The City of Edinburgh Council

Low Emission Zone
Awareness and Understanding Wave Two
Final Report
June 2023

Contents

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Summary and conclusions

Method and sample

Fieldwork was undertaken from 22nd April to 6th May 2023. A target sample of 752 interviews was achieved. This comprised the following:

- 112 interviews with LEZ residents (those living within the LEZ boundary).
- 265 interviews with residents of the wider Edinburgh Council area (living outwith the LEZ boundary) who may travel into or through the LEZ for work, leisure or some other reason.
- 265 interviews with visitors / commuters to the city centre from elsewhere in Scotland who may travel into the LEZ.
- All residents and visitors to Edinburgh owned or had access to a vehicle for their personal use.
- Care was taken to ensure a close match in sample profile across waves one and two to optimise comparability of data year on year.
- 110 van drivers who were business owners, self -employed contractors and or employees; 62 based in Edinburgh and 48 based elsewhere in Scotland. All were responsible for their business vehicle and worked in an organisation with fewer than ten employees.
- A table of interviewer locations can be found in the appendix.

Travel behaviour

As with wave one the majority of those living outwith the city centre claimed to visit for leisure, shopping or some other kind of cultural or family event. The second most mentioned reason was work. This was followed by appointments such as school drops and medical.

The pattern of activity for city centre residents was similar wave one but with more activity for leisure, appointments and work this wave and fewer students. When city centre residents were asked what activities they do within the city centre, the majority claimed to visit for leisure, shopping or some other kind of cultural or family event. The second most mentioned reason was set appointments such as school drop offs or medical appointments and the third most often mentioned reason was for work.

Van drivers were asked about their main purpose of being in Edinburgh city and the main reasons were to collect of deliver something or to carry out repairs or maintenance. A large minority were there to carry out a service such as gardening or cleaning. A small minority were there to remove waste or rubbish.

This wave of research saw an increase in activity in the city centre with more people visiting for multiple reasons which may be a reflection of less concern for Covid and more social activity in 2023 than in 2022. This increase is in line with an increase in the number of those who said they come to Edinburgh every weekday. There was a drop in the number of people who come only at weekends.

Van drivers were significantly more likely than members of the general public to make trips into Edinburgh city centre everyday (Monday to Sunday) and every weekday (Monday to Friday).

This wave saw an increase in the number of those who frequently (every day or at least once a week) walk around to and from Edinburgh's city centre and a decrease in the number who travel as a car passenger.

Awareness and understanding

There was a significant increase in the number of those who claimed to be informed about the Low Emission Zone for Edinburgh City Centre and a significant increase in the number of those who claimed to be extremely well informed.

Those aged over thirty-four years old claimed to be more informed than younger adults. Those who travel into the city centre every day were more informed than less frequent travellers. Those who live in Edinburgh city centre were more informed than those living in other parts of Edinburgh and those who live in Edinburgh were more informed than those in other parts of Scotland. A higher percentage of van drivers than members of the public claimed to be informed.

There was also a significant increase in the number who claimed to be informed about the boundary. City centre residents were better informed about the boundary as were those who travelled into the city centre every day. Van drivers were also well informed about the boundary.

The increases in being informed suggest that the communication campaigns have been successful in making people more aware. Drivers of electric and hybrid cars were more informed which is likely to be a result of their investment in environmentally positive behaviours as well as successful communications campaign.

This wave saw significant increases in awareness of operational issues such as not needing an electric car, contributing to air quality, operating 24 hours a day, automatic number plate recognition, the grace period and access for blue badge holder and motorbikes was also fairly high.
Those who tended to be better informed were:

- Van drivers
- City centre residents
- Edinburgh residents
- Frequent travellers into the city centre
- Those in favour of LEZ
- Drivers of electric and hybrid vehicles.

While we saw a significant increase in awareness and understanding of penalty charges, nonetheless it remains the issue respondents were least informed about. There was a reduction in those who believe it will operate on the basis of a daily entry charge for non-compliant vehicles but a sizeable minority still believe this is the case.

Support for LEZ

The majority of respondents are in favour of the scheme, however as the enforcement date grows closer, support for the scheme has declined. This wave saw a significant decrease in those who are supportive of the scheme and an increase in those who are opposed to it.

The majority of drivers/respondents who said they were in favour of LEZ is smaller this wave and strength of support has diminished with only one fifth being strongly in favour compared to a third in the previous wave of research. Women, those aged over 34, Edinburgh residents, socio economic

classes ABC1 and electric and hybrid vehicle drivers were more in favour than other groups. Consideration should be given to ways in which other groups can be influenced in favour of LEZ in Edinburgh.

While slightly fewer van drivers were in favour of the LEZ scheme the difference between them and members of the general population was not significant.

As with the previous wave respondents were asked to rate their awareness of the impacts of the LEZ scheme. They were then asked to rank the importance of those issues. As with last wave, levels of awareness for the issues fell in similar order to the importance respondents placed on them.

A significant proportion of drivers (77-80%) in Edinburgh considered the following topics important for people in Edinburgh:

- Protecting public health
- Making the city centre more attractive and people-focused (by reducing traffic)
- Encouraging people to consider public transport and active travel
- Encouraging the use of cleaner vehicles benefits all the areas they travel through not just the LEZ.

Communications on the impacts of the impacts of the LEZ appear to have been effective as there has been a significant increase in awareness of the key benefits of the scheme, including making the city centre more people-focused and encouraging people consider use more public/active travel.

As with overall claimed levels of being informed it tended to be the same groups who were aware of the impacts i.e.

- Those in favour
- Edinburgh residents
- City centre residents
- Electric and Hybrid vehicle drivers

Predictably those in favour of the LEZ scheme placed higher levels of importance on the impacts of it than others did.

Compliance

Levels of claimed definite compliance dropped significantly this wave by ten percent. One in six think they probably or definitely do not meet the standard. Van drivers were no less likely to meet the standards than other drivers, in fact they were very slightly more likely to claim to meet the standards.

Those who do not meet the standards were more likely to be in lower SEG and opposed to the scheme. This suggests targeting communications to these groups could improve awareness of support grants available.

Of those who said their cars met the standard just under a half (45%) had replaced their car in the last two years. This is a significantly higher percentage than in wave one.

City centre residents were more likely to state that their vehicle complies when compared to Edinburgh residents which suggests that polluting vehicles are more likely to come from outwith the LEZ boundary.

Behaviour change

A third said they would make no change. Those who are more likely to take up more active travel were in the youngest age group 18-34, Edinburgh residents, weekday travellers, those in favour of the LEZ scheme and men.

Edinburgh residents and city centre residents were more likely than those living outwith Edinburgh to apply for grants or support funds. As were drivers of electric vehicles, men and those in lower SEG C2DE.

Those who said they would avoid the city centre were lower SEG C2DE and those opposed to the LEZ scheme.
City centre residents were more likely than other residents to say they would join a car club. Women were more likely than men to say they would use public transport more often or use taxis/private car hire.

Conclusions

Van drivers were likely to be frequent travellers into the city centre and were well informed about the issues relating to the LEZ in Edinburgh.

Whilst there are significant increases in the number who claim to be informed of the LEZ, and understanding of the boundary has increased significantly; more consideration should be given to informing those who live outwith the Council area and those who travel infrequently into the city centre. Ways to inform those who are not in favour of the scheme should be considered.

Support for the scheme has dropped this wave and that may be due the enforcement date coming ever closer and those who are opposed not having compliant vehicles. More could be done to point people in the direction of support for upgrading vehicles and other sustainable grants.

Findings suggest there is yet more work to do in making clear the difference between entry and penalty charges in all communications. There is also a need to build awareness of the amount for penalty charges and that the fine doubles for repeated breaches.

Once more findings suggest that communication on protecting public health could be dialled up as this remains the top ranked issue in terms of importance but is still third in line for awareness.

It is clear that understanding has improved and that could be a result do a successful communications campaign. There is still a need to communicate more to a population who is not as supportive as it was last year and who are not living in the city centre.

Introduction

Background

Low Emissions Zones (LEZs) are designed to improve air quality by reducing harmful emissions from road traffic. Access to a low emission zone is restricted for the most polluting vehicles, which in turn improves the air quality and helps protect health both within and beyond the zone.

In May 2022 local authorities, in partnership with the Scottish Government introduced LEZs in Glasgow, Edinburgh, Dundee and Aberdeen which are designed to discourage non-compliant vehicles from driving within the zones, and penalty charges will be issued for those that do not comply. This differs to other restrictions, such as England's Clean Air Zones and London's LEZ that allow entry to their zones if a daily access charge is paid by drivers.

To help those who may have the most difficulty in adapting to the LEZs, Transport Scotland have provided funds including – the Low Emission Zone Support Fund and the Retrofit Fund – which are delivered by Energy Saving Trust (EST).

The Low Emission Support Fund is available to low-income households and micro-businesses and is there to help recycle older, more polluting vehicles to reduce harmful emissions. The Retrofit Fund supports micro-businesses to upgrade their vehicles to the minimum standards required to be compliant with the LEZs. Grants were available to support the cost of retrofitting engines or exhausts on taxis, vans and HGVs to Euro 6/VI standard. Bus Emissions Abatement Retrofit (BEAR) grant funding supports bus operators with engine and exhaust retrofitting.

The Edinburgh LEZ was introduced on 31 May 2022. There will be a two-year grace period before any penalty charges (fines) are issued, from 1 June 2024. Since the inception of the scheme Transport Scotland has supported local and national communications campaigns to raise awareness of the benefits of LEZs.

In May 2022 the City of Edinburgh Council undertook research to help it understand views towards the LEZ from individuals driving in Edinburgh. Findings from the research provided a baseline measure of understanding and awareness. Wave two of this research was commissioned in March 2023 and was designed to gauge any changes to understanding and awareness.

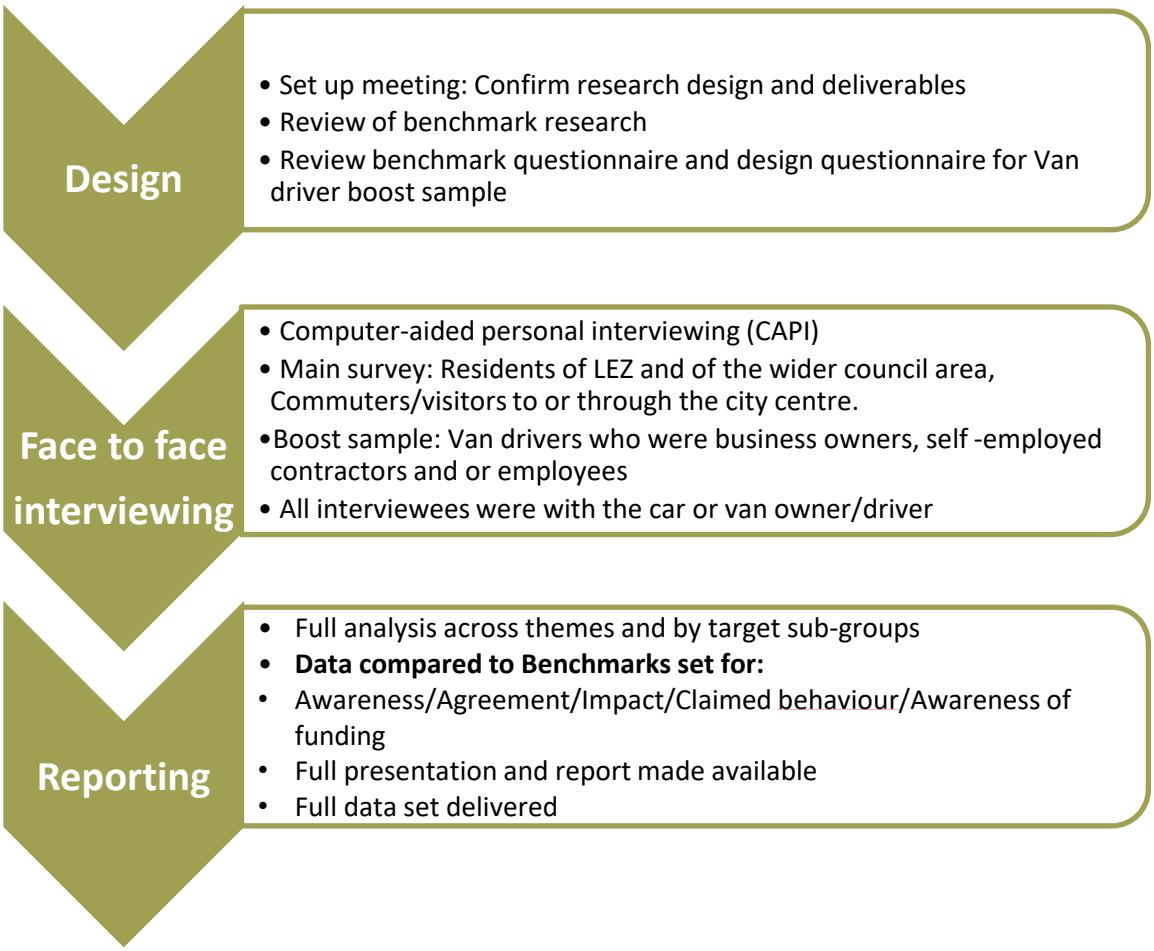
Insights from each wave of research will help shape future local engagement and communications campaigns. In addition, the research will inform the developing monitoring and evaluation approach of its LEZ locally and best practice/findings will be shared with Scotland's other LEZ cities, nationally. Finally, the research will help to inform local policy development in relation to LEZ structures, and to inform the development of potential demand management projects (e.g., road user charging). The detailed objectives of this research were to gain a current measurement of the following:

- Awareness/understanding of scheme
- Agreement with proposed Scheme
- Awareness/understanding of the impact and benefits
- Impact on vehicles owners/understanding if their vehicles meet the minimum standards
- Behaviour change because of LEZ
- Wherever possible findings have been compared to the benchmarks set in 2022.

Method

The figure below summarises the survey approach.

Figure 1



Inception meeting

The first task was a detailed inception meeting, attended by Sarah Ainsworth and Valerie Strachan from Progressive, and George King and Jacqueline Allan from the City of Edinburgh Council ('the Council'). The meeting allowed us to review and refine the research methodology leaning on our understanding from the benchmark research in 2022. Key points discussed at the meeting included:

- A review of the proposed method and sampling approach
- Identification and refinement of practical matters, such as the administration of the survey
- Discussion of conducting a boost sample with van drivers
- Discussion of the questionnaires and how they should be refined
- Agreement of timings and reporting requirements.

Fieldwork

Sample

A sample of 752 interviews was achieved. This comprised the following:

- 112 interviews with LEZ residents (those living within the LEZ boundary)
- 265 interviews with residents of the wider Edinburgh Council area (living outwith the LEZ boundary) who may travel into or through the LEZ for work, leisure or some other reason
- 265 interviews with visitors / commuters to the city centre from elsewhere in Scotland who may travel into the LEZ
- All residents and visitors to Edinburgh owned or had access to a vehicle for their personal use
- 110 van drivers who were business owners, self -employed contractors and or employees, 62 based in Edinburgh and 48 based elsewhere in Scotland. All were responsible for their business vehicle and working in an organisation with fewer than ten employees
- A table of interviewer locations can be found in the appendix.

Quota controls guided the sample selection for this study. This means that statistically precise margins of error or significance testing are not appropriate, as the sampling approach non-probability. The margins of error outlined below are therefore indicative, based on an equivalent probability sample.

The overall sample size of 642 provides a dataset with an approximate margin of error of between ±0.77% and ±3.87%, calculated at the 95% confidence level (market research industry standard). Each sub sample of 110 provides a dataset with an approximate margin of error of between ±1.86% and ±9.34%.

We are confident that the achieved sample provides a good representation of the target population.

Face-to-face interviewing

All interviews were undertaken by Progressive's team of field interviewers face-to-face on-street using Computer Aided Personal Interviewing (CAPI). They were supervised throughout the process by our regional supervisor and our field managers. All interviews were undertaken under our strict quality control procedures – in accordance with ISO 20252. To maintain consistency of approach all interviewers were briefed to use the sample points set for the benchmark survey of 2022. Additional sample points were set for van drivers; these included industrial areas where the Council has been advertising the LEZ and some where no advertising has taken place.

Fieldwork ran from 22nd April to 6th May 2023. Throughout fieldwork we conducted regular checks on the data to ensure a consistently high standard of quality across our interviewing team. All interviewers' work was individually checked and if there were any concerns, interviewers were to be contacted to be provided further guidance and/or training. There were no concerns raised during this research exercise.

All interviewers' work was also subject to back-checking, whereby a minimum of 10% of respondents were contacted by telephone or emailed by our head office fieldwork team to check data accuracy for key questions and to ensure that the respondent was satisfied that the survey was conducted professionally and courteously. There were no concerns raised during this research exercise.

Questionnaire design

The questionnaires were developed in conjunction with the client. The average time for the main sample of the general public to complete the survey was 13 minutes; van drivers took an average of 10 minutes to complete their questionnaire.

Data processing and analysis

Our data processing department undertook a number of quality checks on the data to ensure its validity and integrity. Responses were checked to ensure that interviewer and location were identifiable. Any errors or omissions detected at this stage were referred back to the field department, who re-contacted interviewers to check. No errors were identified at this stage.

A computer edit of the data prior to analysis involved both range and inter-field checks. Any further inconsistencies identified at this stage were investigated by reference back to the raw data on the questionnaire.

Where 'other' type questions were used, the responses to these were checked against the parent question for possible up-coding.

Responses to open-ended questions were sense-checked and grouped using a code-frame and analysed by theme. Progressive's data processing and analysis programme (SNAP) was set up in order to provide the client with useable and comprehensive data. Crossbreaks were discussed with the client in order to ensure that all information needs were met.

Sample

Main sample profile

For the main sample of residents and visitors to Edinburgh quota controls were used to guide the selection on place of residence with the aim of achieving a sub-sample of 100 residents living within the LEZ zone, 250 living in Edinburgh but outwith the zone and 250 visitors and commuters to the city centre. We controlled the sample to ensure an approximate even mix of gender. Care was also taken to ensure the sample profiles were a close match across waves one and two, to optimise comparability of data year on year. The following samples were achieved. See tables 1 and 2.

Table 1. Place of residence general population

Residence	Wave 1 2022	%	Wave 2 2023	%
Edinburgh	376	59%	377	59%
Clackmannanshire	5	1%	1	0%
East Lothian	16	3%	32	5%
Falkirk	17	3%	14	2%
Fife	22	3%	30	5%
Midlothian	38	6%	36	6%
West Lothian	73	11%	68	11%
Elsewhere in Scotland	88	14%	84	13%
Base	**635**	**100%**	**642**	**100%**

The sample profiles across the two waves are very similar in terms of place of residence. Those from elsewhere in Scotland came from Glasgow city (21%) North Lanarkshire (19%) Scottish Borders (11%) South Lanarkshire (11%) Stirling (8%) Perth and Kinross (7%) Dundee (6%) Dumfries and Galloway (4%). Other local authorities included Aberdeen, East Dunbartonshire, Highland (each represents 2% of the sample. Angus, Argyll and Bute, East Renfrewshire, Renfrewshire and Shetland Islands each accounted for 1% of the sample.

As with wave one, approximately a third (30%) of those living in Edinburgh were residents of the city centre.

Table 2. Place of residence in Edinburgh general population

Residence (Edinburgh residence)	Wave 1 2022	%	Wave 2 2023	%
I live in Edinburgh City Centre	114	30%	112	30%
I live in another part of Edinburgh	262	70%	265	70%
Base	**376**	**100%**	**377**	**100%**

Age had loose quota controls imposed to ensure an approximate even spread across the sample. No quotas were placed on socio-economic groups (SEG). We have grouped respondents by higher SEG ABC1 and lower SEG C2DE and “prefer not to say” (PNTS). See tables 3 and 4.

