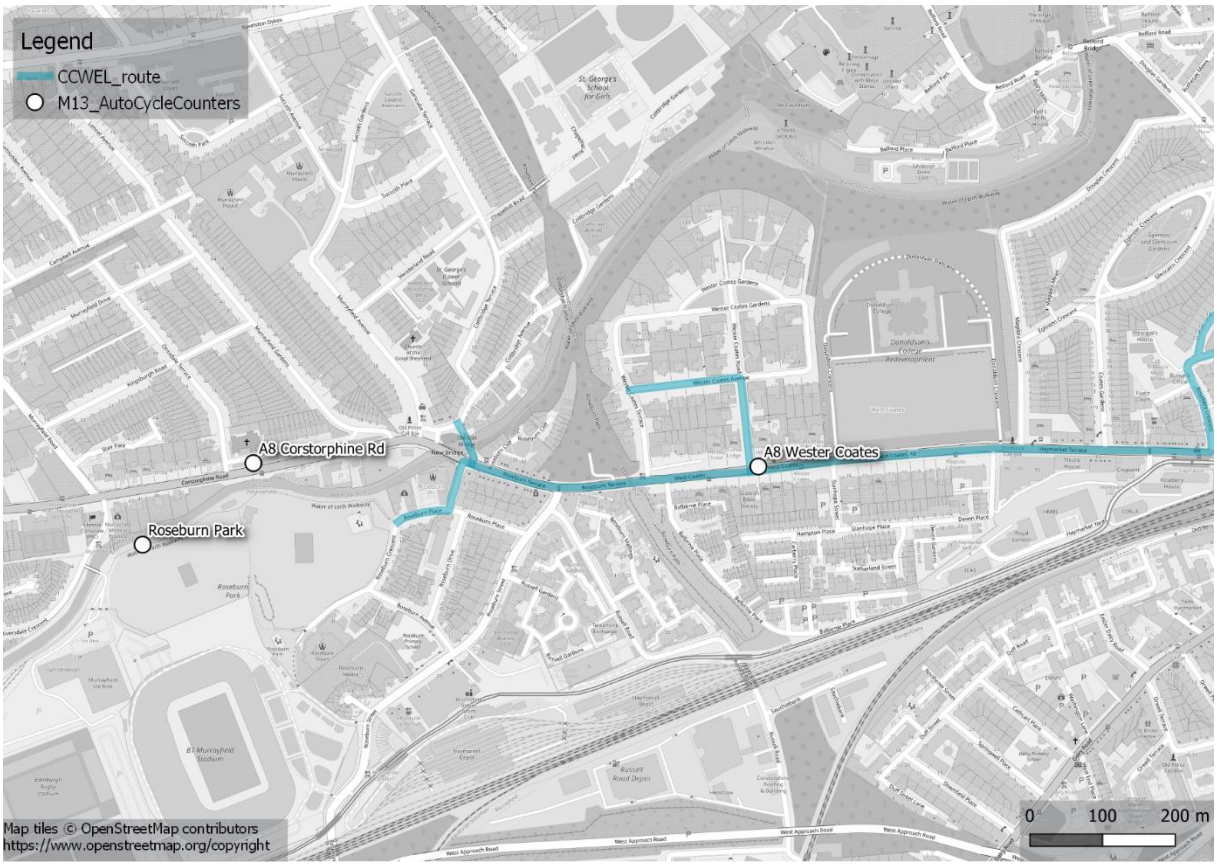


Figure 103. Location of auto cycle counters

13.3 Data and analysis

13.3.1 ADT results (total cycle flows) are summarised in Table 20. The Wester Coates site shows a year on year increase in traffic from 2018 on. The Corstorphine Rd site is reasonably static across all years while the Roseburn Park site shows a year on year decrease in traffic from 2017.

Table 20. Auto cycle counters - annual daily traffic (cycle flows)

SITE	2017	2018	2019	2020
CEC052 - A8 Wester Coates	446	444	757	857
CEC029 - A8 Corstorphine Road	265	154	133	232
CEC024 - Roseburn Park	852	674	521	449

13.3.2 Peak and off-peak average flows are summarised in Table 21 for February and November 2020. The impact of Covid-19 measures are clear in the November data where morning and

evening traffic is reduced in volume compared to the results for February. The only result to show an increase in traffic between February and November is Roseburn Park in the 1000-1600 period.

Table 21. Auto cycle counters – peak / off-peak average flows

SITE	MONTH	0700-1000	1000-1600	1600-1900
CEC024_RoseburnPark	Nov2020	97	214	90
	Feb2020	105	191	129
CEC052_A8WesterCoates	Nov2020	96	151	96
	Feb2020	207	292	130
CEC029_ACorstorphineRd	Nov2020	65	88	55
	Feb2020	118	104	263

14. M15 - VACANT PREMISES COUNT

14.1 Objectives

14.1.1 Information on vacant premises was collected to feed the following objectives:

- EC.1. Enhance retail vitality in the project corridor

14.1.2 This was accomplished by collecting the following data:

- Number of vacant shop premises throughout project corridor & comparison with adjacent similar streets.

14.2 Methodology

14.2.1 Surveyor walked the areas of interest, made note of the vacant premises and classified the other premises into suitable categories based on the information provided by the building. Those buildings where classification was unclear when on-site were subject to desk-based research to gain clarity. Vacant premises were surveyed in four areas as shown in Figure 104.

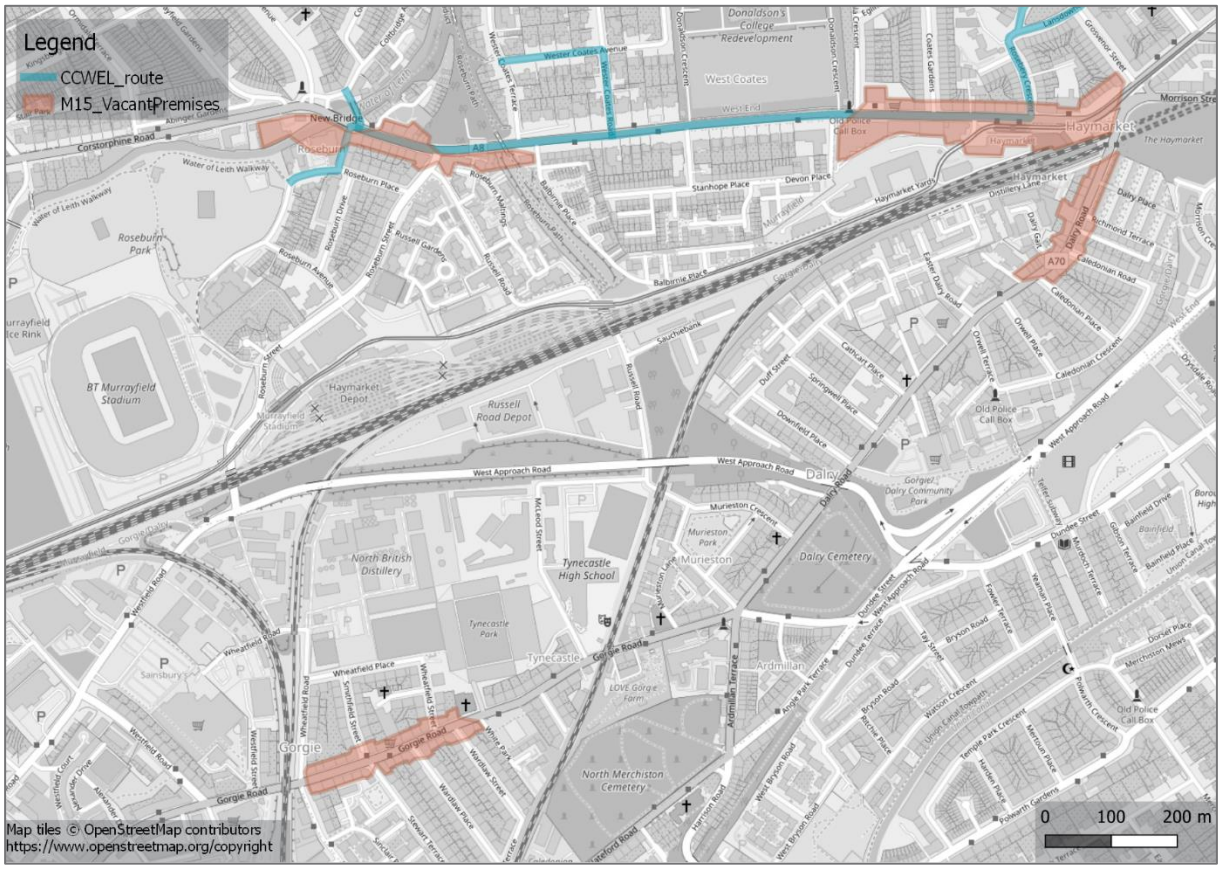


Figure 104. Vacant premises survey areas

14.3 Data and analysis

14.3.1 Surveyor transferred the notes taken while walking the areas onto both an Excel spreadsheet and GIS software.

14.3.2 The building categories were split into the following:

- Shops – Convenience (e.g. supermarket, newsagent, take-away food);
- Shops – Charity shops;
- Shops – Other (e.g. clothes, toys, electronics, books);
- Food and Drink – (e.g. restaurant, café, pub – consumed on site);
- Service (e.g. laundrette, bank, hair dresser, library, nail bar, travel agent, vet);
- Childcare (e.g. nursery, creche facility);
- Health (e.g. GP, dentist, optician, pharmacy);
- Leisure (e.g. betting shop, fitness studio);
- Other - charitable organisation e.g. foodbank, advice centre;
- Vacant;
- Housing;
- Office Buildings;
- Hostel/Hotel and;
- Other (To specify).

14.3.3 Figure 105 shows results for the two areas surveyed around Haymarket Station: Haymarket Terrace to the north and Dalry Road to the east. Haymarket Terrace had only two vacant premises and Dalry had eight. On Haymarket Terrace there is one building marked as ‘other’ which is Haymarket Station and on Dalry Road there is one building marked as ‘other’ which is “Escape” - a locked puzzle room centre.

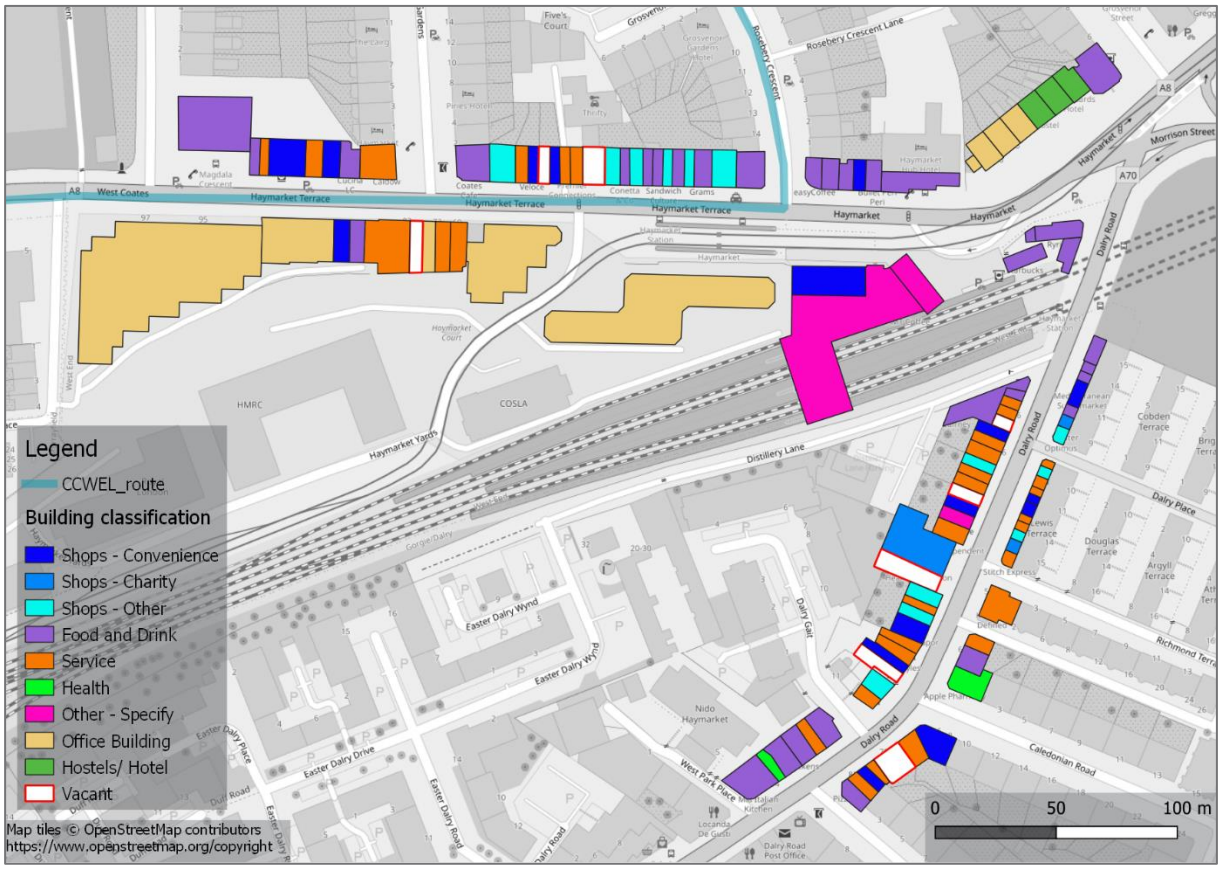


Figure 105. Haymarket Terrace and Dalry Road Vacant Premises

14.3.4 Roseburn Terrace is shown in Figure 106 and has six vacant premises counted. There is one building marked as 'other', this is a garage.

Figure 106. Roseburn Terrace Vacant Premises

14.3.5 Gorgie Road which located southwest of the CCWEL route and is shown in Figure 107. Gorgie Road had six vacant premises counted.

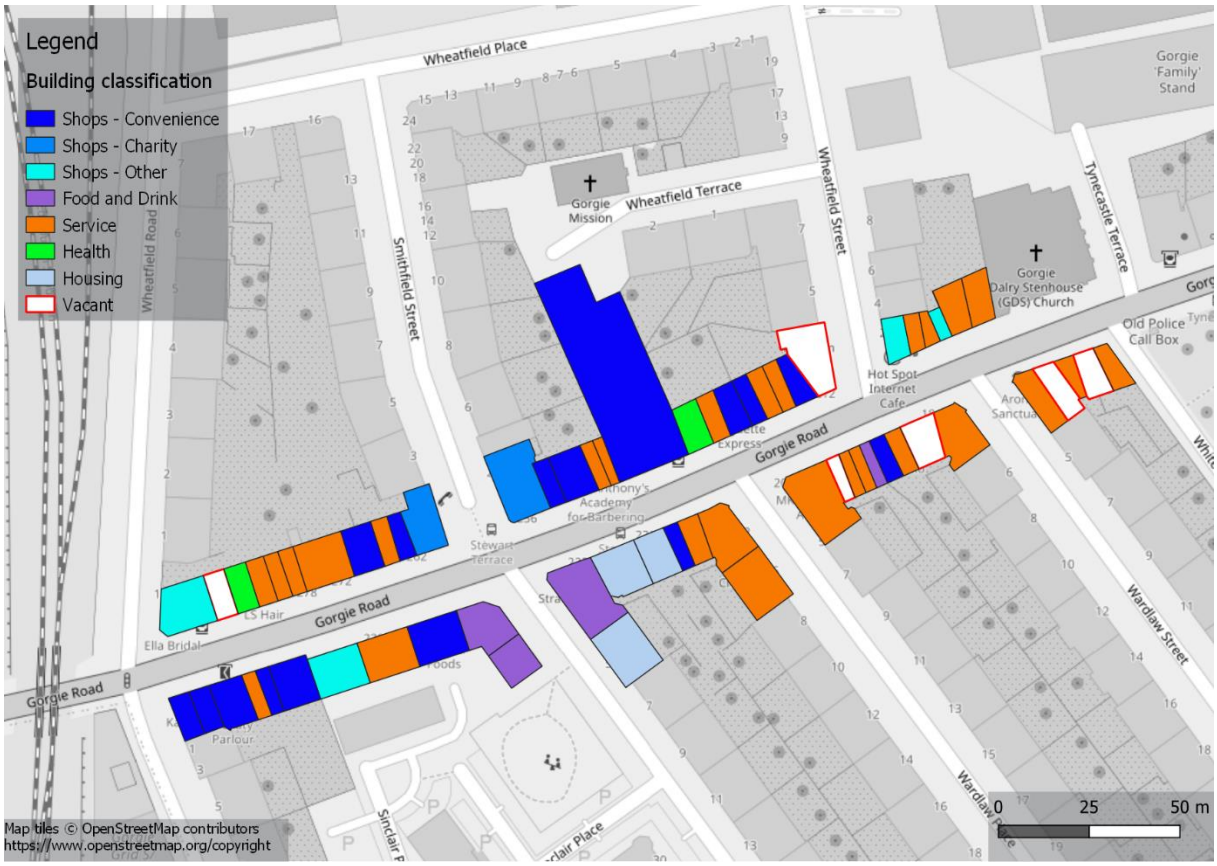


Figure 107. Gorgie Road Vacant Premises

14.3.6 Table 22 shows a summary for the number of buildings in each category mentioned in 14.3.2 in each areas surveyed. In total, 228 buildings where counted.

