Transport Scotland

Attitudes to roadworks: South West OCA

May 2019

Contents

Project background

Transport Scotland is responsible for maintaining, upgrading and monitoring the trunk road network across Scotland. Roadworks are essential to ensure the roads network is maintained to a high standard

It has become general practice to minimise the impacts of roadworks on road users, with works being undertaken overnight, at weekends, or with lane closures rather than by closing the carriageway.

There are concerns that this approach may result in inefficient working, increased costs, sub-optimal repairs, and reduced road-worker safety.

The research aims to explore road user and local business preferences for managing roadworks and to consider how the impacts of traffic management could be best mitigated.

The study focuses on the South West OC; mainly on the A75, A76 and A77. It also covers the stretch of the A82 between the Erskine Bridge and Balloch.

The research will be used to inform and support the planning of roadworks and specifying appropriate restrictions in future maintenance contracts.

Project Objectives

To identify road users' views on traffic management at roadworks

- How road works are conducted (e.g. lane closure vs road closures)
- When road works are carried out (time of day, weekday/weekend, holiday)
- Explore variations between types of road user

To identify ways of informing road users about roadworks

- Identify the channels currently used by road users prior to travel
- Explore how road users want to receive information about road works
- Identify how far in advance information is needed by road users

To explore local businesses' views on traffic management at roadworks.

- How road works are conducted (e.g. lane closure vs road closures)
- When road works are carried out (time of day, weekday/weekend, holidays)
- Impacts of road works on business
- Potential to mitigate impacts by providing information about forthcoming roadworks

In addition, a key output from the study will be lessons on study approach and implementation, which can be applied if the research is extended across the country.

Method

Summary of approach

- The research was undertaken in two phases:
  - Phase 1: Computer Aided Personal Interviewing (CAPI) survey of road users in the South West OCA, as follows: A75, A76, A77 and the portion of the A82 between the Erskine Bridge and Balloch.
  - Phase 2: CAPI survey of local businesses also in the South West OCA: covering businesses located close to the A75, A76 and A77.

- Phase 1: Road users
  - Sampling approach: quota sample designed to reflect a range of road users who would be affected by roadworks: HGV drivers, commuters, drivers making personal trips and business drivers.
  - A target of 700 interviews was set; and in order to achieve quotas on each of the road user, the achieved sample was 744.
  - The margin of error[1] for the sample as a whole was ±0.71 to ±3.59. For the sub-groups of road users, these range from ±1.98 to ±9.95 for HGV drivers to ±1.23 to ±6.17 for drivers making personal trips.
  - Interviewing was carried out over a number of locations across the study area: Cairnryan Ferry Terminal, Bellfield Services, Monkton Services, carparks in Dumfries, Hetland Garden Centre, Lomondgate Services, and Ayr town centre.
  - The fieldwork was carried out over the period 30th Aug to 1st Oct 2018. All interviews were carried out during the day (7am – 6pm).

- Phase 2: Local businesses
  - Sampling approach: quota sample designed to reflect a range of local businesses, located along the A75, A76, A77.
  - A target of 50 interviews was set and achieved; with quotas on each of the roads to ensure a good spread across the area. Interviewers were asked to achieve a good mix of business types, but formal quotas on types of businesses were not set.
  - The fieldwork was carried out over the period 6 – 20 November 2018.

[1] Quota controls will guide 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 are therefore indicative, based on an equivalent probability sample.

Data Analysis

Only **statistically significant** differences are reported

Statistically significant differences between sub-groups on charts are noted with ⬭ or ⬭

Where figures do not add to 100% this is due to multi-coded responses or rounding

Sample

Sample profile
Road users

Quotas were developed in consultation with the client, based on their knowledge and understanding of local road use, to achieve a good spread of drivers and to achieve a robust sample from each driver type.

In the achieved sample:

- Around a third of the respondents were travelling for personal reasons – such as school runs, hospital visits, leisure trips
- A third were commuting
- A fifth were travelling on business: for example, attending meetings, couriers
- Just over one in ten were HGV drivers.

It is noted that secondary data on local road use was not available, so it was not possible to assess the overall representativeness of the final sample.

A total of eight interview locations were tested over the course of the road users survey. The service stations and Cairnryan Port provided high numbers of road users, a good mix of driver types, and coverage of the trunk road network. As a consequence, the majority of interviews were conducted across these locations.

Driver type	Target	Achieved	%
Personal/leisure	225	252	34%
Commuter	230	239	32%
Business	*150	156	21%
HGV	95	97	13%
Base		**744**	**100%**

* Quotas were set for all driver types. The business driver target was initially 200. However, based on the outcomes from the early sampling points, this was not achievable, and the target was revised to 150. The balance was allocated to HGV (20) and commuters (30). The target for interviews was 700; with a total of 744 achieved.

Interview locations	No.	%
Monkton Services	199	27%
Kilmarnock Services: Bellfield	189	25%
Cairnryan	139	19%
Lomondgate services	129	17%
Hetland Garden Centre	30	4%
Ayr town centre	22	3%
DGC - Cargenbridge Car Park	20	3%
Dumfries: town centre	16	2%
Base	**744**	**100%**

Sample profile
Road users

Drivers identified all the local trunk roads, and the main trunk road, their journey included. As the table shows, there was very little difference between their answers to these questions, indicating that almost all the journeys covered a single trunk road.

More than half of the respondents were travelling on the A77. Several of the interview locations picked up these drivers, including the Kilmarnock Services, Monkton Services and the Cairnryan Port. The proportions of commuters and business travellers using the A77 for the biggest part of their journey was relatively high (75% and 71% respectively).

Around a fifth of respondents were travelling on the A82. All of these respondents were interviewed at Lomondgate.

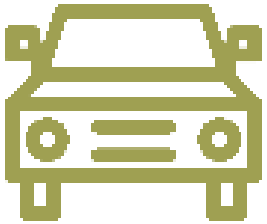
Roads used	Roads that the journey includes		Main road travelled	
	No.	%	No.	%
A77 Stranraer to Kilmarnock	427	57%	416	56%
A75 Gretna to Stranraer	136	18%	131	18%
A82 Erskine Bridge to Balloch	132	18%	131	18%
A76 Dumfries to Kilmarnock	76	10%	66	9%
Base	**744**	**100%**	**744**	**100%**

Sample profile
Road users

Quotas were not set on age and sex.

Around two-thirds of the respondents were male and one third were female.

Two-fifths of the respondents were aged under 45 years and a further quarter were aged 45-54.



Age	No.	%		No.	%
18-24 years	51	7%	55-64 years	139	19%
25-34 years	121	16%	65-74 years	82	11%
35-44 years	141	19%	75+ years	16	2%
45-54 years	190	26%	Prefer not to say	4	1%
Base				**744**	**100%**

Sex	No.	%
Male	505	68%
Female	239	32%
Base	**744**	**100%**

The journey

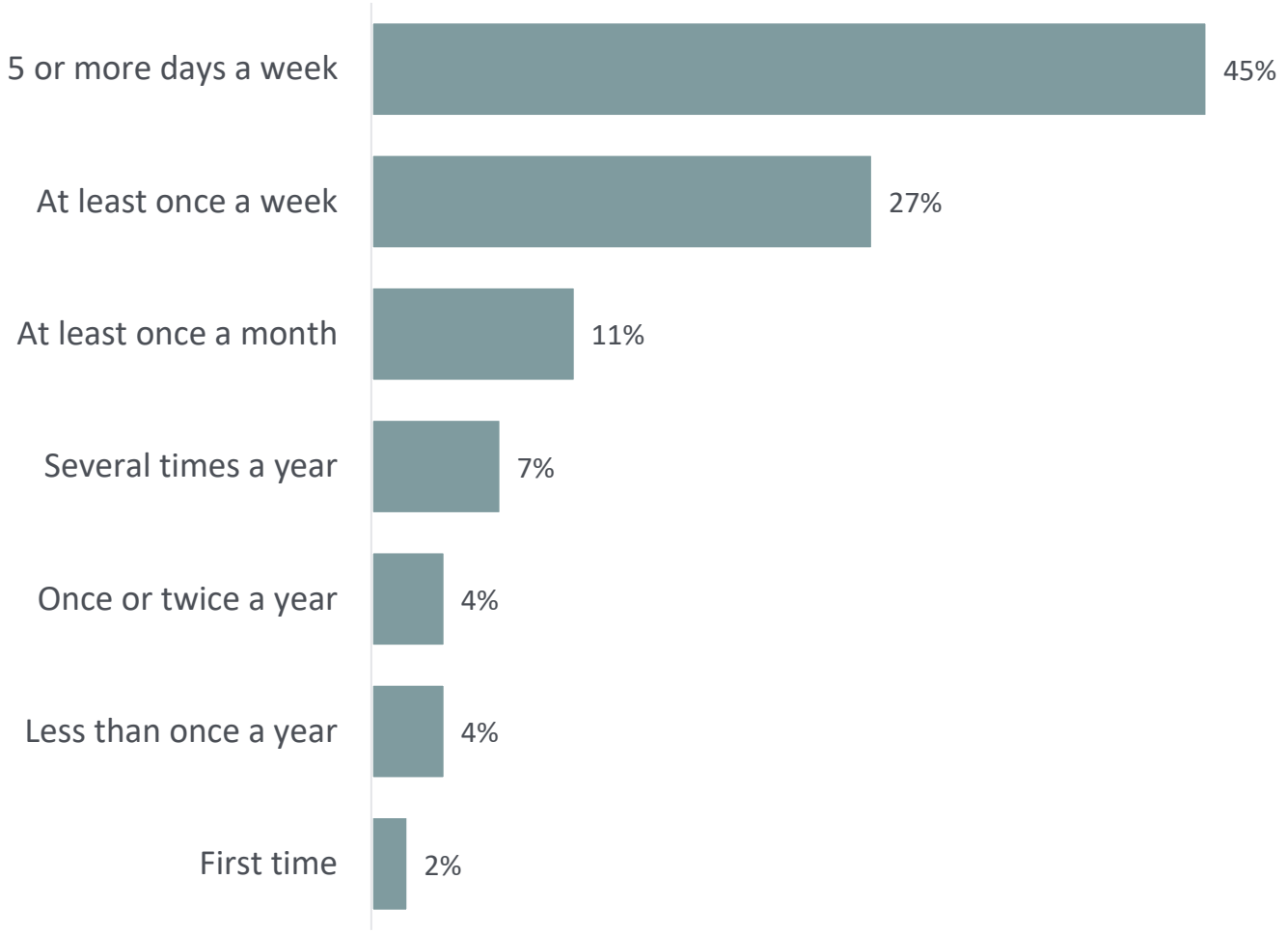
Frequency

Just under half of the drivers made the journey 5 or more days a week and a further quarter made the journey at least once a week.

- Commuters (64%) were most likely to make the journey most days (5 or more days), while personal drivers (30%) were least likely.
- Just 10% respondents said they made the journey infrequently (once or twice a year, or less); almost all were personal drivers (64 of the 78 respondents).

On the whole, the respondents were regular users of the roads.

Frequency of this journey



Q5RU - How frequently do you travel on this road?

Base (all) 744

Sample profile
Local businesses

Business respondents identified all the local trunk roads, and the main trunk road, as important to their business.

Almost half of the businesses said the A77 and the A75 were important to them, while around a third said A76 was important to them.

Just under half said the A77 was the most important road for their business; followed by the A75 and the A76. This is in line with the sample profile.

Most businesses mainly operated within the local area. However, more than one in ten were operating UK-wide, and almost a fifth were operating worldwide.

Businesses for whom the A77 was considered the road most important to them were less likely to be operating primarily in the immediate area (18%) and more likely to be operating at a UK level (32%).

Roads	Sample		Trunk roads important to business		Trunk road most important to business	
	No	%	No.	%	No.	%
A77 Stranraer to Kilmarnock	22	44%	23	46%	22	44%
A75 Gretna to Stranraer	16	32%	23	46%	16	32%
A76 Dumfries to Kilmarnock	12	24%	19	38%	12	24%
Base					**50**	

Area of operation	No	%
Immediate local area	26	52%
Wider Ayrshire area	2	4%
Wider Dumfries and Galloway area	2	4%
Scotland	4	8%
UK	7	14%
Worldwide	9	18%
Base	**50**	**100%**

Sample profile
Local businesses

Quotas were not set on the type of business to be included in the survey, although interviewers were instructed to aim for a mix of businesses:

- Around half were retail – shops, convenience stores, and so on
- Around a quarter were food and drink – cafes, pubs, restaurants, take-aways
- Around one in ten were tourism and leisure
- The others were mix of motor trade, health and beauty, and so on.