Table 3. Age general population

Age	Wave 1 2022	%	Wave 2 2023	%
18 to 34	200	31%	165	26%
35 to 54	221	35%	239	37%
55 to 74	204	32%	221	34%
75+	10	2%	17	3%
Base	**635**	**100%**	**642**	**100%**

Table 4. SEG general population

SEG	Wave 1 2022	%	Wave 2 2023	%
ABC1	433	68%	414	65%
C2DE	198	31%	223	35%
PNTS	4	1%	5	>1%
Base	**635**	**100%**	**642**	**100%**

Van driver sample

Just under a quarter (23%) of van drivers were business owners, over half (55%) were self-employed contractors and just under a quarter (23%) were employees or apprentices. Respondents were screened to ensure that we spoke to small businesses. Just over a quarter (28%) employed 6 to 9 employees; approximately two thirds (62%) employed between 2 and 5 people; and 10% employed just one person. Approximately a quarter (26%) were in the business of delivery/collection; two in five (44%) were tradespeople; one in five (22%) supplied services such as dog-walking, hairdressing, cleaning etc.; and 5% were in the third sector. Just over half (56%) were based in Edinburgh; the rest (44%) were based elsewhere. The majority (89%) were men; and 11% were women. See table 5.

Table 5. Van driver sample profile

Employment	Van Drivers 2023	%	Nature of Business	Van Drivers 2023	%
Business owner	25	23%	Delivery /collection	29	26%
Self employed contractor	60	55%	Trades person	48	44%
Employee/apprentice	25	23%	Service	24	22%
BASE	**110**		Third sector charity	6	5%
Number of employees			**BASE**	**110**	
1	5	10%	**Based**		
2 to 5	31	62%	Edinburgh	62	56%
6 to 9	14	28%	Elsewhere	48	44%
BASE	50		**BASE**	**110**	

Main findings

This section of the document reports on findings from the general population and Van drivers. Where possible we have compared results from wave one in 2022 to wave two 2023 for the general population. Van drivers were not interviewed as a separate group in 2022. Van drivers were not asked all of the same questions as the general population. Where possible results from Van drivers have been compared to the general population.

Where significant differences occur they have been marked with a green arrow to indicate an increase between waves on tables; or with a green circle to indicate increases and a red circle to indicate decreases within the sample on charts and tables, and between waves on tables. 

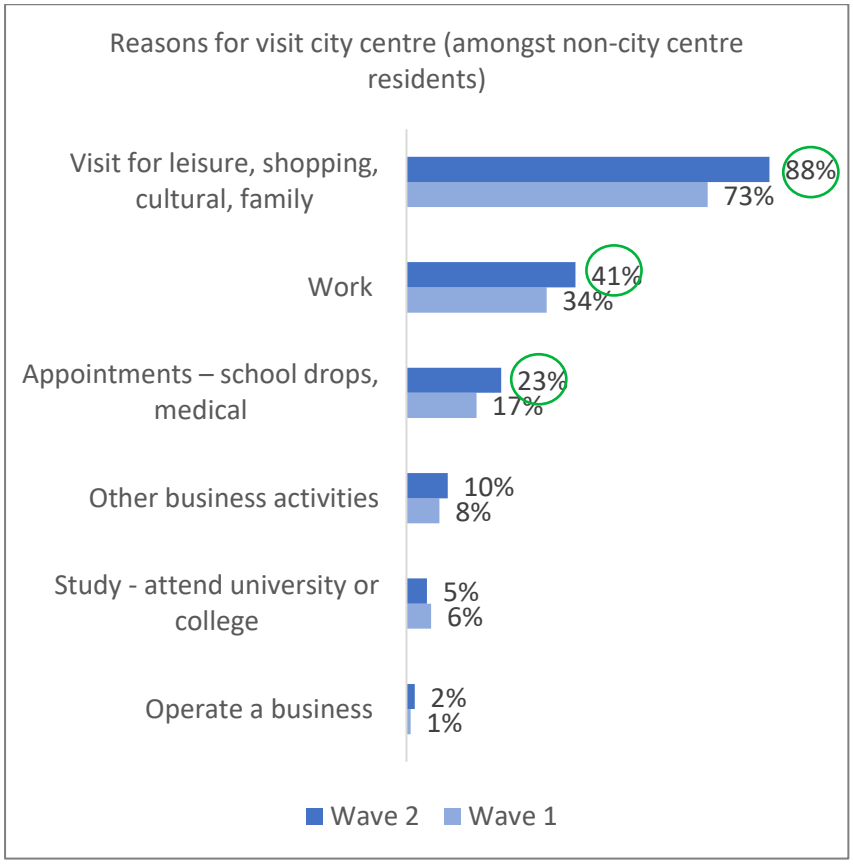
Where base sizes are low a caution sign is shown. **These results must be read with caution.**

Travel behaviour

Reason for travel into the city centre general population

Those who live outwith Edinburgh city centre were asked why they visit the city centre. The majority claimed to visit for leisure, shopping or some other kind of cultural or family event. The second most mentioned reason was work. This was followed by appointments such as school drops or medical. The pattern of reasons to visit was similar to the previous wave but the overall level of activity has increased, which may reflect less concern for Covid and more social activity in 2023 than in 2022. See chart 1.

Chart 1. What city centre visitors do, general population



SQ5: Which of the following describes why you visit Edinburgh city centre? centre boundary? **Base (Scottish residents living outwith Edinburgh city centre): Wave 1: 521, Wave2: 530**

Those who travel at weekends only (98%) were more likely than those who travel every day (87%) or weekday/part week (77%) to visit for leisure reasons.

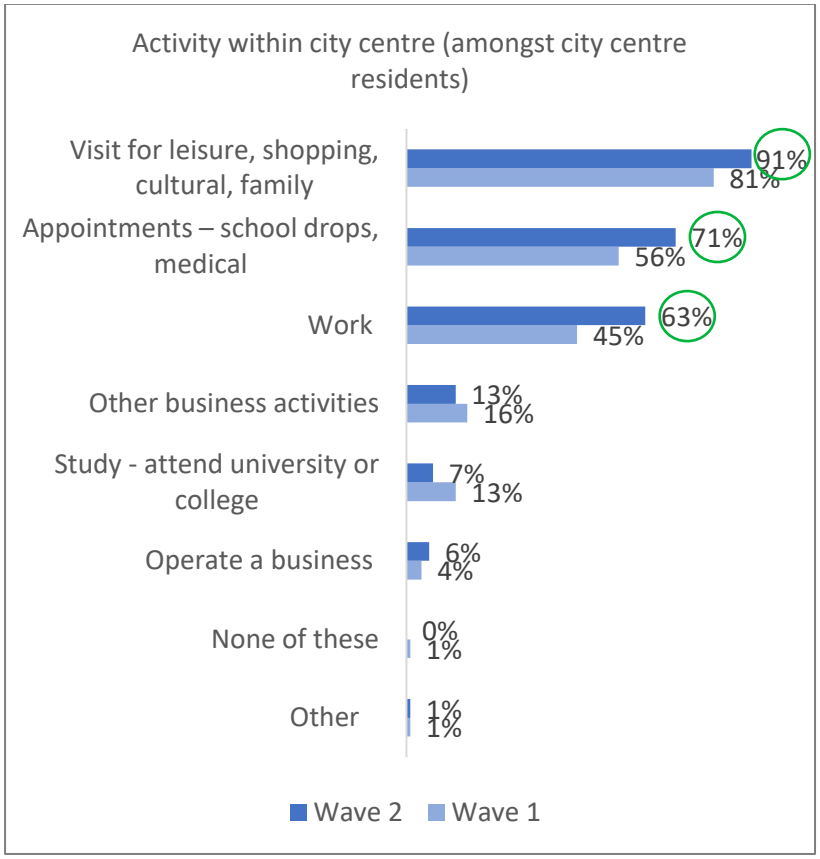
Those more likely to work and study within the city centre were:

- Men more likely than women (57% vs 43%)
- Those aged 18-54 more likely than those aged 55+ (57% vs 24%)
- ABC1s more likely than C2DEs (57% vs 37%)

- Those who travel every day (71%) or weekdays/part week (81%) more likely than those who travel weekends only (10%) or other mix of days (29%).

When asked as well as living in the city centre which, if any, of the following do you do within the city centre boundary the majority claimed to visit for leisure, shopping or some other kind of cultural or family event. The second most mentioned reason was set appointments such as school drop-offs or medical appointments and the third most often mentioned reason was for work. The pattern of activity for city centre residents was similar to last wave but with increased activity for leisure, appointments and work this wave and fewer students. See chart 2.

Chart 2. What city centre residents do, general population



SQ6: As well as living in the city centre which, if any, of the following do you do within the city centre boundary? **Base (Scottish residents living in Edinburgh city centre): Wave 1: 114, Wave 2: 112**

Men were slightly more likely than women to work or study in the city centre (71% vs 66%). Those aged 18-54 more likely than those aged 55-74 (97% vs 40%) to work or study in the city centre.

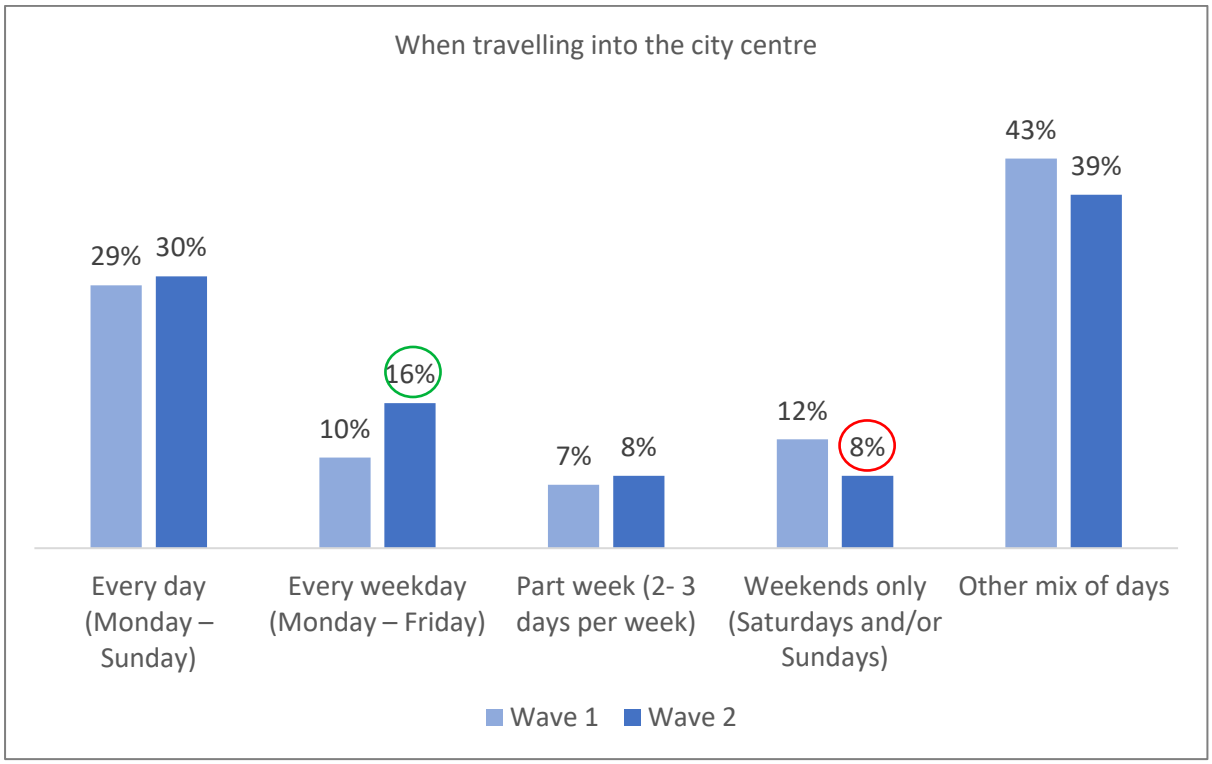
Reason for travel into the city centre van drivers

Van drivers were asked about their main purpose of being in Edinburgh city on the day of the survey. Just under two fifths (38%) were there to collect of deliver something, just over a third (35%) were there to carry out repairs or maintenance and 18% were there to carry out a service such as gardening or cleaning. A few (7%) were there to remove waste or rubbish and 2% were in Edinburgh on a personal trip.

Frequency and mode of travel into the city centre, general population

When asked "when do you normally travel to, from or around the city centre", just under a third (30%) said every day and approximately one in six (16%) said every weekday; this was significantly more than in wave one and reflects the increase in those who travel into the city centre for work. Just under a tenth (8%) said weekends only which is significantly less than wave 1 and may be a reflection of the cost of living crisis and a reduction of spending at the time of research. The most common response was two fifths (39%) said 'another mix of days'. See chart 3.

Chart 3. Normal travel days, general population



Q2. When do you normally tend to travel to, from or around the city centre, for personal and/or business reasons? **Base: (all) Wave 1: 635, Wave 2: 642 (Single coded question)**

Predictably those who live in the city centre were more likely to travel around the city centre every day than those who live in another part of Edinburgh (60% vs 34%). Edinburgh residents were more likely than non-Edinburgh residents (41% vs 13%) to travel around the city centre every day. Those in the youngest age group (aged 18-34 = 37%) were more likely to travel around the city centre everyday compared to (35-54 = 25%) and (75+ = 6%). As with wave one those more likely to travel weekends only were more likely to be non-Edinburgh residents than Edinburgh residents (16% vs 2%).

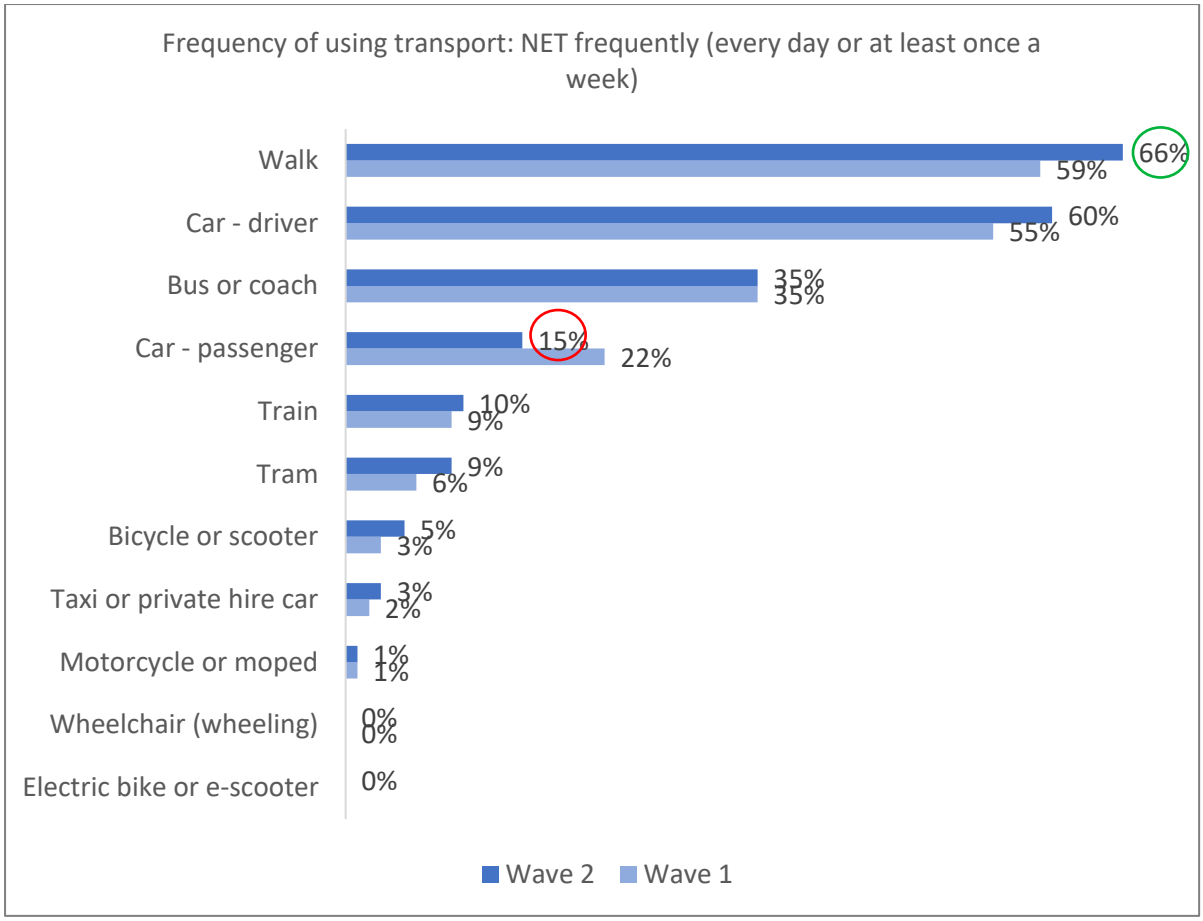
Travel Days Van drivers

The largest single percentage of van drivers (41%) drove into the city centre on a mix of days. Just over a quarter (27%) drove into the city centre every day, nearly one fifth (19%) drove in every weekday and 11% drove in part of the week. Unsurprisingly those who are based in Edinburgh (37%) are more likely than those based elsewhere (15%) to travel in every day.

Frequency of mode, general Population

Members of the general population were asked how often they use various modes of travel. Walking was the mode most frequently used followed by car driving, bus or coach and car as a passenger. Because we interviewed respondents who have access to a car there was very little difference in the sub-groups by mode of travel. Significantly more respondents frequently walked this wave compared to wave one and significantly fewer travelled as a car passenger this wave. See chart 4.

Chart 4. Frequent travel mode, general population



Q1. Currently how often do you use the following modes of transport to travel around, or to and from Edinburgh's city centre, for personal and/or business reasons? **Base: Wave 1: 635, Wave 2: 642**

Those who frequently walk around, to or from the city centre were more likely to be based in Edinburgh and its city centre, in SEG ABC1, in favour of the LEZ and drive an all-electric car. Those who frequently use a car were more likely to be men, informed rather than uninformed, live in Edinburgh and its city centre and use an electric car.

Public transport was used by fewer people who travel into the city centre frequently than car/ motorcycle or active travel. There is an increase in all modes of travel this wave which correlates with the increase in activities and travel every weekday. See table 6.