Table 22. Building Classifications

Premises Code	Location			
	Roseburn Terrace	Haymarket Terrace	Dalry Road	Gorgie Road
Shops – Convenience (e.g. supermarket, newsagent, take-away food)	6	7	9	16
Shops – Charity Shop s	0	0	3	2
Shops – Other e.g. clothes, toys, electronics, books	5	6	7	4
Food and Drink - Restaurant/Café /Pub (consumed on site)	4	19	13	3
Service e.g. laundrette, bank hairdresser, library, nail bar, travel agent, vet	16	9	23	27
Childcare e.g. nursery, creche facility	0	0	0	0
Health e.g. GP, dentist, optician, pharmacy	3	0	2	2
Leisure e.g. betting shop , fitness studio	0	0	0	0
Other charitable organisation e.g. foodbank, advice centre	0	0	0	0
Vacant	5	3	5	6
Other (please specify)	1	1	1	0
Housing	6	0	0	3
Office Building	0	8	0	0
Hostels/Hotel	0	3	0	0

14.3.7 Note that It is beyond the scope of this survey to investigate the reasons that premises were made vacant. In particular, we suspect that some of these vacancies may be a direct result of the impacts of the Covid-19 pandemic and the associated restrictions.

15. M16 - ACCIDENT DATA

15.1 Objectives

15.1.1 The aim of the accident data collection is to assess the number of casualties and the casualty rate per distance travelled for cycle trips. The data feeds into the following study objectives:

- S.1 - Significantly reduce the casualty rate per distance travelled for cycle trips in the corridor;
- S.2 - No increase in overall numbers of casualties among users of all modes in the corridor.

15.2 Methodology

15.2.1 The accident data was based on the Department for Transport Stats 19 Road Safety datasets, Crashmap.com information and details supplied by the City of Edinburgh Council Road Safety & Active Travel Team. The gathered data was for the latest available three years (**2017-2019**) and covered the CCWEL corridor (including a 250m buffer zone around the route to account for junctions and routes in the immediate vicinity), and the City of Edinburgh council area.

15.2.2 To provide an accurate picture of cycling safety, the number of casualties should be calibrated by distance travelled to produce a casualty rate per mile cycled. As a proxy for distance travelled by cycle, we used the number of cyclists in the corridor, sourced from Junction Turning Counts that were carried out across the City during 2019.

15.2.3 The 2017-2019 data was analysed to provide an average annual number of cyclist casualties, which was then compared to the total average number of cycle trips along the CCWEL route and within its 250m buffer zone.

15.2.4 In addition, three smaller areas with high concentrations of cyclist casualties were analysed and reported individually. These areas were:

- Haymarket junction
- Shandwick Pl / Lothian Rd / Princes St junction
- Leith St

15.2.5 For all the above areas, and as an additional indicator, we then established accident rates by comparing the 2017-2019 average number of casualties to the sizes of the areas (in km^2) within which they occurred.

15.2.6 Analysis of accident data for the City of Edinburgh Council area was based on the average annual number of cyclist casualties in the area for the same years (2017-2019) and the annual number of cycle trips as reported in Bike Life Edinburgh 2019 report[11] (see section 11.2.1).

[11] Bike Life Edinburgh - Sustrans.org.uk

15.3 Data and analysis

CCWEL corridor

15.3.1 From 2017 to 2019, there were on average 18.7 accidents involving a cyclist per year along the CCWEL corridor, of which 0.3 was fatal, 4.3 were serious and 14.0 were slight (Figure 108).

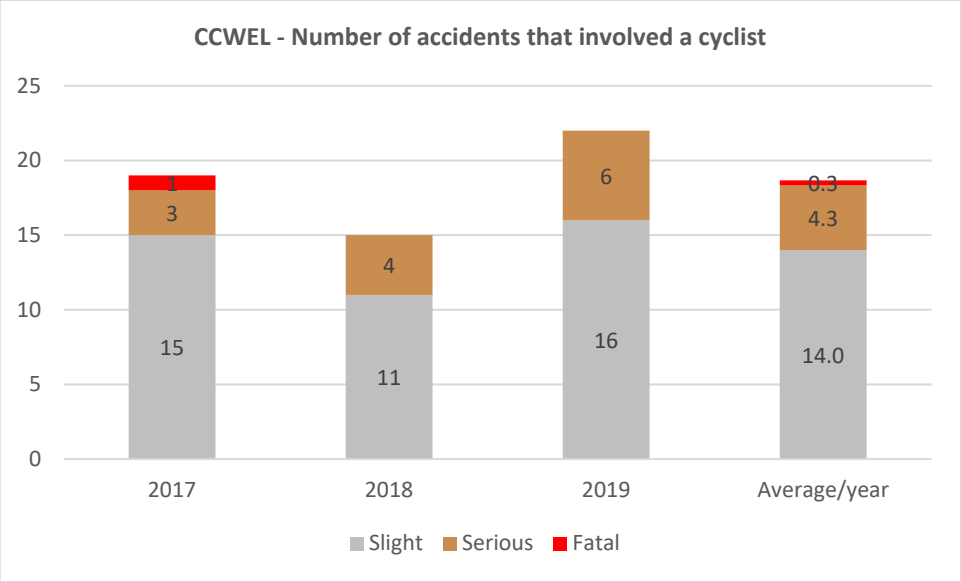


Figure 108. Accidents within 250m of CCWEL route

15.3.2 The locations of the accidents are shown in Figure 109 below.

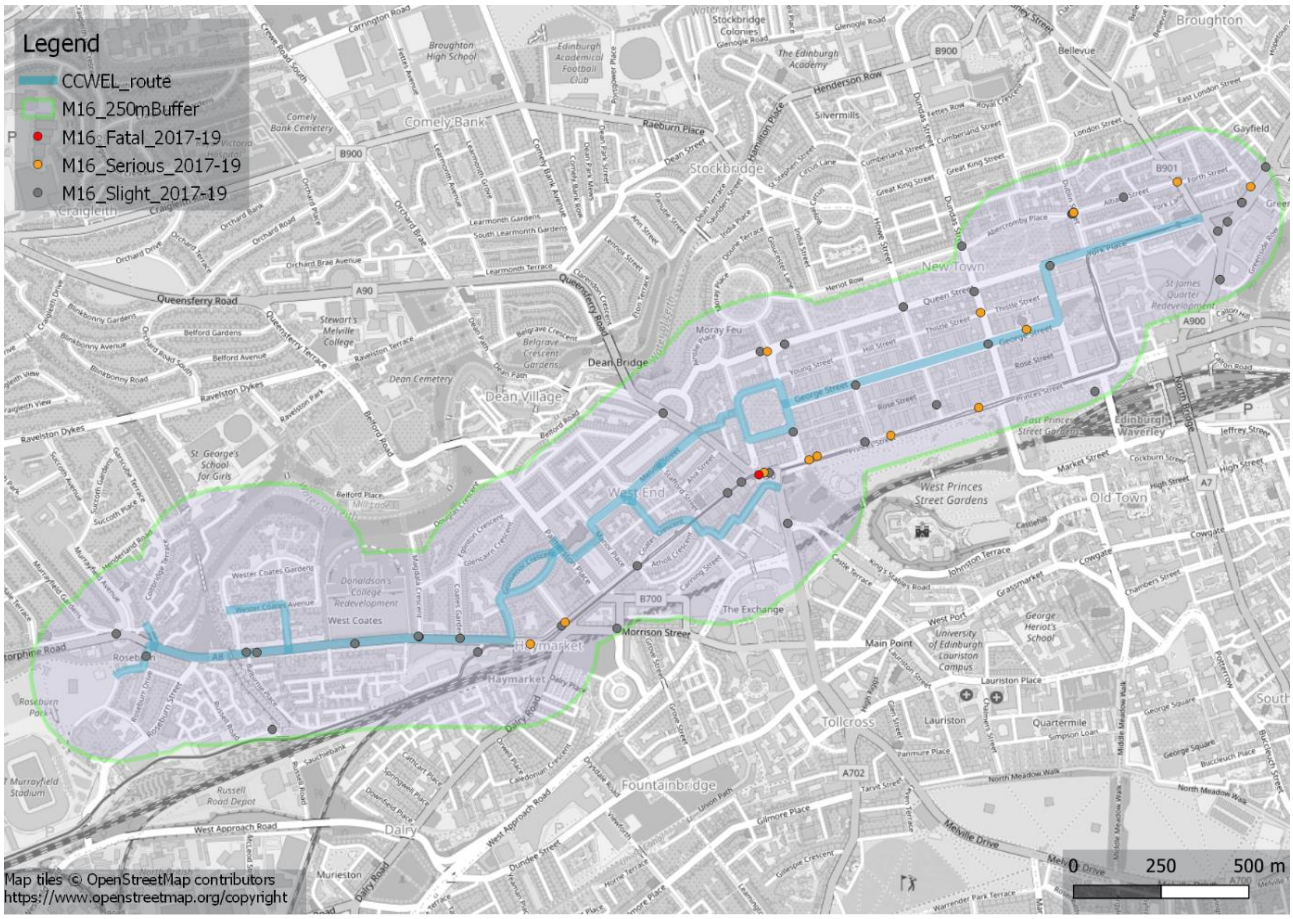


Figure 109. Locations of accidents that involved a cyclist (2017-2019)

15.3.3 Traffic count data were provided by CEC for a comprehensive range of junctions in the study area, which (among data for other modes of transport) recorded the number of cycle users between 07:00 and 19:00 on 19th or 25th June 2019. Analysis of these data showed that there were an average of 293 cycle trips at each junction along the CCWEL route which (assuming similar cycle flows for every day of the year) equates to 106,945 trips per annum. When divided by the average annual cycle accident rate this shows that there were 177 accidents per million cycle trips per year.

15.3.4 The pedal cycle volumes per location are shown in purple in Figure 110 and Figure 111.

Figure 110. 2019 2-way cycle link flows 0700-1900 weekday Princes St to St Andrew Sq

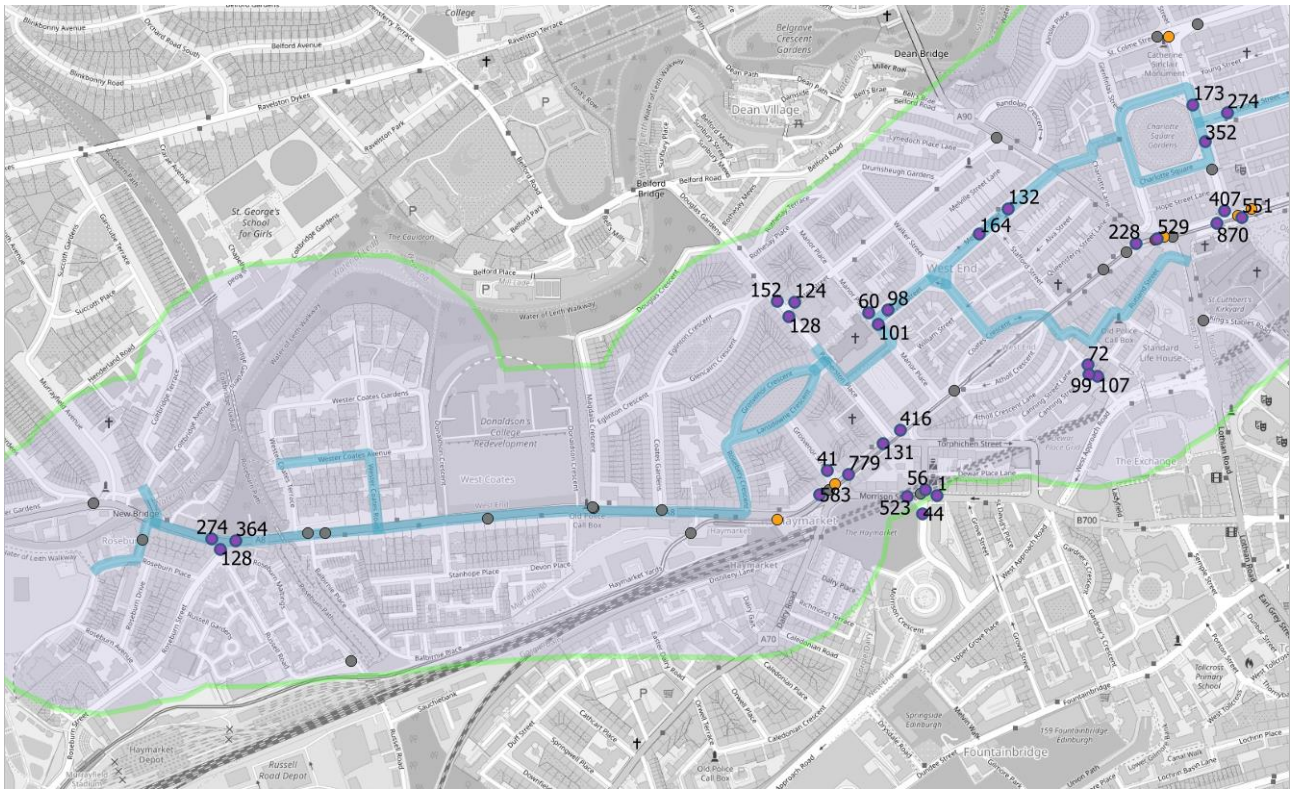


Figure 111. 2019 2-way cycle link flows – 0700-1900 weekday Roseburn to Princes St

15.3.5 Comparing the average number of pedal cycle accidents (18.7) to the area of the CCWEL corridor's 250m buffer zone (2.3 km^2) shows that there have been 8 cycle accidents per km^2 per year.

15.3.6 Sub-areas with a high number of cycle casualties were identified in Leith Street (1), West Princes Street (2) and Haymarket (3). These are highlighted in Figure 112. The cycle rate for these locations is shown in Table 23.