This gave a good mix of businesses requiring regular deliveries from suppliers, good access to premises for customers (including businesses relying on passing trade), and businesses which make deliveries to customers.

Interviews were carried out with the business owner or senior staff.

Role in business*	No.	%
Owner	24	48%
Site/unit manager	5	10%
Operations manager	6	12%
Supervisor of small business – left in charge	15	30%
Base	**50**	**100%**

* To ensure respondents could provide an informed opinion for their business, only senior employees or business owners were interviewed.

Type of business	No.	%
Retail	23	46%
Food and drink	14	28%
Tourism and leisure	7	14%
Medical services	2	4%
Health and beauty	1	2%
Motor trade	1	2%
Base	**50**	**100%**

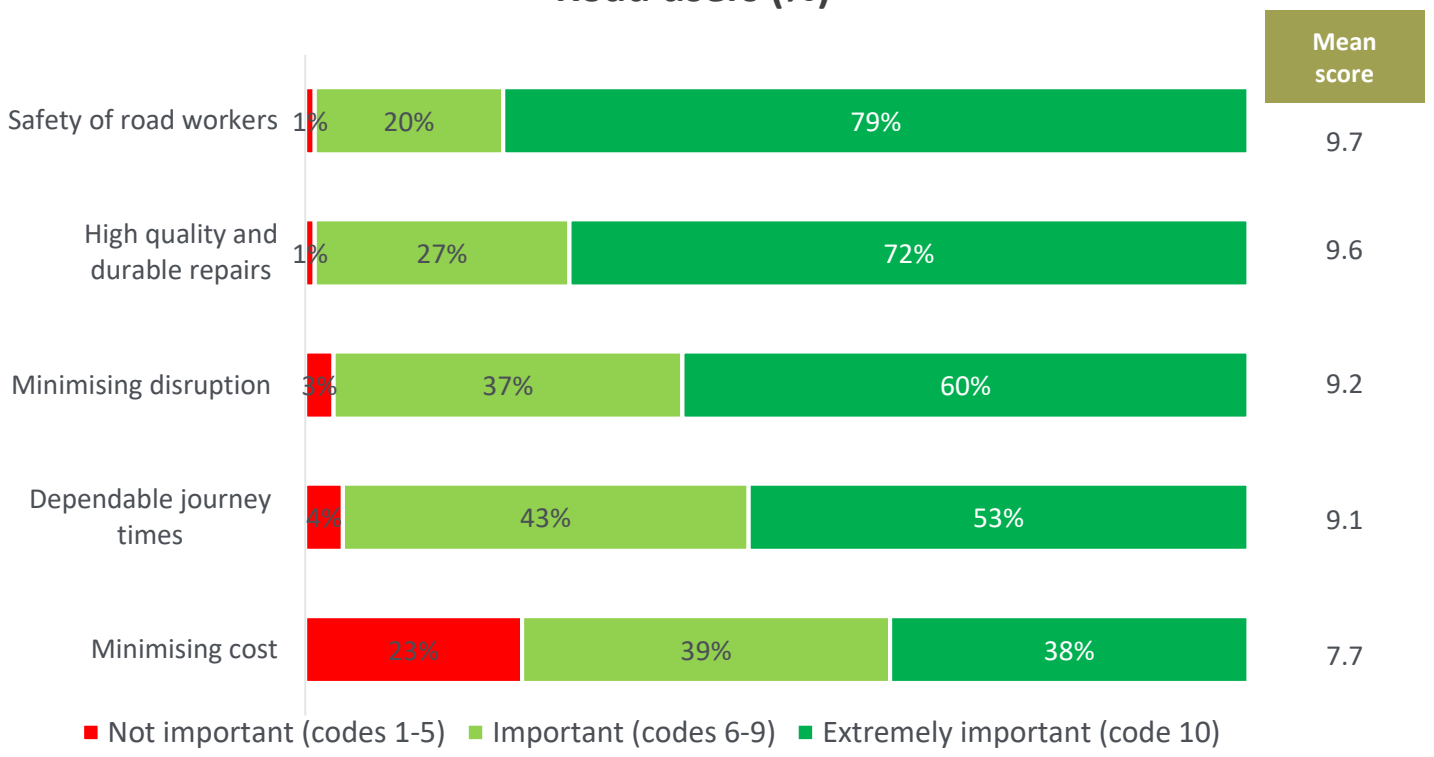
Roadwork management

Priorities: Road users

Almost all (99%) the respondents considered the safety of road workers important. Indeed, most (79%) considered worker safety to be extremely important.

- The quality of repairs was also considered important by almost all the respondents. Possibly related to this, respondents tended to consider minimising costs much less important, with around a quarter saying this was unimportant.
- Critically, worker safety and quality of repairs scored considerably higher than issues of minimising disruption and ensuring dependable journey times. Nonetheless, very few respondents went so far as to say these factors were unimportant.
  - HGV drivers were more likely than other drivers to say dependable journey times are extremely important (70% vs 48% - 55%)
  - Personal drivers were less likely than other drivers to say that minimising the cost of works is extremely important (29% vs 40% - 49%)

Importance of factors associated with roadworks
Road users (%)



Safety of road workers was the most important issue for respondents.

Q9RU: I'm going to read out some factors associated with undertaking roadworks, and I'd like you to tell me how important or unimportant you think each of them is, using a scale of 1 to 10, where 1 is not important at all, and 10 is extremely important

Base (all) 744

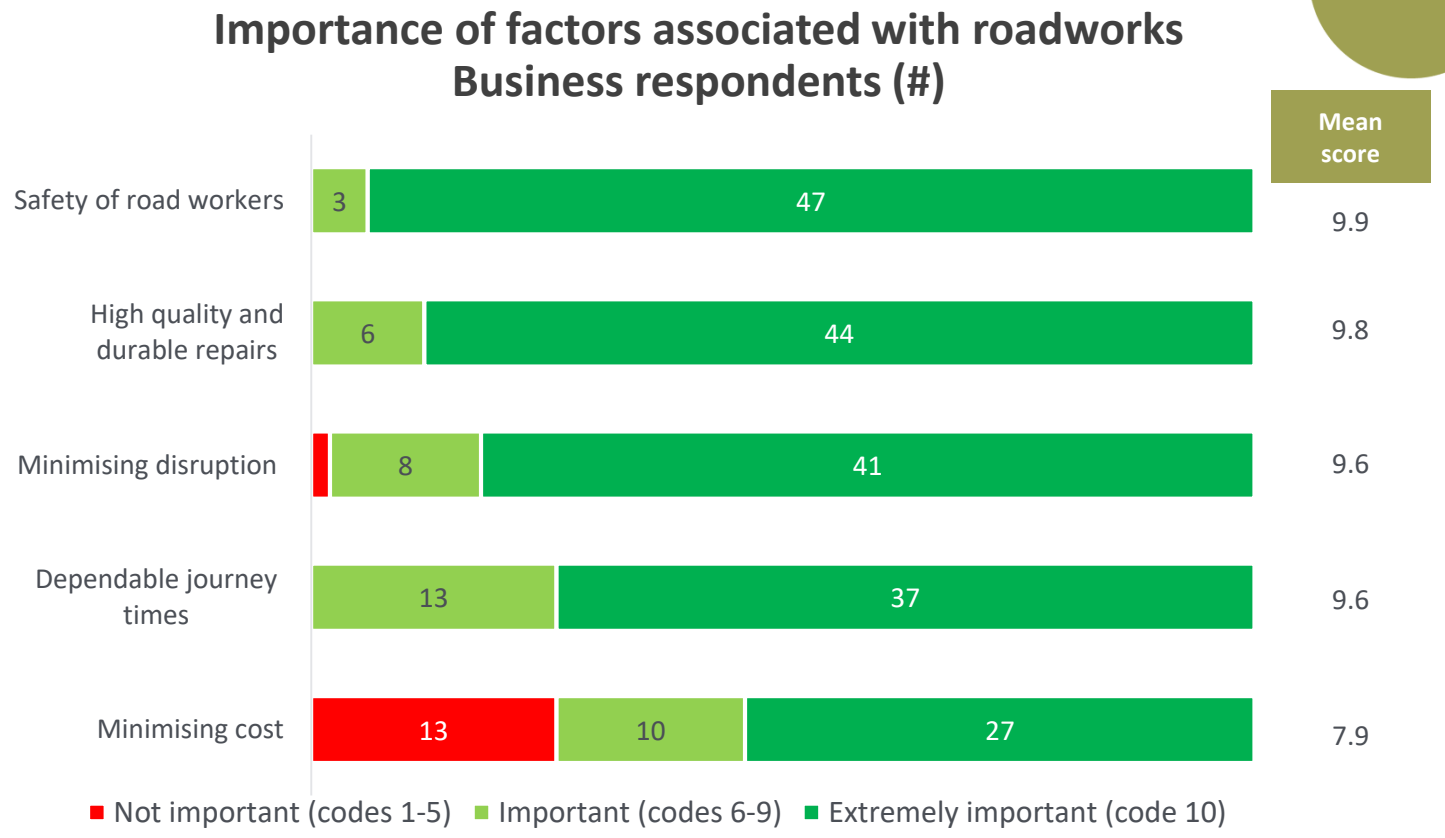
Priorities: Businesses

All of the business respondents considered the safety of road workers important. Indeed, almost all (47 of the 50) considered worker safety to be extremely important (10 on a scale of 1 to 10).

The quality of repairs was also considered important by all the business respondents, with 44 of the 50 saying this was very important.

As with the drivers, business respondents tended to consider minimising costs much less important, with around a quarter saying this was unimportant.

Minimising disruption was particularly important to businesses who had experienced substantial impact from roadworks in relation to diversions causing difficulties for suppliers. It was also more important to businesses for whom the A77 was the most important trunk road (mean score of 10). Businesses for whom this was the most important road were also more likely to think minimising cost was important (mean score 9.6).



Safety of road workers was the most important issue for local business respondents.

Q13LB: I'm going to read out some factors associated with undertaking roadworks, and I'd like you to tell me how important or unimportant you think each of them is, using a scale of 1 to 10, where 1 is not important at all, and 10 is extremely important

Base (all) 50

Undertaking works

Time of year: drivers

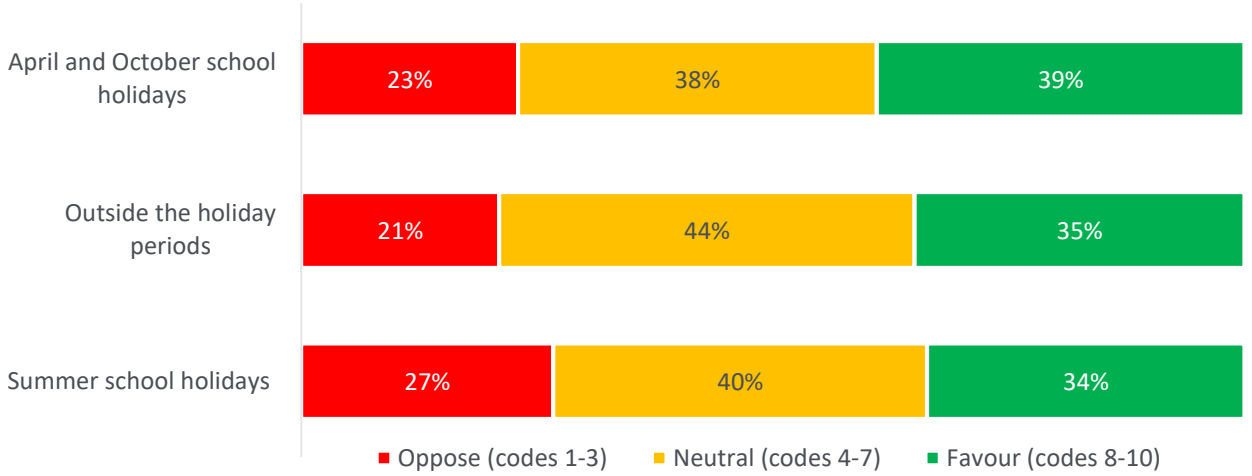
There is an assumption that drivers prefer roadworks to be undertaken during school holidays. However, the survey suggests that views are divided.

Just over a third of drivers supported roadworks in the holidays, while around a quarter opposed roadworks at that time of year.

Conversely, around a third supported roadworks outwith the holiday period, while a fifth opposed roadworks during the holidays.

The largest group of respondents do not express a strong opinion on the time of year that road works should be carried out.