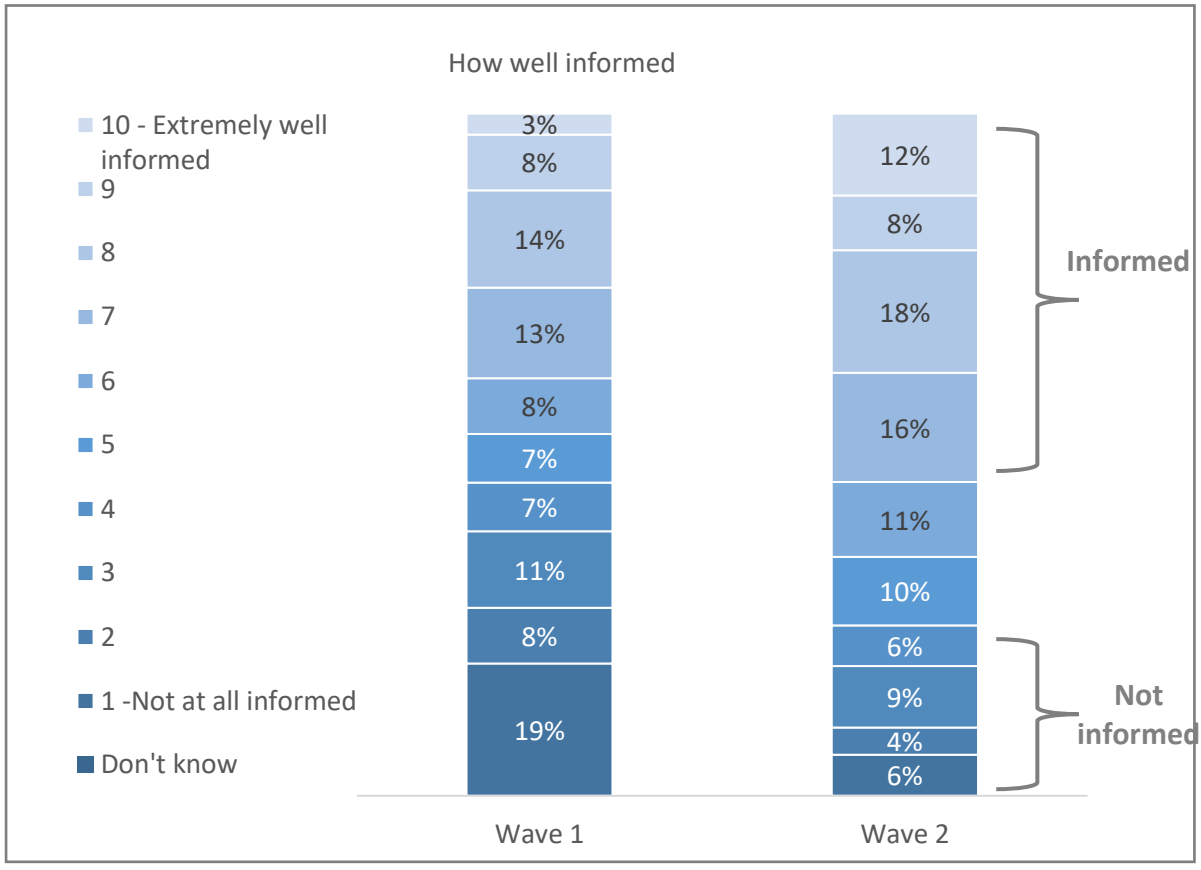
Table 6. Mode of travel for frequent travellers into the city centre, general population

NET: Frequently	Wave 1 2022	Wave 2 2023
Active travel (walk or cycle)	59%	89%
Car (driver or passenger) / motorcycle	57%	84%
Public transport (bus, tram, train, taxi)	42%	57%

Awareness and understanding

When asked how well informed about the Low Emission Zone for Edinburgh City Centre would you say you were before this interview today just over half said they were informed. This is a significant increase on wave one when just under two fifths of the sample were informed. See chart 5.

Chart 5. Informed about LEZ, general population



Q3. Tell me, how well informed about the Low Emission Zone for Edinburgh City Centre would you say you were before this interview today? **Base: Wave 1: 635, Wave 2: 642**

General population NET: Informed	Wave 1 Gen Pop 2022	Wave 2 Gen Pop 2023	Van drivers 2023
Informed (7~10)	39%	54%	83%
N/N (5~6)	16%	21%	12%
Not informed (1~4)	45%	25%	5%

Those who tended to be more informed were as follows:

- Van drivers compared to general population (83% vs 54%)
- Over the age of 34 (18 -34 (42%), Rest 60%)
- Those who travel every day were more informed than weekday/part week, weekends, and other mix of days travellers (65% vs 52% vs 41% vs 49%)
- Those who live in the Edinburgh city centre more informed than those living in other parts of Edinburgh (81% vs 63%)
- Those who live in Edinburgh were more informed than those in other parts of Scotland (60% vs 33%).

In wave one men were more likely than women to be informed, this was not the case in wave two. In wave one socio economic groups ABC1 were more informed, there are no differences by SEG in this wave.

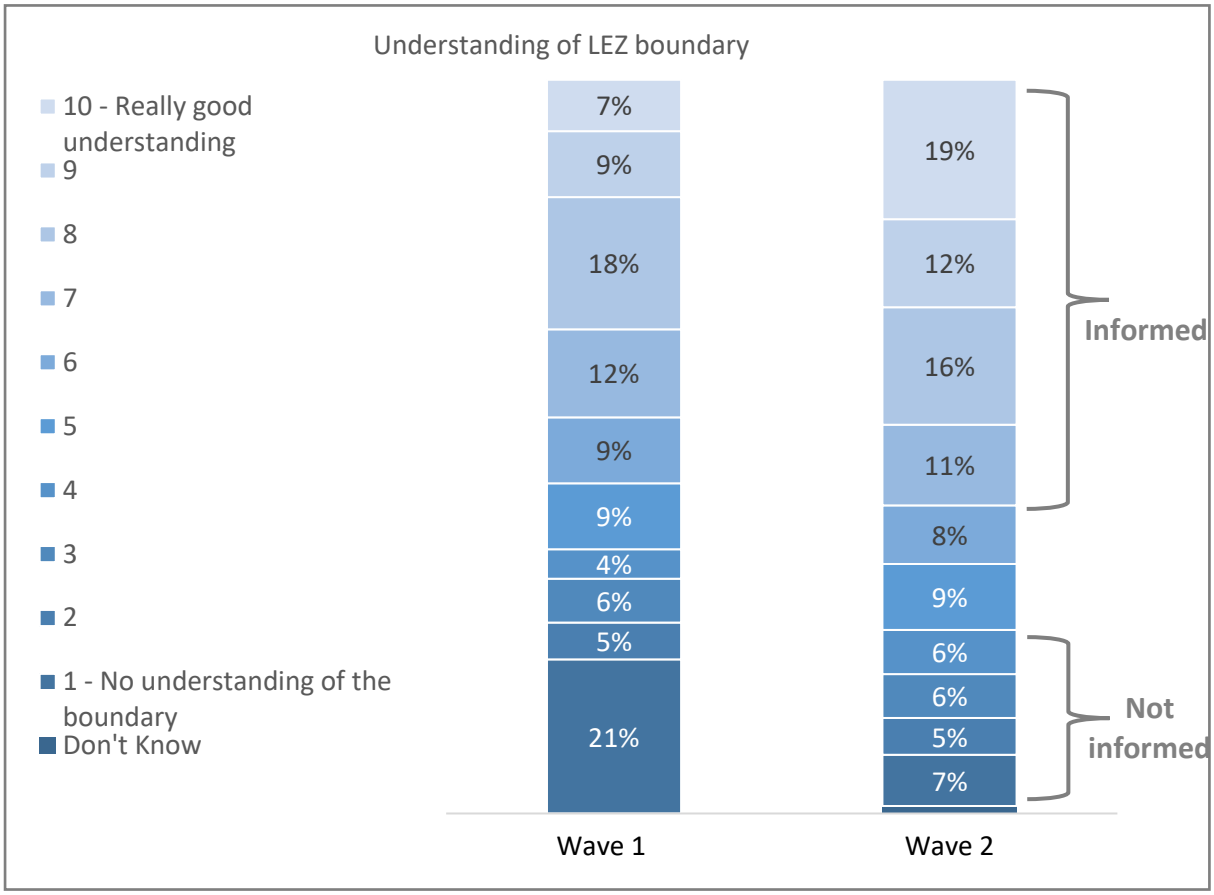
Informed Van drivers

Van drivers had higher levels of being informed that members of the general public. The majority (83%) were informed about LEZ and only 5% claimed not to be informed.

Understanding of boundary

Respondents were asked about how good their general understanding was of the Edinburgh LEZ boundary before the interview had taken place. Over half (60%) claimed to be informed, which is a significant increase compared to wave one. However, a quarter (24%) claimed to not be informed. See chart 6.

Chart 6. Informed about LEZ boundary, general population



Q4. This map shows the boundary of the LEZ. It will cover Edinburgh City Centre. How good was your understanding of the Edinburgh LEZ boundary before this interview today? **Base: Wave 1: 635, Wave 2: 642**

General population NET: Understanding	Wave 1 Gen Pop 2022	Wave 2 Gen Pop 2023	Van drivers 2023
Understanding (7~10)	46%	59%	87%
N/N (5~6)	17%	17%	5%
No understanding (1~4)	36%	24%	5%

Those who tended to be more informed were as follows:

- Those who travel every day were more informed than weekday/part week, weekends, and other mix of days travellers (78% vs 52% vs 33% vs 54%)
- Those who live in Edinburgh were more informed than those in other parts of Scotland (75% vs 37%)
- City centre residents showed more understanding than those living in other parts of Edinburgh (85% vs 71%)
- Those driving electric only and hybrid cars (78% - 66%) were more likely to be informed than petrol and diesel drivers (56% each).

Understanding of boundary, Van drivers

Van drivers were better informed on average than members of the public with 87% claiming to be informed about the boundary of the LEZ. Those based in Edinburgh (97%) were better informed than those based elsewhere (75%).

Awareness of operational issues

The survey then showed respondents various statements describing how the LEZ will work in Edinburgh city centre and asked them asked to rate how well informed they felt about each. Responses were rated on a scale of one to ten. One being not at all informed, and ten extremely well informed. The table below shows significant increases in being informed for all but one statement.

Table 6. Level of being informed, general population

	Net Informed	
	Wave 1 2022	Wave 2 2023
You do not need to have an electric car to drive into the LEZ, modern petrol and diesel cars will usually also meet the LEZ minimum standards.	50%	68%
The LEZ will contribute to improving air quality in the city centre	56%	68%
Automatic number plate recognition cameras will be used to identify the vehicles which do not comply with the LEZ minimum standard	48%	67%
The LEZ will contribute to improving air quality across the whole city	54%	65%
The LEZ will be in operation 24 hours a day, all year round (including public holidays)	48%	64%
Residents and visitors to the city will have a grace period of two years, from 31st May 2022, to prepare their vehicles to comply with the LEZ minimum standards, before any penalty charges (fines) will be issued	43%	62%
The LEZ will help the city achieve its net zero 2030 climate change target	51%	56%
Drivers with a Blue Badge will be exempt from LEZ penalty notices (fines).	38%	56%
otorbikes and mopeds are allowed to drive in the LEZ	34%	42%

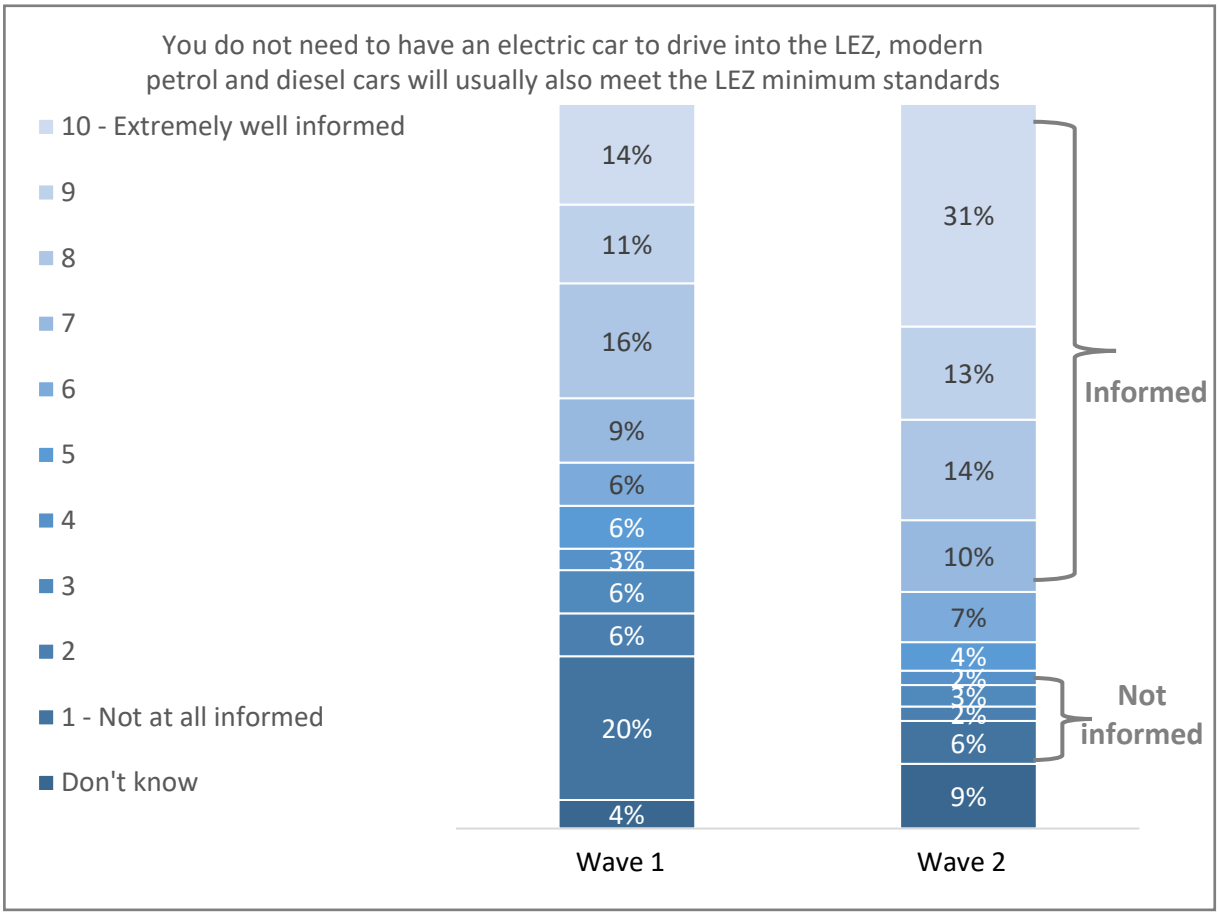
Q5. The following statements describe how the LEZ will work in Edinburgh City Centre. Please tell me how informed you were of how the LEZ would operate before this interview today. **Base: Wave 1: 635, Wave 2: 642**

It is clear that levels of awareness were high across all issues. The following analysis shows that groups who were consistently better informed were: van drivers, those aged over 34, in favour of the LEZ scheme, travel everyday in Edinburgh, were residents of Edinburgh and the city centre and were drivers of electric and hybrid vehicles.

The following charts give more detail on the levels of how well-informed respondents felt on each of the nine operational issues tested. Where applicable we have charted responses from van drivers.

This section describes how informed respondents felt about not needing an electric car to drive into the LEZ.

Chart 7. Informed about not needing an electric car, general population



Q5. Please tell me how informed you were of how the LEZ would operate before this interview today.
Base: Wave 1: 635, Wave 2: 642

NET: Informed	Wave 1 Gen pop 2022	Wave 2 Gen pop 2023	Van drivers 2023
Informed (7~10)	50%	68%	85%
N/N (5~6)	12%	10%	5%
Not informed (1~4)	34%	13%	6%

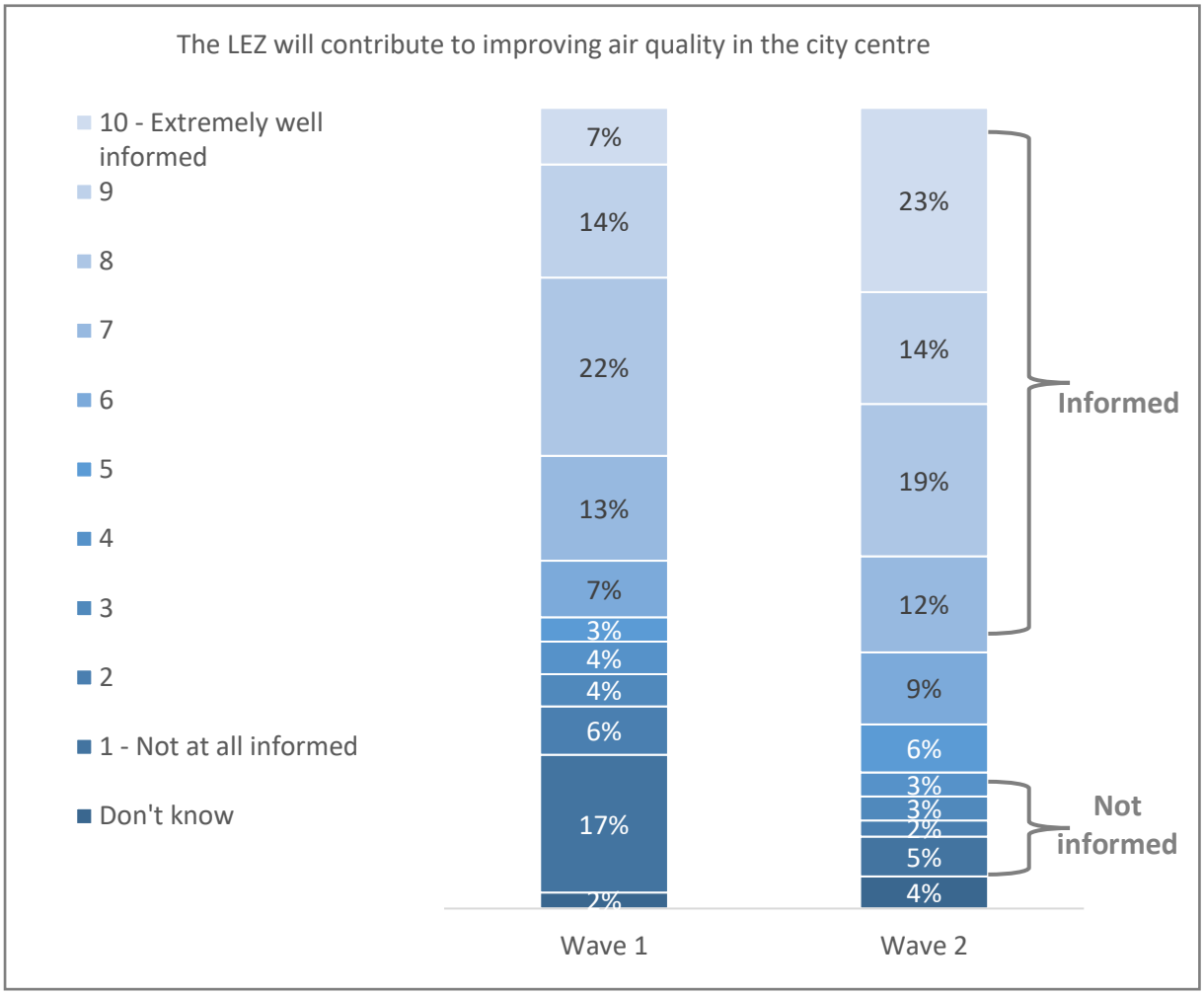
Those who tended to be better informed on this issue were:

- Van drivers compared to the general population (85% vs 68%)
- Those aged over 18 -34 yrs ((18-34 (57%) vs 35-54 (72%), 55-75 (71%) and 75+ 82%))
- Those in favour of the LEZ were more informed than those opposed (77% vs 58%)
- Those who travel everyday were more informed compared to weekday, weekends only and other mix of day travellers (80% vs 65%, 51%, 64%)
- Edinburgh residents were more informed than the rest of Scotland (81% vs 49%)

- Those living in the city centre were more informed than those living in other parts of Edinburgh (88% vs 79%)
- Electric and hybrid car drivers were more aware than petrol and diesel drivers (84% and 79% vs 63% and 66%)

This section describes how informed respondents felt about the LEZ contributing to improving air quality in the city centre.