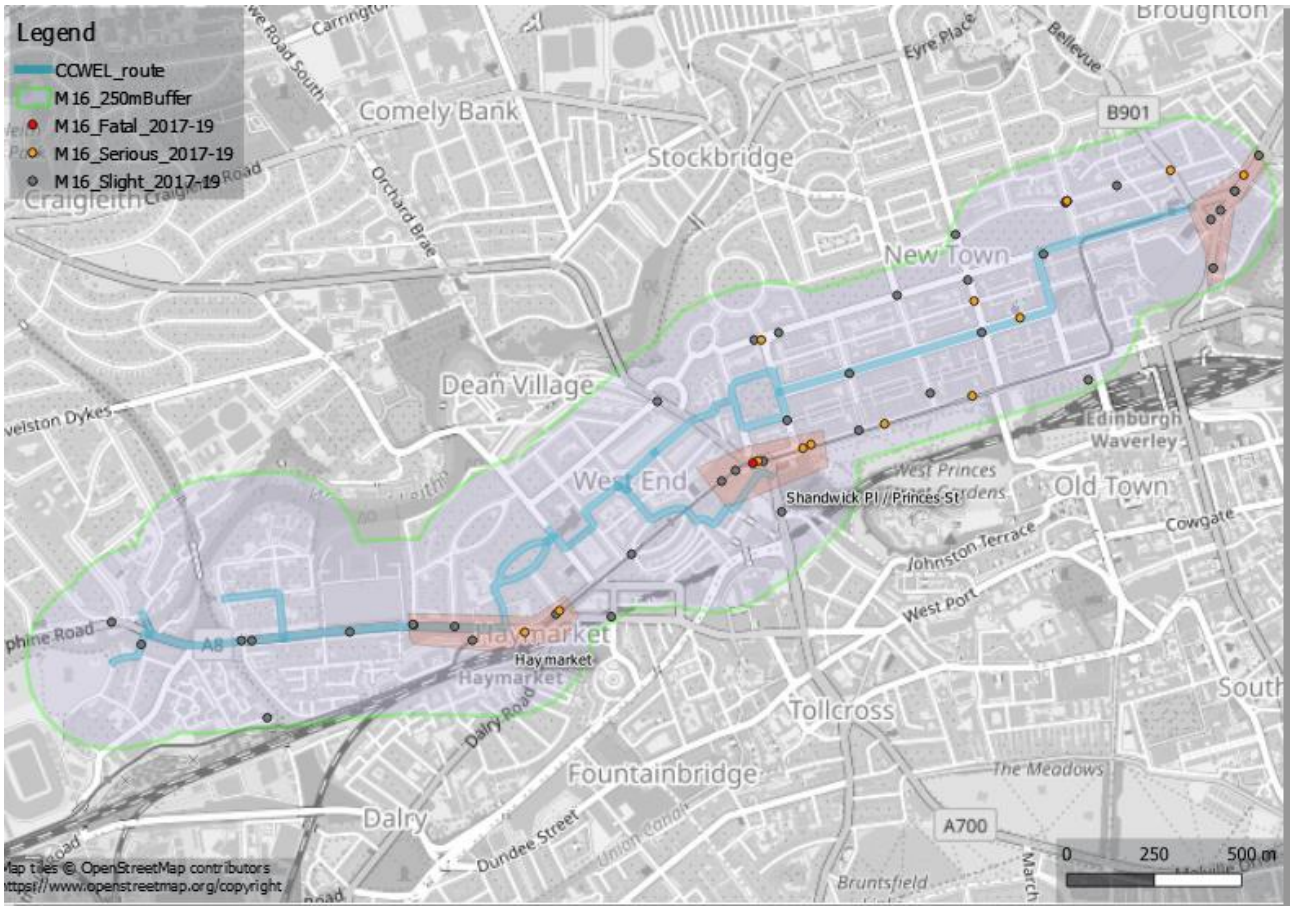


Figure 112. High cycle casualty sub-areas

Table 23. Cycle rate per cluster site

Clusters	Leith St	West Princes St	Haymarket
Average number of cycle trips in the Cluster (2019 JTC data)	649	517	468
Average number of cycle trips in the Cluster (2019 JTC data) per annum	236885	188705	170820
Average annual number of pedal cycle casualties in the Cluster	2	42.3	2.3
Annual accidents per million cycle trips	8.4	12.2	13.5
Cluster area (km^2)	0.03	0.04	0.04
Annual accidents per km^2	63	52	52

15.3.7 The data shows that there was on average 164 accidents involving a cyclist per year in the City of Edinburgh Council area, of which 1 was fatal, 35 were serious and 128 were slight (Figure 113).

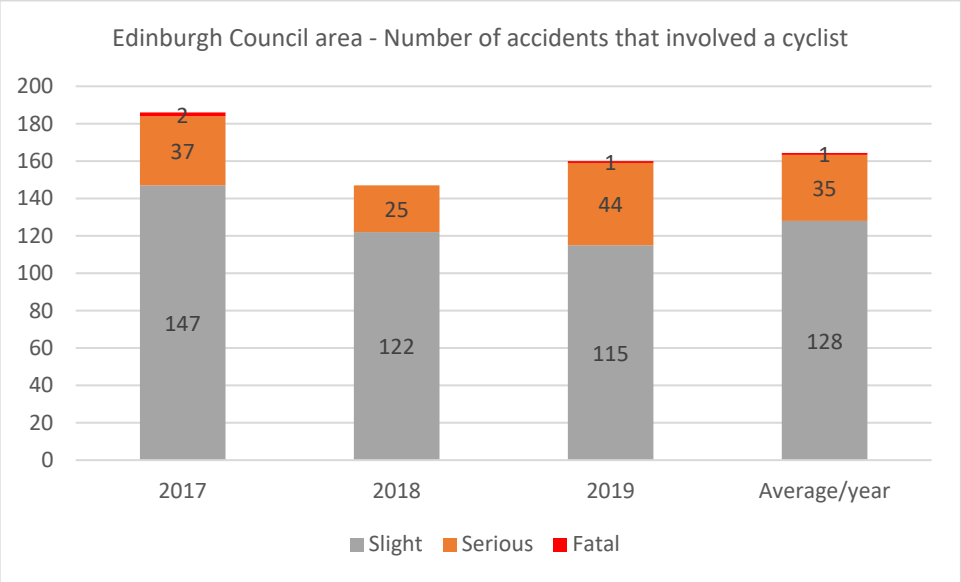


Figure 113. Accidents in Edinburgh Council area

15.3.8 Using the 2019 Bike Life information, there were 27,160,000 cycle trips in 2018. Comparing the number to the average annual number of pedal cycle casualties this gives a rate of 6 accidents per million cycle trips per year.

16. M17 – PUBLIC TRANSPORT PASSENGERS

16.1.1 Initial discussions with Lothian Buses and Edinburgh Trams confirmed that some detailed passenger data was available. However, both had serious reservations with providing data for reasons of commercial sensitivity and the inability to disentangle the impact of Covid-19 to arrive at a reasonable Baseline. Therefore no public transport passenger baseline data were made available for this study.

17. M18 – PUBLIC TRANSPORT JOURNEY DATA

17.1 Objectives

17.1.1 Public Transport journey time data was collated to feed the following objectives.

- T.6. Avoid excessive delay to general traffic, with particular regard to pollution and to knock-on effects on public transport to the western end of the project corridor

17.2 Methodology

17.2.1 Following discussions with Lothian Buses, real-time bus journey data was provided to allow analysis of stop-to-stop journey times in the vicinity of the CCWEL route. Unfortunately, no journey time data was made available by Edinburgh Trams. The Lothian Buses data was provided as a series of Excel files containing data in the following fields:

- Date
- Service number
- Direction
- Service label
- Naptan stop number
- Real time at stop
- Real layover time at stop

17.2.2 The data therefore contained information on the journeys of individual bus vehicles throughout Edinburgh and provided the time that each vehicle stopped at each bus stop on their route. Data was provided for the following weeks (pre and post Covid-19):

- 26/1/20 – 1/2/20
- 4/10/20 – 10/10/20

17.2.3 The large volume of data (>600mb) meant that it was necessary to process it using a custom-built macro (rather than manually). Therefore conversion of the data into a summary format was able to be accomplished efficiently. The macro summarised each day's data by stop-to-stop "link" (defined as from / to Naptan stop codes) and by hour between 0700-1900.

17.2.4 Weighted average journey times for the three periods were then calculated using the number of buses on each "link" in each hour.

- Morning: 0700-1000
- Interpeak: 1000-1600
- Evening: 1600-1900

17.2.5 The stops / links were then grouped as shown in Figure 114 to allow calculation of average stop-to-stop times by corridor. These included a "control" corridor on Gorgie Road. Finally, the weighted average journey times for each corridor were summarised by individual day, weekday and weekend for both pre and post-Covid months.

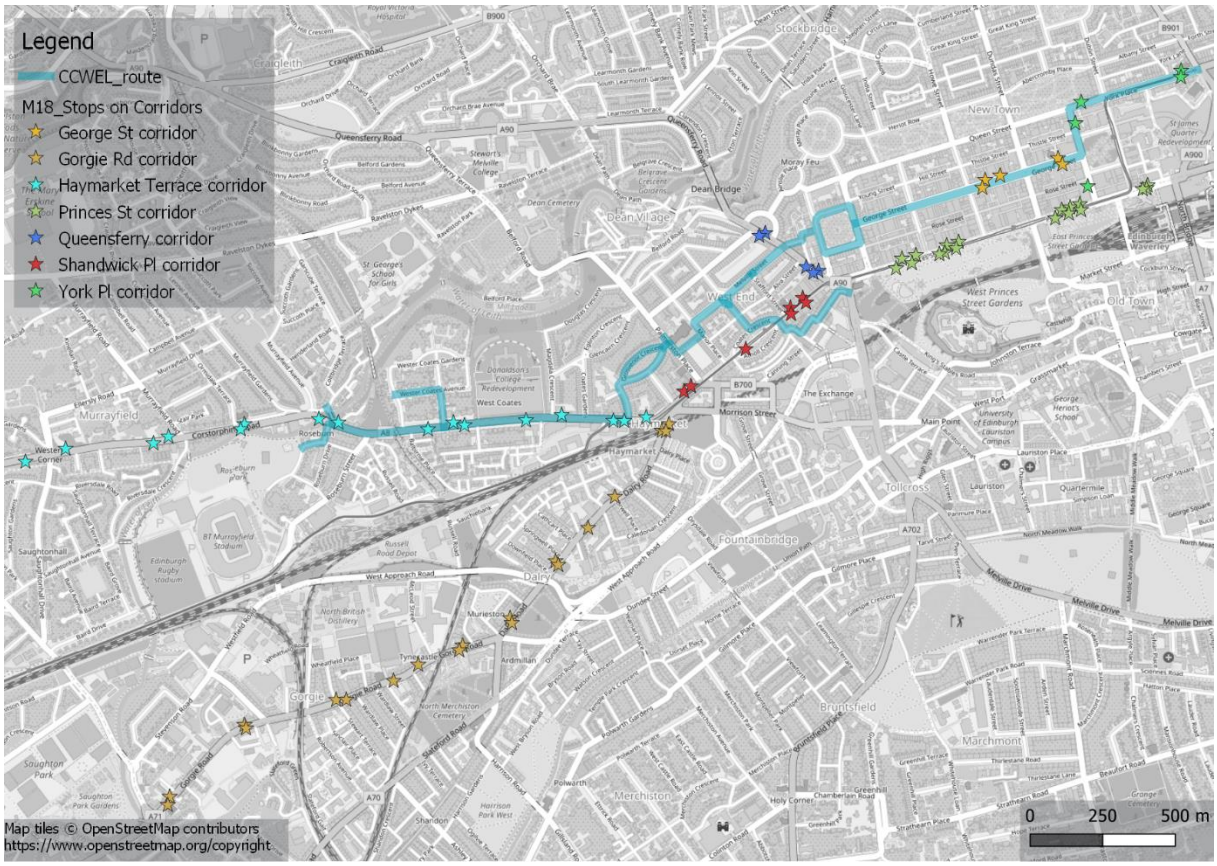


Figure 114. Corridor definitions for bus journey time analysis

17.3 Data and analysis

17.3.1 Figure 115 shows a comparison of corridor stop-to-stop journey times between Jan-Feb 2020 (pre-Covid) and Oct 2020 (post-Covid). Journey times are presented as a percentage of the Gorgie Road control corridor result for Jan-Feb 2020. There is a general reduction in journey times in October 2020, although the Shandwick Pl corridor does buck the trend and show a slight increase.

17.3.2 The longest stop-to-stop journey times occur on the Princes St corridor, closely followed by the York Pl corridor.

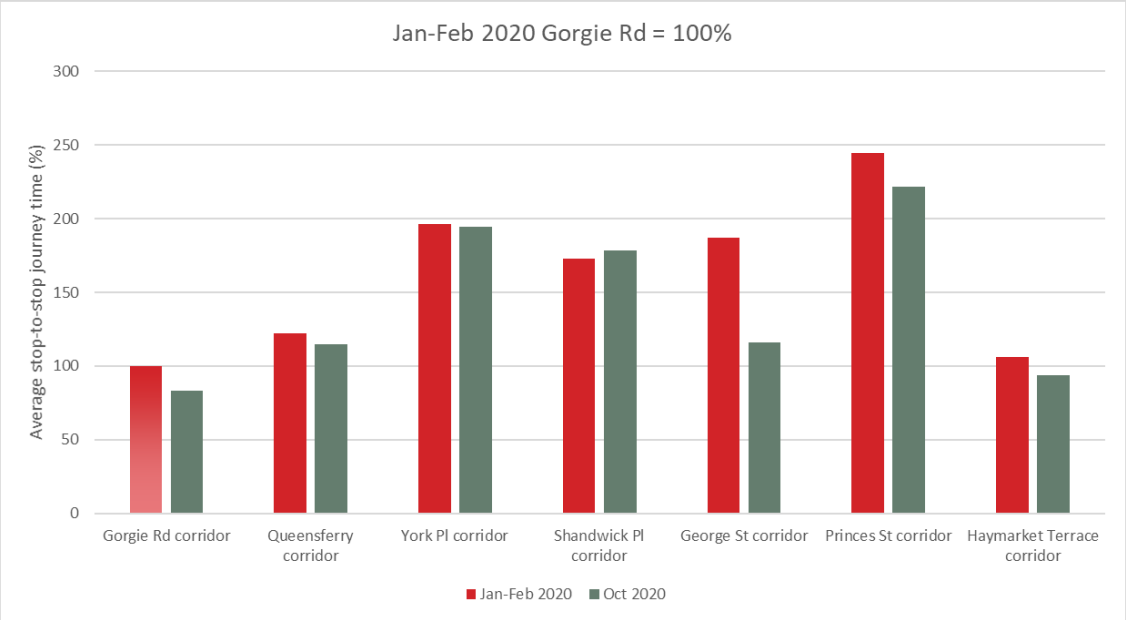


Figure 115. Whole week 0700-1900 - stop-to-stop average journey times

17.3.3 Figure 116 shows a comparison of October 2020 results by route vs. equivalent Jan-Feb 2020 Baseline journey times for different days / time periods. Results are presented as percentages of the Baseline results. In the morning period, times for October are generally shorter than Baseline with the exception of York Place and Shandwick Pl which show an increase. In the evening period, results are similar.

17.3.4 At the weekend, the comparisons show that all corridors apart from Shandwick Pl and Princes St show a reduction in journey times in October compared to January. Including data for all available days between 0700-1900 results in smaller changes than in the peak periods.

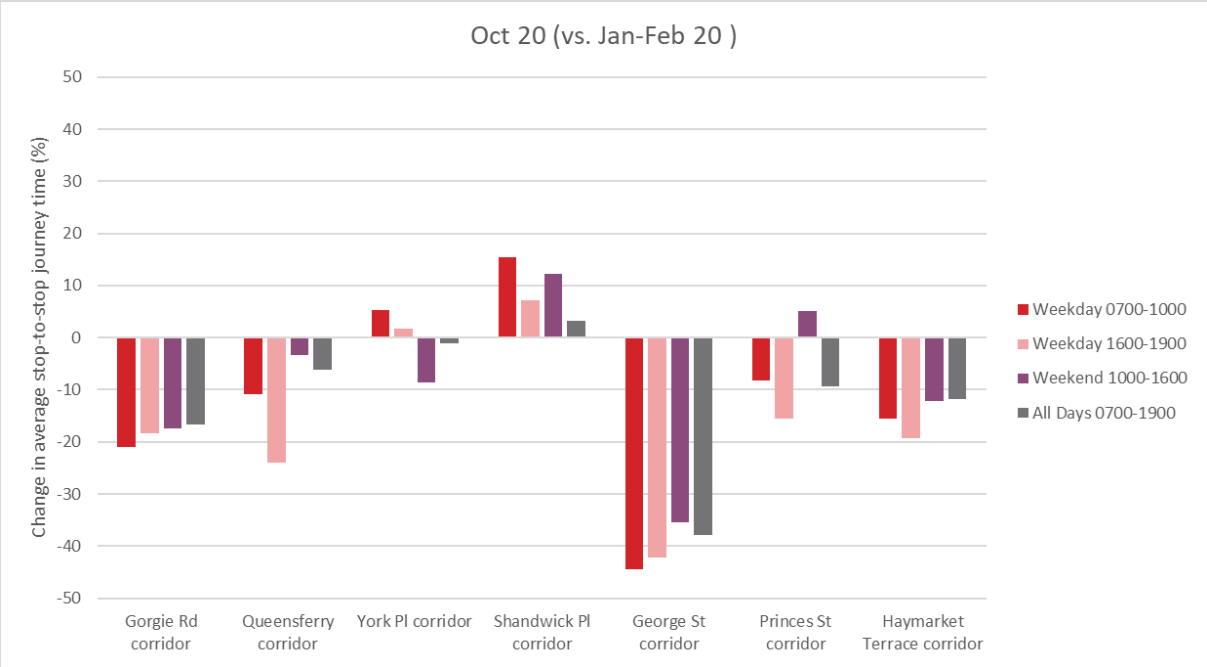


Figure 116. Weekday morning period - stop-to-stop average journey times

18. M23 - TRIAL JOURNEYS BY BIKE

18.1 Objectives

18.1.1 Trial journeys by bike were conducted to feed the following objective:

- P.2 Create a high-quality cycle route:
  - i That meets cycle route objectives of: safety, comfort, attractiveness, coherence & directness, accessibility & socio-economic impact, streetscape and implementability;
  - ii Provides an expedient route across the city centre, with journey times rivalling, or bettering private car, and
  - iii Integrates with planned segregated facilities on Leith Walk and George Street and with the wider Edinburgh Family Network

18.1.2 This was accomplished by collecting the following data:

- Experience of users cycling the route regarding route quality
- Journey time along route by bike post-construction compared with Baseline

18.2 Methodology

18.2.1 To understand the direct impact that the project has on people travelling through the city centre by bike it will be important to assess journey times before and after implementation. Trial journeys were conducted to assess baseline journey times by bike along three routes:

the CCWEL Route, the NCN1 route and the Direct Route (Shandwick Place and Princes Street). These routes are shown in Figure 117.