Options for roadworks: time of year Drivers (%)



Mean scores	All	HGV	Personal	Commuter	Business
Apr and Oct	6.0	6.2	5.3	6.5	6.5
Outside the holidays	5.9	5.6	6.3	5.7	5.9
Summer	5.8	6.0	5.2	6.0	6.0

Q10RU: I'd like to show you some options for the different of times of year that major roadworks could be undertaken. Please tell me how strongly you would favour or oppose each option for [ROAD = Q2]. Use a scale of 1 to 10, where 1 is strongly oppose and 10 is strongly favour.

Base (all) 744

Undertaking works

Time of year: drivers

Focusing on respondents who favoured at least one of the options (a score of 8 or more), it is clear that those supporting roadworks in the April/October holiday period also tended to support roadworks in the Summer period (75%), and those who supported roadworks in the Summer period, also tended to support work in the April/Oct period (87%). However, only a small proportion of these respondents were supportive of work outside the holiday period (23% and 26% respectively).

Likewise, those who supported works outwith the holiday period were much less likely to support work during the holidays (at just 30% for April/Oct breaks and 26% for during the summer breaks).

- The mean scores suggest that HGV, commuter and business drivers are more disposed towards roadworks during the holidays
- People who travel most days were less likely than others to support roadworks outside the school holidays (29% vs 38%-39%)
- Personal drivers are more likely tend to support works outwith the holidays (45%) compared with other drivers (27% - 32%), and to oppose works during holidays (Apr/Oct 33% vs 17%-21%; and summer 36% vs 18%-26%)

How do preferences for roadworks at different times of the year align?
Drivers (%)

	April /October	Summer	Outside the holidays
April/Oct	100%	87%	30%
Summer	75%	100%	26%
Outside the holidays	27%	26%	100%
Base	**287**	**247**	**254**

Respondents who expressed a view on time of year, either supported roadworks during school holidays or outside the holiday period, but rarely both.

Q10RU: I'd like to show you some options for the different of times of year that major roadworks could be undertaken. Please tell me how strongly you would favour or oppose each option for [ROAD = Q2]. Use a scale of 1 to 10, where 1 is strongly oppose and 10 is strongly favour.

Base those who favour undertaking roadworks at different times of the year

Undertaking works

Time of year: businesses

Business respondents were clear cut:

Respondents were most likely to favour outside the school holiday periods (20 of the 50 gave this option), a score of 8 or more out of 10).

Just over half of respondents were opposed to roadworks during school holidays periods (a score of 3 or less out of 10). Notably, 21 businesses indicated they *strongly* opposed roadworks during the school holidays (score of 1 out of 10).

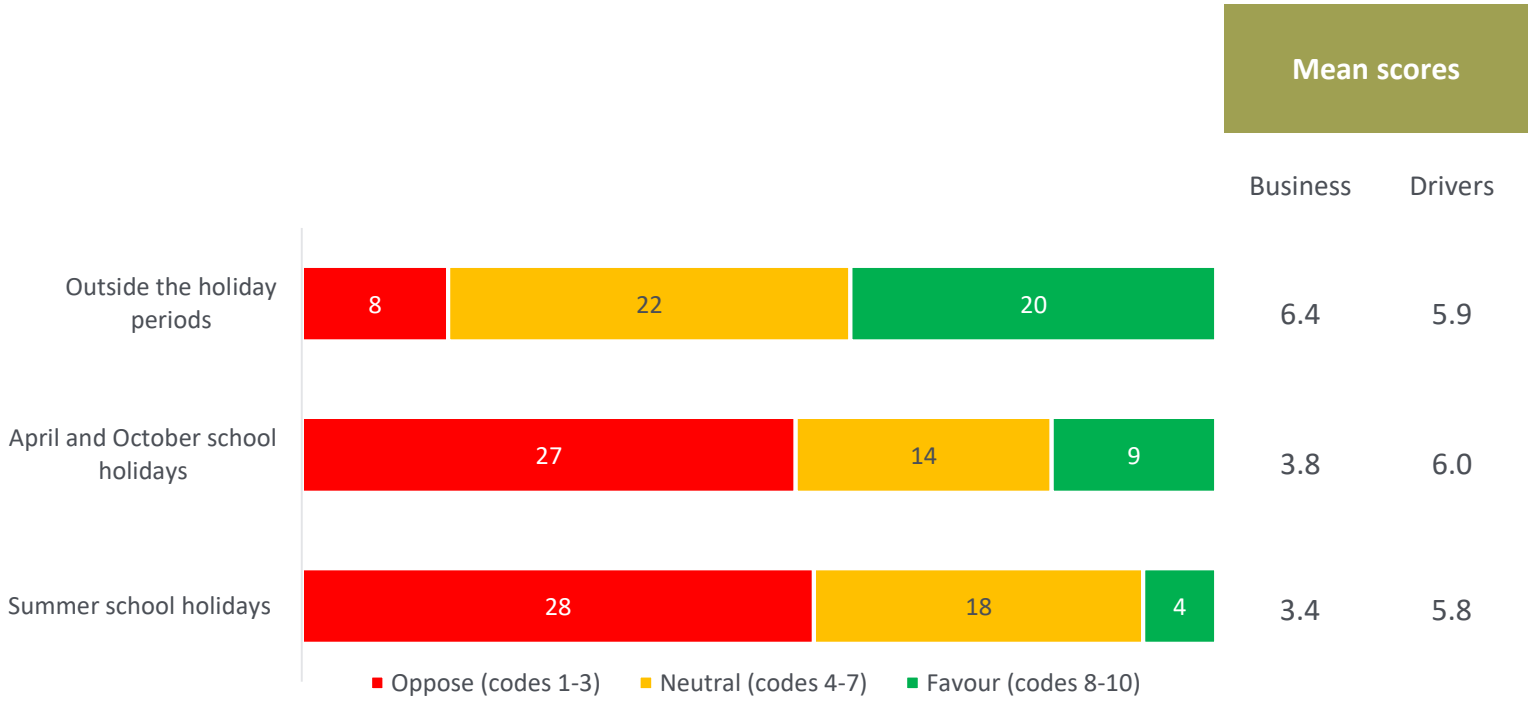
- Businesses for whom the A77 was the most important road had particularly low support for roadworks during school holidays (mean score of 1.6 for both summer and April or October school holidays).
- Businesses that had experienced substantial impact to loss of passing trade/customer access to their premises/whose customers have experienced difficulties because of diversions were also more likely to be strongly opposed to roadworks during holidays.

The main reasons given by those opposing roadworks over the holiday period were that March to October is the busiest time of year for them, it's the time of year when the roads are busiest, and it's the peak time for the tourist trade.

"A lot more people on road and that brings in business."

"Holidaymakers can get straight from A to B."

Options for roadworks: time of year
Businesses (#)



Q14LB: I'd like to show you some options for the different of times of year that major roadworks could be undertaken. Please tell me how strongly you would favour or oppose each option. Use a scale of 1 to 10, where 1 is strongly oppose and 10 is strongly favour.

Base (all) Local Businesses: 50
Road Users: 744

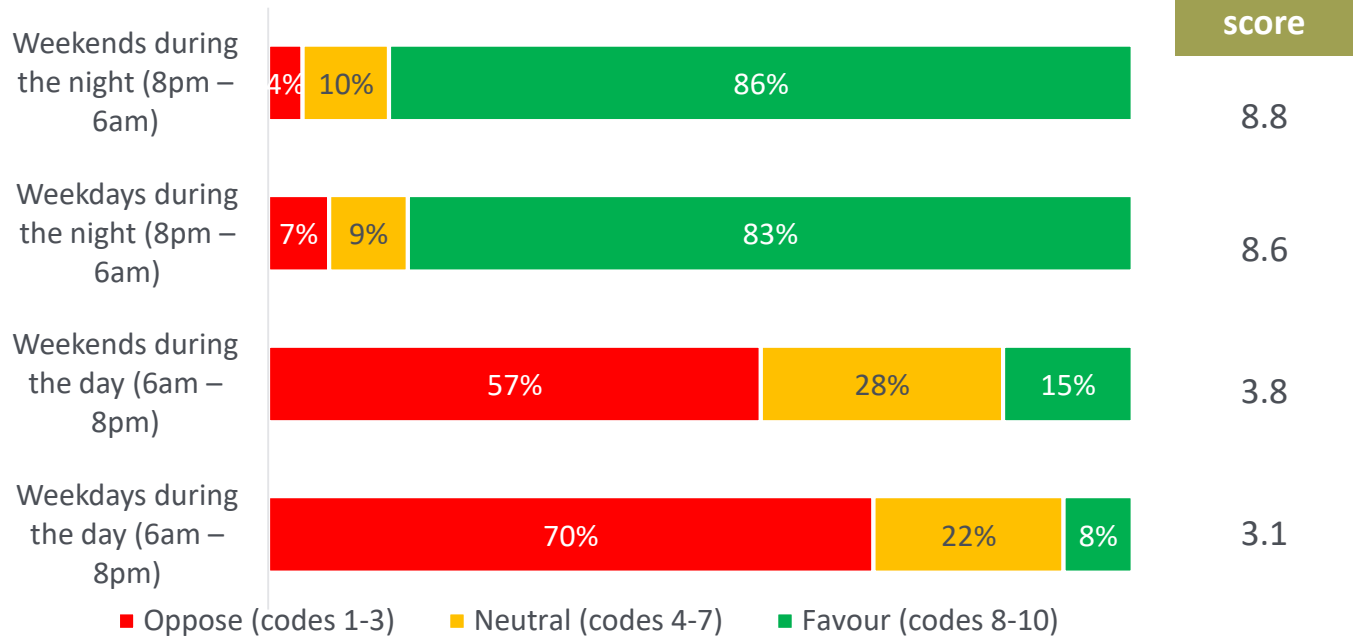
Undertaking work

Time of day: drivers

There was a clear preference from road users that roadworks be undertaken during the night.

- More than four fifths of respondents said that would support work at night.
  - While still overwhelmingly supporting work at night, HGV drivers were less likely to do so than other drivers (weekdays: 63% vs 82% - 90%; weekends: 75% vs 85-91%)
- Only around one in ten supported roadworks during the day: around 15% at the weekend, and 8% during the week.
  - Commuters and business travellers (both 49%) are much less likely to oppose weekend daytime works than HGV (61%) and personal (69%) drivers.
  - Those making the journey most days were more likely than others to oppose daytime weekday works (74% vs 67% people travelling every week and 63% than those travelling a few times a year)

Options for roadworks: time of day
Drivers (%)



Drivers would much prefer that roadworks were undertaken at night!

Q11RU I'd like to show you some options for the different of times of the week that major roadworks could be undertaken. Could you tell me how strongly you would favour or oppose each option for [ROAD = Q2]. Please use a scale of 1 to 10, where 1 is strongly oppose and 10 is strongly favour.

Base (all) 744

Undertaking work

Time of day: businesses

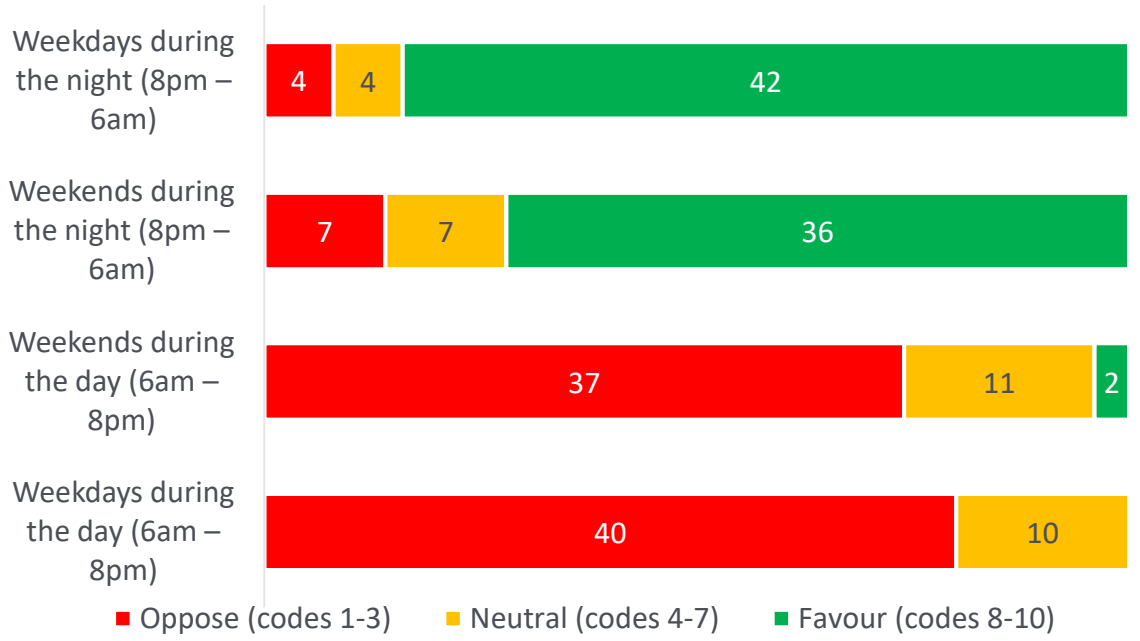
Businesses also expressed a clear preference that roadworks be undertaken during the night.