Chart 8. Informed about improving air quality in the city, general population



Q5. Please tell me how informed you were of how the LEZ would operate before this interview today.
Base: Wave 1: 635, Wave 2: 642

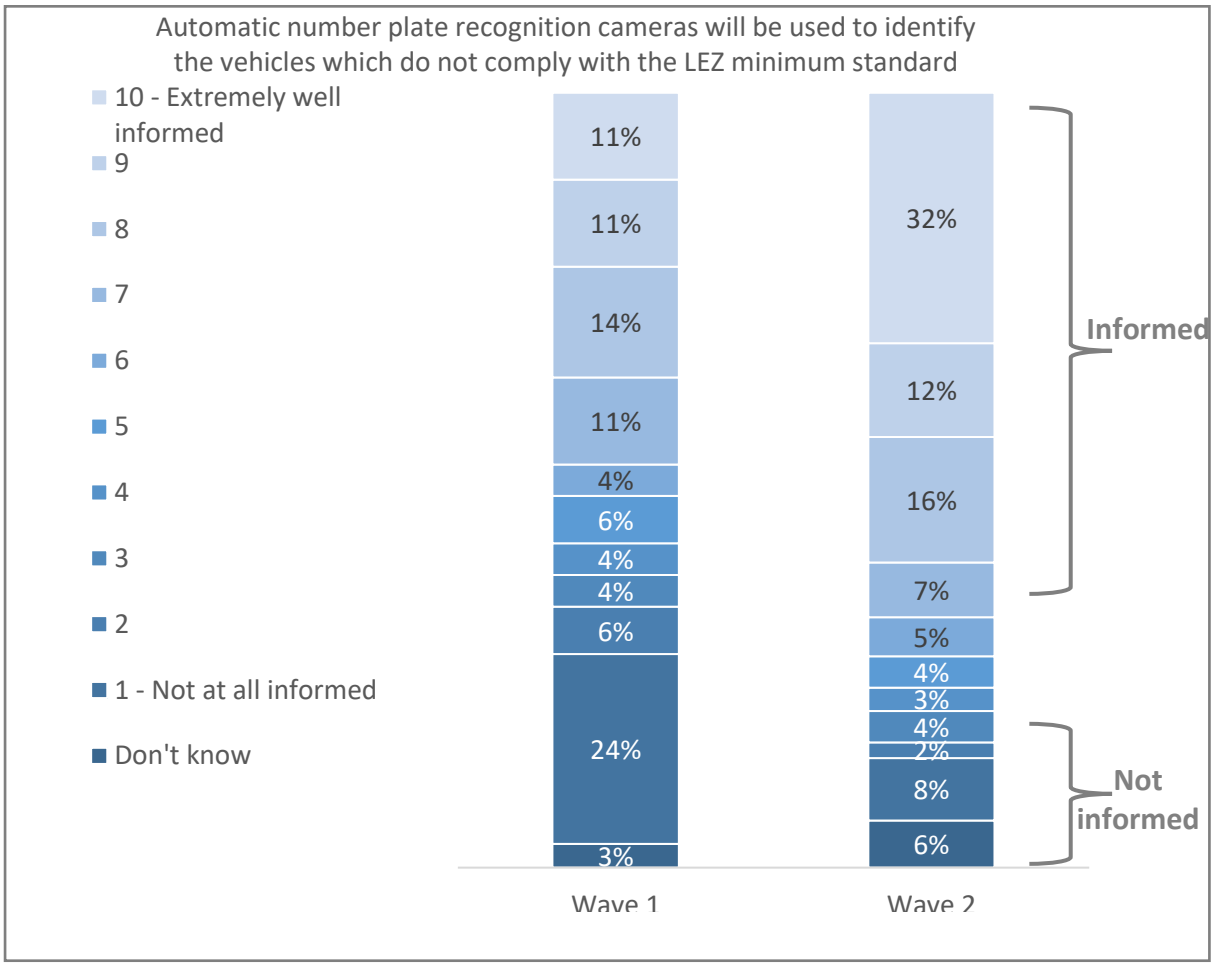
NET: Informed	Wave 1 Gen Pop 2022	Wave 2 Gen Pop 2023	Van Drivers 2023
Informed (7~10)	56%	68%	79%
N/N (5~6)	11%	15%	10%
Not informed (1~4)	31%	13%	6%

Those who tended to be better informed on this issue were:

- Van drivers compared to the general population (79% Vs 68%)
- Those aged over 18 -34 yrs ((18-34 (56%) vs 35-54 (75%) and 55 + (71%))
- Those in favour of the LEZ were more informed than those opposed (79% vs 49%)
- Those who travel everyday were more informed compared to weekday and other mix of day travellers (77% vs 63% and 65%)
- Edinburgh residents were more informed than the rest of Scotland (79% vs 53%)
- Electric car drivers were more aware than petrol and diesel drivers (90% vs 63% and 67%).

The following section describes how informed respondents felt about the use of automatic number plate recognition cameras to identify non-compliant vehicles in the LEZ.

Chart 9. Informed about automatic number plate recognition cameras, general population



Q5. Please tell me how informed you were of how the LEZ would operate before this interview today.

Base: Wave 1: 635, Wave 2: 642

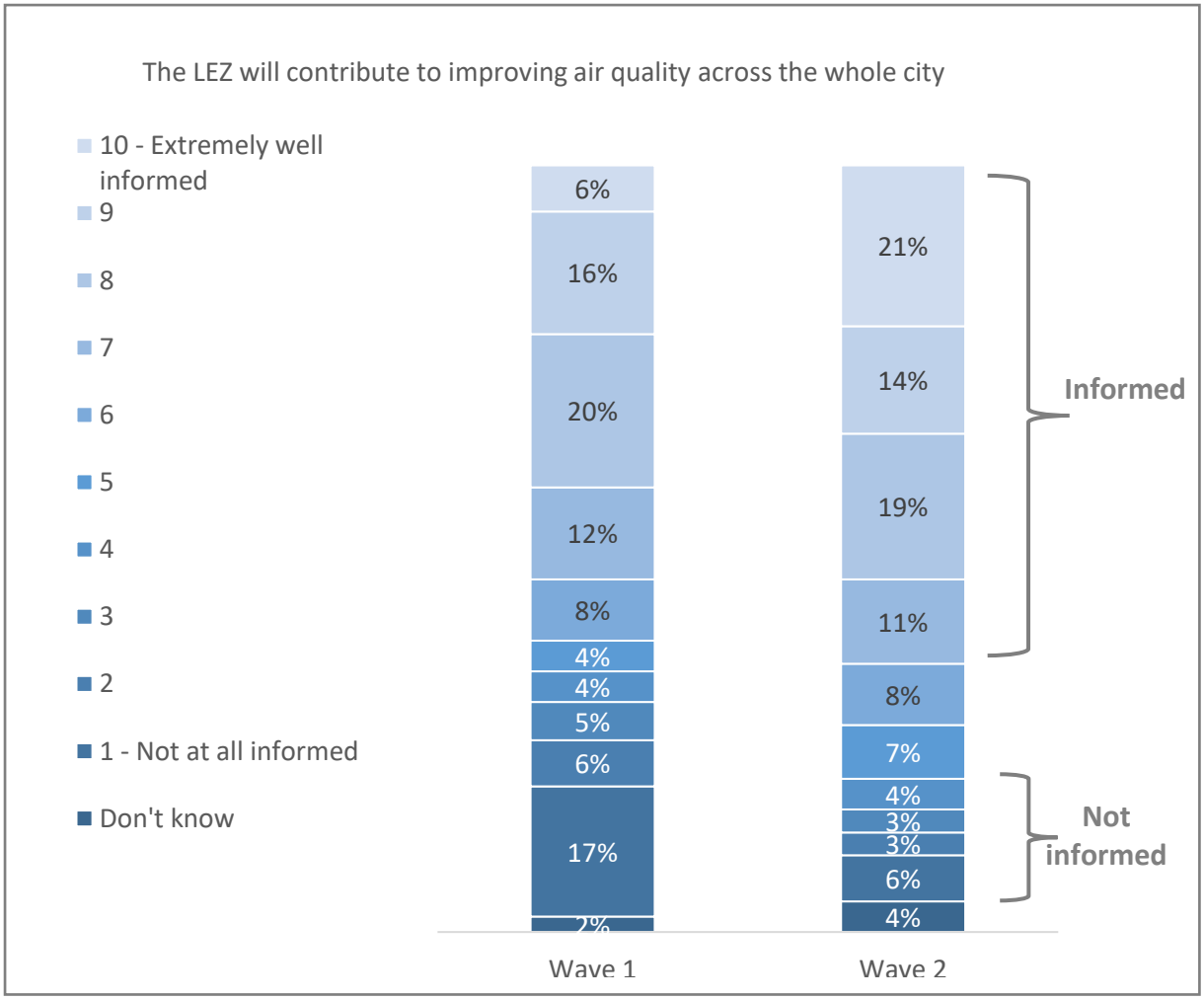
NET: Informed	Wave 1 Gen Pop 2022	Wave 2 Gen Pop 2023	Van Drivers 2023
Informed (7~10)	48%	67%	86%
N/N (5~6)	10%	10%	7%
Not informed (1~4)	39%	17%	5%

Those who tended to be better informed on this issue were:

- Van drivers compared to the general population (86% Vs 67%)
- Those aged over 18-34 yrs ((18-34 (58%) vs 35-54 (73%) and 55-75 (69%))
- Those in favour of the LEZ were more informed than those opposed (73% vs 57%)
- Car/motorcycle drivers compared to public transport users (71% vs 63%)
- Those who travel everyday were more informed compared to weekday, weekends only and other mix of day travellers (75% vs 63%, 61%, 66%)
- Edinburgh residents were more informed than the rest of Scotland (78% vs 52%)
- Electric and hybrid car drivers were more aware than petrol and diesel drivers (83% & 80% Vs 60% & 70%).

The following section describes how informed respondents felt about the contribution of the LEZ to improving air quality across the city as a whole.

Chart 10. Informed about contribute to improving air quality across the whole city, general population



Q5. Please tell me how informed you were of how the LEZ would operate before this interview today.
Base: Wave 1: 635, Wave 2: 642

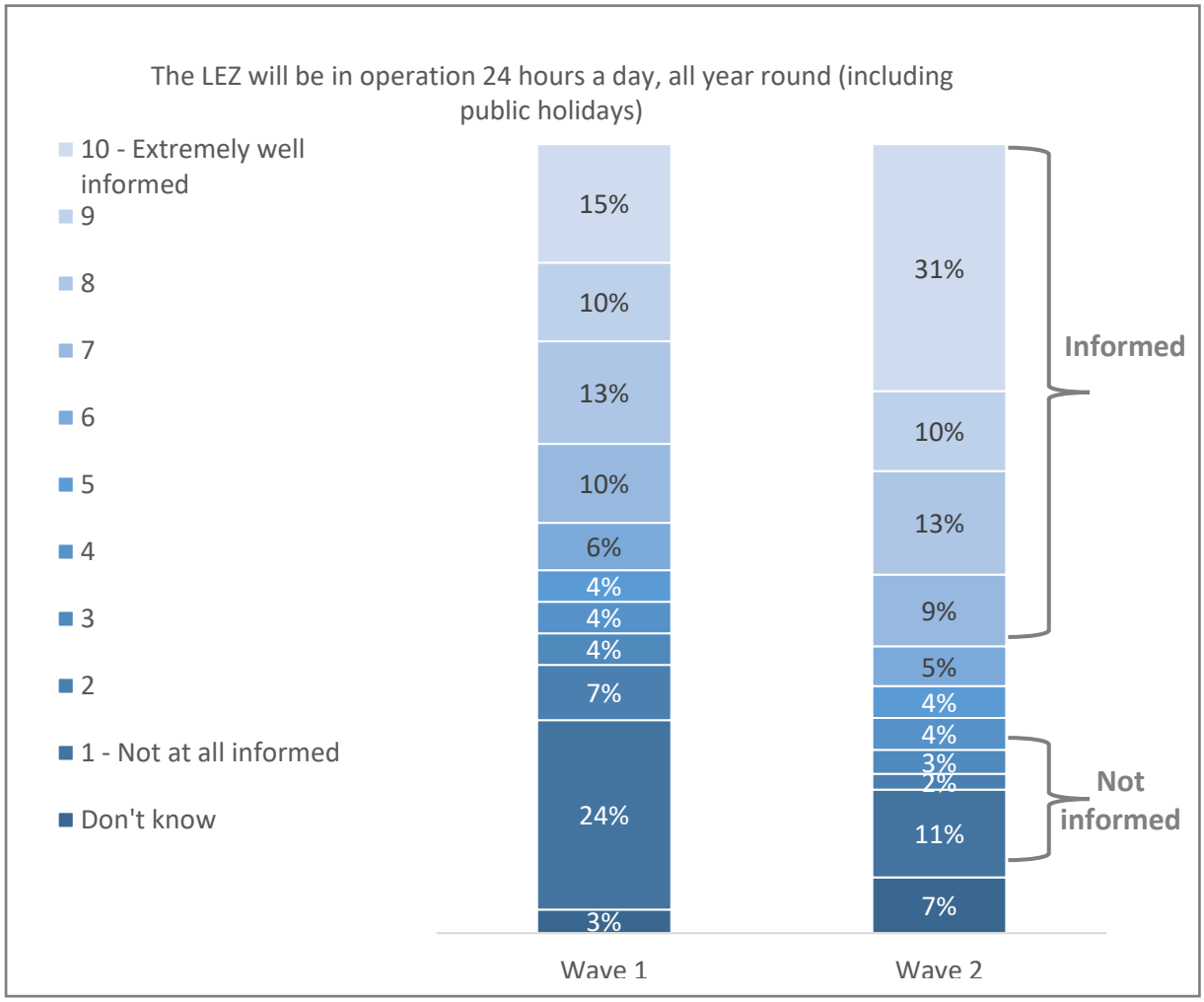
NET: Informed	Wave 1 Gen Pop 2022	Wave 2 Gen Pop 2023	Van Drivers 2023
Informed (7~10)	54%	65%	70%
N/N (5~6)	12%	15%	12%
Not informed (1~4)	31%	16%	12%

Those who tended to be better informed on this issue were:

- Those aged over 18-34 yrs ((18-34 (55%) vs 35-54 (71%) and 55-75 (66%))
- Those in favour of the LEZ were more informed than those opposed (74% vs 49%)
- Those who travel everyday were more informed compared to weekday, weekends only and other mix of day travellers (75% vs 61%, 59%, 60%)
- Edinburgh residents were more informed than the rest of Scotland (76% vs 49%)
- Electric car drivers were more aware than petrol and diesel drivers (83% vs 59% and 67%).

The following section describes how informed respondents were about the LEZ being operational 24 hours a day, all year round.

Chart 11. Informed about being in operation 24 hours a day, all year round, general population



Q5. Please tell me how informed you were of how the LEZ would operate before this interview today.
Base: Wave 1: 635, Wave 2: 642

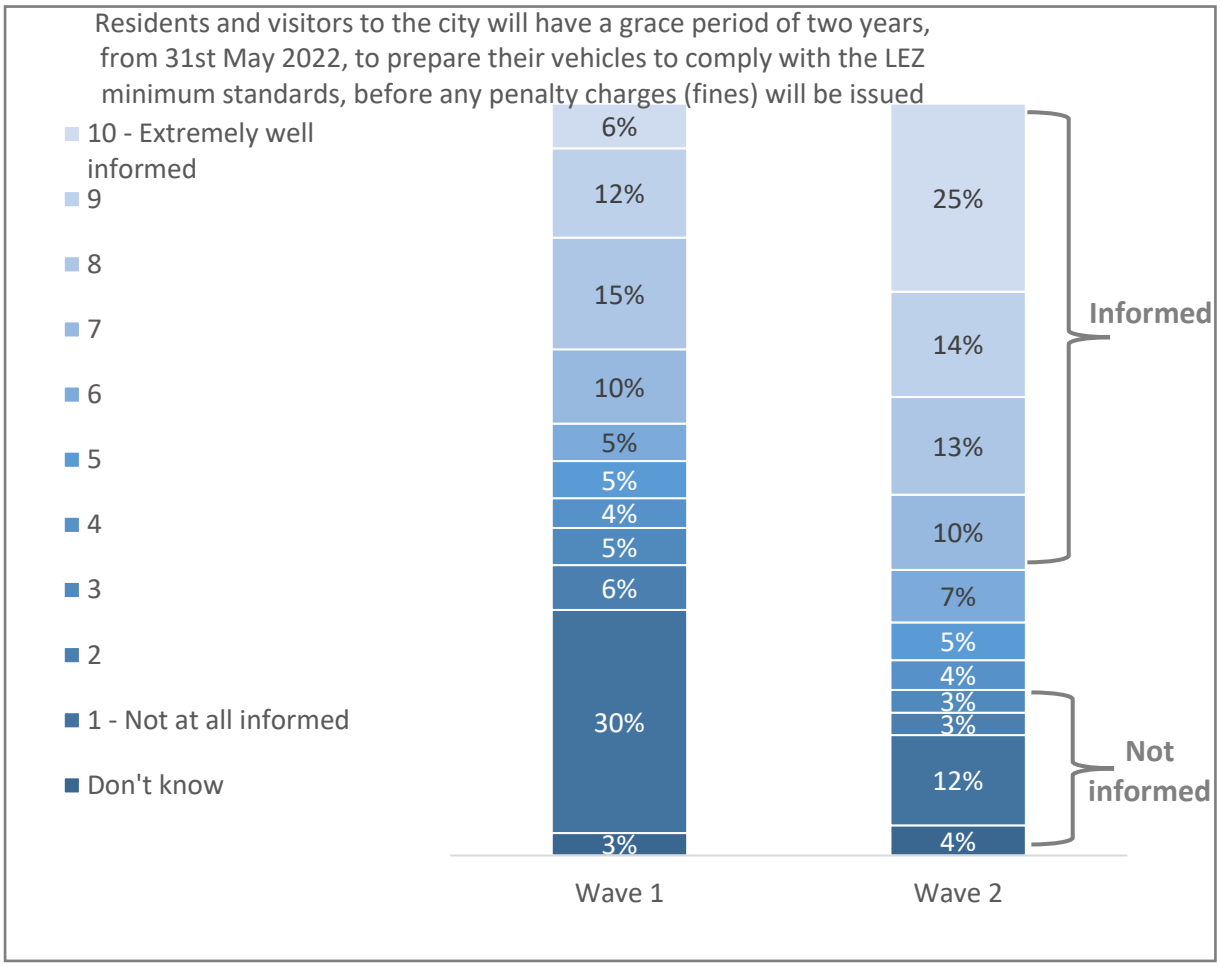
NET: Informed	Wave 1 Gen Pop 2022	Wave 2 Gen Pop 2023	Van Drivers 2023
Informed (7~10)	48%	64%	85%
N/N (5~6)	10%	9%	7%
Not informed ((1~4)	39%	20%	8%

Those who tended to be better informed on this issue were:

- Van drivers compared to the general population (85% vs 64%)
- Those in favour of the LEZ were more informed than those opposed (69% vs 52%)
- Those who travel everyday were more informed compared to weekday and other mix of day travellers (72% vs 61%, 60%)
- Edinburgh residents were more informed than the rest of Scotland (76% vs 46%)
- Those living in the city centre were more informed than those living in other parts of Edinburgh (82% vs 74%)
- Electric car drivers were more aware than petrol and diesel drivers (83% vs 57% and 65%).

The following section describes how informed respondents were that there is a two-year grace period of two years from the introduction of the LEZ on 31 May 2022 to prepare their vehicles, before any fines are levied.