18.2.2 Following implementation an average journey time will be established and compared with the Baseline journey times to understand what impact the project has had on the expediency of travelling by bike in the city centre.

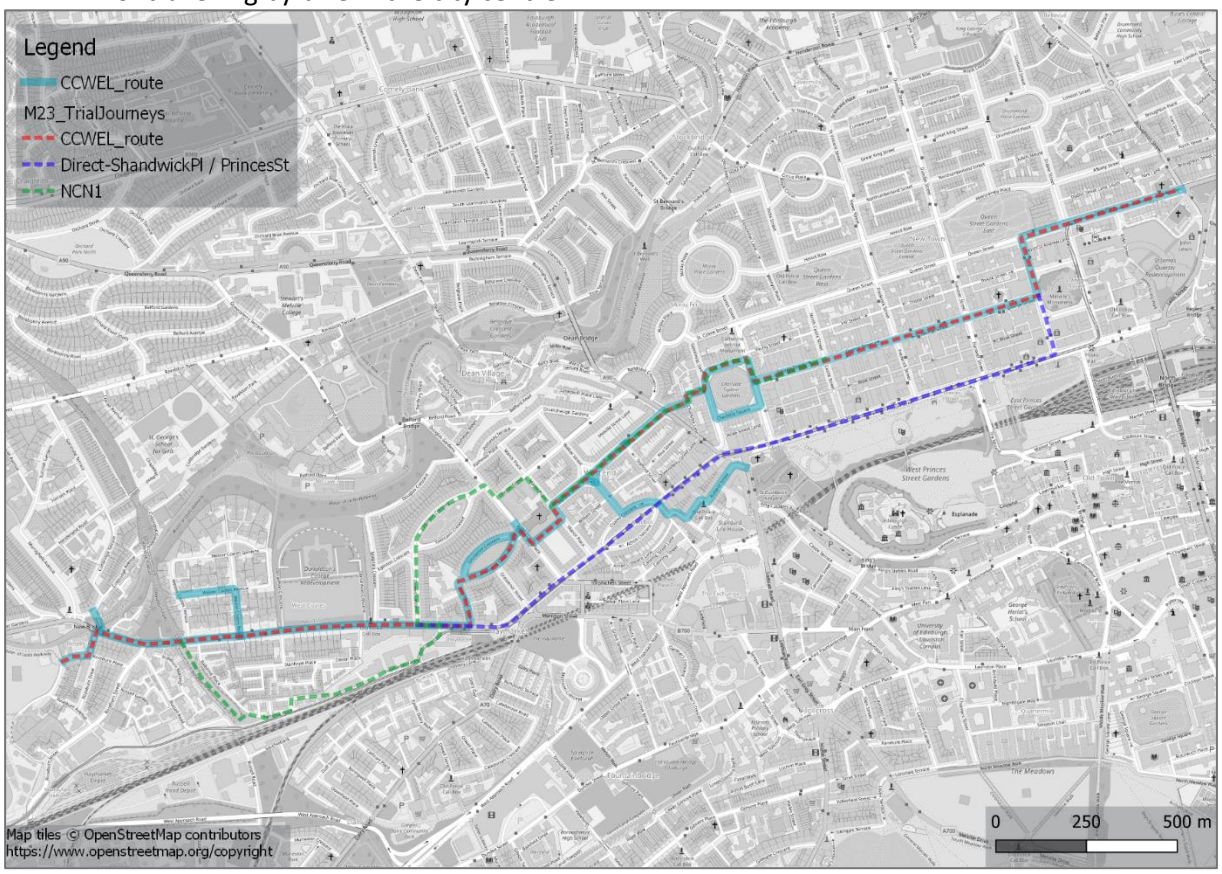


Figure 117. Routes for trial journeys by bike

18.2.3 The surveyor assessed each route three times in each direction between 3/11/20-10/11/20 during the following periods:

- AM peak (7:30am - 9am),
- Inter-peak (10am - 2pm) and,
- PM peak (4.30pm - 6pm).

18.2.4 The surveyor recorded timings of each journey via a GPS-enabled mobile phone app. Video footage was recorded during each peak for the three routes in both directions via a bike-mounted camera.

18.3 Journey time analysis

18.3.1 The surveyor recorded GPS position data using a mobile phone app while riding the three routes. Analysis of this data allowed an average travel time to be calculated for each time interval. An example of the information provided by the app is shown in Figure 118.

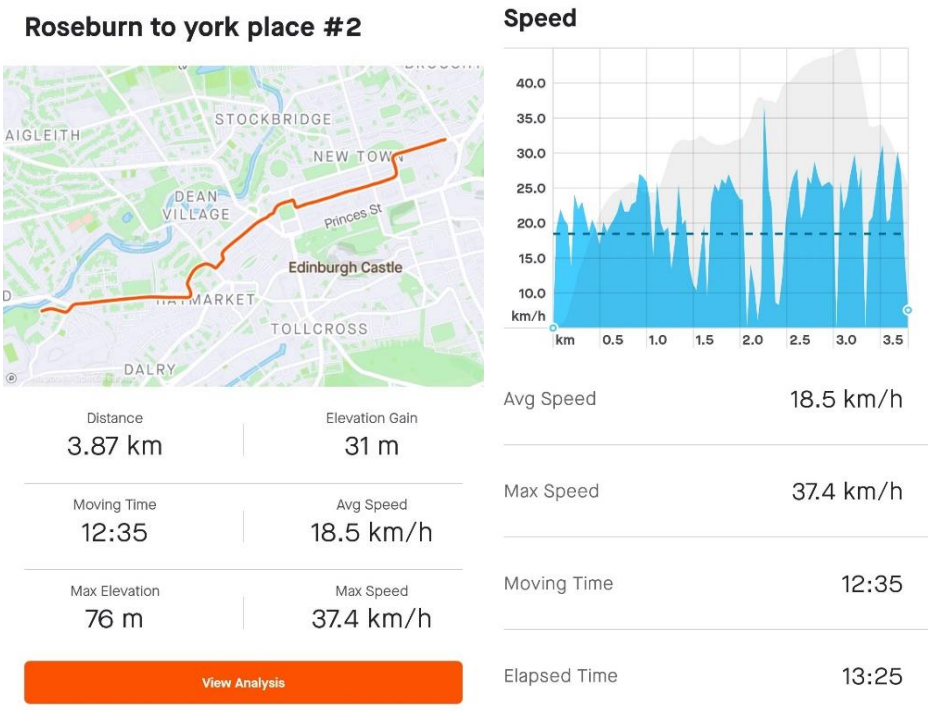


Figure 118. Example of data provided by mobile phone app

18.3.2 For each route the average times from the three trial journey were collated along with the average time the surveyor spent stationary (e.g. while waiting at junctions / traffic lights). The standard deviation was calculated to show the amount of variation between the elapsed times for each trial journey. The bike trial for the CCWEL route was assessed on 03/11/2020. The data collected from the day is summarised in Table 24. The speed was calculated using the distance 3.96km for both directions of the route. This distance was measured using GIS software.

Table 24. CCWEL Bike Trial Journey Data

	CCWEL	Average Elapsed time (minutes)	Average stopped time (minutes)	Average speed (km/h)
EB	AM	15.3	2.2	18.1
	Interpeak	16.2	1.8	16.5
	PM	18.2	2.9	15.5
WB	AM	16.2	2.1	16.9
	Interpeak	16.6	2.4	16.7
	PM	18.3	2.9	15.5

18.3.3 The slowest time to cycle the route was during the PM peak in both eastbound and westbound, indicating the traffic along this route is heaviest in the evening peak. The bike trial for the NCN1 route was assessed on 03/11/2020 and 10/11/2020, the data collected from the days is summarised in Table 9. The speed was calculated using the distance 2.7km eastbound and 2.8km westbound.

Table 25. NCN1 Bike Trial Journey Data

	NCN1	Average Elapsed time (minutes)	Average stopped time (minutes)	Average speed (km/h)
EB	AM	14.0	3.7	15.7
	Interpeak	12.1	2.1	16.1
	PM	13.1	2.4	14.6
WB	AM	11.3	2.2	17.7
	Interpeak	13.4	3.0	16.2
	PM	11.1	1.2	16.3

18.3.4 Cycling the NCN1 route took the longest time during the AM peak going eastbound and during the interpeak going westbound. Implying, for the NCN1 route, eastbound traffic is heavier in the morning peak and westbound traffic is heavier in the middle of the day.

18.3.5 The bike trial for the Direct route was assessed on 10/11/2020, the data collected from the days is summarised in Table 26. The speed was calculated using the distances 2.1km eastbound and 2.2km westbound.

Table 26. Direct Bike Trial Journey Data

	Direct	Average Elapsed time (minutes)	Average stopped time (minutes)	Average speed (km/h)
EB	AM	8.5	2.0	19.3
	Interpeak	9.3	2.0	17.5
	PM	9.4	2.0	17.1
WB	AM	9.0	3.1	20.8
	Interpeak	8.4	2.1	21.0
	PM	9.2	2.0	18.4

18.3.6 Cycling the Direct route took the longest time during the PM peak going eastbound and during the AM going westbound. Implying, for the Direct route, eastbound traffic is heavier in the evening peak and westbound traffic is heavier in the morning peak.

18.4 Surveyor's observations

18.4.1 Notes taken by surveyor during the trial journeys were supplemented by a review of the on-bike video footage to provide a comprehensive commentary for each route. Stills have been captured from the on-bike video footage to illustrate some of the observations.

18.4.2 Each observation has been allocated a number and is located in Figure 119. In addition, the location of an incident is highlighted by the red marker. More details of this incident are presented in paragraph 18.4.3 below.

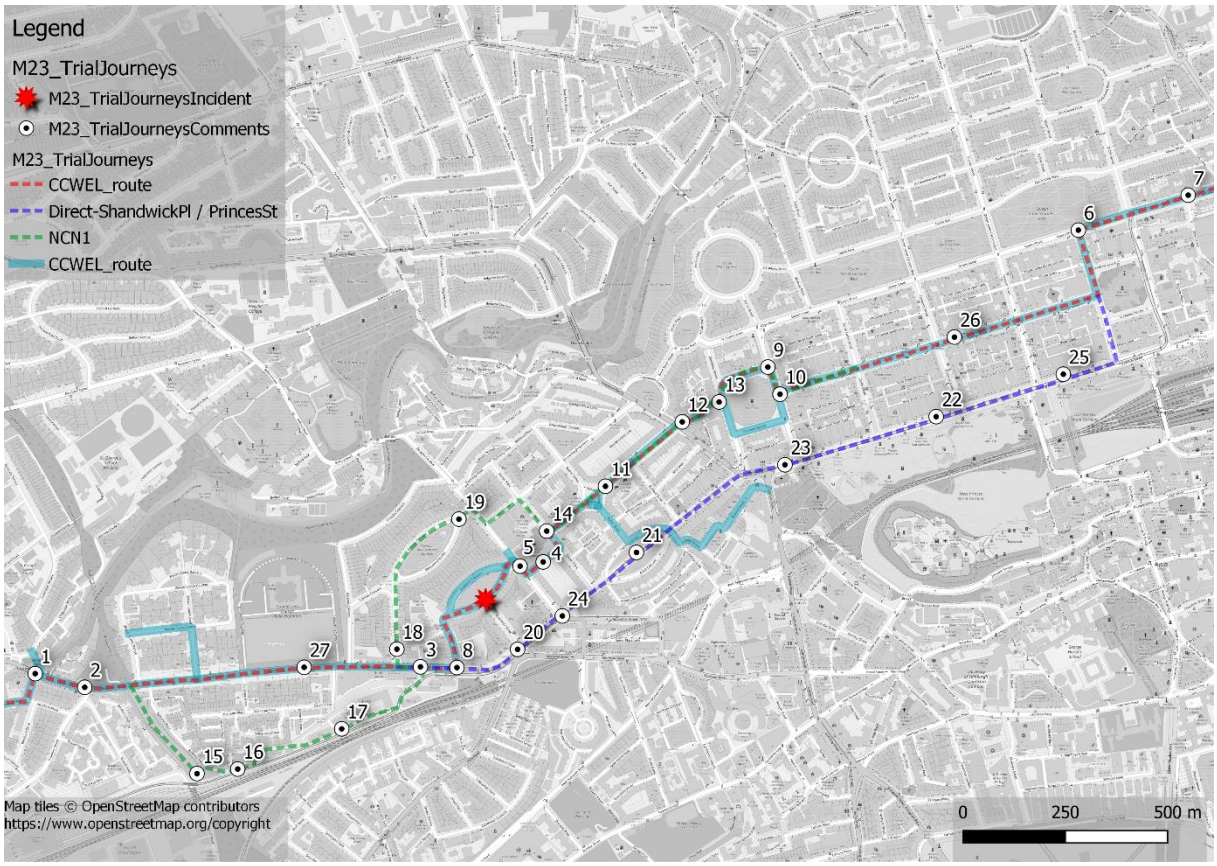


Figure 119. Trial Bike - Surveyor's Observations

Incident report

18.4.3 While completing the trial journeys, our surveyor was involved in an incident on Lansdowne Crescent where a car driver pulled out of Grosvenor Street without due care, location of incident is indicated by the red mark shown in Figure 119. The surveyor, who was cycling on the main road and had priority, was forced to braked heavily to avoid the car and skidded, then crashed onto the road surface. The road surface is cobbled at this location. Luckily, the surveyor was not badly hurt, but this crash does serve to highlight the dangers faced by cyclists when sharing road space with motorised traffic.

18.4.4 This was a single minor incident and was not reported to the police. A comprehensive analysis of reported accident statistics for the area surrounding the proposed CCWEL route (2017-2019) is presented in Section 15.

CCWEL route observations

18.4.5 **Location 1 – Roseburn Gardens**. There is no right-turn onto Roseburn Terrace, so cyclists wishing to continue eastbound are inconvenienced. They must dismount, cross Roseburn Gardens, push along the pavement and cross at the zig-zag island crossing to the east of the junction. Figure 120 shows the approach to this junction from Roseburn Gardens.

Figure 120. Roseburn Garden

18.4.6 **Locations 2 - 3 – Roseburn Terrace to Haymarket Terrace.** In both directions on this stretch the road surface is in poor condition. There are frequent potholes and worn patches of road surface. Figure 121 shows part of the poor road surface on West Coates (location 27).

Figure 121. West Coates

18.4.7 **Location 4 – St Mary's Cathedral.** The path south-east of Cathedral is inconvenient. It is uneven , narrow and cyclists share the space with pedestrians (which can lead to potential conflict). There is no drop-down kerb facilitating access at the west end (from Palmerston

Place), cyclists are therefore required to stop in the road, dismount and lift their bike across the pavement. Figure 122 shows the conditions of this path.