- Almost all businesses (42 of the 50) said that would support work at night during the week, with slightly fewer (36 of the 50) supporting night work during the weekends. All businesses who said the A77 was the most important road opposed roadworks during the day (weekdays or weekends).
- There was very strong opposition to roadworks being undertaken during the day, with around half of businesses saying they **strongly oppose** daytime working.

"Opposed to roadworks during the day at weekends because usually holiday makers that are working come here on Friday and leave again on Sunday."

"Need roads open for lorry drivers to travel on during night. My clients travel during the day."

Options for roadworks: time of day
Businesses (#)



Mean scores	Business	Drivers
Weekdays during the night (8pm – 6am)	8.6	8.6
Weekends during the night (8pm – 6am)	7.9	8.8
Weekends during the day (6am – 8pm)	2.4	3.8
Weekdays during the day (6am – 8pm)	2.1	3.1

Q16LB: I'd like to show you some options for the different of times of the week that major roadworks could be undertaken. Could you tell me how strongly you would favour or oppose each option for [ROAD = Q2]. Please use a scale of 1 to 10, where 1 is strongly oppose and 10 is strongly favour.

Base (all) 50

Undertaking works Strategies: drivers

Respondents prioritised **when** the works would be undertaken over *how long* they would take or the *level of disruption* they would cause.

The favoured options were for roadworks to be carried out at the weekend, with most support for works that could be completed over a single weekend (Option A).

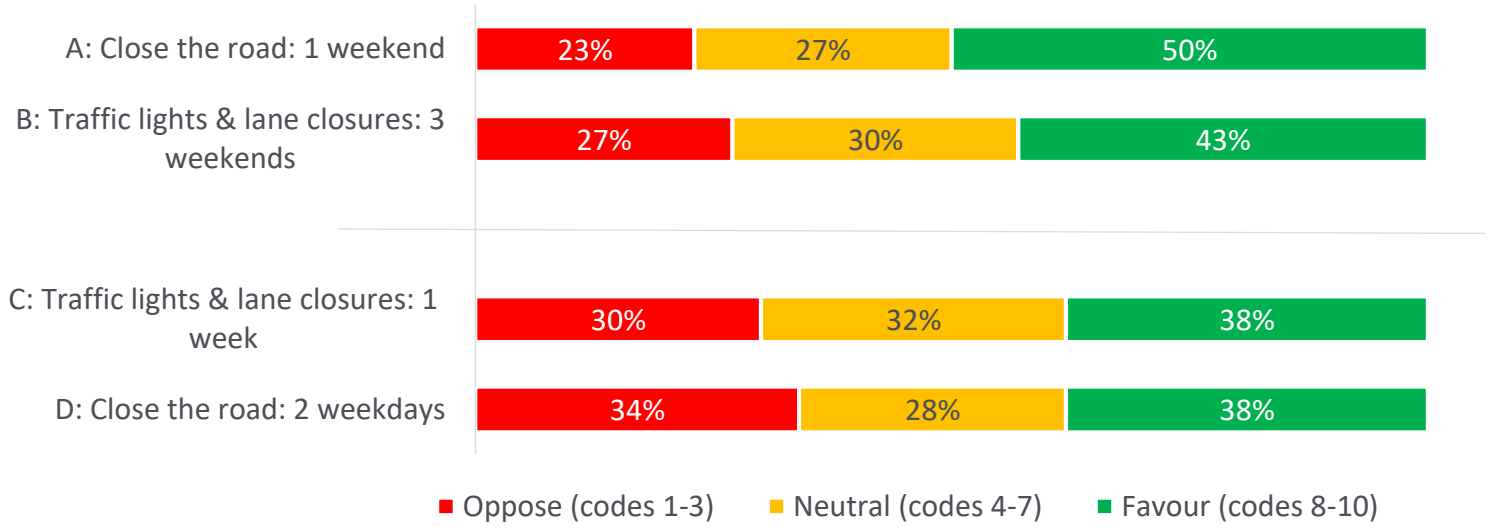
- Commuters were least likely to support Option B (36% vs 43%-54%)

Works during the week secured less support: around two fifths of respondents supported these works, while around a third opposed them.

- Notably, more than half of HGV drivers (55%) said they supported Option C – this is the highest level of support any of the options achieved.

Drivers favoured undertaking roadworks at the weekend.

Options for roadworks: roadwork management strategies Drivers (%)



Mean scores	All	HGV	Personal	Commuter	Business
A: Close the road: 1 weekend	6.4	6.5	6.5	6.4	6.5
B: Traffic lights, etc: 3 weekends	6.1	6.5	6.1	5.8	6.3
C: Traffic lights, etc: 1 week	5.7	6.7	5.7	5.3	5.7
D: Close the road: 2 weekdays	5.6	5.3	5.9	5.6	5.1

Q12RU: I'd like you to consider different options for undertaking the major roadworks. Again, please tell me how strongly you favour or oppose each option for [ROAD = Q2]. Please use a scale of 1 to 10, where of 1 to 10, where 1 is strongly oppose and 10 is strongly favour.

Base (all) 744

Undertaking works Strategies: business

Businesses preferences for managing roadworks were different to those of drivers overall.

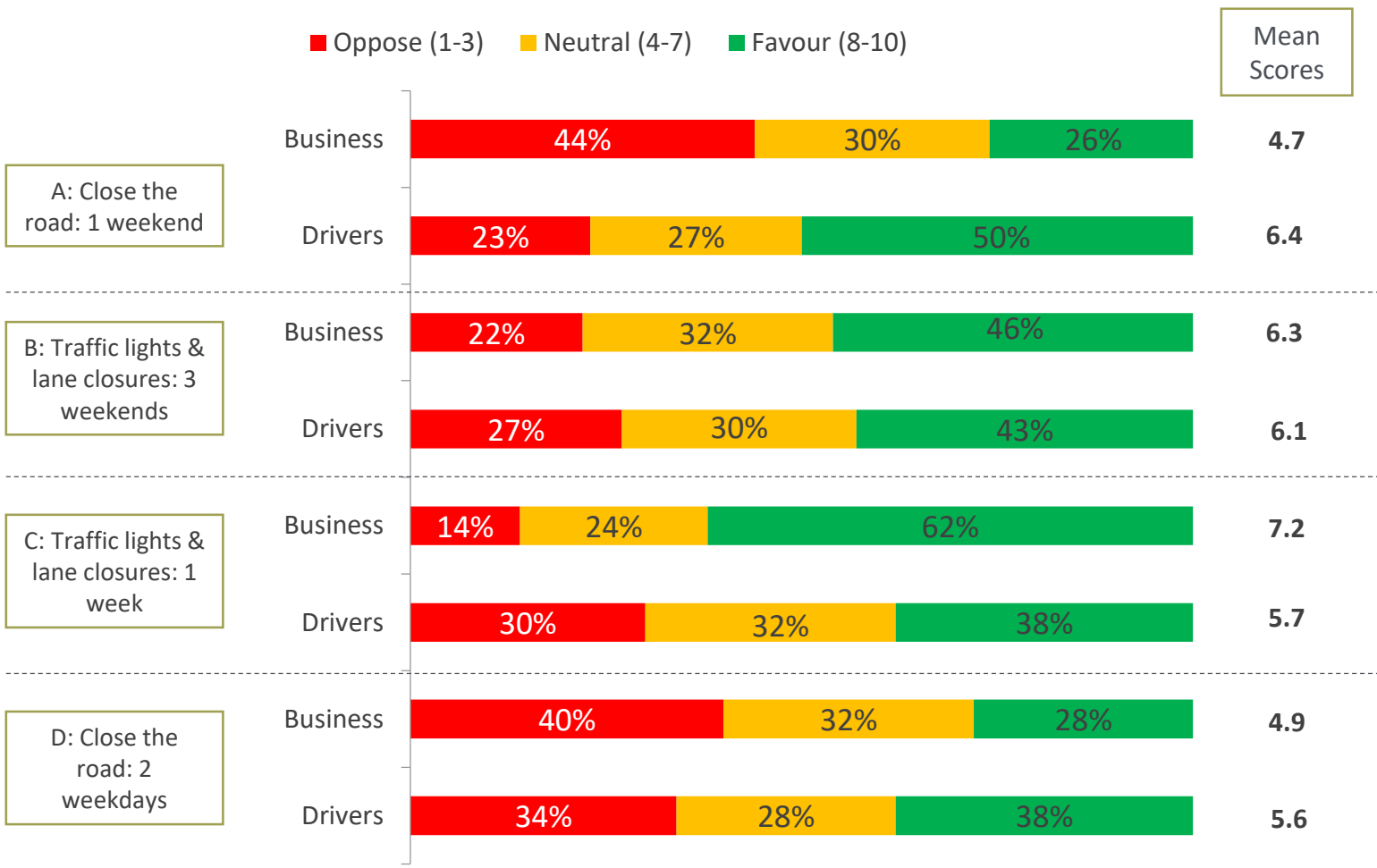
Businesses strongest preference was for an approach that kept roads open at all times, albeit with disruptions to journey times. Notably, this was also the approach most preferred by HGV drivers.

- Businesses for whom the A77 was the most important road were more likely to oppose options which meant roads would be fully closed. 20 out of 22 of these businesses favoured keeping roads open for 7 days with lane closures and restrictions.
- Those that had experienced substantial impact to customer access to their premises, or for who diversions had caused substantial difficulties to customers or to suppliers were also less likely to favour both roadwork options that involved full road closures.

Unlike drivers, there was considerable opposition for an approach that would close the road completely for a weekend, with almost half of the business respondents saying they would oppose this (and around a quarter saying they would **strongly oppose** it).

Businesses were also opposed to road closures during the week.

Options for roadworks: roadwork management strategies Drivers and businesses (%)



Q18LB: I'd like you to consider different options for undertaking the major roadworks. Again, please tell me how strongly you favour or oppose each option for [local trunk roads. Please use a scale of 1 to 10, where of 1 to 10, where 1 is strongly oppose and 10 is strongly favour.

Base (all) Businesses: 50 Drivers: 744

Undertaking works Strategies: business

Businesses preferred roadwork management strategies that minimised disruption. Issues of safety and durability came second to disruption.

