



**Cheltenham public consultation (06/11/17- 05/12/17)  
response analysis**

## Executive summary

This report details the analysis of responses received during the public consultation regarding the possible introduction of 20mph speed limits in Cheltenham, as proposed by Cheltenham Borough Council, which was conducted between November 6 and December 5, 2017.

Overall, 68% of respondents supported the introduction of limits in some capacity, with further analysis showing support for limits to be introduced on none-main roads, such as in the town centre, residential areas, inner ring road and those near schools and hospitals.

Most respondents believe that limits would improve road safety; however concerns were raised by some respondents who support, oppose and are neutral to the introduction of limits regarding their prospective enforcement (or speculated lack of). There was also rebuttal for the stated air quality improvement benefit that limits could achieve from some respondents who oppose and are neutral to their introduction.

## **1.0 Introduction**

This report presents the findings from the analysis of the proposed introduction of 20mph speed limits for road vehicles in Cheltenham.

### **1.1 Background**

Cheltenham Borough Council is exploring options to improve road safety and improve air quality in the town, with the introduction of 20mph speed limits being one of those options.

20mph limit schemes have been implemented in various UK locations in recent years, such as Portsmouth, Edinburgh, Cambridge and no fewer than nine London boroughs. Organisations such as the nationwide “20’s Plenty” have raised the profile of 20mph limits as a method of improving road safety in built up areas.

A public, online only consultation was held from Monday 6 November until Monday 5 December to gauge views from Cheltenham residents, workers, business owners and visitors on the introduction of prospective limits as a method of improving road safety and air quality in the town.

### **1.2 Methodology**

The consultation was open to responses from everyone who lives, works, shops, studies or runs a business in Cheltenham, as well as tourists who visit the town.

An online (Google) form containing standardised questions with multiple option answers was provided via the Cheltenham Borough Council website for response submission. Free text boxes for tailored responses were also provided where appropriate, such as for specific areas that should / should not see speed limits introduced and any other comments.

Each question was designed to ascertain from responders support for limits (overall or in certain areas or roads), their views on the impact of limits on road safety and or air quality. Google Analytics was to be utilised for data analysis, however upon further inspection, this was not available. Instead, responses were downloaded as a spreadsheet file and analysis conducted within Microsoft Excel.

### **1.3 Consultation marketing**

Awareness of the consultation was generated through the below methods;

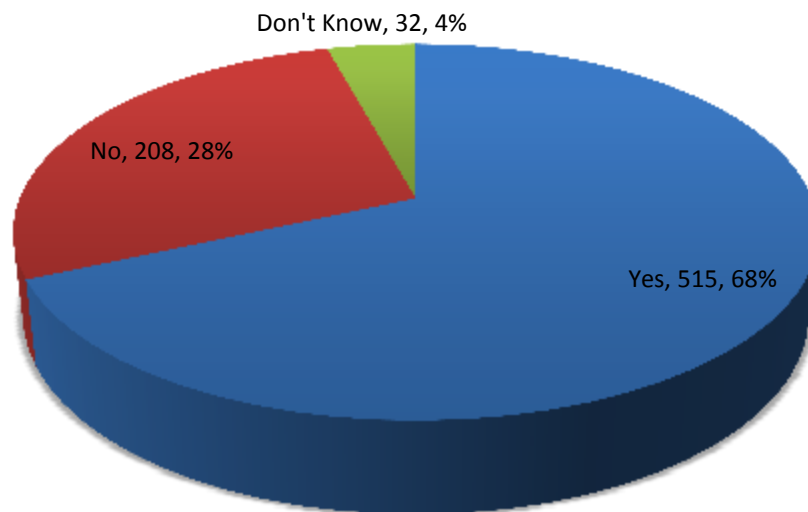
Method	Outlets
Social media	<ul style="list-style-type: none"><li>• Facebook : Cheltenham Borough Council, Gloucestershire Live</li><li>• Twitter: Cheltenham Borough Council</li></ul>
Websites	<ul style="list-style-type: none"><li>• Cheltenham Borough Council</li><li>• Gloucestershire Live</li><li>• Cheltenham Lib Dems</li><li>• Air Quality News.com</li></ul>
Radio	<ul style="list-style-type: none"><li>• BBC Radio Gloucestershire</li><li>• Heart FM Gloucestershire</li></ul>