Figure 122. St Mary's Cathedral path

18.4.8 **Location 5 – Palmerston Place.** When travelling westbound, from the path by St Mary's Cathedral, if Palmerston Pl is busy then an island can be used to help cross, however this island is not aligned with the path and is quite narrow for bikes.

18.4.9 **Location 26 – George Street**. Surveyor noted that George Street was in good condition, with traffic moving slowly and steadily, allowing this section of the route to flow smoothly.

18.4.10 **Location 6 – Queen Street / St David Street.** There are several large potholes at this location, as a consequence the surveyor felt unsafe when cycling through this junction.

18.4.11 **Location 7 – York Place.** A long time was spent stationary in traffic at this location. At the York Pl / Elder Street East junction the surveyor found wayfinding confusing when joining the main carriageway from the segregated cycle route. The junction is shown in Figure 123.

Figure 123. York Place

18.4.12 **Location 8 - Rosebery Crescent.** Visibility poor when turning right onto Haymarket Terrace due to taxis parked in the rank immediately west of the junction.

CCWEL and NCN1

18.4.13 **Location 9 – Charlotte Square.** Right turn from Charlotte Square north to Charlotte Square east is open to bikes but not cars. Continuation on route necessitated crossing 4 lanes of traffic and central hatched area. This can entail a delay while waiting for suitable gap.

18.4.14 **Location 10 – Charlotte Square.** CCWEL route necessitated right-turn from George Street to the north side of Charlotte Square. However this movement is not possible on the road, so would require dismounting, crossing at signals and rejoining main carriageway. Surveyor elected to reroute around south of Charlotte Square as this was more convenient.

18.4.15 **Location 11 – Melville Street.** Road surface is generally poor, surveyor had to avoid several potholes.

18.4.16 **Location 12 – Randolph Place / Lane**. This is a cobbled street which the surveyor found uncomfortable / unsafe to cycle over.

18.4.17 **Location 13 – Randolph Lane to Charlotte Square.** Surveyor found this section very dark even in daytime when the sun wasn't out. The access from Charlotte Square does not have a drop down kerb to facilitate access, from the road.

18.4.18 **Location 14 – Melville Street / Manor Place.** The right-turn from Melville Street to Manor Place is only open to cyclists, however the surveyor witnessed a number of cars illegally making this movement.

18.4.19 **Location 15 - Roseburn Path.** Surveyor found this a pleasant path to cycle on. There is a relatively tight corner at the south end of the path (heading towards either Russell Road or Balbirnie Place). This is shown in Figure 124.

Figure 124. Roseburn Path

18.4.20 **Location 16 – Balbirnie Place.** The street has a number of large speed bumps which the surveyor found it was uncomfortable to cycle over.

18.4.21 **Location 17 – Balbirnie Place to Haymarket Yard.** Path is narrow and busy with pedestrians, surveyor found it necessary to dismount / slow to walking pace several times. Figure 125 shows the entrance to this path.

Figure 125. Balbirnie Place to Haymarket Yard Path

18.4.22 **Location 18 – Coates Gardens.** A long cobbled street, surveyor found this uncomfortable / strenuous to cycle uphill and difficult to control bike on the descent.

18.4.23 **Location 19 – Eglinton Crescent**. The east end of the street is cobbled with a number of filled potholes, the variation in road surface is shown in Figure 126.

Figure 126. Eglinton Crescent

18.4.24 **Location 3 – Haymarket Terrace.** Surveyor encountered deteriorating road surface, especially by the taxi rank, this is shown in Figure 127.

18.4.25 The surveyor found the cycle lane markings at Haymarket Terrace westbound by Haymarket Station helpful and used them to navigate the tramline, however surveyor found the road surface to be in poor condition. E.g. the coloured section of cycle lane is deteriorating, this is shown in Figure 128.

Figure 127. Haymarket Terrace eastbound

Figure 128. Haymarket Terrace westbound

18.4.26 **Location 20 – Clifton Terrace.** Surveyor encountered a number of potholes and sunken manhole covers, shown in Figure 129.

Figure 129. Clifton Terrace

18.4.27 Location 21 – Coates Crescent / Atholl Crescent. Surveyor noted a number of potholes.

18.4.28 **Location 22 – Princes Street**. Surveyor noted a number of potholes and generally poor road surface.

18.4.29 **Location 25 – Princes Street.** There are a lot of bus stops on Princes Street - when overtaking stationary buses the surveyor noted the space between stopped buses and the tram tracks was narrow. Figure 130 shows an example of this.

Figure 130. Princes Street

18.4.30 **Location 23 – St John's Church**. Maintaining road position to cycle from Shandwick Place to Princes St required a lot of confidence at this location. The high volume of traffic contributed to this. Surveyor's wheel was caught by some large sunken manhole covers, also had to negotiate the tram tracks. These factors combined meant that the surveyor found this section intimidating.

18.4.31 **Location 24 – Atholl Place / Maitland Street**. Surveyor found this a confusing junction as signage made it unclear whether cycles were permitted to continue westbound towards Haymarket. Surveyor observed several other cyclists on this section but having cycled this once in the AM period was uncomfortable due to proximity of tram tracks. Surveyor therefore rerouted on the next trip via Torphichen Pl / Morrison St to re-join route at Haymarket Terrace which felt safer but was an obviously longer / busier route.

Appendix A – Example of postcard handout linking to web surveys

Appendix B– Traffic volume, occupancy and queues

Volume

Vehicular traffic volumes have been recorded during Thursday and Saturday on 01/10/2020 and 03/10/2020. The volume is shown in Passenger car units (PCUs), Table 27 shows the PCUs equivalent per vehicle class.

Table 27. PCU Equivalent

VEHICLE TYPE	PCU VALUE
Car	1
LGV (Light Good Vehicle)	1
OGV1 (Other Goods Vehicle)	1.5
OGV2 (Other Goods Vehicle)	2.3
PSV (Passenger Service Vehicle)	2
MC (Motorcycle)	0.4
PC (cyclist)	0.2

During the week we can find a clear double peak at around 8:00 in the AM and 16:00 in the PM. However, over the weekend we have a longer peak from noontime to around 16 in the afternoon.

Thursday 01/10/2020

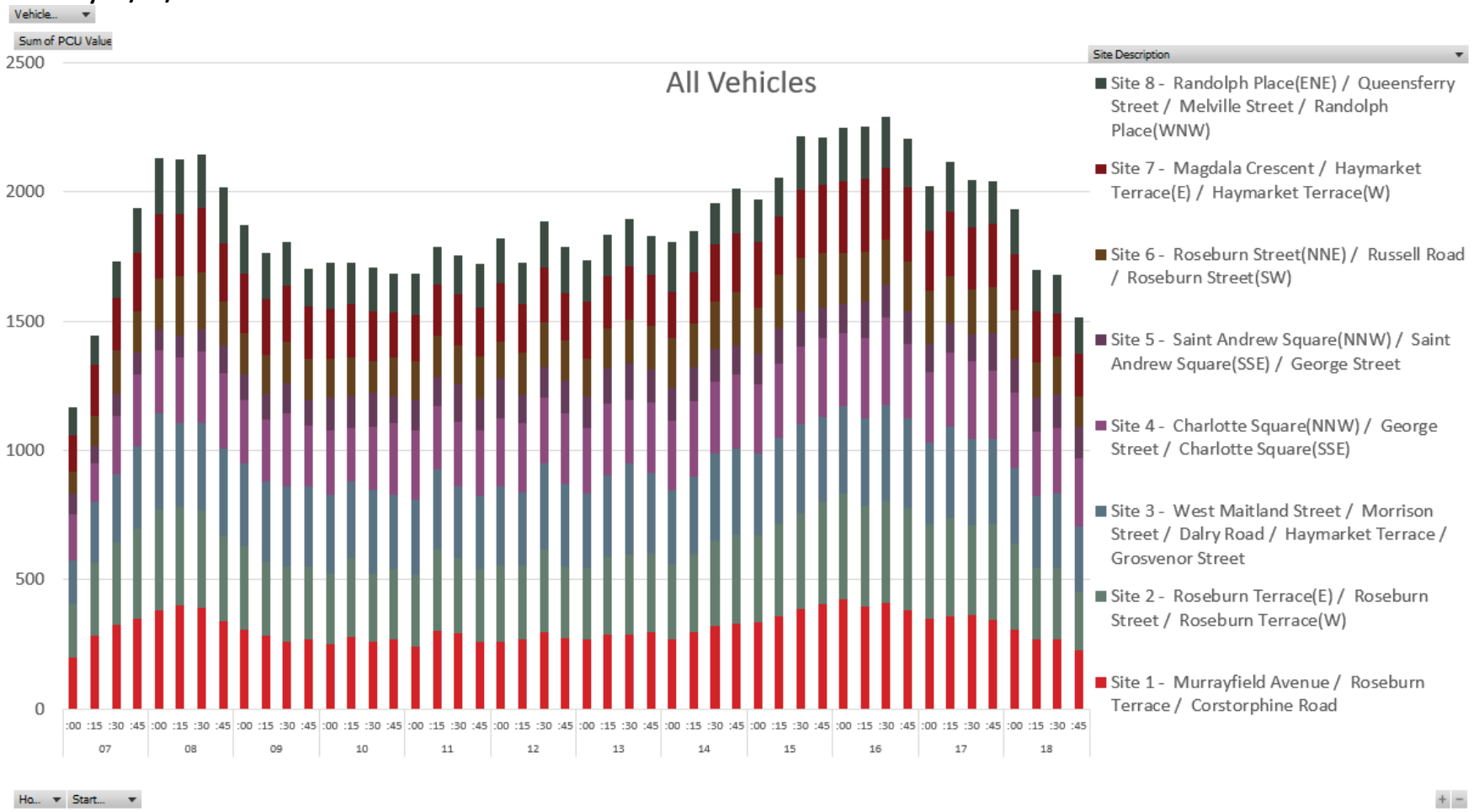


Figure 131. All Traffic Volume in PCUs (01/10/2020)

Saturday 03/10/2020

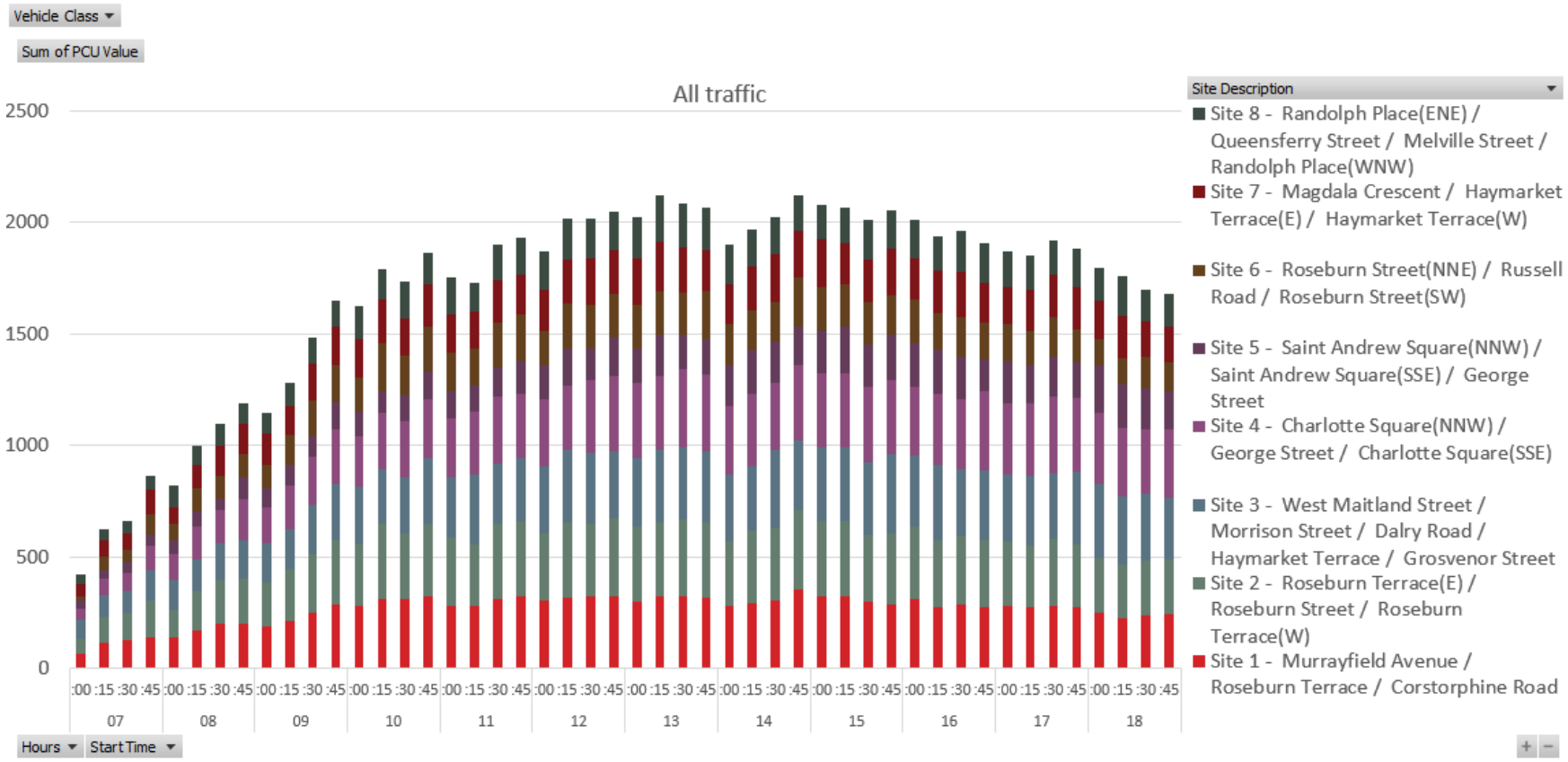
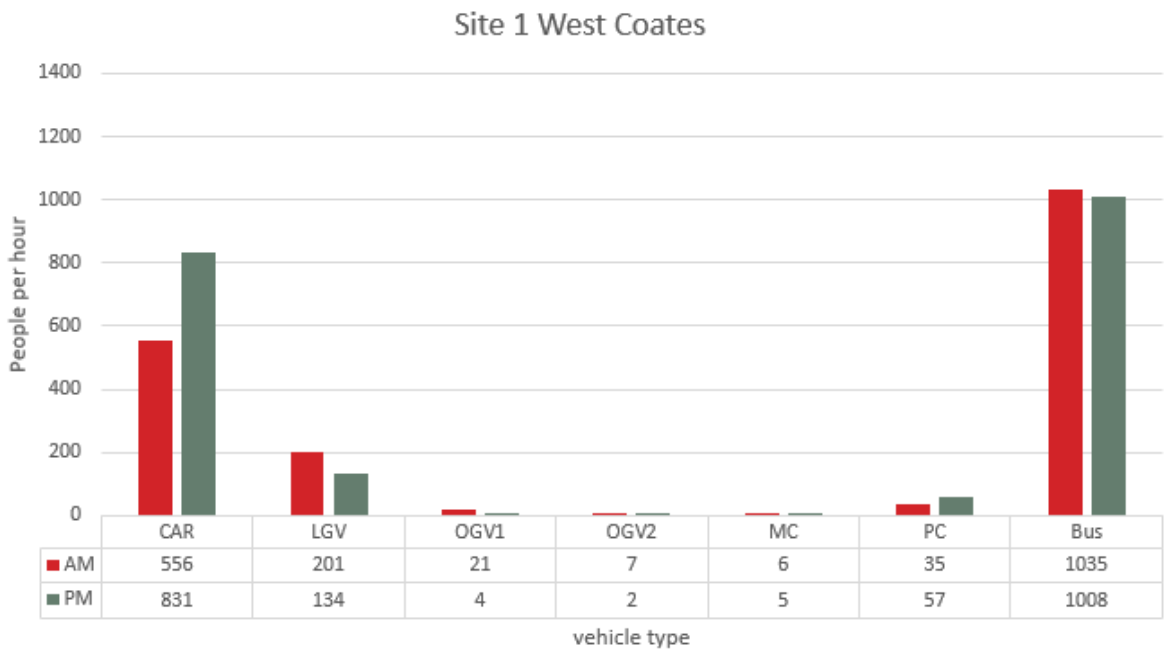


Figure 132. All Traffic Volume in PCUs (03/10/2020)

Occupancy

The vehicle occupancy survey was completed on Thursday and Saturday, 01/10/2020 and 03/10/2020 respectively. It shows the average number of people per hour in the AM peak and PM peak. In general, the data confirms a greater use of the Bus against other modes of transport, followed by Car-taxi use.