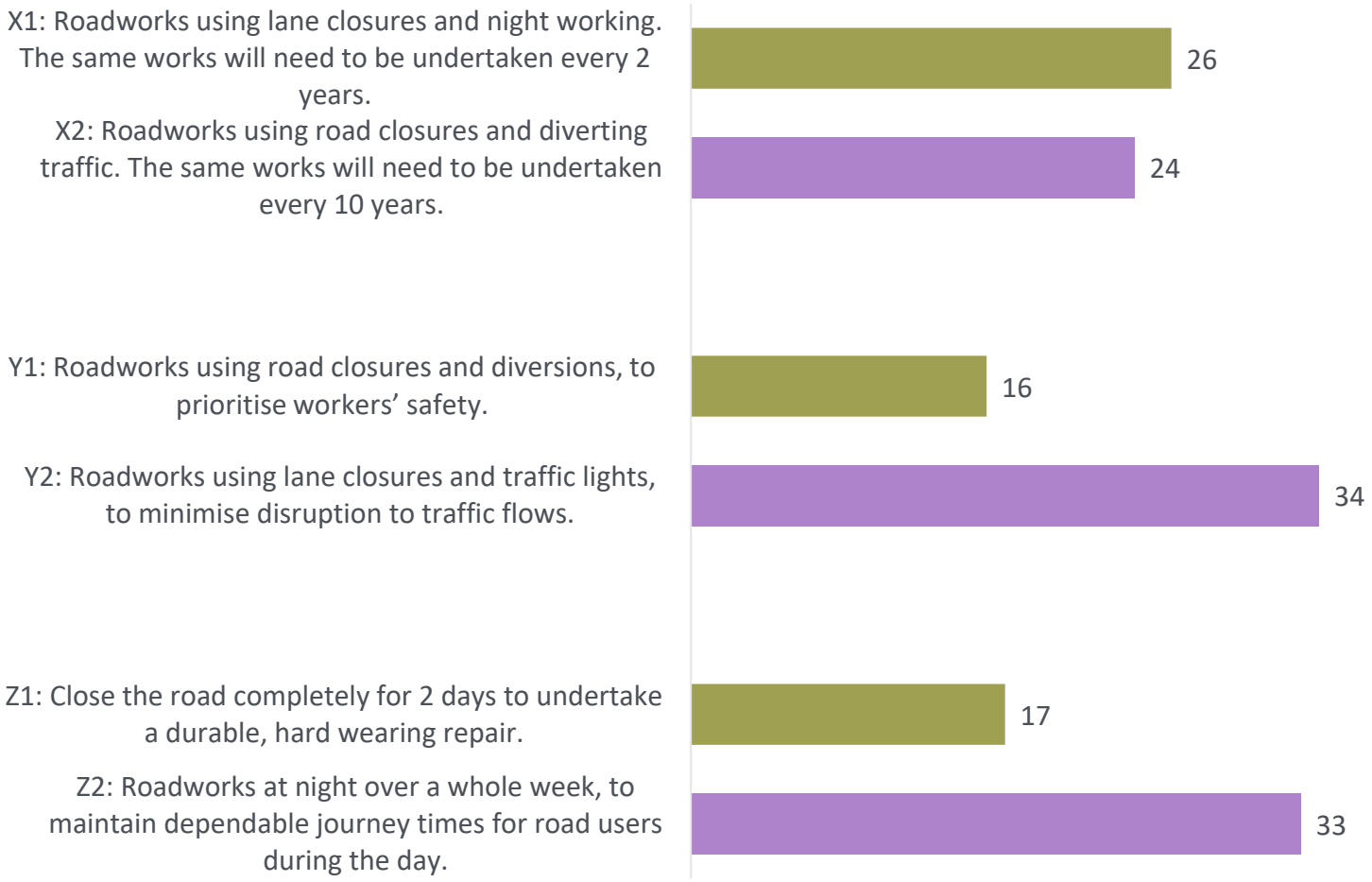
Local businesses were presented with a set of paired strategies and asked to select their preferences.

Views were largely in favour of strategies that minimised disruption. Indeed, businesses tended to favour strategies that minimised disruption over those that prioritised worker safety and those that maximised the quality of repairs.

Notably views fairly evenly split between strategies that kept roads partially open, but would mean roadworks would need to be repeated fairly often, and those that required road closures but would result in less frequent works.

- All businesses for whom the A76 was the most important road favoured option X2 over option X1.
- Businesses who had experienced substantial impacts on passing trade, customer access or difficulties for customers because of diversions in the last two years were more likely to support option X1 over option X2, and more likely to favour to favour Z2 over Z1.
- Businesses for whom the A77 was the most important road **all** preferred Y2 over Y1. These businesses were also more likely than others to favour Z2 over Z1.

Options for roadworks: roadwork management strategies businesses (#)



Q19LB: I'd like you to consider different options for undertaking the major roadworks. Again, please tell me how strongly you favour or oppose each option for [local trunk roads. Please use a scale of 1 to 10, where of 1 to 10, where 1 is strongly oppose and 10 is strongly favour.

Base (all): 50

Responding to delays
Drivers

Information

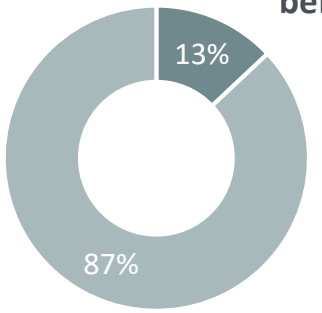
Before setting off

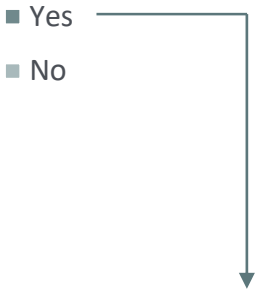
- Just over one in ten of drivers said they checked for roadworks before their journey.
  - There were no differences between the different driver types
- Those that did check tended to use the car's satnav system, mobile apps and the Transport Scotland site. The number of valid responses are relatively low here, but there were a few differences worth noting between the driver types:
  - A might be expected, commuters are much less likely than personal drivers to use satnav (7% vs 37%)
  - Commuters and business drivers are more likely than HGVs to use radio updates (26%/25% vs 14%)

Drivers do not usually check if there are roadworks on their route before setting off

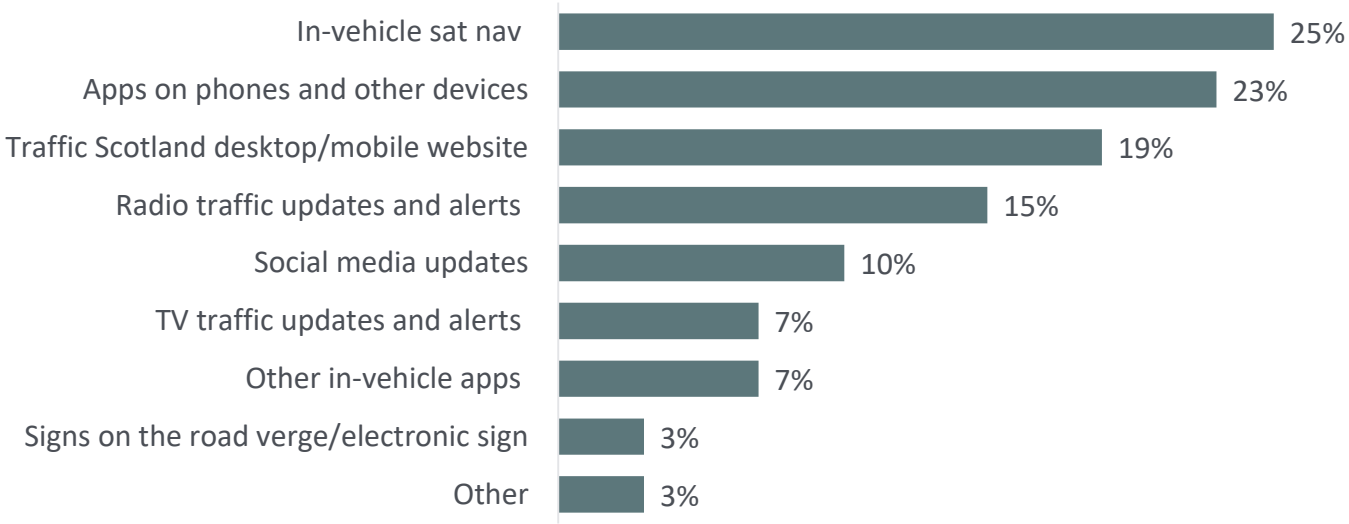
progressive

Did you check for roadworks before setting off





Information sources checked before setting off



Q6RU: Before you set off on your journey today, did you check if there were any roadworks or associated traffic disruption affecting your route? RUQ7 - Which sources of information did you check?

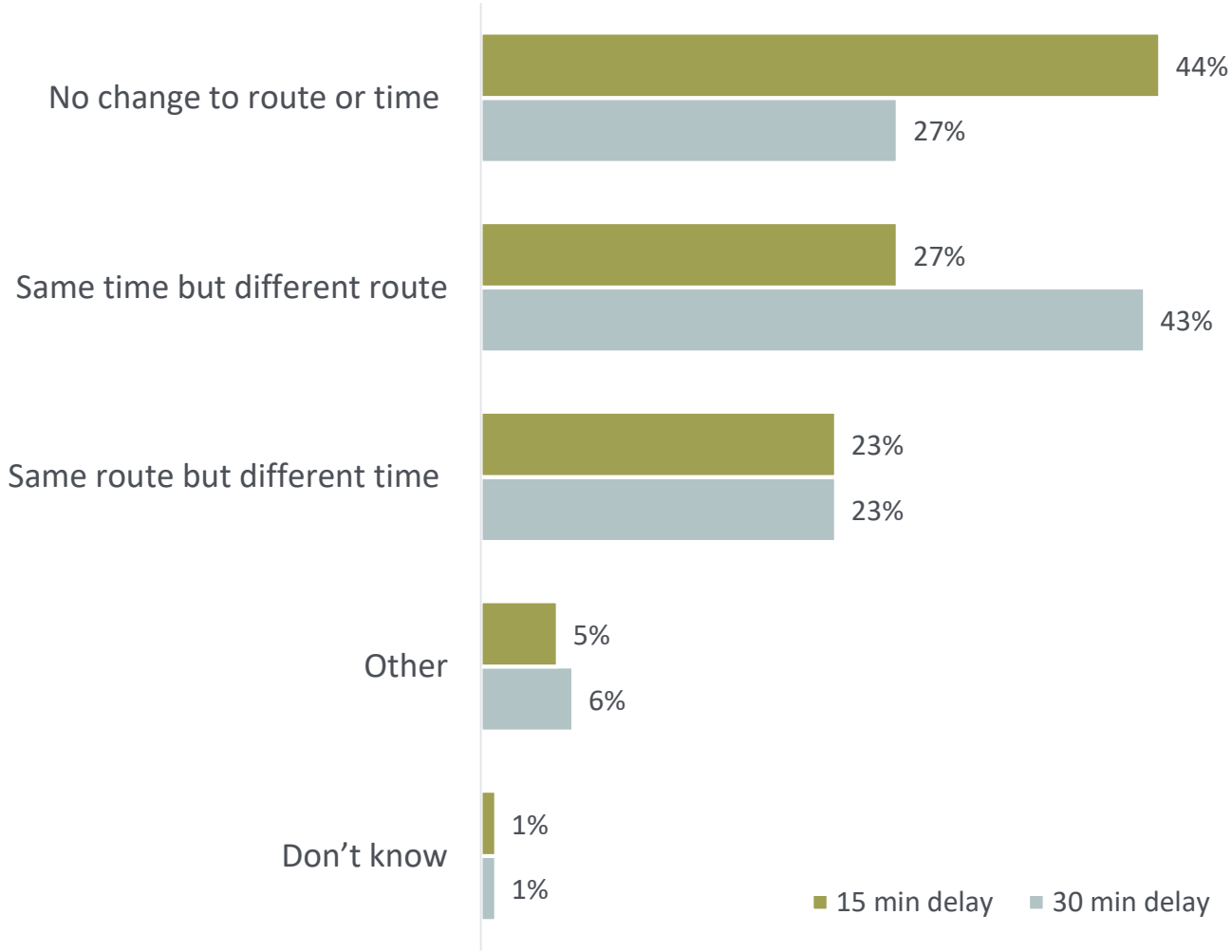
Base: Q6 (all): 744, Q7: 99

Response to delays

- The most common response to a short – 15 minute – delay was to carry on as planned.
- Almost half of all drivers said that faced with a 15 minute delay they would not change anything about their journey.
- When faced with a longer – 30 minute – delay, only a quarter of respondents said they would make no adjustments to their plans.
- The most common response was to alter the route.

Drivers' responses to delays depend on the length of the likely delay.

Most likely option were journey to be delayed: by 15 minutes and by 30 minutes



Q8aRU - Which option do you think you would have taken if your journey would have been delayed by 15 minutes? Q8bRU…By 30 minutes?