	<ul style="list-style-type: none"> <li>• The Breeze FM Cheltenham</li> </ul>
Email	<ul style="list-style-type: none"> <li>• An eNewsletter was distributed to stakeholders, including Parish Councils, the BID and community groups</li> <li>• The newsletter raised awareness of the consultation and encouraged further circulation to the stakeholders' customers, including through the supply of printable consultation posters and flyers</li> </ul>
Posters & flyers	<ul style="list-style-type: none"> <li>• A poster and flyers were displayed in the Municipal Offices reception</li> <li>• Posters and flyers were distributed to local libraries for display</li> </ul>

## 2.0 Response analysis

During the consultation period, a total of 755 responses were received. Of the 755, 515 (68%) indicated support for the introduction of 20mph limits in some capacity.

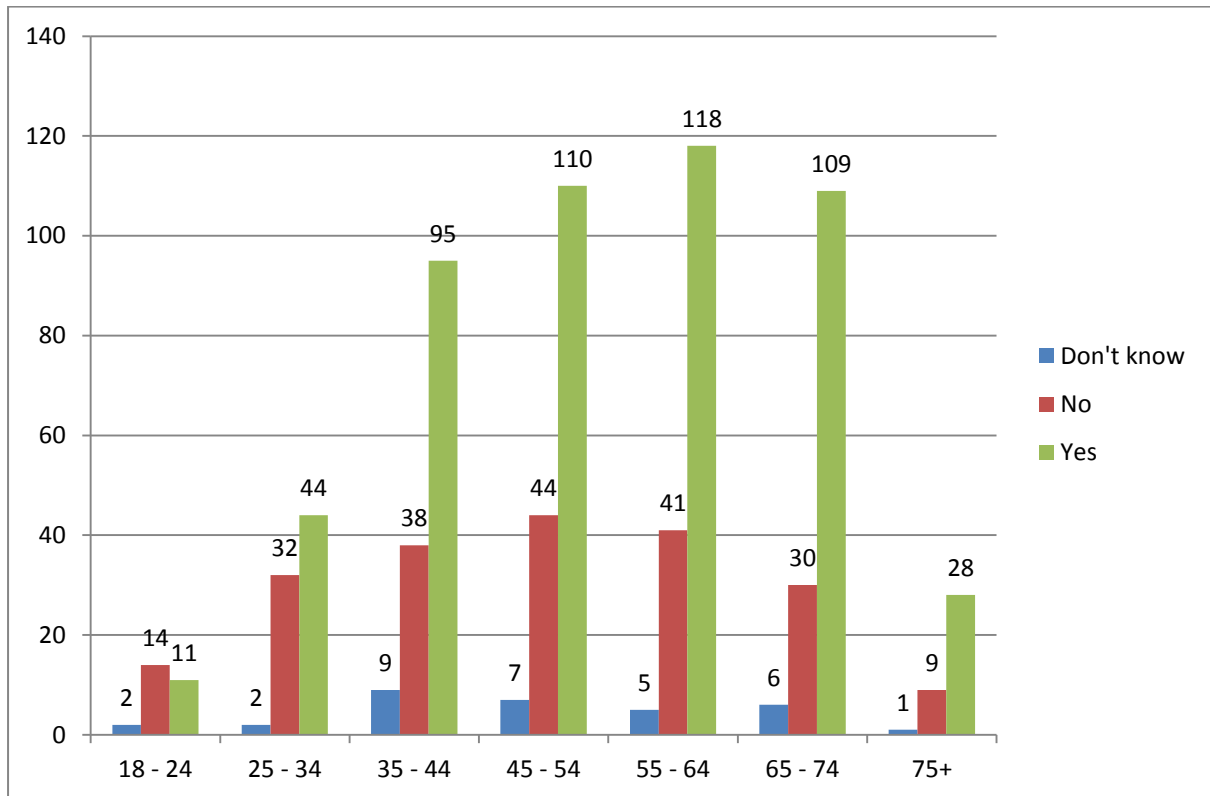
### Would you support the introduction of new 20 mph speed limits in Cheltenham?