Occupancy on Thursday 01/10/2020



	CAR	LGV	OGV1	OGV2	MC	PC	Bus
AM	556	201	21	7	6	35	1035
PM	831	134	4	2	5	57	1008

Figure 133. West Coates people per hour by mode (both directions)

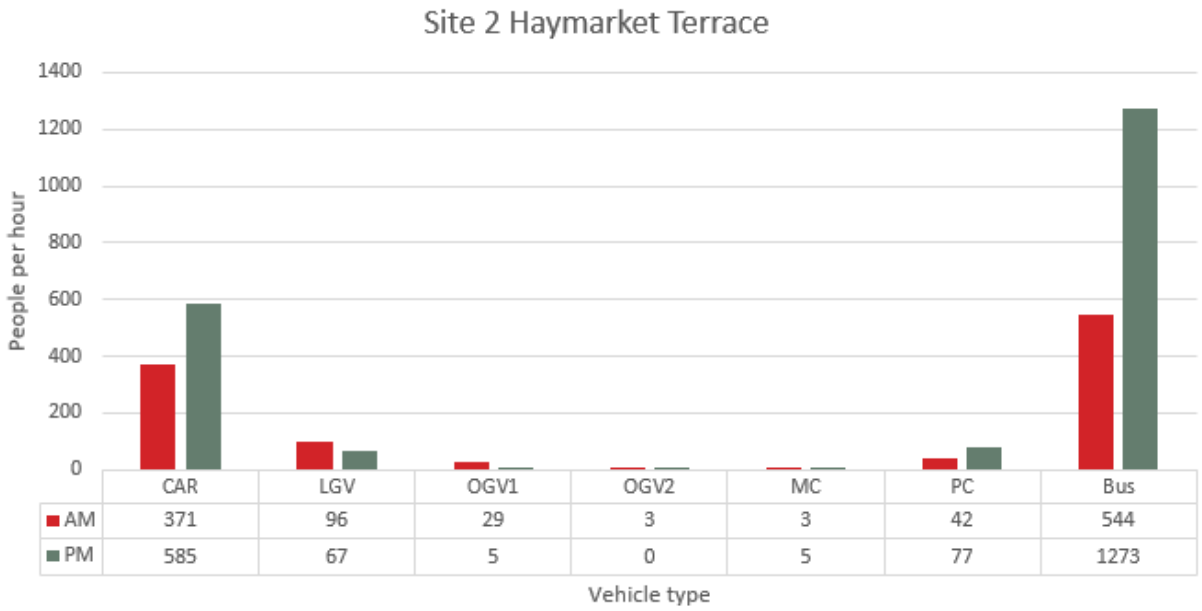


Figure 134. Haymarket Terrace people per hour by mode (both directions)

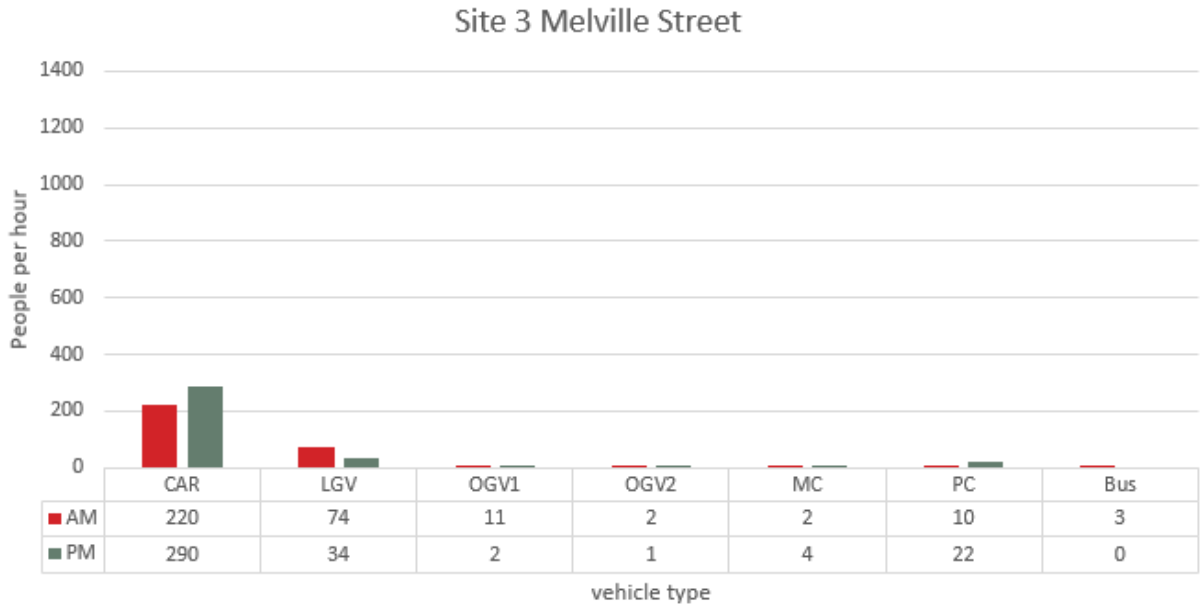


Figure 135. Melville Street people per hour by mode (both directions)

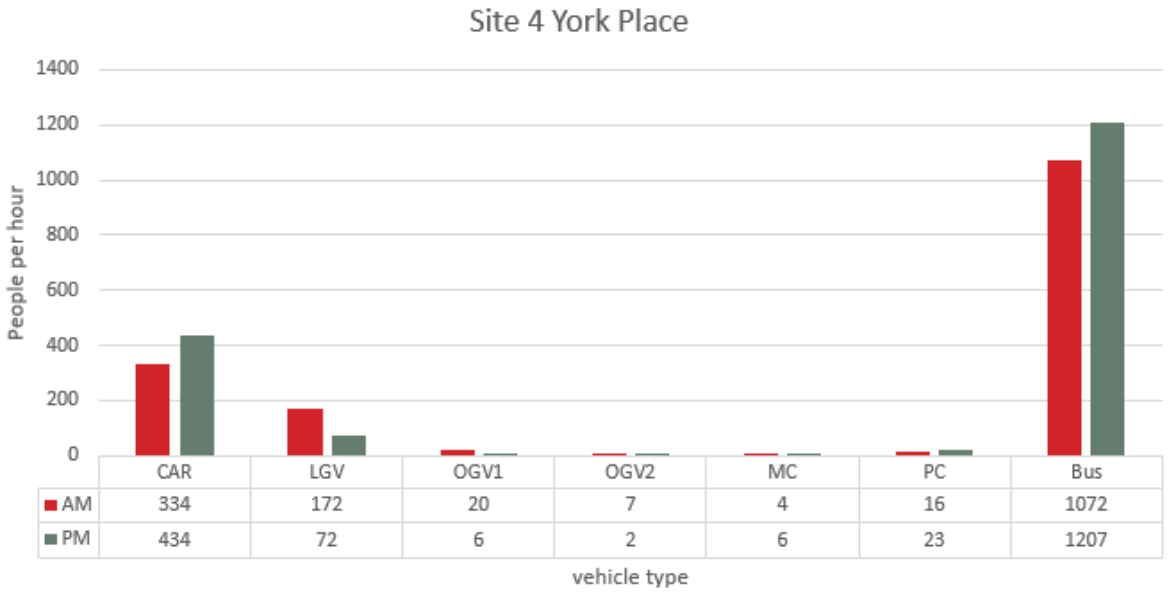


Figure 136. York Place people per hour by mode (both directions)

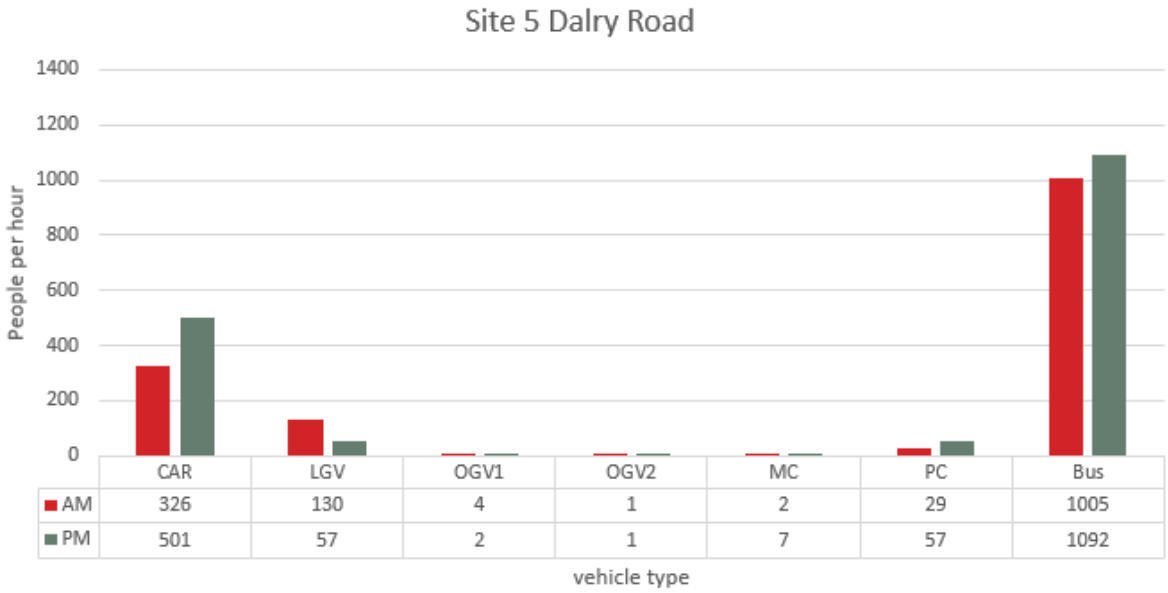
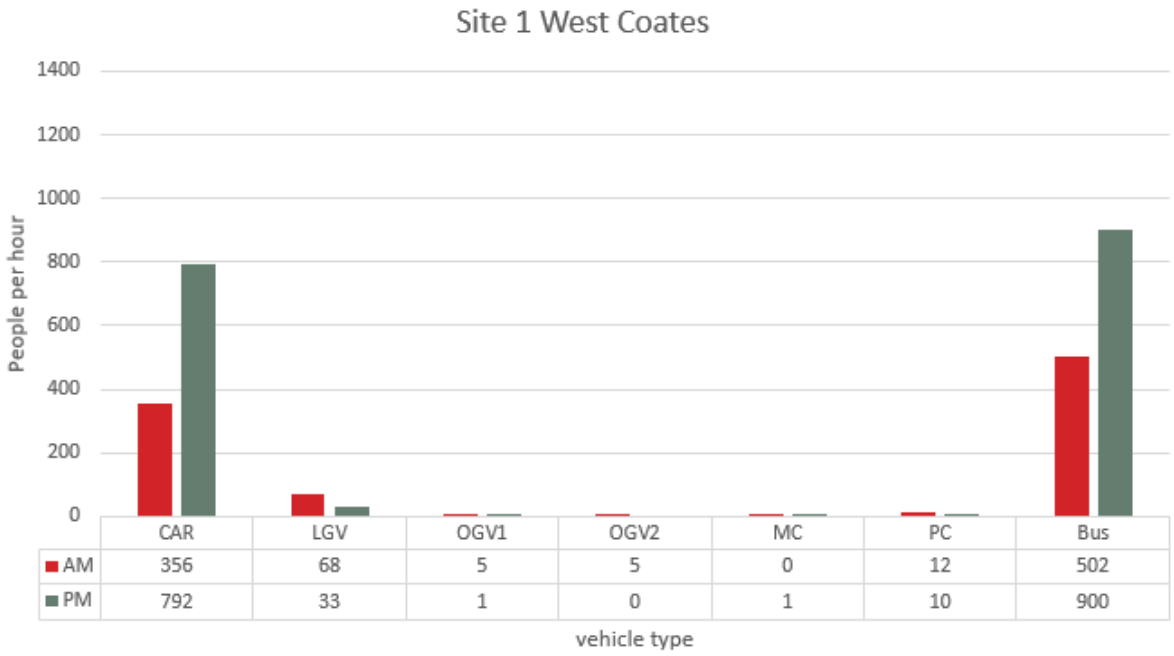


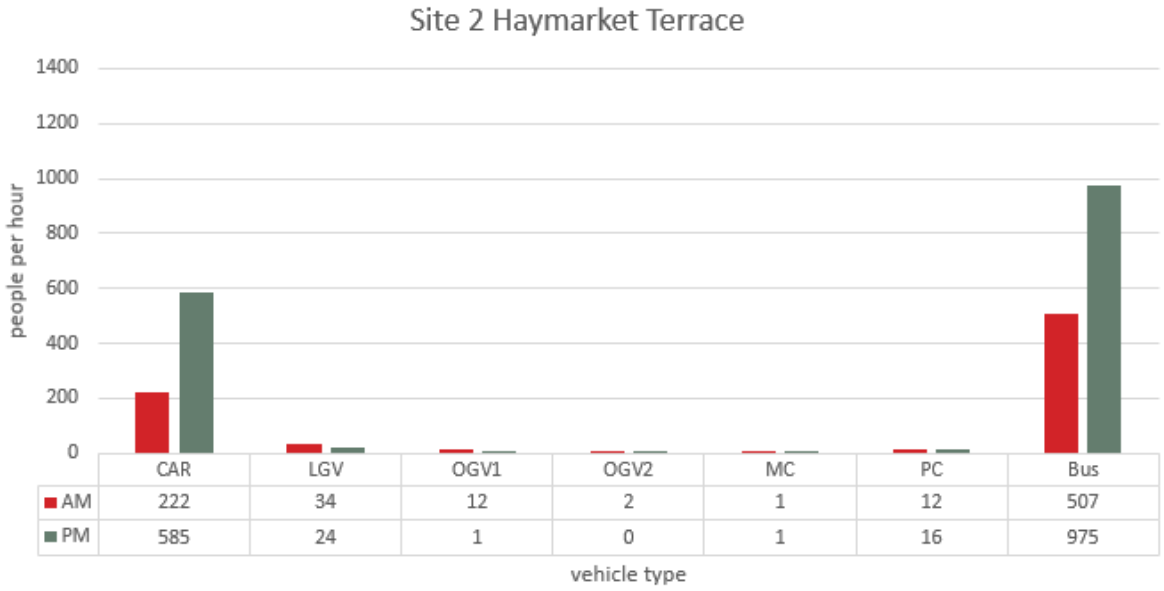
Figure 137. Dalry Road people per hour by mode (both directions)

During the weekend, there is less vehicle occupancy and less average people per hour travelling at the surveyed sites in comparison to Thursday during the week



	CAR	LGV	OGV1	OGV2	MC	PC	Bus
AM	356	68	5	5	0	12	502
PM	792	33	1	0	1	10	900

Figure 138. West Coates people per hour by mode (both directions)



	CAR	LGV	OGV1	OGV2	MC	PC	Bus
AM	222	34	12	2	1	12	507
PM	585	24	1	0	1	16	975

Figure 139. Haymarket Terrace people per hour by mode (both directions)