Chart 12. Informed about grace period of two years, from 31st May 2022, general population



Q5. Please tell me how informed you were of how the LEZ would operate before this interview today
Base: Wave 1: 635, Wave 2: 642

NET: Informed	Gen Pop 2022	Gen Pop 2023	Driver 2023
Informed (7~10)	43%	62%	87%
N/N (5~6)	10%	12%	5%
Not informed (1~4)	45%	22%	5%

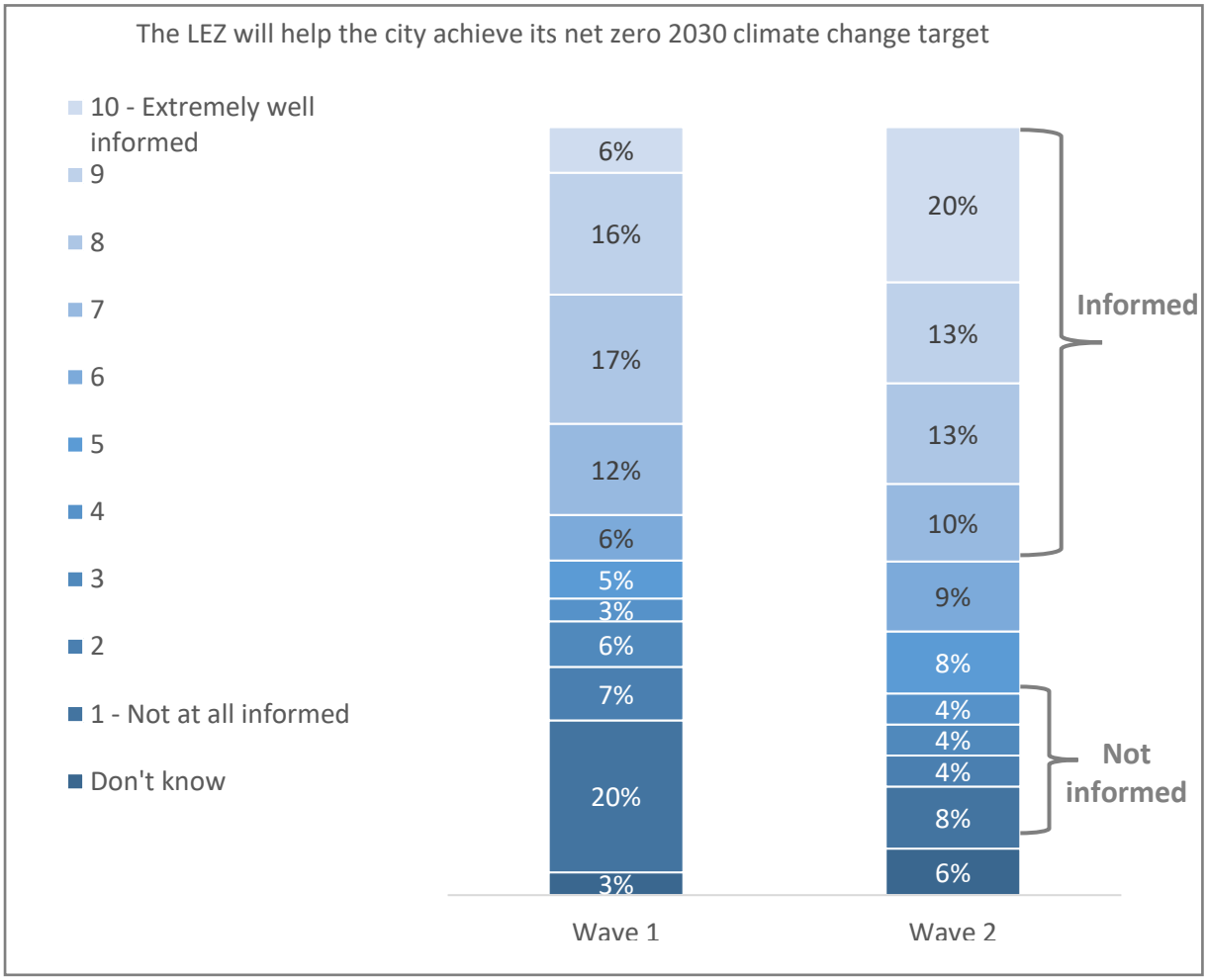
Those who tended to be better informed on this issue were:

- Van drivers compared to the general population (87% vs 62%)
- Those aged over 18-34 yrs ((18-34 (49%) vs 35-54 (70%) and 55-75 (63%))
- Those in favour of the LEZ were more informed than those opposed (66% vs 54%)
- Those who travel everyday were more informed compared to weekday and other mix of day travellers (71% vs 56%, 59%)
- Edinburgh residents were more informed than the rest of Scotland (75% vs 45%)

- Those living in the city centre were more informed than those living in other parts of Edinburgh (84% vs 71%)
- Electric and hybrid car drivers were more aware than petrol and diesel drivers (84% vs 55% and 60%).

The following section describes how informed respondents felt about the LEZ helping the city to achieve its net zero 2030 climate change target.

Chart 13. Informed about help the city achieve its net zero 2030 climate change target, general population



Q5. Please tell me how informed you were of how the LEZ would operate before this interview today
Base: Wave 1: 635, Wave 2: 642

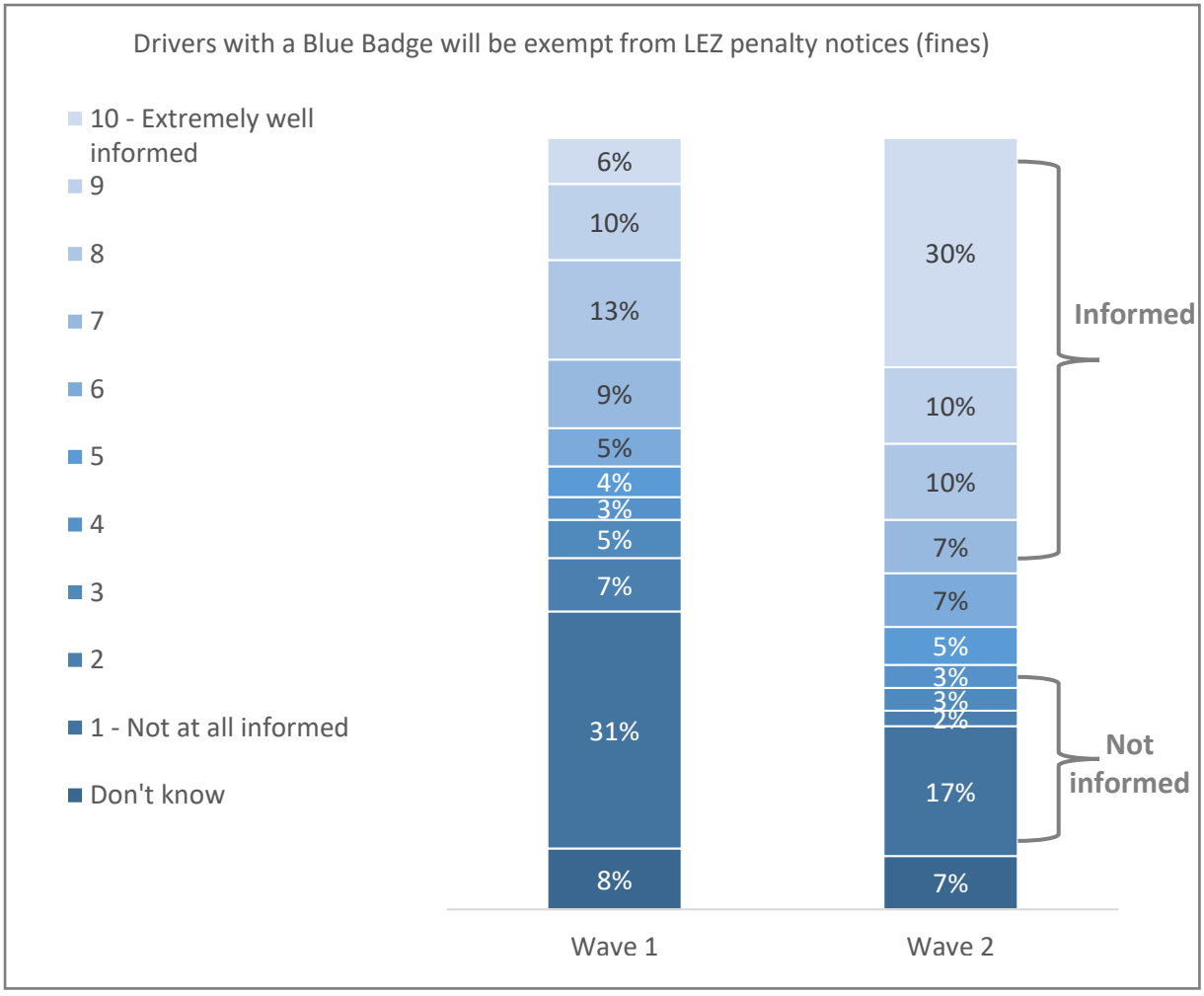
NET: Informed	Wave 1 Gen Pop 2022	Wave 2 Gen Pop 2023	Van Drivers 2023
Informed (7~10)	51%	56%	65%
N/N (5~6)	11%	17%	14%
Not informed (1~4)	35%	21%	10%

As with other facts those who tended to be more informed included:

- Van drivers compared to the general population (65% vs 56%)
- Those in favour of the LEZ were more informed than those opposed (63% vs 39%)
- Those who travel everyday were more informed compared to weekday and other mix of day travellers (66% vs 54%, 50%)
- Edinburgh residents were more informed than the rest of Scotland (67% vs 41%)
- Those living in the city centre were more informed than those living in other parts of Edinburgh (75% vs 63%)
- Electric and hybrid car drivers were more aware than petrol and diesel drivers (78% and 70% vs 50% and 55%)

The following section describes how informed respondents were about Blue Badge holders being exempt from LEZ penalty notices.

Chart 14. Informed about blue badge drivers, general population



Q5. Please tell me how informed you were of how the LEZ would operate before this interview today.
Base: Wave 1: 635, Wave 2: 642

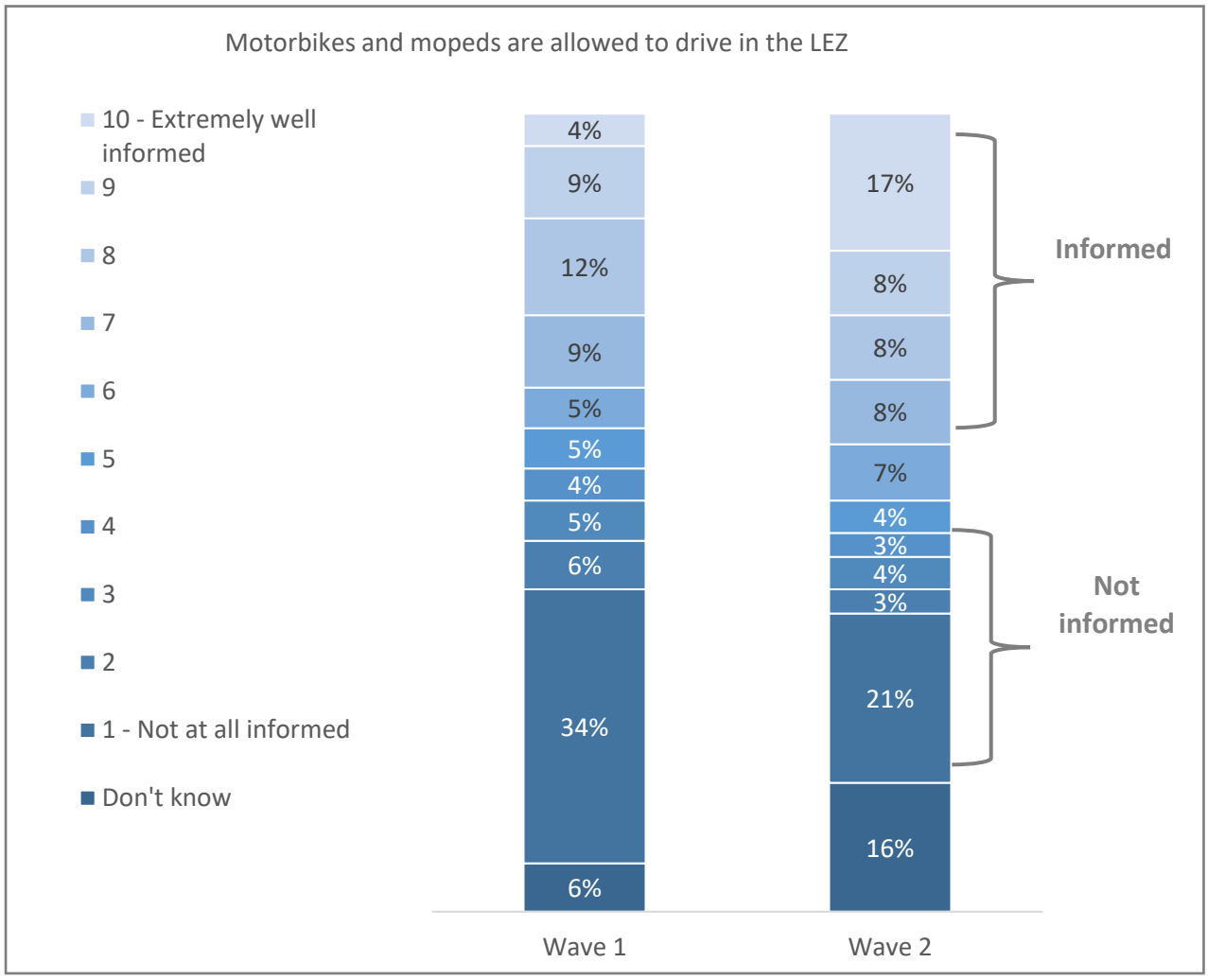
NET: Informed	Wave 1 Gen Pop 2022	Wave 2 Gen Pop 2023	Van Drivers 2023
Informed (7~10)	38%	56%	71%
N/N (5~6)	9%	12%	8%
Not informed (1~4)	46%	25%	9%

As seen across other issues those who were more informed fell into similar sub-groups:

- Van drivers compared to the general population (71% vs 56%)
- Those aged over 18-34 yrs ((18 – 34 (38%) vs 35-54 (66%), 55-75 (58%) and 75+(76%))
- Those in favour of the LEZ were more informed than those opposed (64% vs 44%)
- Edinburgh residents were more informed than the rest of Scotland (67% vs 40%)
- Those living in the city centre were more informed than those living in other parts of Edinburgh (77% vs 63%)
- Electric and hybrid car drivers were more aware than petrol and diesel drivers (76% and 77% vs 49% and 53%)

The following section describes how informed respondents were about motorbikes and mopeds being allowed to drive in the LEZ.

Chart 15. Informed about motorbikes and mopeds, general population



Q5. Please tell me how informed you were of how the LEZ would operate before this interview today.
Base: Wave 1: 635, Wave 2: 642

NET: Informed	Wave 1 Gen Pop 2022	Wave 2 Gen Pop 2023	Van Drivers 2023
Informed (7~10)	34%	42%	60%
N/N (5~6)	10%	11%	10%
Not informed ((1~4)	49%	31%	10%

As seen across other issues those who were more informed fell into similar sub-groups:

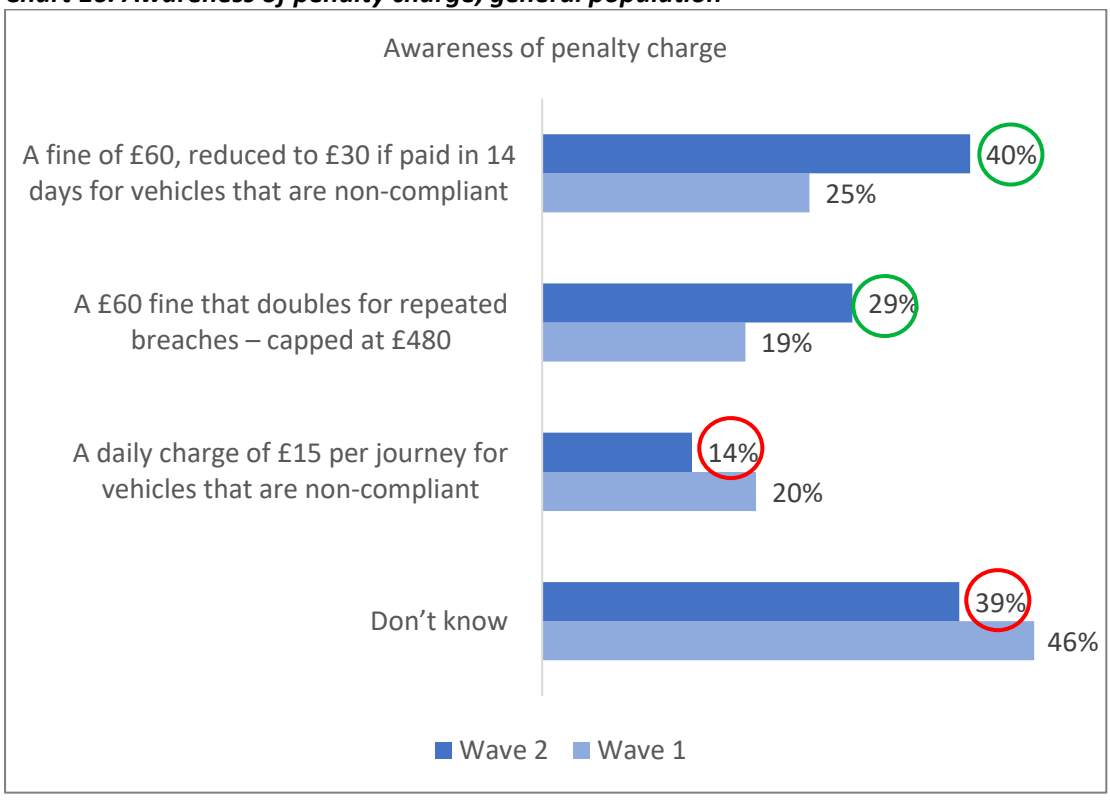
- Van drivers compared to the general population (60% vs 42%)
- Those in SEG C2DE were more informed that those in ABC1 (48% vs 38%)
- Those in favour of the LEZ were more informed than those opposed (48% vs 33%)
- Edinburgh residents were more informed than the rest of Scotland (51% vs 28%)

- Those living in the city centre were more informed than those living in other parts of Edinburgh (63% vs 46%)
- Electric and hybrid car drivers were more aware than petrol and diesel drivers (74% and 58% vs 31% and 43%)

The final awareness question was about penalty charges. As with wave one this was the issue that people were the least well informed about. However, there was a significant increase in awareness in wave two (wave one 25% wave two 40%). Just under a third (29%) were aware that the fine doubles for repeated breaches. While this is a fairly low number it is a significant increase from wave one (wave one 19%, wave two 29%). Nearly two in five (39%) said they didn't know what the penalty charge would be which is a significant decrease from wave one (wave one 46%, wave two 39%).

While the third statement in the chart below is not factually correct, one in seven (14%) claimed to be aware of the standard charge of £15 per journey. This is fewer than in wave one but once more highlights the need to continue to make clear the difference between entry and penalty charges in all communications. See chart 16.

Chart 16. Awareness of penalty charge, general population



Q6. Which of the following, as far as you are aware, best describes the fines set for non-compliant cars and vans that drive into an LEZ? **Base: Wave 1: 635, Wave 2: 642**

NET: Informed	Wave 2 Gen Pop 2023	Van Drivers 2023
A fine of £60, reduced to £30 if paid in 14 days for vehicles that are non-compliant	40%	49%
A £60 fine that doubles for repeated breaches – capped at £480	29%	45%
A daily charge of £15 per journey for vehicles that are non-compliant	14%	20%
Don't know	39%	24%

A similar profile of people were more aware of penalty issues as were aware of other issues.