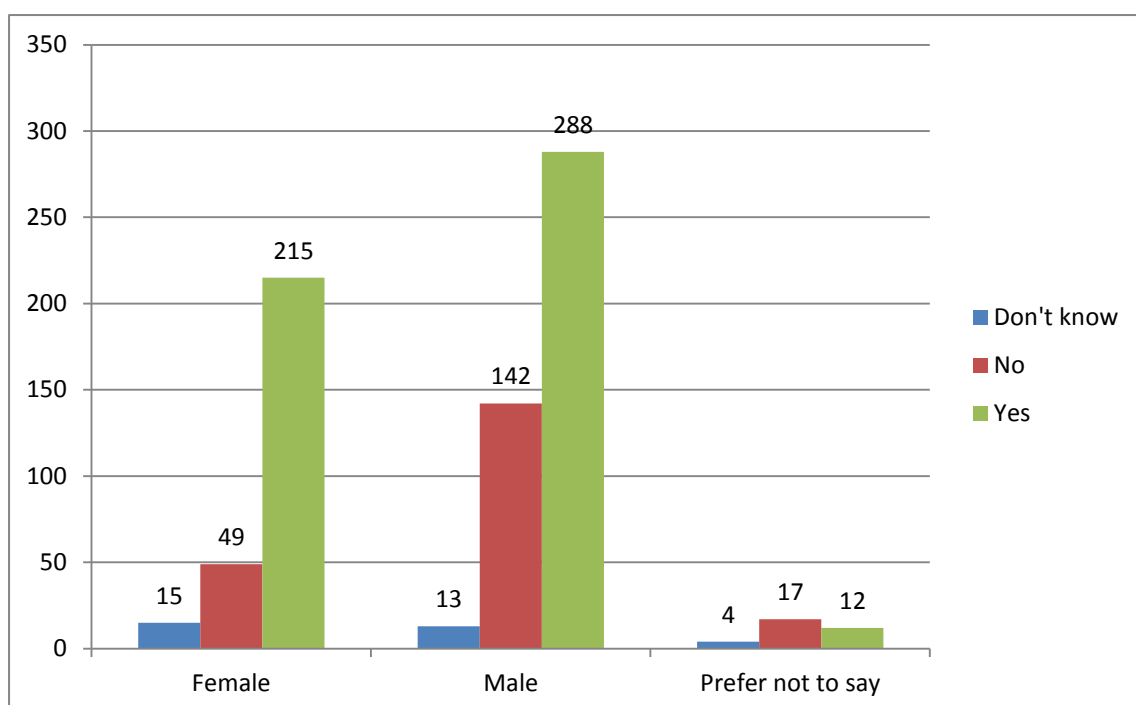
## 2.1 Support for 20mph limits in some capacity - demographics

### 2.1.1 By Age Range

The only respondent age range with a majority to opposed limits were 18-24 year olds.