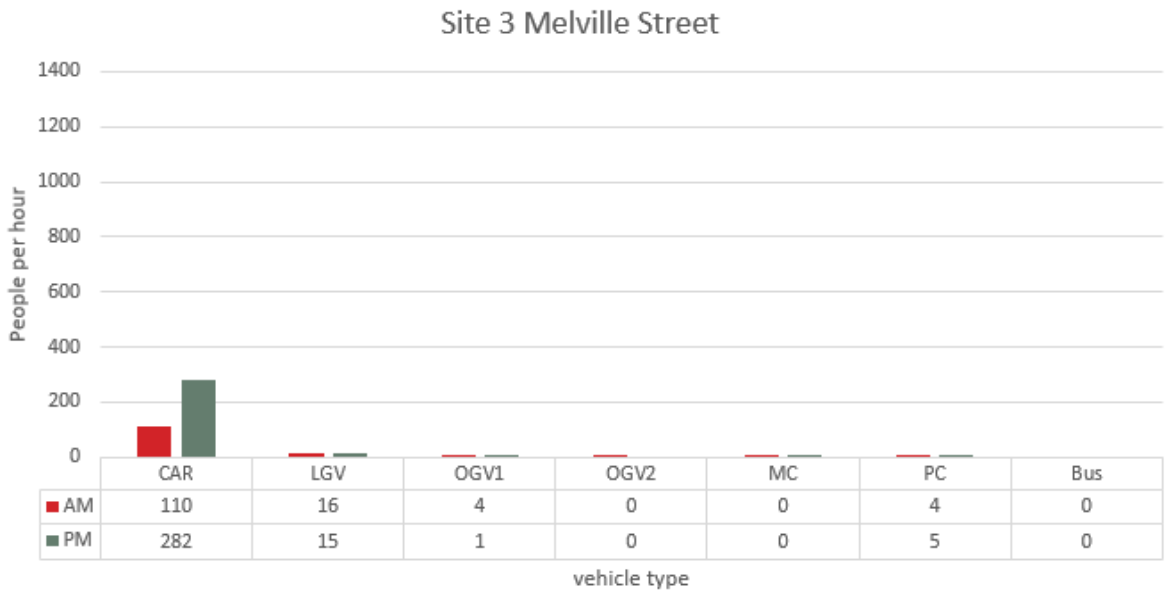


Figure 140. Melville Street people per hour by mode (both directions)

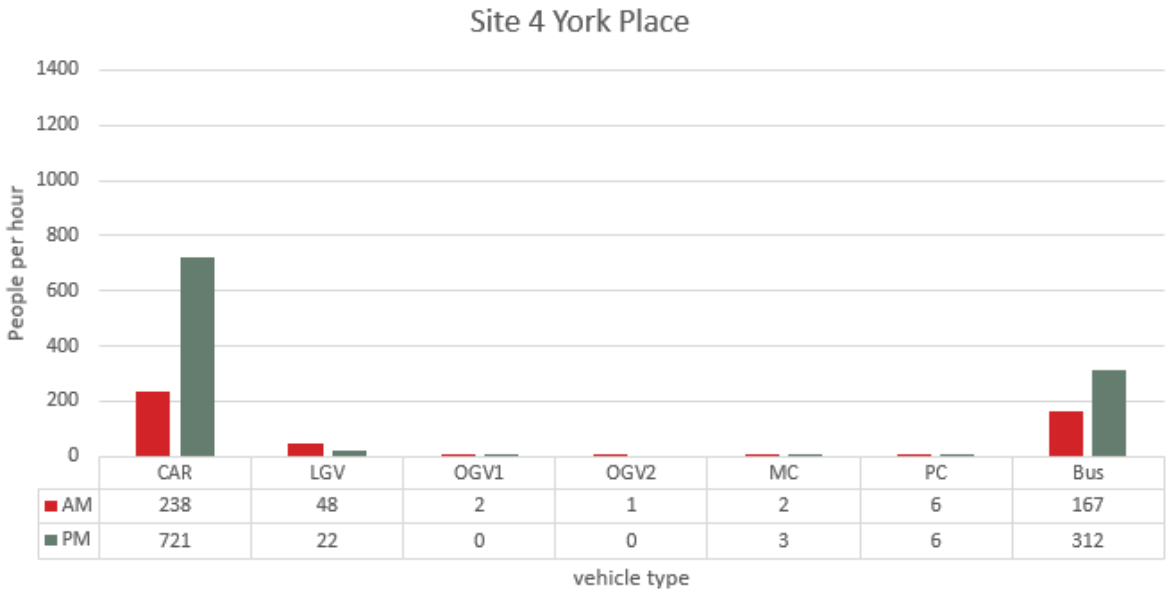
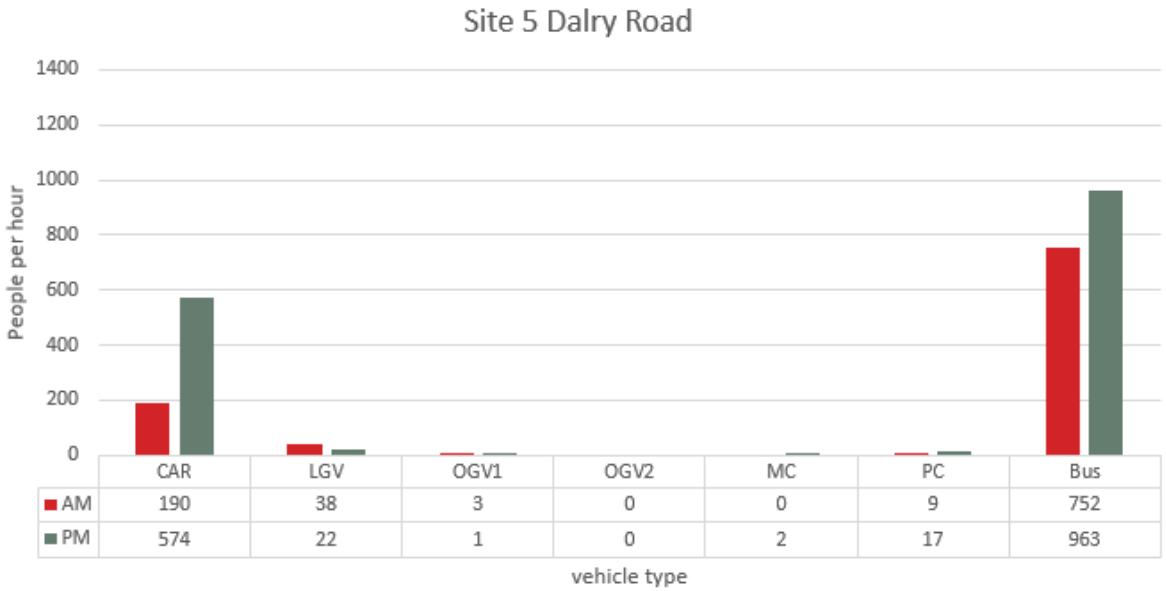


Figure 141. York Place people per hour by mode (both directions)



	CAR	LGV	OGV1	OGV2	MC	PC	Bus
AM	190	38	3	0	0	9	752
PM	574	22	1	0	2	17	963

Figure 142. Dalry Road people per hour by mode (both directions)

Queues on Thursday 01/10/2020

Roseburn Terrace junction has queue lengths of up to 70m at (site 1 AM) and 130m at (site 2 PM) that suggest delays are likely here. While at Site 3, the maximum queue length at Dalry Road was 190m during the PM peak.

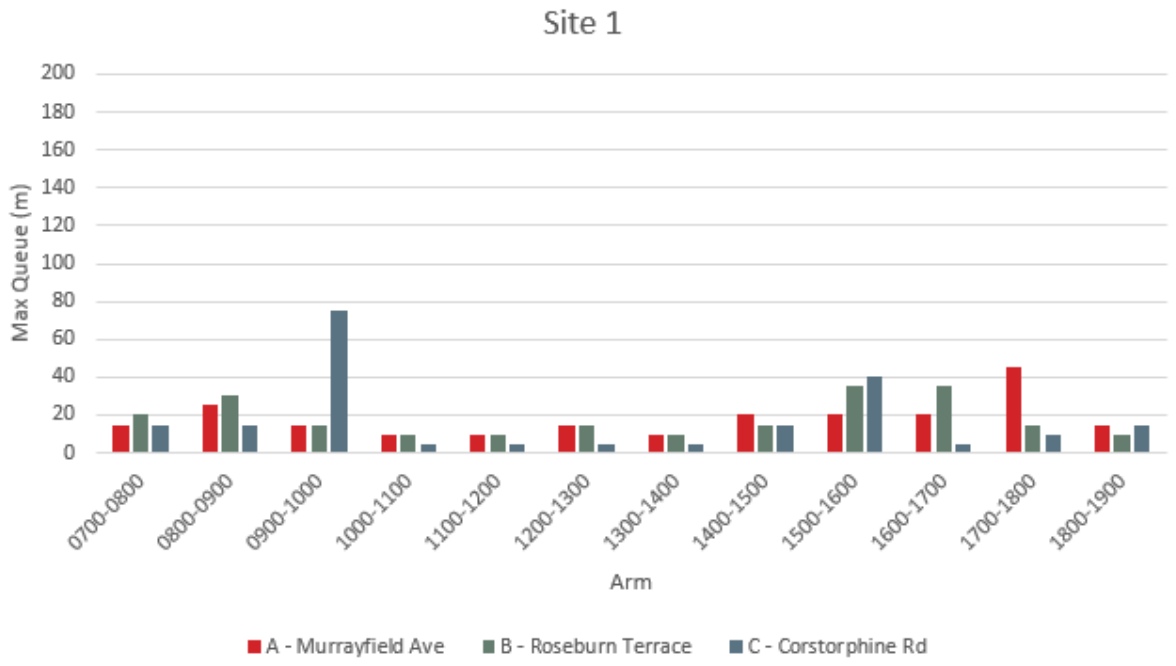


Figure 143. Site 1 Max Queue lengths (m)

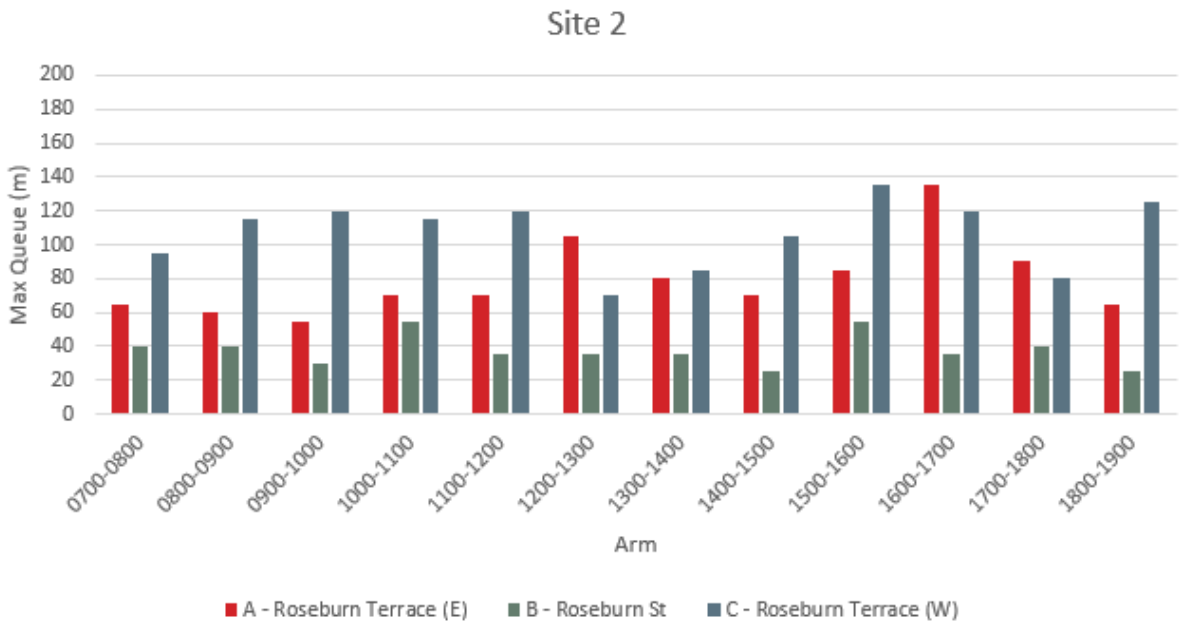


Figure 144. Site 2 Max Queue lengths (m)

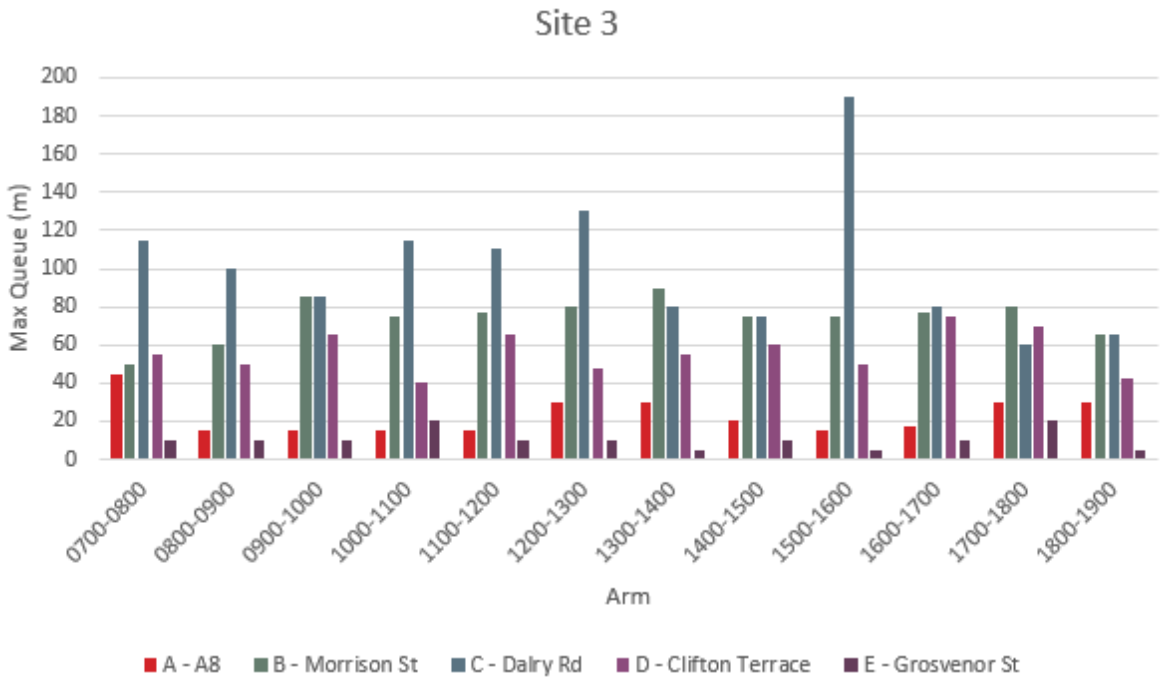


Figure 145. Site 3 Max Queue lengths (m)

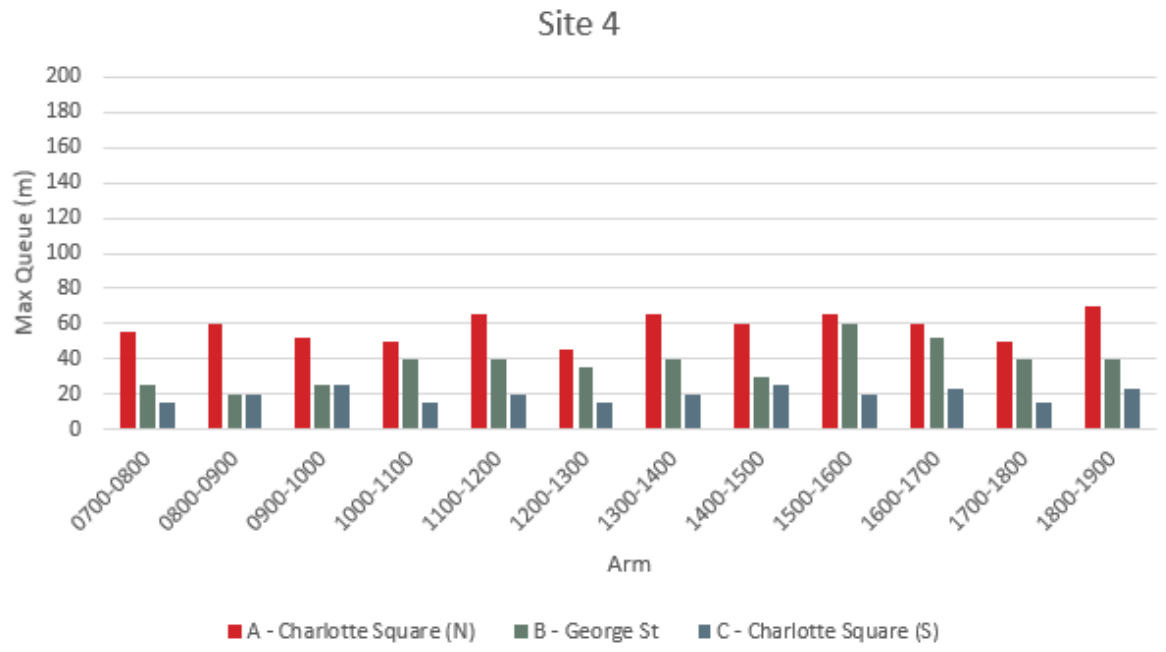


Figure 146. Site 4 Max Queue lengths (m)

Figure 147. Site 5 Max Queue lengths (m)

Queues on Saturday 03/10/2020

During the weekend, the traffic volume is lower than a typical weekday. The queue lengths are therefore shorter and only occur in the afternoon with a 120m max queue length at Dalry Road.