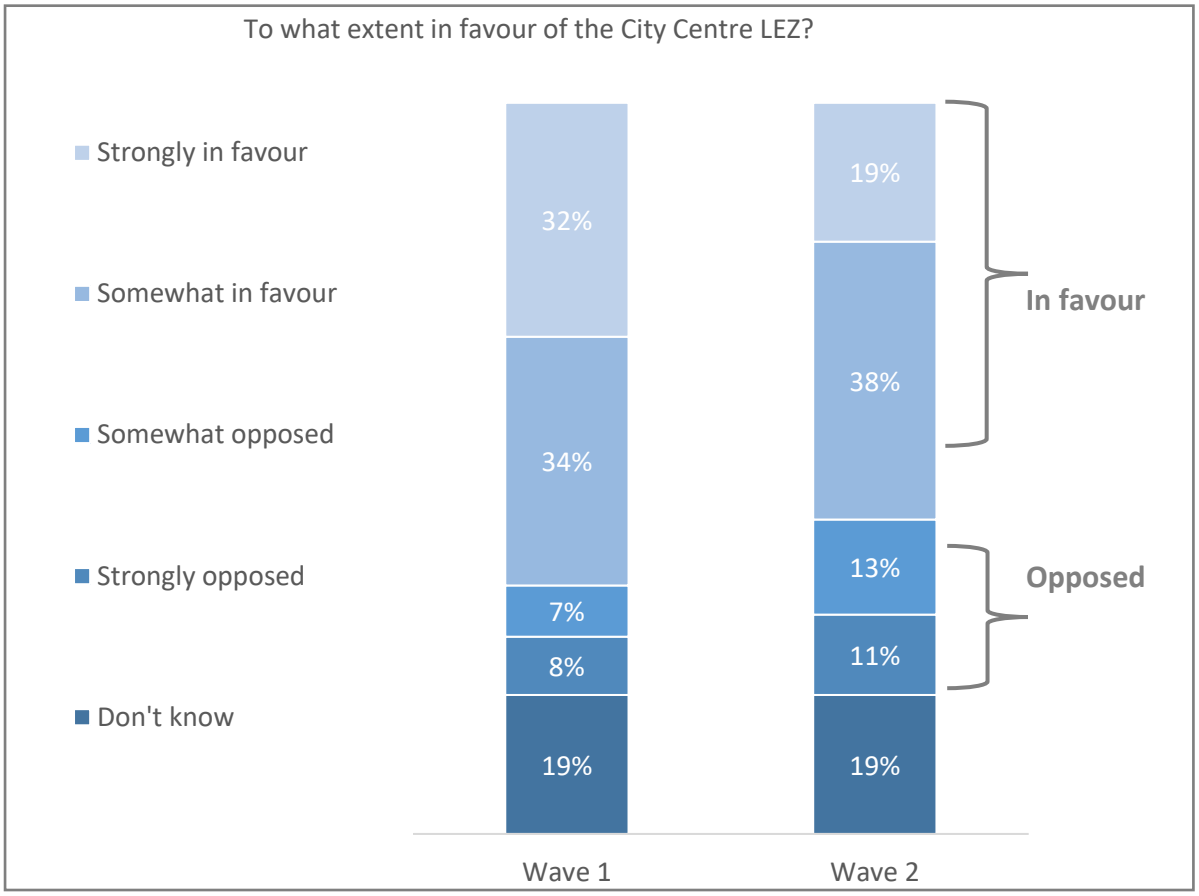
- Van drivers were more aware of a £60 fine that doubles for repeated breaches and less likely to say don't know (24% vs 39%)
- Those in favour of the LEZ were more informed than those not in favour about fine being reduced to £30 (48% vs 37%) and fine doubling for repeat offences (35% vs 22%) but they were more likely than those opposed to say they were informed about a daily charge (18% vs 9%)
- Edinburgh residents were more informed than the rest of Scotland about fines being reduced to £30 (48% vs 29%) and fine doubling for repeat offences (40% vs 14%) but they were more likely to say they were informed about a daily charge (18% vs 9%)
- Those living in the city centre were more informed than those living in other parts of Edinburgh about fine doubling for repeat offences (53% vs 35%)
- Electric and hybrid car drivers were more aware than petrol and diesel drivers to say they were informed across all statements.

Support for LEZ

Overall support

Respondents were questioned on whether they were in favour of the LEZ. A significantly lower number were in favour of the scheme this wave (wave one 66% wave two 57%). Just under a quarter (24%) were opposed to the scheme which is a significant increase on the last wave. See chart 17.

Chart 17. Support for LEZ, general population



Q7. Tell me, to what extent are you in favour of the City Centre LEZ?. **Base: Wave 1: 635, Wave 2: 642**

NET	Wave 1 Gen Pop 2022		Wave 2 Gen Pop 2023	Van Drivers 2023
In favour	66%		57%	49%
Opposed	15%	➡	24%	34%

The profile of those in favour is very similar to wave one in that women, those in older age groups, higher SEGs, city centre residents and electric and hybrid car drivers were more in favour as detailed below:

- Women were more in favour than men (64% vs 51%)
- Those aged 18-34 were less likely to be in favour than 35 to 54 year olds (18-34 (49%) vs 35-54 (60%), and slightly less in favour than other age groups (55 to 75 (59%) and 75+ (76%).
- ABC1s more in favour than C2DEs (63% vs 47%)
- Edinburgh residents were more in favour than the rest of Scotland (60% vs 53%)
- Electric and hybrid car drivers were more in favour than petrol and diesel drivers (78% and 73% vs 56% and 44%)

While slightly fewer van drivers were in favour of the LEZ scheme the difference between them and members of the general population was not significant.

Awareness and importance of the impacts of LEZ

Respondents were asked to rate their awareness of the impacts of the LEZ scheme. They were then asked to rank the importance of those issues. As with wave one levels of awareness for the issues fell in the same order to the importance respondents had placed on them, with the exception of reduced air pollution, which was ranked higher in importance than awareness. Charts 18 and 19 illustrate the detail of findings.

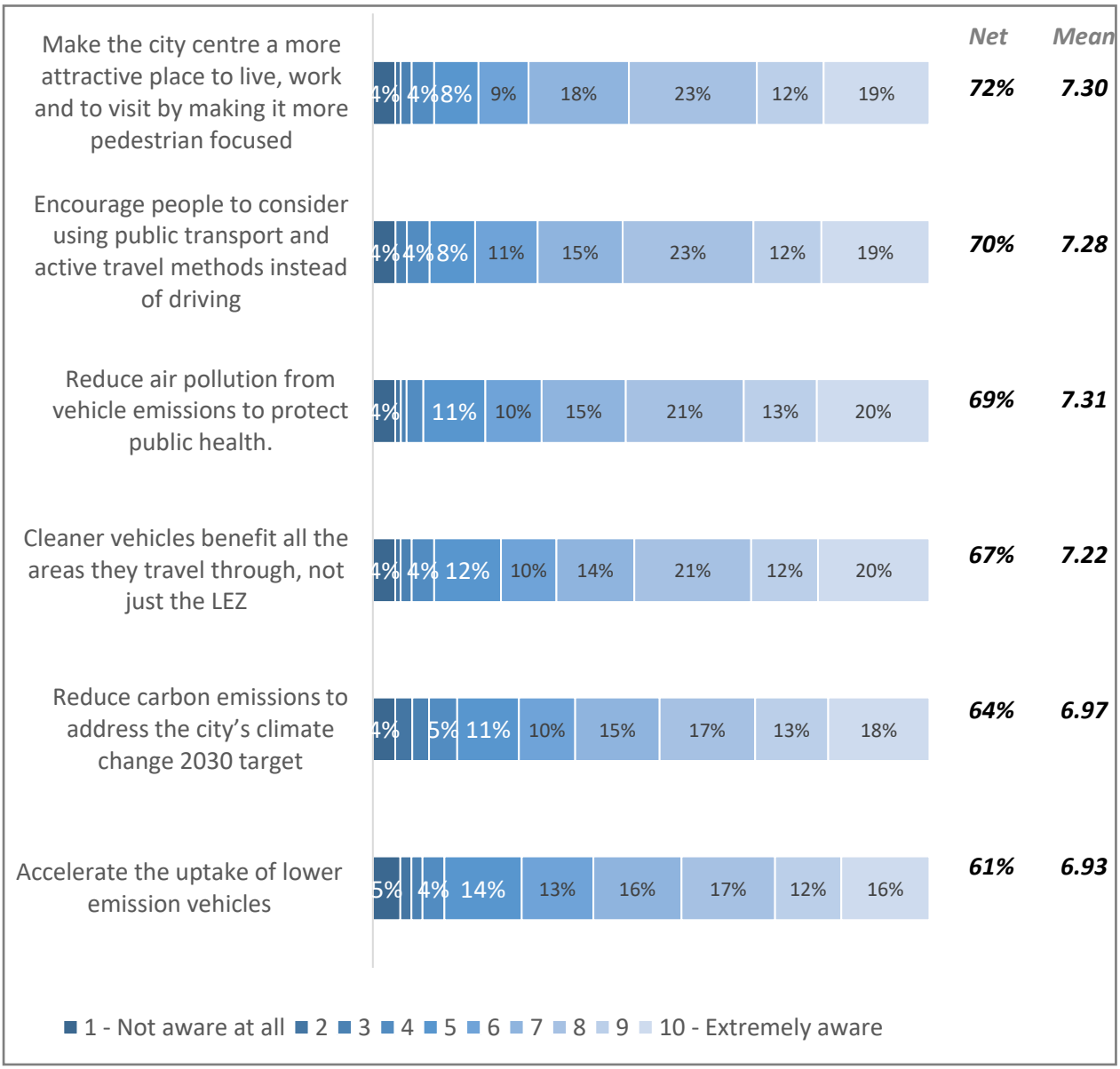
Awareness across all issues other than accelerate the uptake of lower emission vehicles has increased significantly this wave suggesting that communications on protect public health and making the city centre more people-focused have had a positive impact. Acceleration of the uptake of lower emission vehicles remains the least known about and of least of importance to people. See table 7 below:

Table 7. Net awareness of impacts by wave

NET: Aware	Wave 1 Gen Pop 2022		Wave 2 Gen Pop 2023
Make the city centre a more attractive place to live, work and to visit by making it more pedestrian focused	60%	➡	72%
Encourage people to consider using public transport and active travel methods instead of driving	56%	➡	70%
Reduce air pollution from vehicle emissions to protect public health.	61%	➡	69%
Cleaner vehicles benefit all the areas they travel through, not just the LEZ	60%	➡	67%
Reduce carbon emissions to address the city's climate change 2030 target	56%	➡	64%
Accelerate the uptake of lower emission vehicles	56%		61%

Q8. The following are some of the benefits for the city that will come from the introduction of the LEZ. How aware of these impacts of Low Emission Zones would you say you are? **Base: Wave 1: 635, Wave 2: 642**

Chart 18. Awareness of impacts, General population

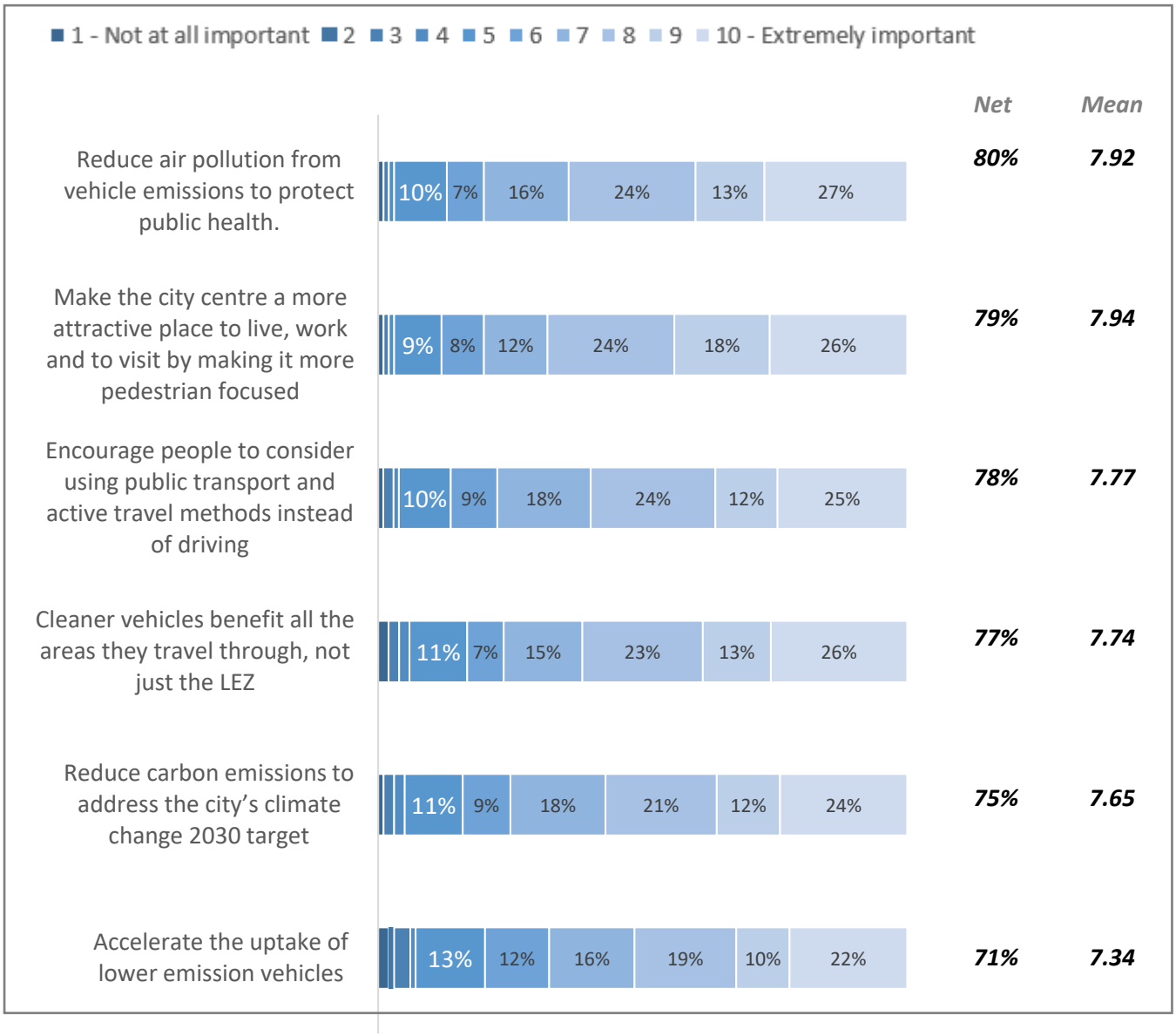


Q8. The following are some of the benefits for the city that will come from the introduction of the LEZ. How aware of these impacts of Low Emission Zones would you say you are?
Base: Wave 2: 642

A full breakdown of the differences across sub-groups (where they existed) can be found in appendix A.

Van drivers were not asked this question.

Chart 19. Importance of impacts, general population



Q9. And thinking of each of these impacts in turn, how important or unimportant would you say they will be for the people of Edinburgh? **Base: Wave 2: 642**

A full breakdown of the differences across sub-groups (where they existed) can be found in appendix A.

Van drivers were not asked this question.

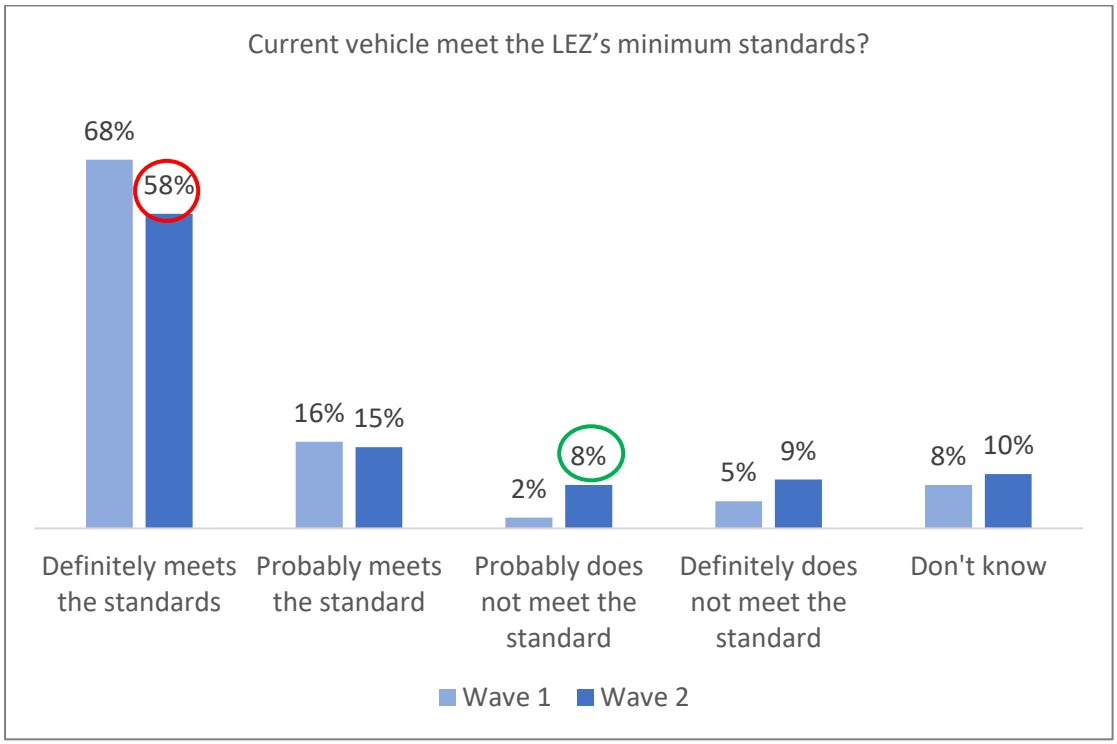
Behaviour change

The final section of the survey focuses on the status of respondents' current cars, whether they have replaced them in recent years and if so why. It continues with a set of questions designed to determine the likely changes respondents intend to make and when they intend to make them.

Status of current vehicle

The following chart illustrates that the majority (58%) consider their vehicles definitely meet the standards. This is a significant drop from wave one and may be the result of drivers being better educated about standards as the date for compliance becomes closer. Just under one in six (15%) think their vehicles probably comply. Less than one in ten (8%) think they probably do not meet the standards which is an increase on wave one and just under one in ten (9%) said their car definitely does not meet the standard which is also a significant increase on wave one. See chart 20.

Chart 20. Status of current vehicle, general population



Q10. To the best of your knowledge, does your current vehicle meet the LEZ's minimum standards?
Base: Wave 1: 631, Wave 2: 641

Van drivers were slightly but not significantly more likely than other drivers (80% compared to 73%) to say their vehicles met the standard. As with wave one those in higher SEG and city centre residents were more likely to comply when compared to their counterparts which suggests that polluting vehicles are more likely to come from outwith the LEZ boundary.

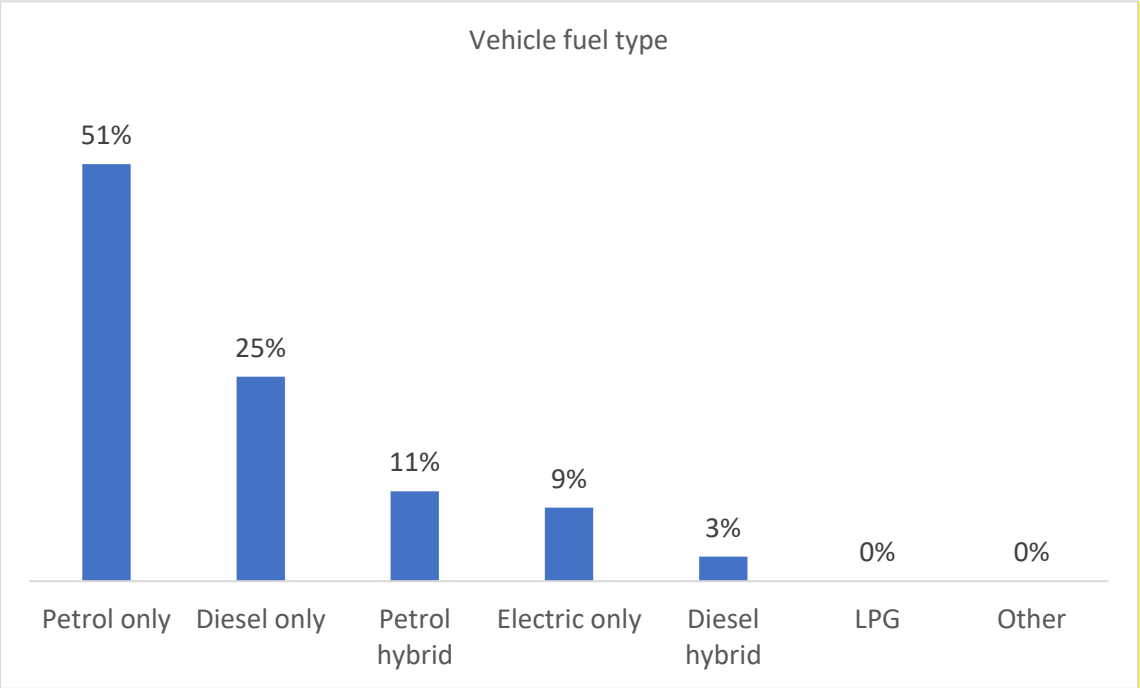
- ABC1s definitely meeting the standards was higher than C2DEs (76% vs 68%)

- Those in favour of the scheme were more likely to meet the standards than those opposed (83% vs 57%)
- City centre residents definitely meeting the standards was higher than those in other parts of Edinburgh (77% vs 57%)

Those who travelled less frequently (weekends only and mix of days) were more likely than daily and weekday travellers to say their vehicles do not meet the standards (24% and 22% vs 12%). Diesel drivers were more likely than petrol only to say their vehicles do not meet the standard (36% vs 14%). Those opposed to the scheme were more likely to meet the standards than those in favour (31% vs 11%).