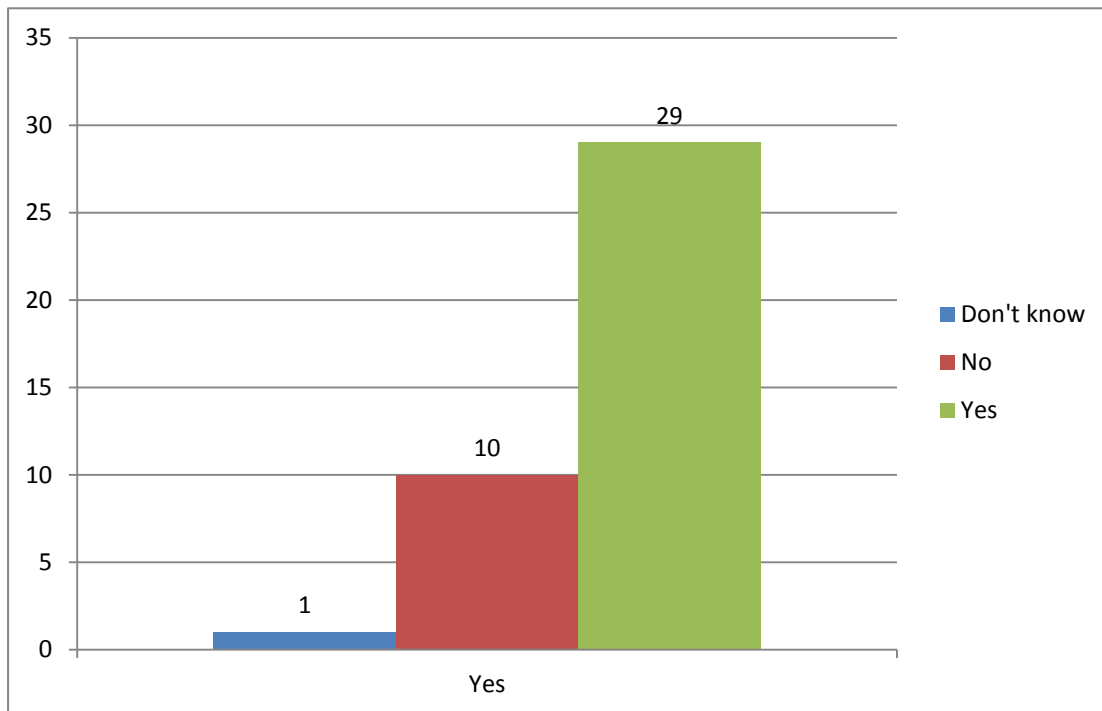


### 2.1.2 By Gender

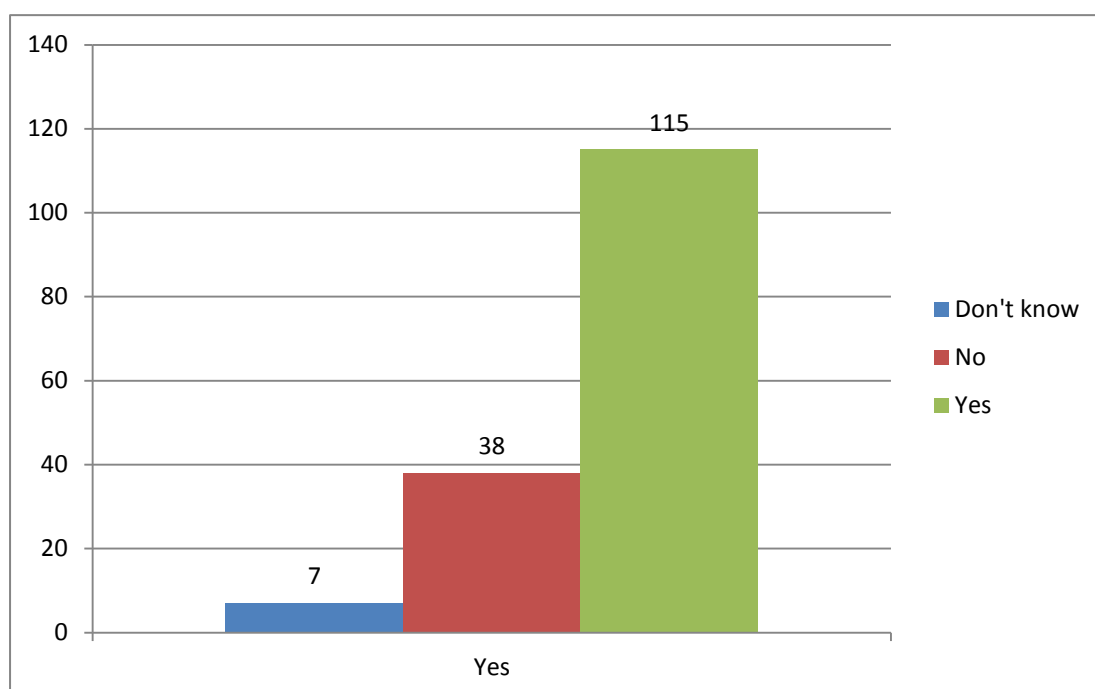


### 2.1.3 Support overall for limits by Mobility affected by disability

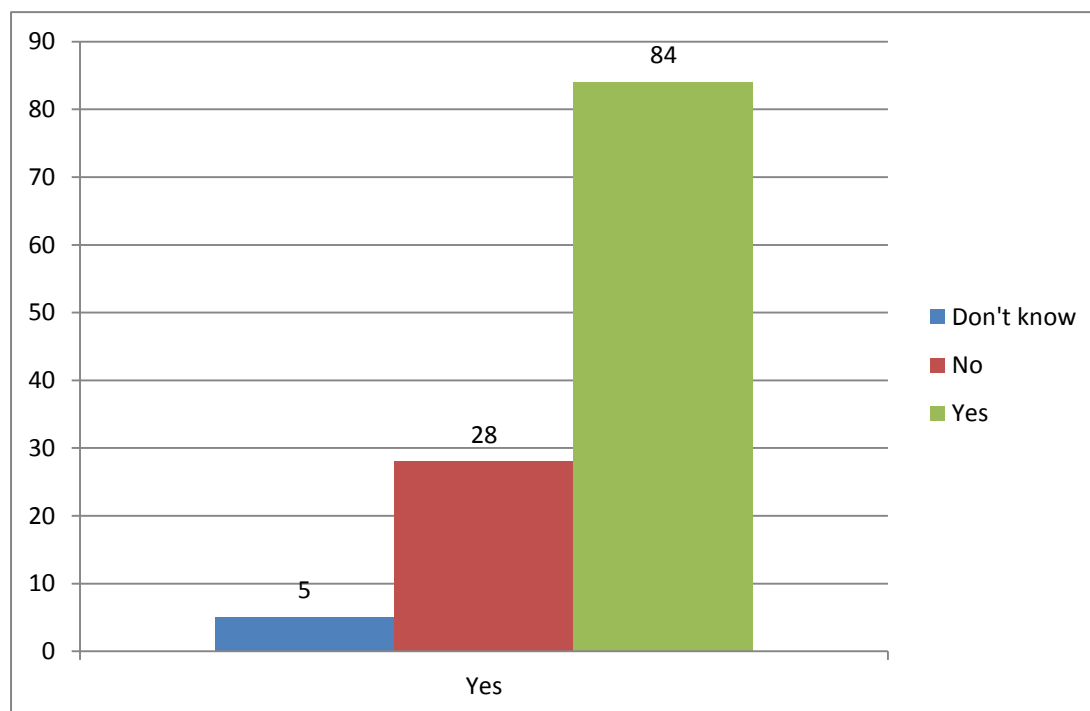
A majority of respondents who answered that their mobility was affected by a disability supported limits in some capacity, as did respondents who answered their mobility was not.