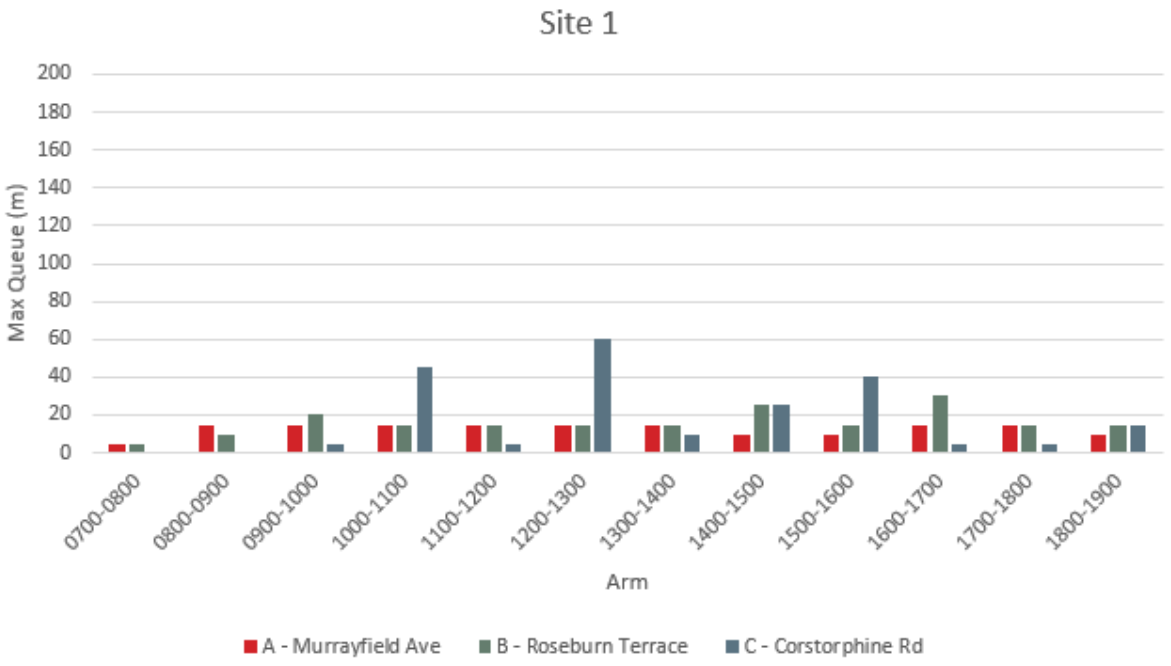


Figure 148. Site 1 Max Queue lengths (m)

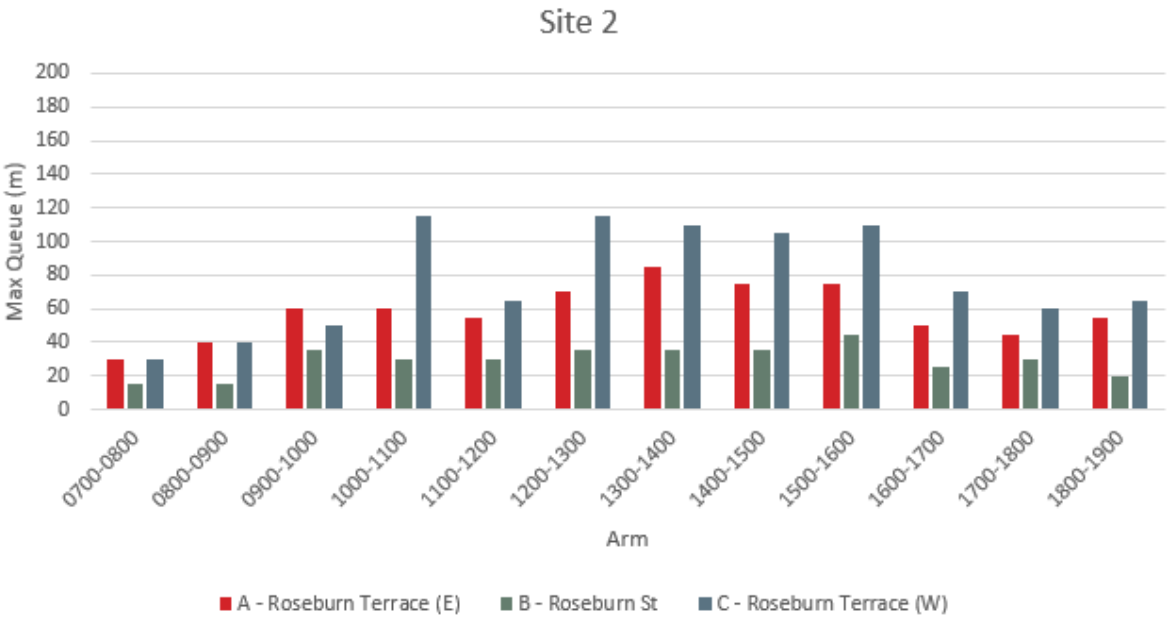


Figure 149. Site 2 Max Queue lengths (m)

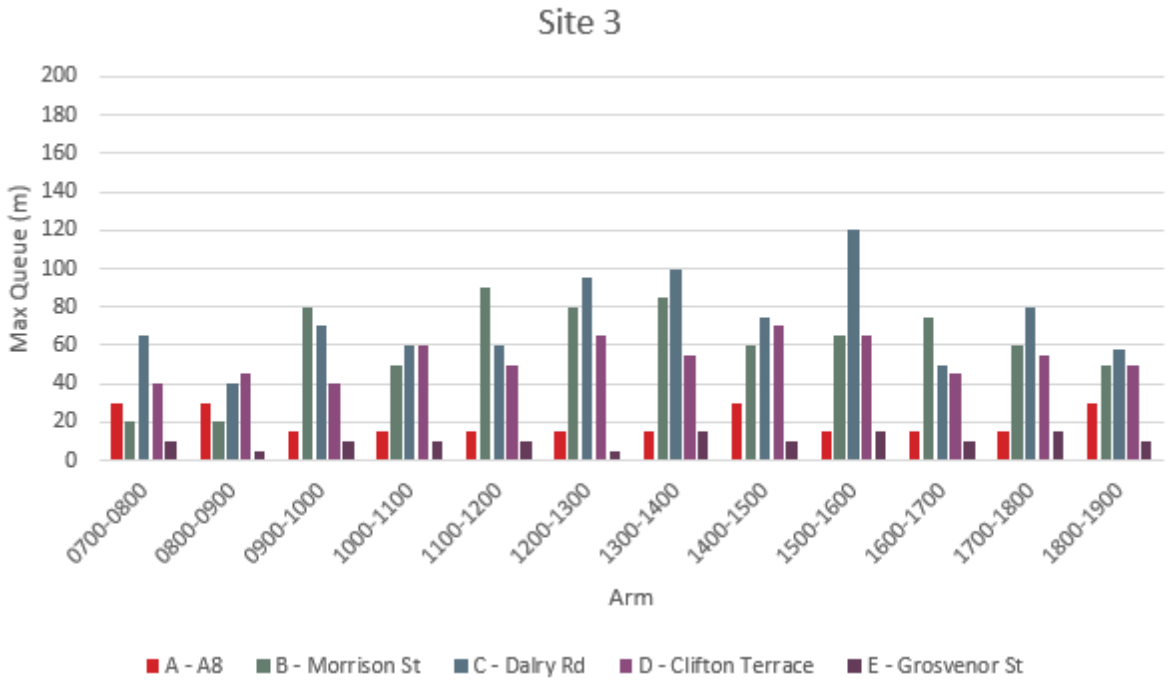


Figure 150. Site 3 Max Queue lengths (m)

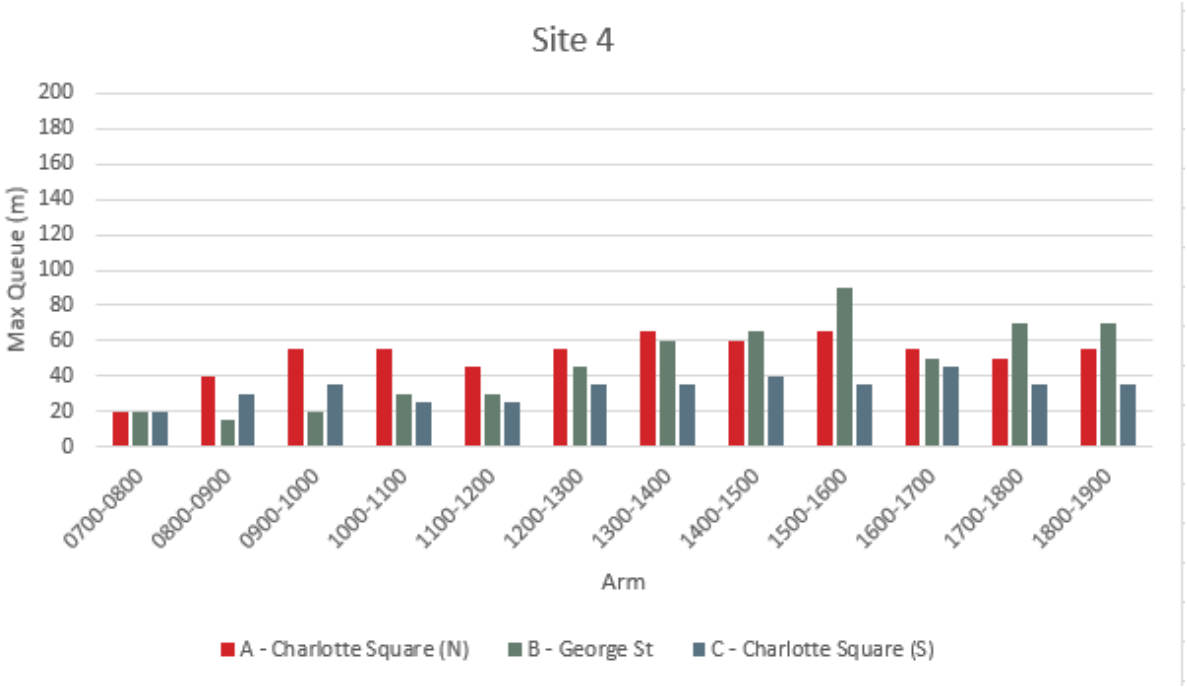


Figure 151. Site 4 Max Queue lengths (m)

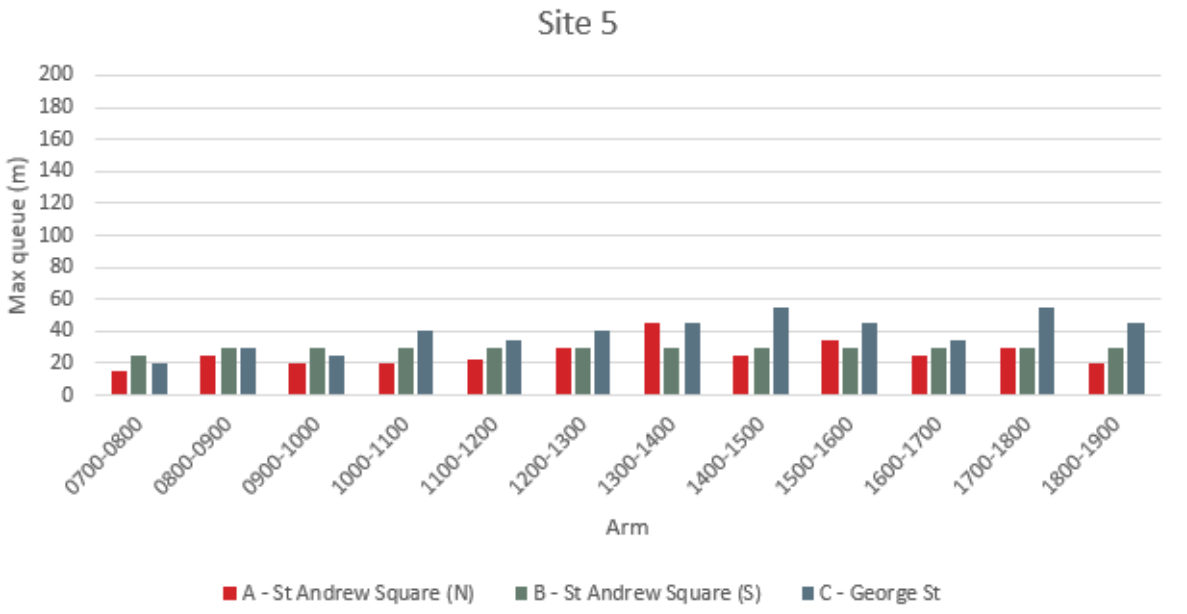


Figure 152. Site 5 Max Queue lengths (m)

SYSTRA provides advice on transport, to central, regional and local government, agencies, developers, operators and financiers.

A diverse group of results-oriented people, we are part of a strong team of professionals worldwide. Through client business planning, customer research and strategy development we create solutions that work for real people in the real world.

For more information visit www.systra.co.uk

Birmingham – Newhall Street
5th Floor, Lancaster House, Newhall St,
Birmingham, B3 1NQ
T: +44 (0)121 393 4841

Birmingham – Edmund Gardens
1 Edmund Gardens, 121 Edmund Street,
Birmingham B3 2HJ
T: +44 (0)121 393 4841

Dublin
2nd Floor, Riverview House, 21-23 City Quay
Dublin 2,Ireland
T: +353 (0) 1 566 2028

Edinburgh – Thistle Street
Prospect House, 5 Thistle Street, Edinburgh EH2 1DF
United Kingdom
T: +44 (0)131 460 1847

Glasgow – St Vincent St
Seventh Floor, 124 St Vincent Street
Glasgow G2 5HF United Kingdom
T: +44 (0)141 468 4205

Leeds
100 Wellington Street, Leeds, LS1 1BA
T: +44 (0)113 360 4842

Liverpool
5th Floor, Horton House, Exchange Flags, Liverpool,
United Kingdom, L2 3PF
T: +44 (0)151 607 2278

London
3rd Floor, 5 Old Bailey, London EC4M 7BA United Kingdom
T: +44 (0)20 3855 0079

Manchester – 16th Floor, City Tower
16th Floor, City Tower, Piccadilly Plaza
Manchester M1 4BT United Kingdom
T: +44 (0)161 504 5026

Newcastle
Floor B, South Corridor, Milburn House, Dean Street, Newcastle, NE1 1LE
United Kingdom
T: +44 (0)191 249 3816

Perth
13 Rose Terrace, Perth PH1 5HA
T: +44 (0)131 460 1847

Reading
Soane Point, 6-8 Market Place, Reading,
Berkshire, RG1 2EG
T: +44 (0)118 206 0220

Woking
Dukes Court, Duke Street
Woking, Surrey GU21 5BH United Kingdom
T: +44 (0)1483 357705

Other locations:

France:
Bordeaux, Lille, Lyon, Marseille, Paris

Northern Europe:
Astana, Copenhagen, Kiev, London, Moscow, Riga, Wroclaw

Southern Europe & Mediterranean: Algiers, Baku, Bucharest,
Madrid, Rabat, Rome, Sofia, Tunis

Middle East:
Cairo, Dubai, Riyadh

Asia Pacific:
Bangkok, Beijing, Brisbane, Delhi, Hanoi, Hong Kong, Manila, Seoul, Shanghai, Singapore, Shenzhen, Taipei

Africa:
Abidjan, Douala, Johannesburg, Kinshasa, Libreville, Nairobi

Latin America:
Lima, Mexico, Rio de Janeiro, Santiago, São Paulo

North America:
Little Falls, Los Angeles, Montreal, New-York, Philadelphia, Washington

SYSTRA