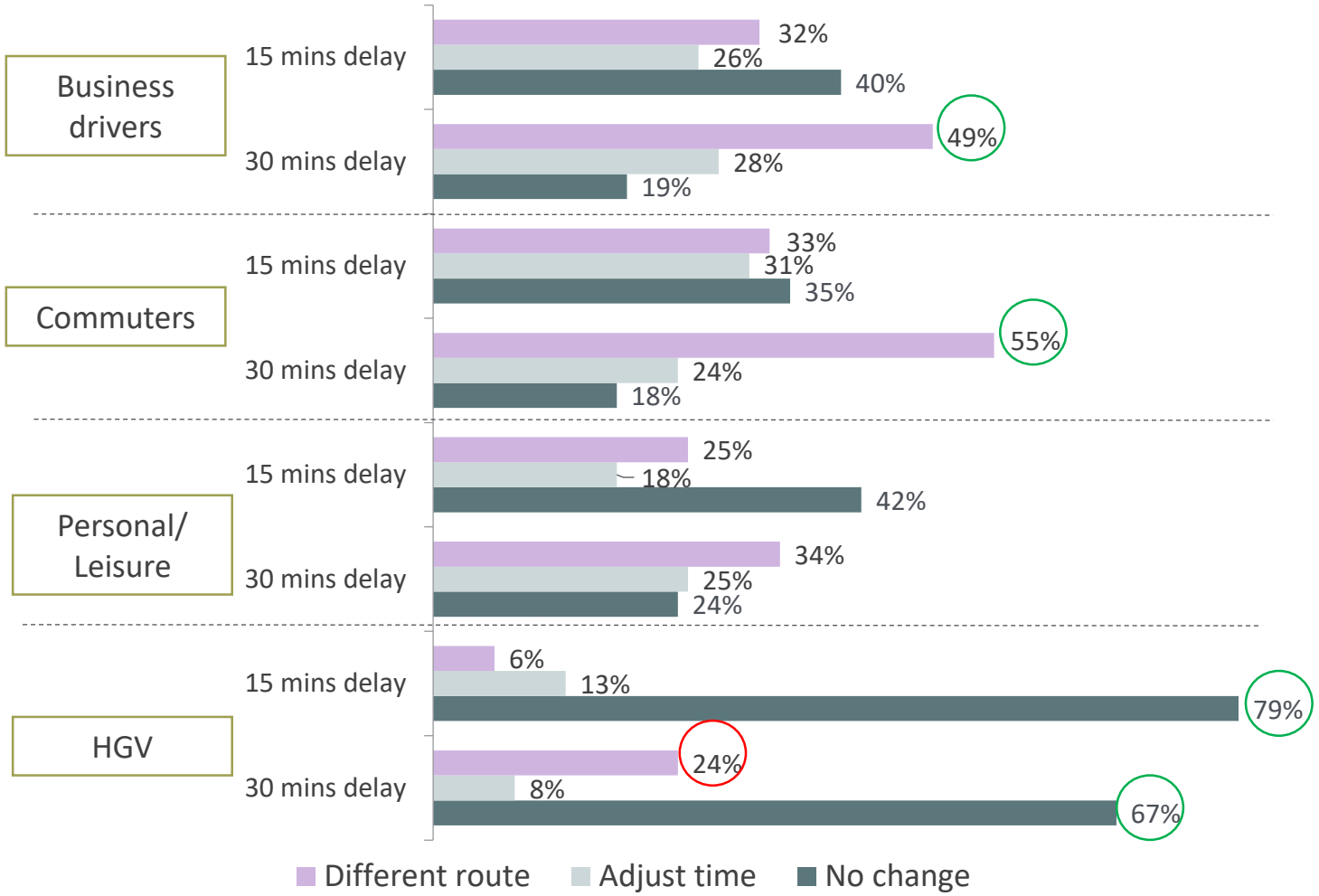
Base (all) 744

Response to delays Sub analysis

The response to delays is different for different types of drivers.

- Commuters and business drivers are fairly sensitive to delays, with only around a third taking no action to 15 minute delays and a fifth to 30 minute delays. When delays are around 30 mins, these drivers more likely than others to seek alternative routes.
- HGV drivers are much more likely than other drivers to say they would not adjust their route, either for a 15 minute delay (79%) or for a 30 minute delay (67%). They were much less likely than others to say they would seek an alternative route: just 6% would do so in the case of a 15 min delay, rising to 24% for a longer delay. Very few HGV drivers could consider adjusting the time of their journey.
- The most common response of personal drivers facing a short delay was to make no change. A small proportion of drivers said they would take other actions for a 30 minute delay, such as postponing until a later date (2%), going somewhere else (2%) and cancelling altogether (2%). Almost all (75%+) of these were personal drivers.

Response to delays, by driver type

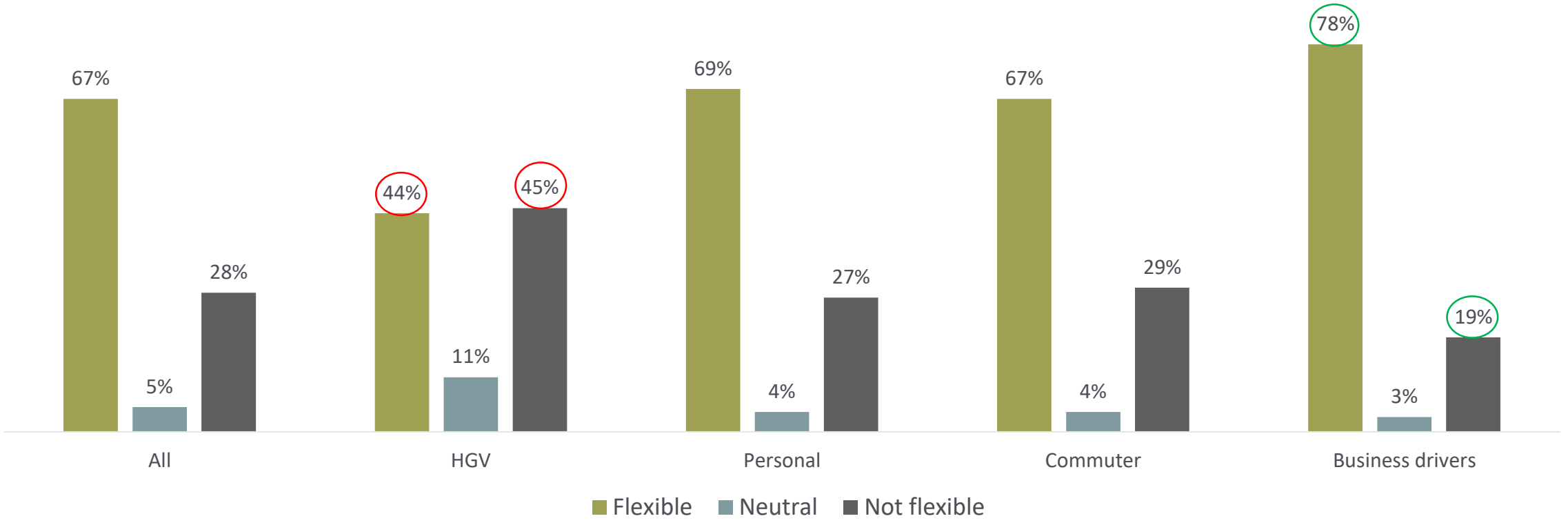


Q8aRU: Which option do you think you would have taken if your journey would have been delayed by 15 minutes? Q8b…By 30 minutes?

Base (all) 744

Flexibility to adjust travel arrangements

when there are major roadworks, by driver type



Most (67%) of drivers said they could be flexible about their travel arrangements if given advance notice of roadworks. HGV drivers (44%) and people who make the journey frequently (58% who travel most days) were least likely to be flexible. Business drivers (78%) and people who make the journey less frequently (77% of those travelling a few times a year) who were most able to be flexible.

A quarter (28%) of drivers said they could not be flexible. HGV drivers (45%) and people who make the journey frequently (37% who travel most days) were particularly likely to say this. Business drivers (at just 19%) were less likely to be inflexible.

Q13RU: If you were given advance notice that [ROAD = Q2] was to be closed for 2 days for roadworks, how flexible could you be about your travel arrangements? Would you say you could be Very flexible, Fairly flexible, Neither, Not very flexible, or Not at all flexible.

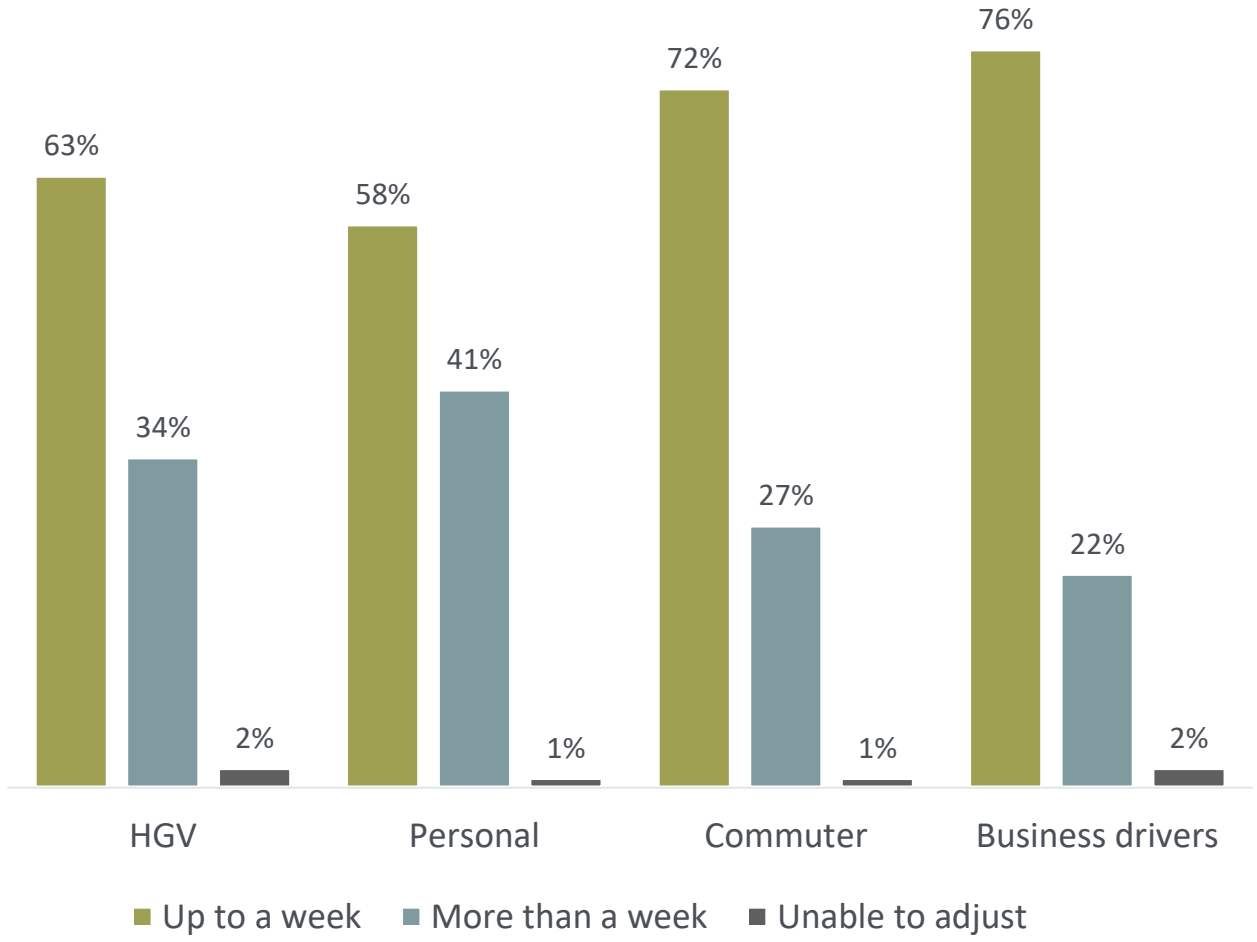
Base (all) 744

Flexibility

Generally drivers require less than a week's notice of forthcoming roadworks.

- Some 16% of respondents said a day's notice of roadworks was sufficient, with a further 49% saying up to a week's notice would be enough.
- Those travelling most days were more likely than those travelling every week to say they needed more than a week's notice (35% vs 26%).
- Personal drivers were generally less likely to say that up to one week's notice was sufficient, and more likely to say that more than a week's notice was required. This may be more a reflection of the (in)frequency of the journeys taken, rather than particular requirements of this group of driver. This issue could be explored further in future waves.

Notice required to adjust travel plans to accommodate major roadworks, by road user



Q14RU: If the [ROAD = Q2] was being closed for 2 days because of roadworks, how much notice would you need in order to adjust your travel plans?