### 2.1.4 Parents of children under 8 years old



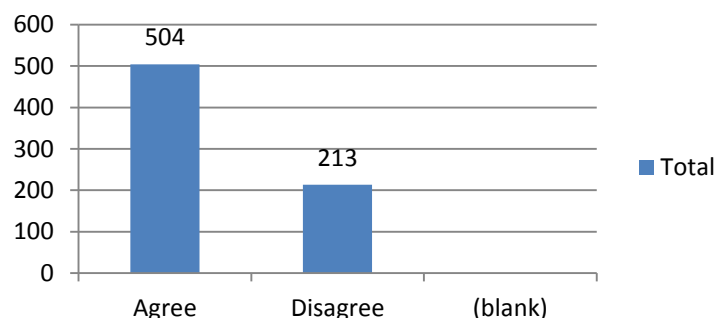
### 2.1.5 Parents of children aged 8-18



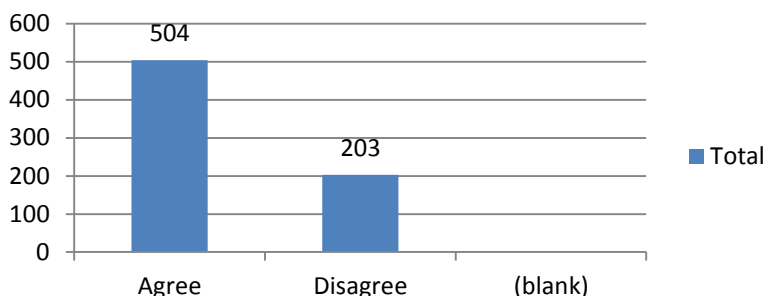
## 2.2 Support for different road types

Overall, a majority of responses supported limits in residential areas, although a narrow majority agreed limits should not apply to main roads within them.

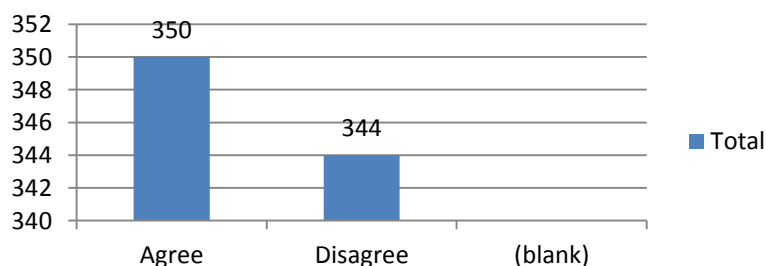
### Limits should apply in residential areas



### Limits should apply in residential shopping areas

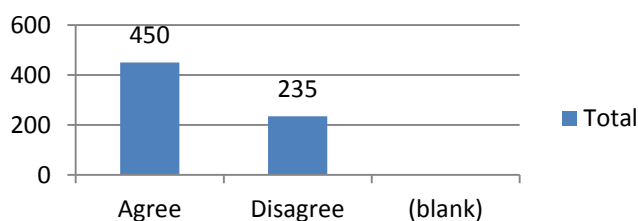


### Limits should NOT apply on main roads in residential areas

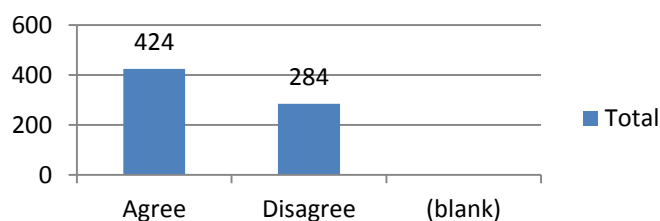


Most respondents believed limits should not apply to main A and B distributor roads, although at the same time, most responses indicated support for limits in the town centre and inner ring road.

### Limits should NOT apply on A and B distributor roads



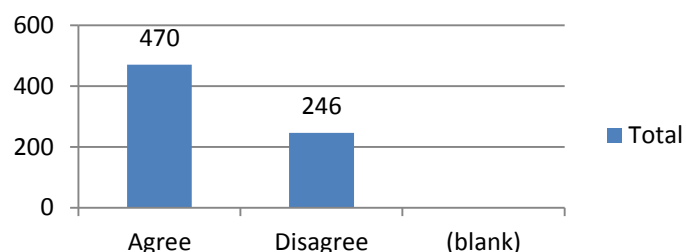
### Limits should apply in the town centre and inner ring road



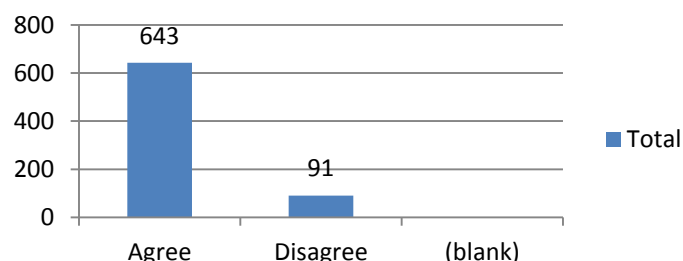


Interestingly, support for limits near schools showed overwhelming support; even from respondents who initially answered no to limits in any capacity.