Over half (51%) of the sample drove vehicles that were petrol only. A quarter drove diesel only vehicles just over one in ten (11%) drove petrol hybrid. See chart 21.

Chart 21. Fuel type of current vehicle, general population



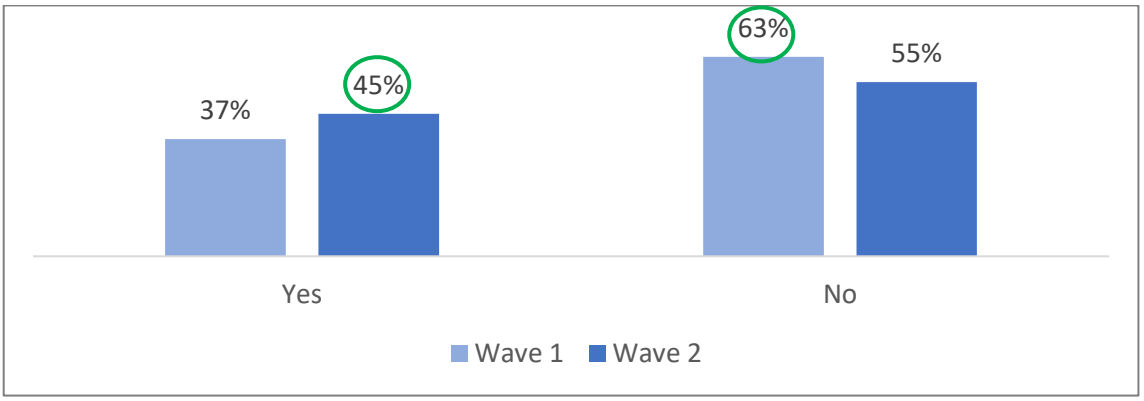
Q10b. To the best of your knowledge, what fuel type does your vehicle use?
Base: Wave 2: 641

Fuel type, Van drivers
Over half (58%) of van drivers drove diesel only vehicles, nearly one in 7 (14%) drove petrol only, the same percentage (14%) drove diesel hybrid and 6% drove petrol hybrid vehicles. Seven percent drove electric-only vehicles.

Car replacement

Of those whose cars met the standard just under a half (45%) claimed to have replaced their car in the last two years. This is a significantly higher percentage than in wave one. See chart 22.

Chart 22. Replaced in last 2 years, general population



Q11. Have you replaced your vehicle in the last two years?
Base (those whose car definitely or probably meets the standard): **Wave 1: 533, Wave 2: 468**

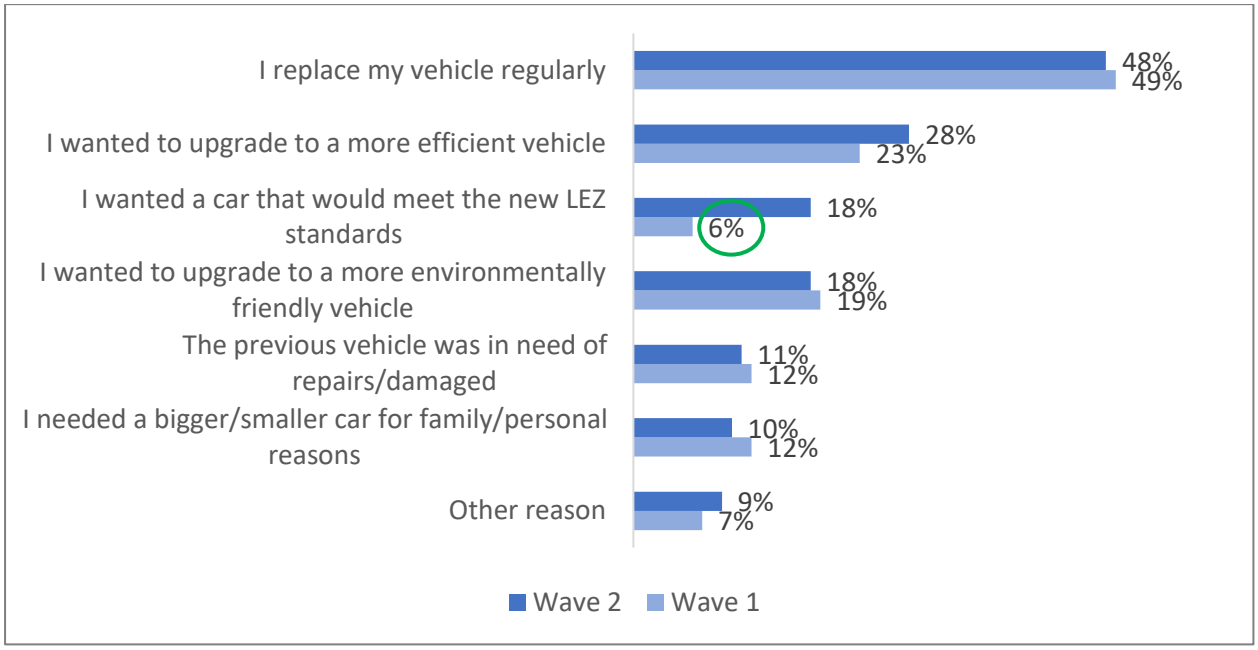
Vehicles replacement, Van drivers

The same percentage of van drivers (45%) had their main work vehicle replaced in the last two years. Drivers of electric and hybrid cars were more likely than drivers of petrol or diesel to have changed their vehicle in the last two years (83% and 78% vs 25% and 41%).

Why replaced, General population

When asked why they had change their cars the most often mentioned reason was because vehicles are changed regularly anyway. Just over a quarter (28%) said they wanted to have a more efficient vehicle and just under one in five (18%) wanted a car than met the new standards which is a significant increase on wave one. This suggests the scheme is encouraging people to accelerate the uptake of lower emission vehicles.

Chart 23. Why replaced, general population



Q12. Which of the following best describes why you replaced your vehicle in the last two years?
Base (all those who replaced your vehicle in the last two years): **Base Wave 1: 195, Wave 2: 211**

Women were more like than men to say they replace their vehicle regularly (60% vs 39%). ABC1 were slightly more likely than C2DE to say they wanted a more environmentally friendly vehicle (22% vs 11%)

Why replaced, Van drivers

Over half (54%) of van drivers who had replaced vehicles did so because their vehicle is regularly replaced. Just over a third (34%) said they did so because they wanted to upgrade to a more efficient vehicle. Just under one in five (18%) said it was to meet the new LEZ standards, 16% said to upgrade to a more environmentally friendly vehicle. 14% said the previous vehicle was damaged and 12 said they needed a different type of vehicle.

Actions planned as a consequence of LEZ

Respondents were asked what types of actions, if any, they thought might take as a consequence of the implementation of the LEZ. They could select more than one action, where relevant. The most popular planned actions in response to the introduction of LEZ were to:

- Use public transport, just over half said they would do this
- Two fifths said they would walk more
- Just over a quarter said they would use park and ride
- One in five said they would upgrade their vehicle
- Just over one in ten said they would use taxis more and a similar proportion said they would car share.
- One in ten said they would apply for support funds
- Over a third (35%) claimed they would make no changes.

Van drivers were more likely than other drivers to say they woud upgrade their vehicle, apply for grants and apply for support funds. See table 7 below.

Table 7. Planned actions

NET: Will act	Wave 1 Gen Pop 2022	Wave 2 Gen Pop 2023	Van Drivers 2023
Use public transport more (buses, tram, train)	47%	51%	N/A
Walk more	35%	40%	N/A
Make no changes at all	37%	35%	15%
Use park and ride (park outside the city centre and then use public transport)	29%	26%	N/A
Upgrade my vehicle	19%	20%	32%
Avoid the City Centre LEZ area	10%	12%	8%
Use taxis / private hire cars more	12%	11%	
Cycle more	6%	10%	N/A
Apply for other sustainable travel grants	10%	10%	21%
Apply for LEZ support funds to help upgrade my vehicle	10%	10%	20%
Car share in a compliant vehicle	11%	9%	N/A
Not travel to Edinburgh at all	4%	5%	6%
Give up my vehicle	3%	4%	N/A
Join a car club	4%	3%	N/A

Q13. How likely are you to take the following actions as a consequence of the introduction of the City Centre LEZ? **Base: Wave 1: 521-635, Wave 2: 530-642, Van drivers 3 to 35.**

A full sub-group analysis for this question can be found in the appendices, a quick overview of this is. It is worth noting that this wave saw fewer sub-group differences than wave one.

Van drivers were more likely to say they would upgrade their vehicle, apply for travel grants and support funds, when compared to the general population.

Those who are more likely to take up more active travel were in the youngest age group 18-34 year olds, Edinburgh residents, weekday travellers, those in favour of the LEZ scheme and men.

Edinburgh residents and city centre residents were more likely than those living outwith Edinburgh to apply for grants or support funds. As were drivers of electric vehicles, men and those in lower SEG C2DE.

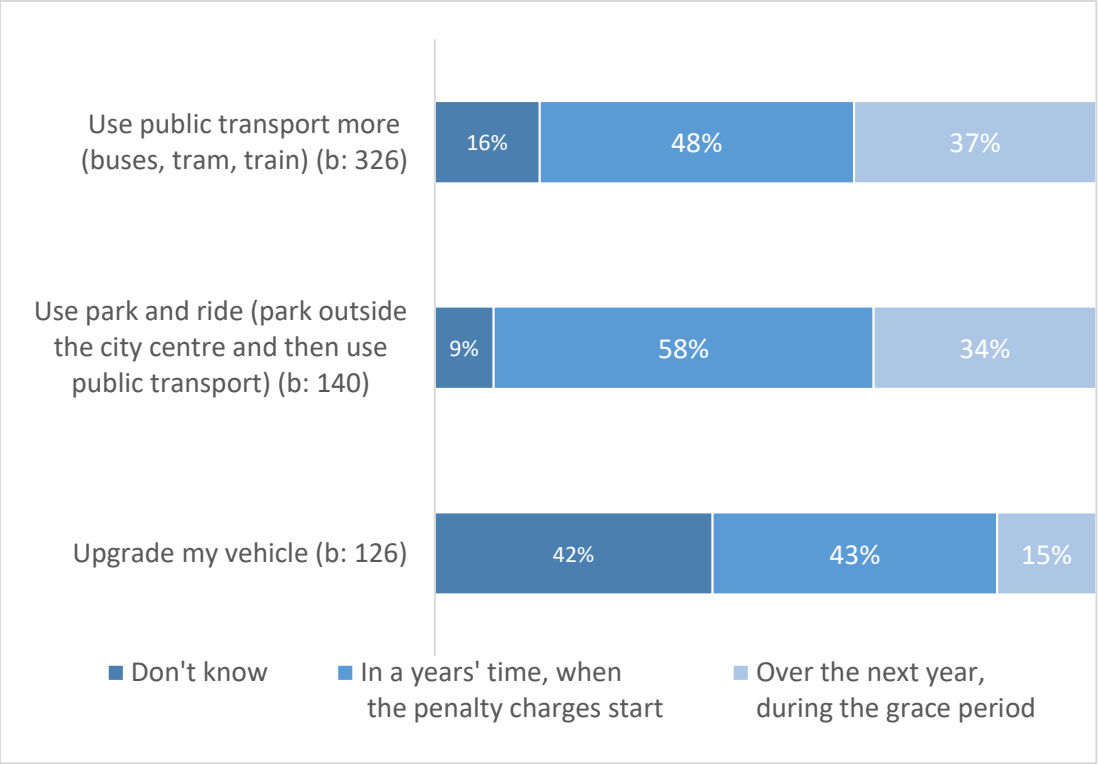
Those who would avoid the city centre were lower SEG C2DE and those opposed to the LEZ scheme. City centre residents were more likely than other residents to say they would join a car club. Women were more likely than men to use public transport more often or use taxis/private car hire.

Time of planned change

Respondents were asked how soon they might start to make the changes they expect to make in light of the introduction of the LEZ. With the exception of those who say they will start using public transport more often, most expect to postpone making changes in a years' time when penalty charges start (see chart 24).

Most of the small number respondents (in each case less than 30) who said they would give up their car, not travel to Edinburgh to Edinburgh at all or join a Car Club also expected to postpone their actions for the next year until the penalty charges come into force.

Chart 24. Time of planned change, general population



Q14. You said you would be likely to make changes as a consequence of the LEZ: how soon do you think you might make these changes? During the next year (the grace period) or by June 2024 when the fixed penalties will be charged for vehicles that do not comply. **Base: Wave 2: 126-326**

In the previous (wave 2022) this question was asked differently in that we applied different timelines: In the near future/over the next couple of years, during the grace period/in two years' time, when the penalty charges start. It is therefore not possible to compare results across the two waves.

Differences that occurred across the time periods and with various sub-groups are documented below:
Use public transport more:

- SEG ABC2 were more likely than C2DE to make this change during the grace period (41% vs 27%)
- Those in favour of the LEZ are more likely to make this change in the grace period compared to those opposed (46% vs 12%)
- Edinburgh residents more likely to make this change during the grace period, compared to the rest of Scotland (41% vs 30%)
- Those who travel on weekdays/part week are more likely to act in the grace period compared to weekends only, other mix of days travellers and everyday travellers (52% vs 27%, 49% and 31%).

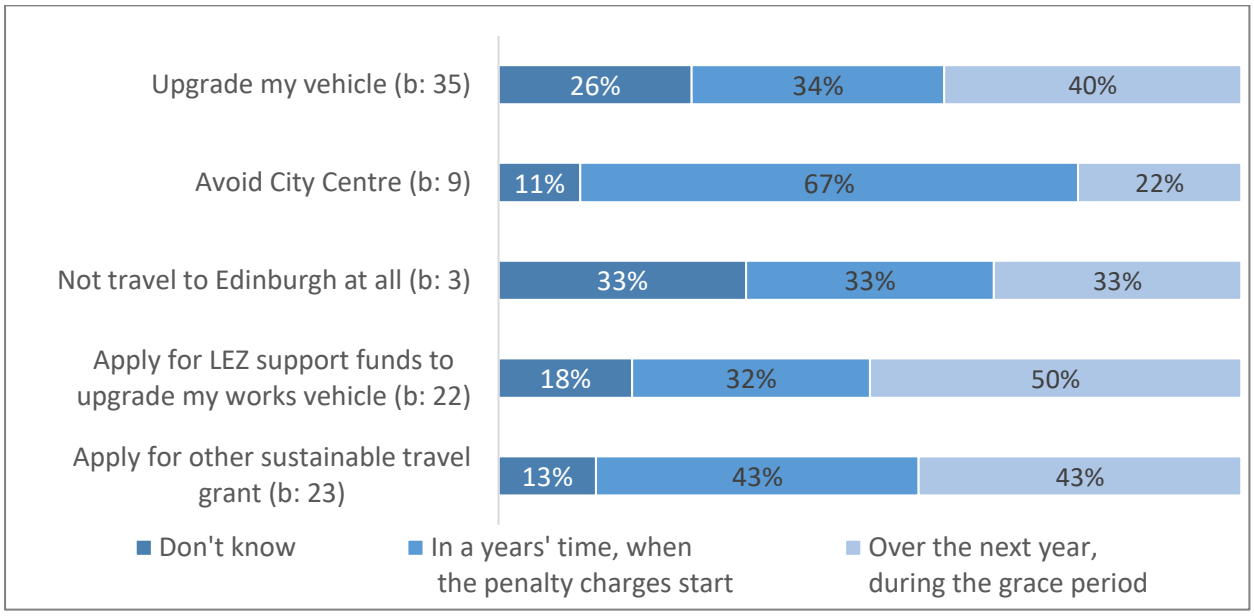
Use park and ride:

- Edinburgh residents are more likely to use over the grace period compared to the rest of Scotland (44% vs 25%).

***Time of planned change,* Van drivers**

Van drivers were asked how soon they might start to make the changes they expect to make in light of the introduction of the LEZ. There was a mix of those who expect to postpone making changes in a years' time when penalty charges start and those who will make changes over the next year during the grace period. See chart 25.

***Chart 25. Time of planned change,* Van drivers**

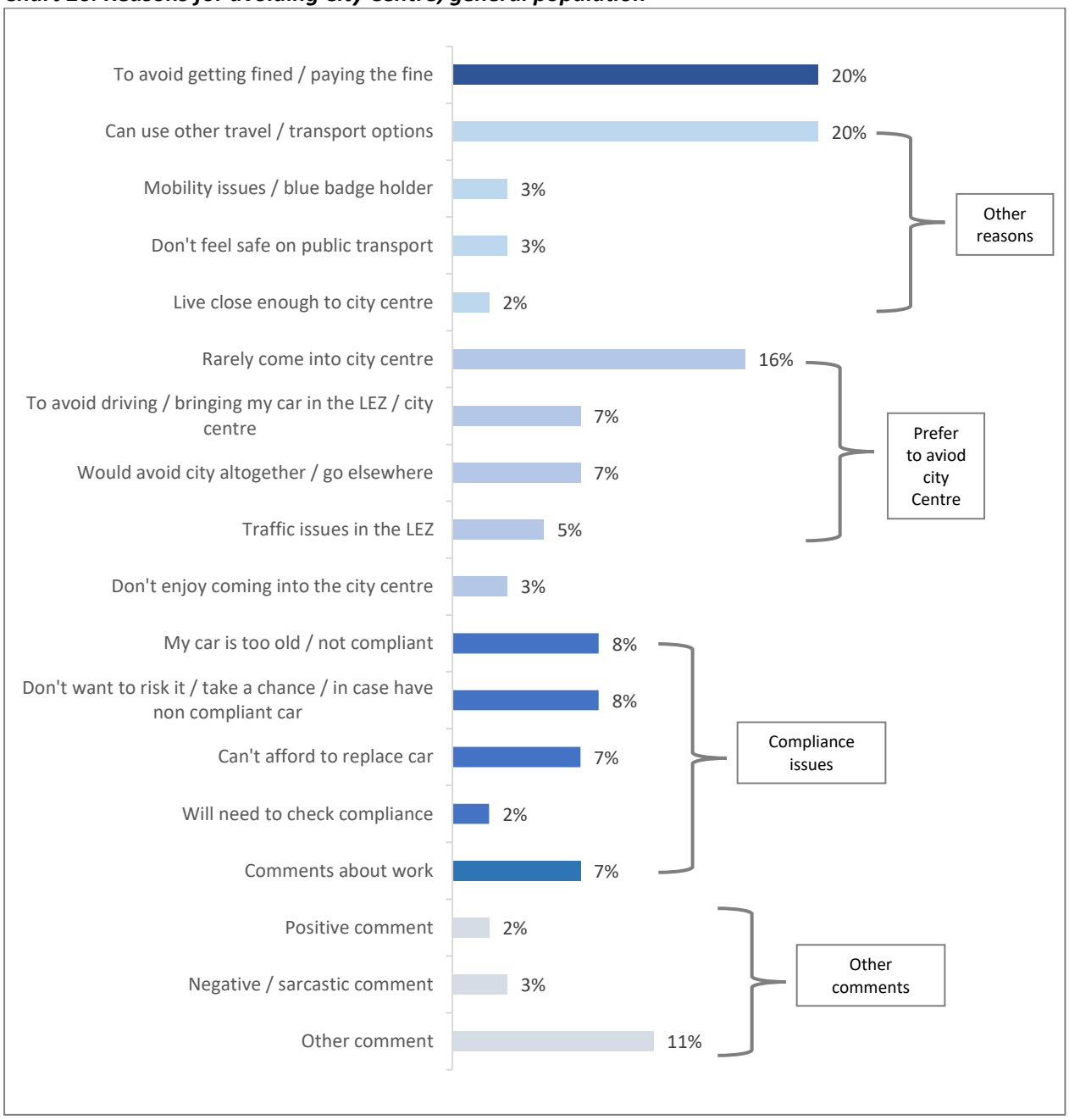


Q11. You said you would be likely to make changes as a consequence of the LEZ: how soon do you think you might make these changes? **Base: 3-35**