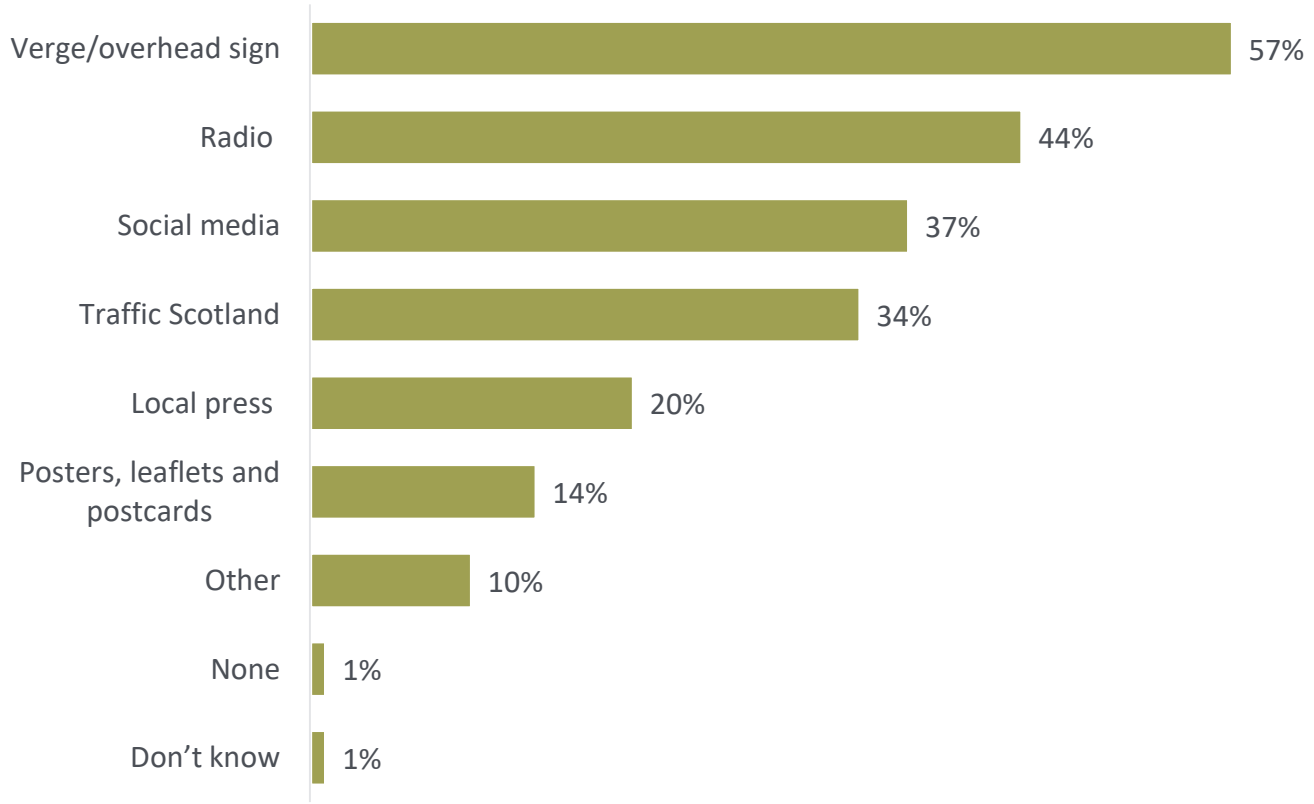
Base 712 (excludes those who rarely travel on this road) and respondents who answered 'don't know')

Preferred sources of information

Respondents mainly prefer to receive traffic information from passive sources; and generally do not actively seek out information.

- The source of information that most respondents wanted used for roadworks was information overhead/verge signs (57% of respondents).
- The research did not explore the reasons for preferences. For example, verge/overhead signs are generally reliable, clear, do not require effort or knowledge on the part of the driver; radio information is immediate and available to drivers without effort. This is an issue that may warrant further examination in further waves of research.

Preferred channels of communication about roadworks



Q15RU: How would you want to be informed about major road works?

Base (all) 744

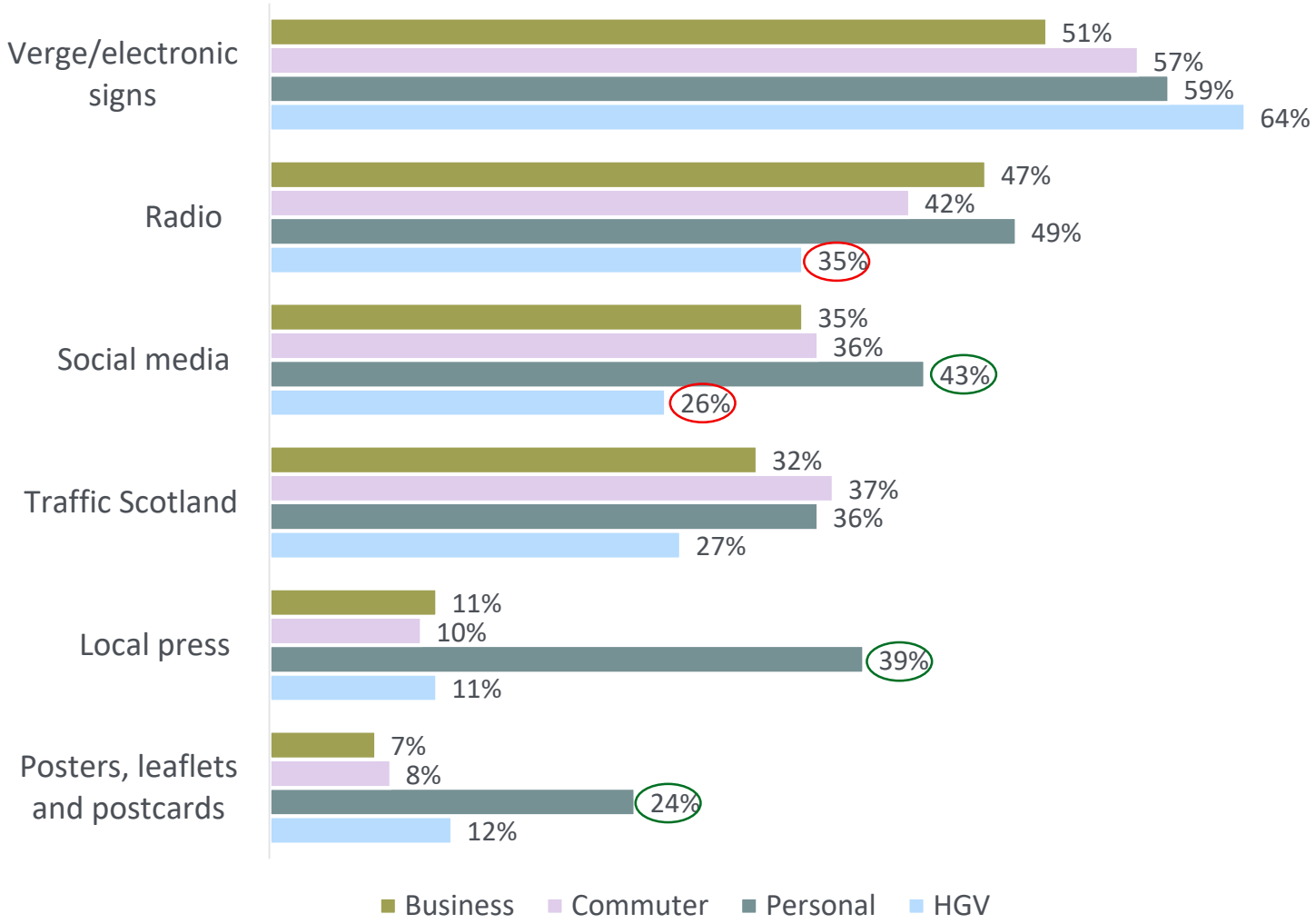
Information sources

Sub analysis

There were clear differences in the media preferences of drivers.

- Verge/electronic signs was the most common responses for all driver types.
- HGV drivers were less likely than other drivers to say radio or social media
- Personal drivers were more likely than other drivers to say social media, the local press and posters, leaflets and postcards. Indeed, almost no-one else said posters etc.
- Those who make the journey most days were more likely than other drivers to say overhead/verge signs (68% vs 24%-57%).

Main channels of communication about roadworks, by road user



Q15RU: How would you want to be informed about major road works?

Base (all) 744

Impact of roadworks on local businesses

Impact of roadworks on local businesses

Businesses were primarily concerned that roadworks would impact on their customers.

- Almost all the businesses considered that diversions had caused difficulties for customers, and most felt that road closures had caused difficulties for customers. Almost all were concerned that about the impact on passing trade, with nearly half saying the impact had been substantial.
- Most respondents noted business impacts: with around half saying roadworks had a significant impact on suppliers, and around a third saying they had a significant impact on deliveries.
- Local businesses for whom the A77 was the most important to their business were more likely to say roadworks had impacted on passing trade, restricting customer access and customer difficulties caused by diversions.
- Food and drink businesses were more likely to say roadworks had had a substantial impact on their passing trade than other types of businesses.
- All tourism and leisure businesses interviewed said road works diversions had had a substantial impact on customers and were also more likely than other types of business to say they had also had a substantial impact on suppliers.

Impact of roadworks on local businesses (#)

Q7LB: I'm going to read you some statements about the types of issues roadworks can have for businesses. For each one I'd like you to tell me how much, if at all, roadworks on trunk roads in this area over the last two years have impacted on your business.

Base (all Businesses) 50

Improving roadwork planning

Quotes (local businesses)

The key issues identified by businesses in planning roadworks were:

- Ensuring businesses were consulted and provided with advance warning or roadworks
- Planning roadworks around business peak business periods (hours/time of year)
- Endeavouring to keep roads open – by using lane closures rather than closures and diversions.

"Try to consolidate works. That is, arrange for all the water, BT & gas works at the same time, to minimise disruption."

"They do roadworks at the wrong times of year. They do them in summer, and in holiday times, when we have more business."

"Let people know in advance - plenty notice."

"Enough information - to let you know in advance, so you can be prepared.

"Contact businesses beforehand and take our opening hours into consideration"

"Do it properly and get it finished. We're fed up with disruptions."

"Overnight work would be better"

Q8LB: Based on your experience, what do you think Transport Scotland should consider when planning essential roadworks?

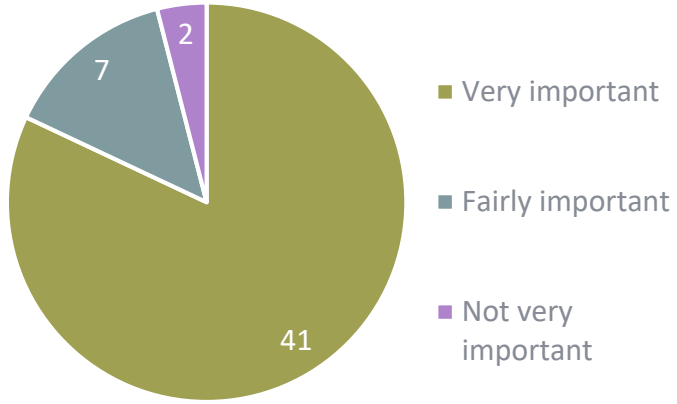
Base (all) 50

Notice of roadworks

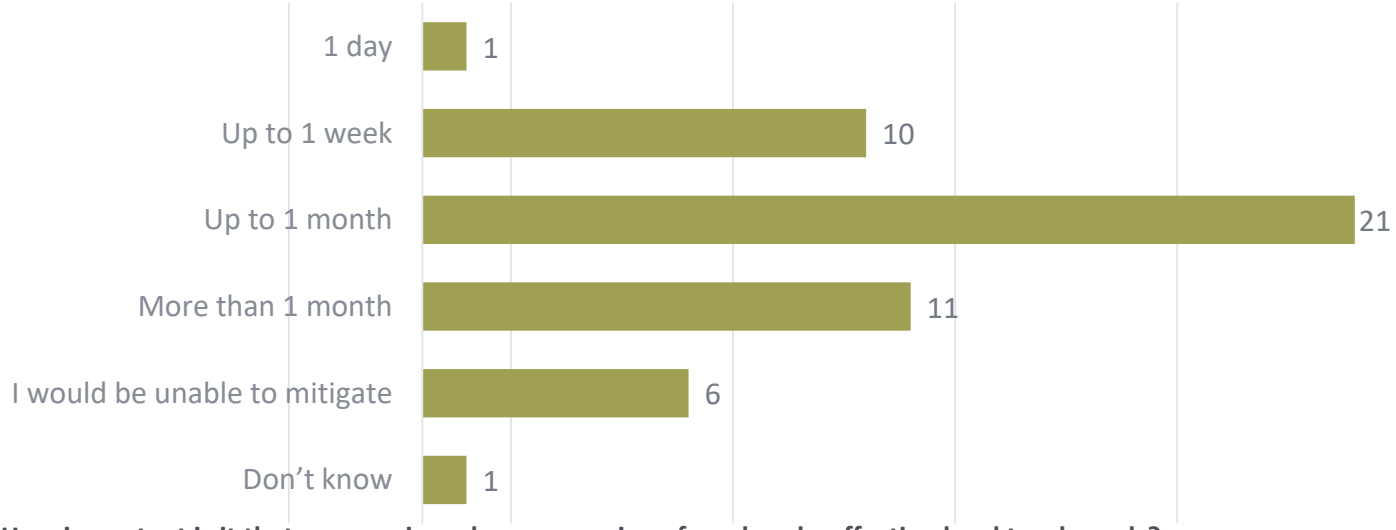
Businesses require much more warning of forthcoming roadworks than drivers.