### Limits should apply near hospitals



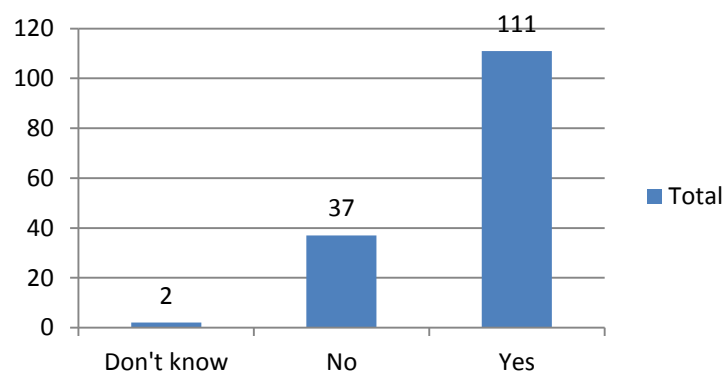
### Limits should apply near schools



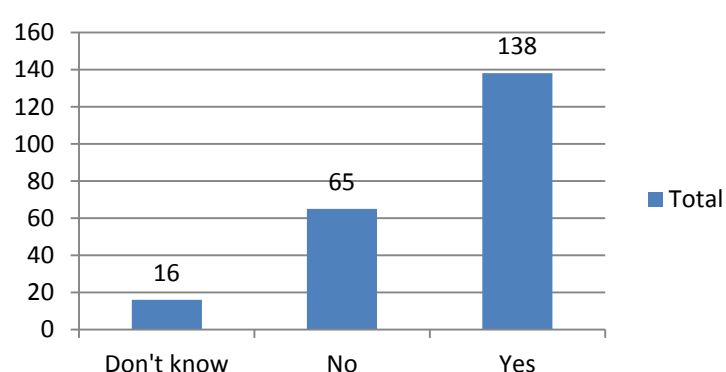
### 2.3 Support for 20mph limits by respondents' home

Support for limits broken down by areas of respondents, gauged by supplied home postcodes and grouped into vicinities of Cheltenham have been analysed by postcode (GL50, GL51, GL52 etc) whilst locations outside Cheltenham have been grouped together. With the exception of GL54, a majority of respondents from all Cheltenham areas supported proposed 20mph limits in some capacity. Areas outside of Cheltenham also displayed support for limits.