Reasons for making or avoiding change

The few who said they would avoid the city centre once the LEZ was introduced were asked why and given an open text box to explain their thinking. The base number to this question was fairly low with only 61 saying they would avoid the city centre and so the table below should be read with caution. As with wave one the main reason given was to avoid the fine. See chart 25:

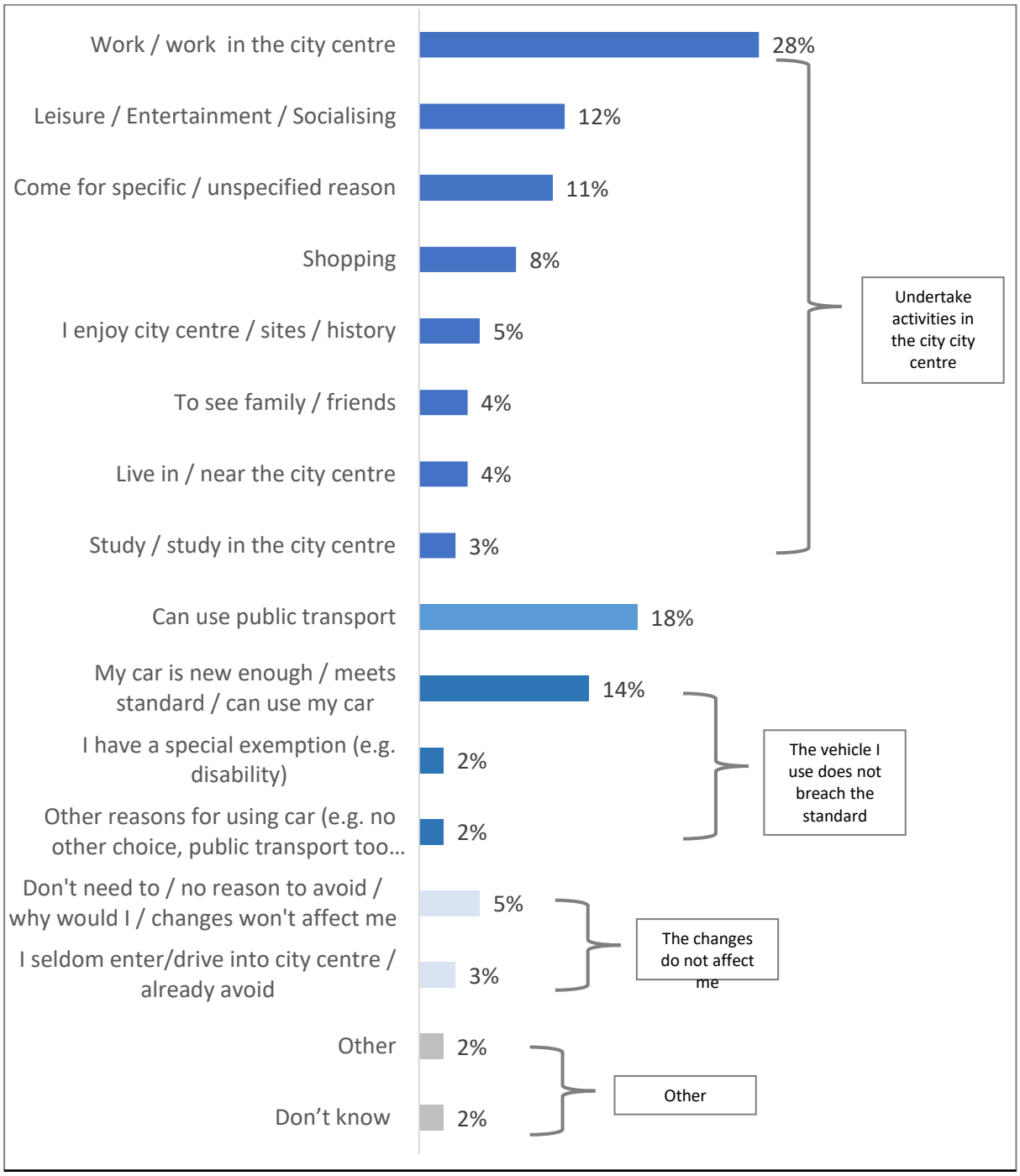
Chart 26. Reasons for avoiding City Centre, general population



Q15 - You said it was likely you would avoid the City Centre LEZ area – why is that? **Base 61**

A much larger proportion (406 respondents) said it was unlikely they would avoid the City Centre after the LEZ was introduced. When asked why that was the case, as with wave one the biggest mention was because they work in the City Centre. This was followed by other reasons to be in the City Centre, such as leisure and shopping. Some said their car was new enough not to worry about the LEZ, others said they could use public transport. Reasons given are illustrated in chart 26.

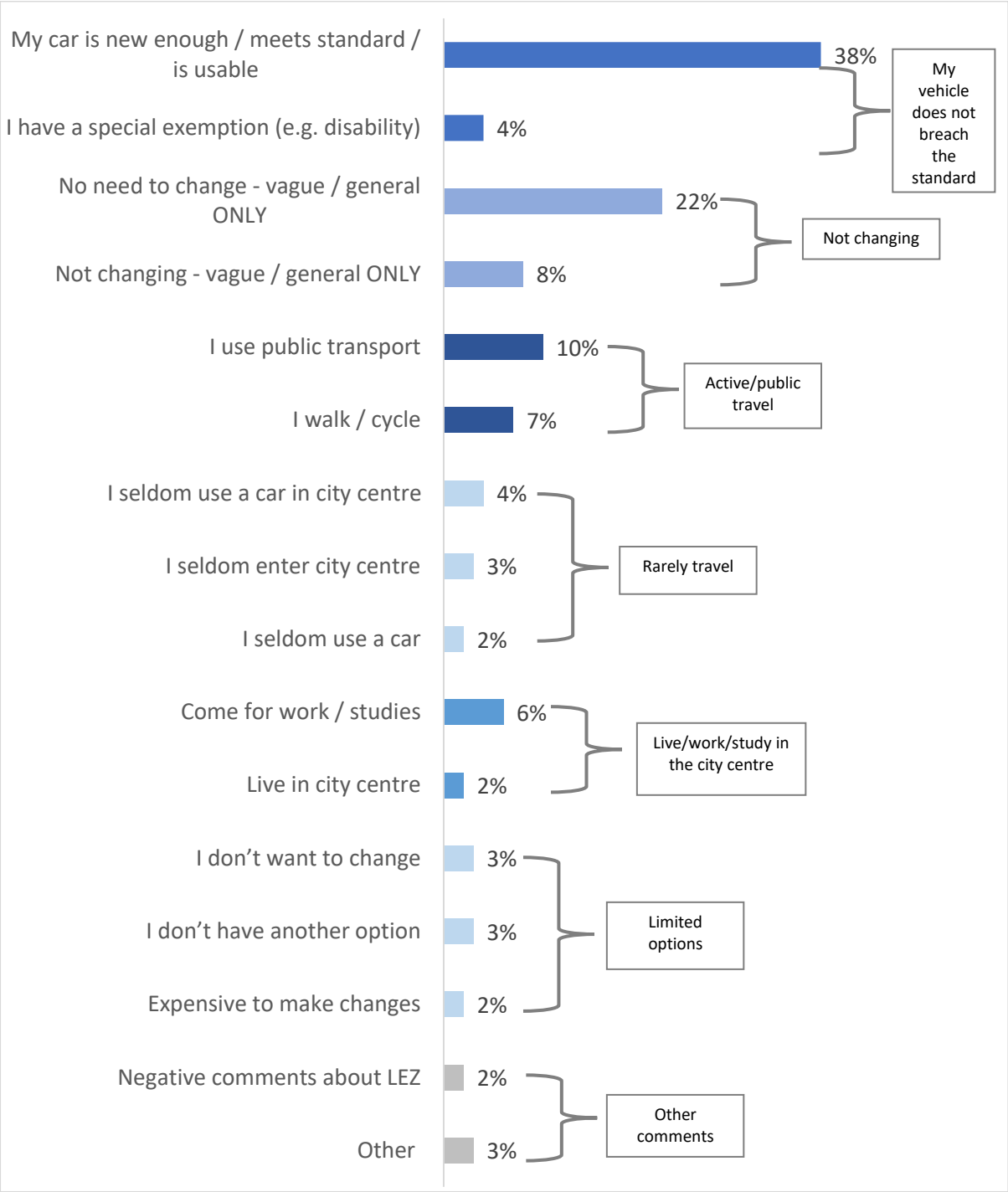
Chart 27. Reasons for not avoiding City Centre, general population



Q16: You said it was likely you would not avoid the City Centre LEZ area – why is that? **Base 406**

Those who claimed they would make no change (226 respondents) as a consequence of LEZ were asked why. As with wave one the main reason given is their car meets the new standard. They were given an open text box to explain their thinking. All responses are illustrated below in chart 27.

Chart 28. Reasons for not making change , general population



Q17 - You said it was likely you would make no changes at all as a consequence of the City Centre LEZ – why is that? **Base: 226**

Appendix A: Additional data tables and sub-group analysis

Gender	Wave 1	%	Wave 2	%
Man (including trans man)	317	50%	336	52%
Woman (including trans woman)	316	50%	305	48%
Other	1	0%	1	0%
Prefer not to say	1	0%	0	0%
Base	**635**	**100%**	**642**	**100%**

Physical or mental health condition or illness	Wave 1	%	Wave 2	%
Yes	57	9%	64	10%
No	561	88%	555	86%
Don't know	7	1%	1	0%
Prefer not to say	10	2%	22	3%
Base	**635**	**100%**	**642**	**100%**

Blue Badge holding	Wave 1	%	Wave 2	%
Yes	34	5%	53	8%
No	596	94%	582	91%
Don't know	3	0%	1	0%
Prefer not to say	2	0%	6	1%
Base	**635**	**100%**	**642**	**100%**

Interviewer location: Main sample	#	%		#	%
Edinburgh Waverly Station/New Street	96	15%	NCP Castle Terrace	92	14%
Thistle Street/Semple Street car parks	85	13%	Princes Exchange	72	11%
Omni Centre	88	14%	Q-Park Quartermile	60	9%
NCP Grindley Street	62	10%	NCP Holyrood Road	87	14%

Interviewer location: van drivers	#	%
West Shore Road/Granton Harbour	20	18%
Bonnington/Tennant St Industrial Estate	20	18%
Newbridge Industrial Estate	20	18%
Seafield Industrial Estate	30	27%
Bankhead/Sighthill industrial estate	20	18%

Sub-group analysis for Q8
How aware of these impacts of Low Emission Zones would you say you are?

Make the city centre more attractive:

- Those aged 75+ were more aware than other age groups (100% vs, 18-34 (64%) 35-44 (75%) 55-75 (72%))
- Those in favour were more aware that those opposed (83% vs 48%)
- Edinburgh residents were more aware than the rest of Scotland (79% vs 62%)
- City centre residents were more aware than those in other parts of Edinburgh (86% vs 76%)
- Electric and hybrid vehicle drivers compared to petrol and diesel (84% & 80% vs 69% & 69%)

Encourage people to consider using public transport:

- Those in favour were more aware that those opposed (78% vs 53%)
- Edinburgh residents more aware than the rest of Scotland (75% vs 62%)
- City centre residents were more aware than those in other parts of Edinburgh (83% vs 72%)
- Electric and hybrid vehicle drivers were more aware compared to petrol and diesel (88% & 77% vs 67% & 66%)

Reduce air pollution from vehicle emissions:

- Those in favour were more aware that those opposed (81% vs 45%)
- Edinburgh residents more aware than the rest of Scotland (75% vs 60%)
- City centre residents were more aware than those in other parts of Edinburgh (82% vs 72%)
- Electric and hybrid vehicle drivers were more aware compared to petrol and diesel (84% & 79% vs 65% & 66%)

Cleaner vehicles benefit all the areas they travel through:

- Those in favour were more aware that those opposed (79% vs 45%)
- Edinburgh residents more aware than the rest of Scotland (75% vs 56%)
- City centre residents were more aware than those in other parts of Edinburgh (84% vs 71%)
- Electric and hybrid vehicle drivers were more aware compared to petrol and diesel (83% & 79% vs 64% & 64%)

Reduce carbon emissions 2030:

- Those in favour were more aware that those opposed (72% vs 45%)
- Edinburgh residents more aware than the rest of Scotland (70% vs 54%)
- City centre residents were more aware than those in other parts of Edinburgh (79% vs 67%)
- Electric and Hybrid vehicle drivers were more aware compared to petrol and diesel (79% & 77% vs 59% & 61%)

Accelerate the uptake of low emission vehicles:

- Those in favour were more aware that those opposed (70% vs 42%)
- Edinburgh residents more aware than the rest of Scotland (67% vs 52%)
- City centre residents were more aware than those in other parts of Edinburgh (79% vs 63%)
- Electric and hybrid vehicle drivers were more aware compared to petrol and diesel (84% & 72% vs 55% & 60%)

Sub-group analysis for Q9
And thinking of each of these impacts in turn, how important or unimportant would you say they will be for the people of Edinburgh?

Reduce air pollution from vehicle emissions:

- Those in favour thought it more important than those opposed (93% vs 53%)
- Edinburgh residents thought it more important than the rest of Scotland (82% vs 77%)

Make the city centre more attractive:

- Women scored higher importance than men (84% vs 75%)
- Those in favour thought it more important than those opposed (93% vs 50%)

Encourage people to consider using public transport:

- Women scored higher importance than men (82% vs 74%)
- Those in favour thought it more important than those opposed (91% vs 52%)
- Edinburgh residents scored higher than the rest of Scotland (81% vs 74%)
- Electric and hybrid vehicle drivers gave more importance than petrol and diesel drivers (90% & 88% vs 76% & 62%)

Cleaner vehicles benefit all areas:

- Women scored higher importance than men (83% vs 71%)
- Those in favour thought it more important than those opposed (90% vs 44%)

Reduce carbon emissions 2030:

- Women scored higher importance than men (82% vs 68%)
- Those in favour thought it more important than those opposed (91% vs 52%)

Accelerate the uptake of low emission vehicles:

- Women scored higher importance than men (73% vs 62%)
- Those in favour thought it more important than those opposed (82% vs 41%)
- Edinburgh residents scored higher than the rest of Scotland (71% vs 62%)
- Electric and hybrid vehicle drivers gave more importance than petrol and diesel drivers (86% & 76% vs 76% & 66%)

Sub-group analysis for Q13

How likely are you to take the following actions as a consequence of the introduction of the city centre LEZ?

Use public transport more:

- Women more likely to take an action than men (56% vs 46%)
- Public transport users more likely to act than active travellers and car users (61% vs 53% & 52%)

Walk more:

- Those aged 18-34 years old more likely to walk more than older age groups (52% vs 33%)
- Weekday/part week travellers were more likely to walk more than everyday, weekend and mixed day travellers (55% vs 38%, 29% & 34%)
- Edinburgh residents were more likely to walk more than the rest of Scotland (46% vs 32%)
- Those in favour more likely to act than those opposed (44% vs 30%)

Make no changes at all:

- Men more likely to make no changes than women (39% vs 31%)
- Those who travel daily were more likely to make no changes than those who travel weekdays, weekends and a mix of days (46% vs 33%, 29% & 30%)

Use park and ride:

- Weekends only travellers more likely to act compared to those that travel everyday (45% vs 23%)

Upgrade my vehicle:

- C2DEs more likely to act than ABC1s (27% vs 16%)
- Weekday travellers more likely to act compared to other travellers (29% vs 15%)
- Those in favour more likely to act than those opposed (21% vs 13%)

Avoid the city centre LEZ:

- C2DEs more likely to act than ABC1s (19% vs 8%)
- Those opposed to the LEZ more likely to act than those in favour (17% vs 8%)
- Edinburgh residents less likely to avoid city centre than the rest of Scotland (9% vs 14%)

Use taxis/private hire cars:

- Women more likely to take an action than men (14% vs 9%)

Apply for LEZ support funds:

- C2DEs more likely to act than ABC1s (18% vs 7%)
- Edinburgh residents more likely to act than the rest of Scotland (14% vs 5%)
- City centre residents more likely to act than those in other parts of Edinburgh (26% vs 9%)
- Electric vehicle drivers more likely to act than drivers of other vehicles (31% vs 9%)

Sub-group analysis for Q13 cont:
How likely are you to take the following actions as a consequence of the introduction of the city centre LEZ?

Apply for other sustainable travel grants:

- Men more likely to not act than women (12% vs 7%)
- Those aged 18-34 years old more likely to act than 35-75 year olds (15% vs 7%)
- Edinburgh residents more likely to act than the rest of Scotland (14% vs 3%)
- City centre residents more likely to act than those in other parts of Edinburgh (24% vs 10%)
- Electric vehicle drivers more likely to act than drivers of other vehicles (31% vs 7%)

Cycle more:

- Men more likely to not act than women (13% vs 6%)
- Those aged 18-34 years old more likely to act than 35-75 year olds (21% vs 6%)

Not travel to Edinburgh at all:

- Those opposed to the LEZ more likely to act than those in favour (11% vs 1%)
- C2DEs more likely to act than ABC1s (8% vs 4%)

Join a car club:

- City centre residents more likely to act than those in other parts of Edinburgh (8% vs 2%)

Appendix B: Technical appendix

Method

Quantitative

1. The data was collected by survey
2. The target group for this research study was people living in, travelling to and through the Edinburgh LEZ area. All had to be car owners or van drivers living within Scotland.
3. The sample type was non-probability. Respondents were selected using a stratified random sampling technique, where interviewers worked to specified quota controls on key sample criteria (sex and age), and selected respondents randomly within these quotas.
4. The target sample size was 700 (600 in the main sample, 100 in the van drivers) and the final achieved sample size was 752. The reason for the difference between these two samples was to achieve a good spread of age and sex across the sub-samples.
5. Fieldwork was undertaken between 22nd April and 6th May 2023.
6. Quota controls guided the sample selection for this study. This means that statistically precise margins of error or significance testing are not appropriate, as the sampling type is non-probability. The margins of error outlined below are therefore indicative, based on an equivalent probability sample.
7. In total, 13 interviewers worked on data collection.
8. Interviews lasted approximately 13 minutes.
9. Each interviewer's work was validated as per the requirements of the international standard ISO 20252. Validation was achieved by re-contacting (by telephone or email) a minimum of 10% of the sample to check profiling details and to re-ask key questions from the survey. Where telephone details were not available re-contact may have been made by post. All interviewers working on the study were subject to validation of their work.
10. All research projects undertaken by Progressive comply fully with the requirements of ISO 20252, the GDPR and the MRS Code of Conduct.

Data processing and analysis

11. Quota controls guided the sample selection for this study. This means that statistically precise margins of error or significance testing are not appropriate, as the sampling type is non-probability. The margins of error outlined below are therefore indicative, based on an equivalent probability sample.
12. The overall sample size of 642 (main sample) provides a dataset with an approximate margin of error of between ±0.77% and ±3.87%, calculated at the 95% confidence level (market research industry standard). The sample of 110 (van drivers) provides a dataset with an approximate margin of error of between ±1.86% and ±9.34%.
13. *We are confident that the achieved sample provides a good representation of the* target population.
14. Our data processing department undertook a number of quality checks on the data to ensure its validity and integrity. Responses were checked to ensure that interviewer and location were identifiable. Any errors or omissions detected at this stage were referred back to the field department, who re-contacted interviewers to check.
15. A computer edit of the data prior to analysis involved both range and inter-field checks. Any further inconsistencies identified at this stage were investigated by reference back to the raw data on the questionnaire.

16. Where ‘other’ type questions were used, the responses to these were checked against the parent question for possible up-coding.
17. Responses to open-ended questions were sense checked and grouped using a code-frame and analysed by theme. A SNAP programme was set up on order to provide the client with useable and comprehensive data. Crossbreaks were discussed with the client in order to ensure that all information needs are met.