- Almost all the businesses considered it very important that they received advance warning of roadworks affecting local trunk roads. Just 2 said it was not important (none said it was not at all important). Businesses who said that within the last two years they had experienced substantial impact from road works affecting customers (either affecting passing trade, customer access or difficulties for customers caused by diversions) were more likely to say advance notice was very important to them.
- Around half of businesses (21) said they would need between a week and a month to make arrangements to mitigate the impacts of roadworks, with a further 11 saying they would need more than a month. Leisure and tourism businesses were more likely to want notice of roadworks of over a month.
- Six of the businesses said they would not be able to put measures in place to mitigate roadworks the effects of roadworks.

Importance of receiving warning of forthcoming trunk road works (#)



Notice required to mitigate impacts of roadworks (#)



Q9LB: How important is it that you receive advance warning of roadworks affecting local trunk roads?
Q10LB: If a local trunk road was being closed for 2 weekdays because of roadworks, how much notice would you need to mitigate the impacts on your business?

Base All (50)

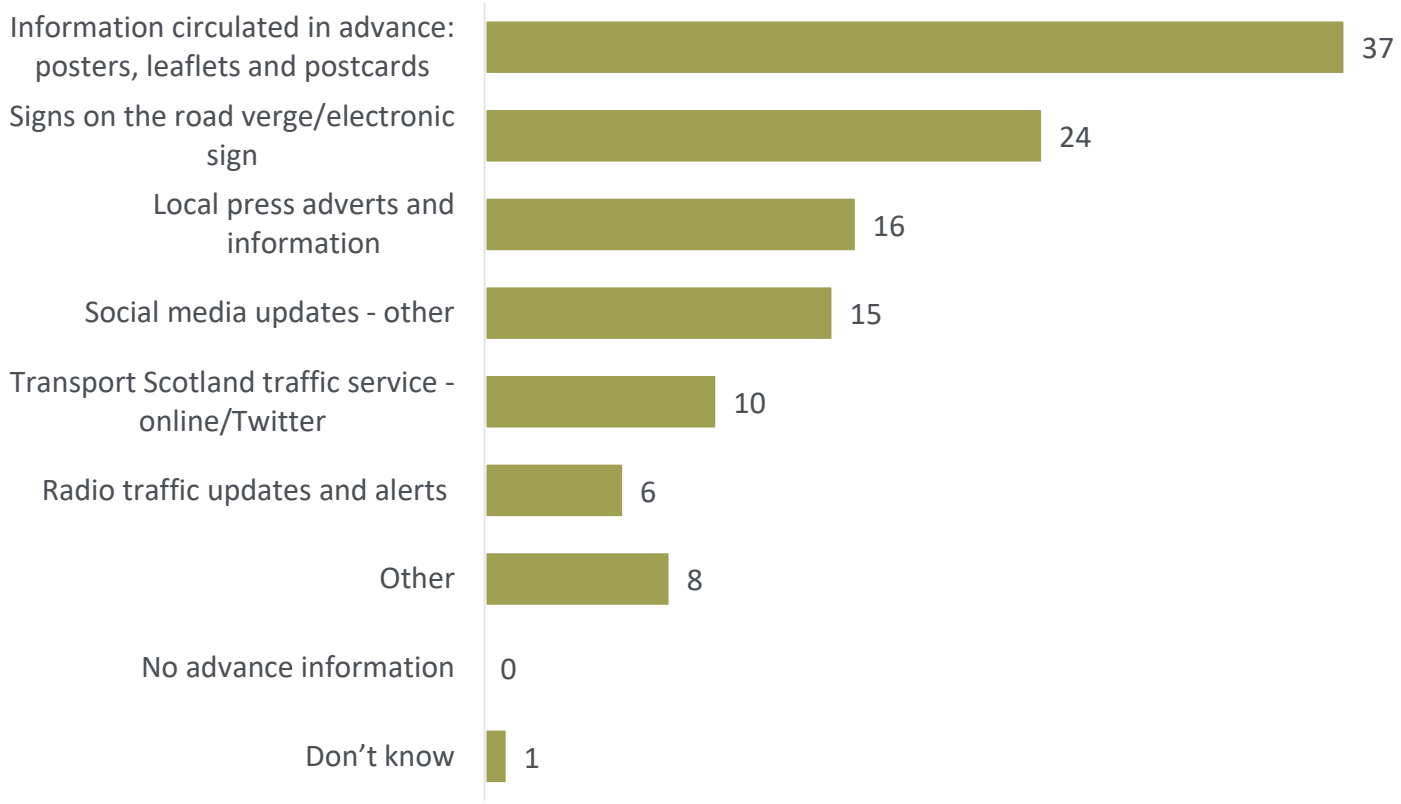
Preferred sources

of information: businesses

Businesses mainly prefer to receive traffic information from passive sources; and generally do not actively seek out information.

- The source of information that most businesses wanted used for roadworks was information circulated in advance – on leaflets, posters, etc. with 37 of the 50 businesses wanting information in this format.
- Local signage (24 businesses) was mentioned by around half of the businesses, with press adverts (16) and social media updates (15) by around a third.
- Of businesses using social media – the preferred channel was Facebook (all 15), with some (4) equally content to receive updates via Twitter.
- Notably, **none** of the businesses selected the 'no advance information' option.

Preferred channels of communication about roadworks: Businesses



Q11LB: How would you want to be informed about major road works?

Base (all) 50

Conclusions

Conclusions

Priorities
Road users generally considered all the factors associated with roadworks in the survey (covering worker safety, quality, disruption and, to a lesser extent, minimising cost) to be important.

Most (around three-quarters) road users considered worker safety and the quality of repairs to be extremely important.
Just over a half of road users thought that the factors directly impacting drivers - minimising disruption and ensuring dependable journey times - were extremely important.
Just over a third considered minimising costs extremely important, and a substantial minority felt it was not important.

Safety, quality and minimising disruption was seen as particularly important to local businesses. Indeed, for businesses that previously been affected by roadworks, and those located along the A77, minimising disruption was especially important.

Conclusions

Timing of roadworks
Given that roadworks are necessary to keep the roads safe and in good repair, rod users indicated a strong preference for roadworks to be carried out at night and during the weekend.

Road users: Opinions were split as to whether roadworks should be carried out during holidays or avoiding holidays.

- Around a third of drivers were largely neutral on the issue, while the others expressed a preference for one or other.
- However, those preferring roadworks during the holidays were more likely to use the roads regularly (HGV drivers, commuters and business drivers).

Given that commuters are likely to comprise the bulk of the traffic on trunk roads at key times of the day, their views on timing will no doubt be of particular relevance here.

Personal drivers are also a relevant group in determining attitudes toward preferences around time of year: further work to explore their experiences, attitudes and may therefore be warranted in future phases of the research.

Local businesses: Local businesses expressed a clear preference that essential roadworks be undertaken outside holidays periods: roadworks disrupt their business and holiday periods are their busiest time.

Businesses also expressed a preference for night time working, and as might be expected, they were strongly opposed to daytime working – both during the week and at the weekend.

Conclusions

Contradictions
There is an apparent contradiction between respondents' general and specific responses. In the general questions road users ranked considerations of workers safety and repair quality higher than considerations around driver disruption. However, when assessing scenarios relating to the timing and management of repairs, they tended to favour those that minimised driver disruption, and in some cases those that either resulted in poorer quality repairs or compromised worker safety.

While the road users could, no doubt, imagine the impact of road or lane closures on their journeys, it is highly possible they were unaware of the relationships between the options and, say worker safety or durability of repair.

The research suggests a need for Transport Scotland and its partners to improve public information and education. This would enable the public to better able to understand the dangers road workers face, and how these can be mitigated; delivering durable road repairs, delivering high quality repairs, and so on. A more deliberative approach to future iterations of the study could allow these issues to be explored in more depth.

The local business survey tested this a little further, by asking respondents to pick between pairs of roadworks strategies. This found that given the choice, on the whole businesses prioritised the strategy that resulted in less disruption over quality of repair, the length of time it takes to complete the roadworks and workers safety.

The research suggests a need for Transport Scotland and its partners to improve public information and education. This would enable the public to better able understand the dangers worker face, how these can be mitigated; delivering durable road repairs, and so on.

Conclusions

Responding to delays

Road users: Generally drivers do not check to see if their route will be affected by road works before they set off on a journey. Instead they use in-car and road-side information to keep them informed. It could be that this is more convenient, up-to-date and adaptable.

As a consequence, preferred channels of communication about roadworks were verge/overhead signs, radio, social media and Transport Scotland. All of these are channels that drivers will use during the journey, or at best immediately before; and none are really designed to support journey planning. It seems unlikely that driver behaviour will change substantially in this regard; the challenge will be ensuring these media carry reliable information in a format that encourages/enable drivers make best use of the road network while roadworks are being undertaken.

On the whole respondents felt they could make adjustments to accommodate roadworks – generally by changing the time or route of their journey, although this wasn't always necessary if the delay was going to fairly short. Some drivers just need a few days – typically around a week's – notice of prospective roadworks to make adjustments. However others – typically HGV drivers and people who are travelling on the road regularly – were much more inflexible. Critically, these drivers are likely to be making most use of the trunk roads, especially at key times of the day.

Local businesses: Accessing good information, in writing, well in advance was important to businesses. This enables them to make preparations for customers and suppliers.

Businesses operating in leisure and tourist industries may require substantial lead-times, in case works coincide with holidays/local events.

Conclusions

Lessons learned

Road users: sample points and targets
The initial approach to selecting sampling points was to use a wide variety of points to capture the range of drivers. Quotas were not set on each sampling point, as the driver profiles of each were very different, but an overall target was set. It was anticipated that by using a mix of sampling points, and managing the number of interviews achieved from each, that the overall targets would be achieved.

However, it became clear that service stations and the port were most productive: they generated a large number of interviews and a broad mix of driver types. The other points such town centres and car parks generated predominantly personal drivers and in some cases produced very few interviews.

In the latter stages of fieldwork therefore, the interviewing shifted to service stations and the port, with quotas applied across all driver types. This approach proved very successful and would be recommended for future waves.

Division of road users and local business surveys
The surveys of road users and local businesses was undertaken separately for practical reasons. However, in future waves, these surveys could run concurrently.

Question development
The survey has clearly produced a substantial amount of valuable information on road users and business attitudes to road works. Some further refinement of the questions was suggested from the surveys

- Road users: inclusion of a question similar to question 19 on the local business survey which allows comparison of road work scenarios
- Businesses: a further question on how businesses mitigate the impacts of roadworks

Technical appendix

Method, fieldwork and analysis

Method

The data was collected by Computer Aided Personal Interviewing (CAPI)

The target group for this research study was road users likely to be affected by roadworks in the South West OCA of Scotland

The target sample size was:

- 700 road user and the final achieved sample size was 744, with targets set for each of the four road user groups: The achieved sample was 744 to enable the targets for each of these four groups to be met.
- 50 local businesses - the achieved sample was 50.

Respondents were selected using non-probability sampling.

- Road users: quotas were set to ensure the sample achieved a coverage of the four key types of road users: HGV drivers, people driving for personal/leisure reasons, commuters and business drivers.
- Local businesses: quotas were set to achieve coverage across the three trunk roads in the area: A75, A76 and A77

Technical appendix

Method, fieldwork and analysis

Fieldwork

Fieldwork was undertaken between 30 Aug and 1 Oct 2018 for the road users survey, and between 6 – 20 November for the local business survey

- The road users interviewing was carried out at a number of locations on the trunk road network, where the greatest 'footfall' of road users was likely to be achieved. It was appreciated that different types of road users would visit the different locations. The profile of interviewing locations was adjusted as the fieldwork progressed in order to best achieve the overall targets.
- The local businesses interviewing was carried out- face-to-face, on-site.
- In total, 8 interviewers worked on data collection.
- 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.

Analysis

Quota controls were used to guide sample selection for this study. This means that we cannot provide statistically precise margins of error or significance testing as the sampling type is non-probability. The margins of error outlined below should therefore be treated as indicative, based on an equivalent probability sample.

- Road users: the overall sample size of 744 road users provides a dataset with an approximate margin of error of between ±0.71 and ±3.59%, calculated at the 95% confidence level (market research industry standard). The sub-samples have For the sub-groups of road users, these range from ±1.98 to ±9.95 for HGV drivers to ±1.23 to ±6.17 for drivers making personal trips.
- Local businesses: the overall sample size of 50 provides a dataset with an approximate margin of error of between ±2.76 and ±13.86%, calculated at the 95% confidence level.

Thank you

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