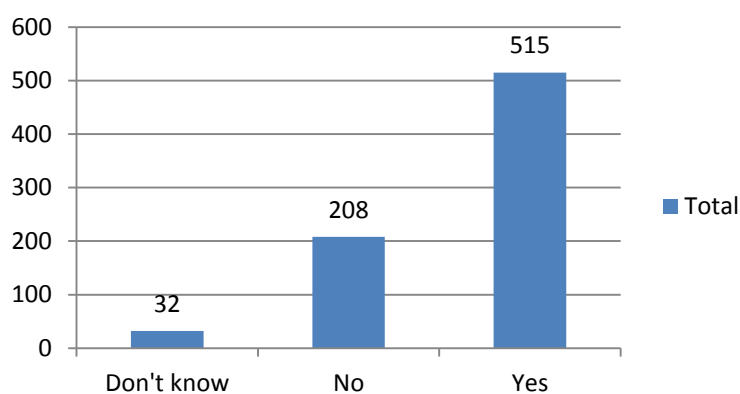
### GL50 postcodes



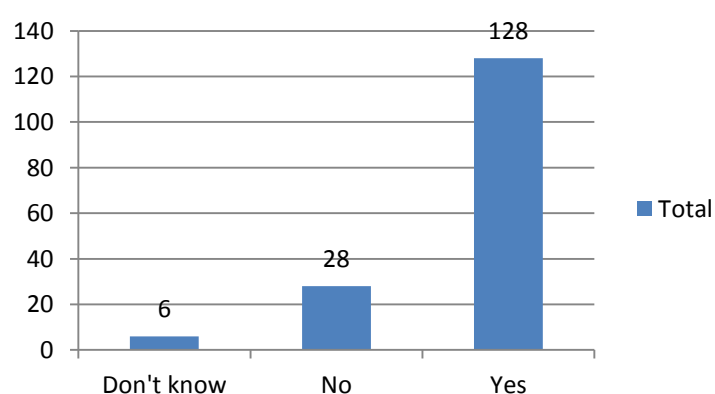
### GL51 postcodes



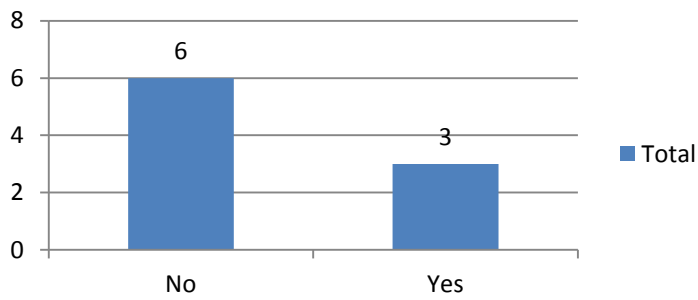
### GL52 postcodes



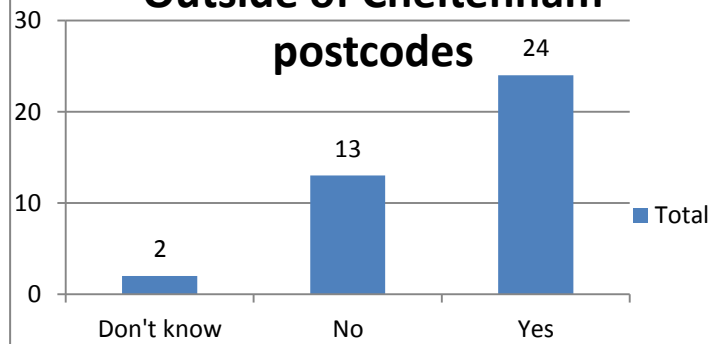
### GL53 postcodes



**GL54 postcodes**

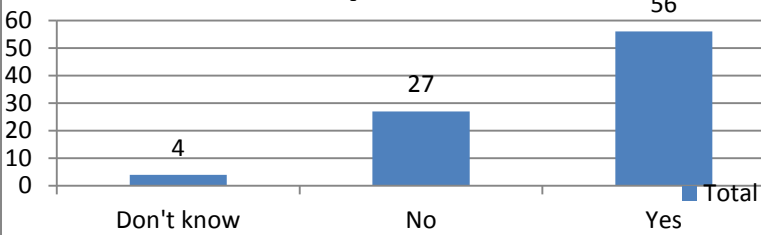


**Outside of Cheltenham postcodes**

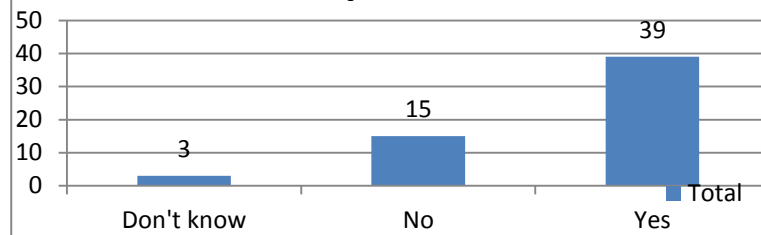


2.3 Support for limits based on workplace postcode

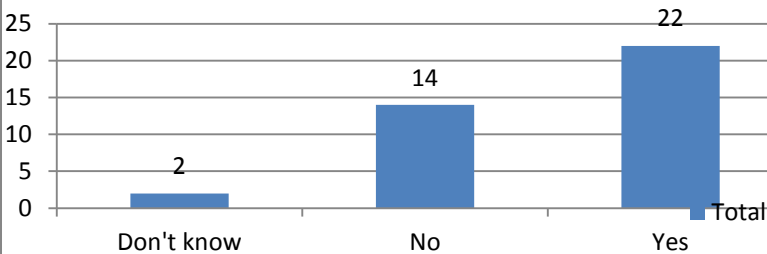
**GL50 postcodes**



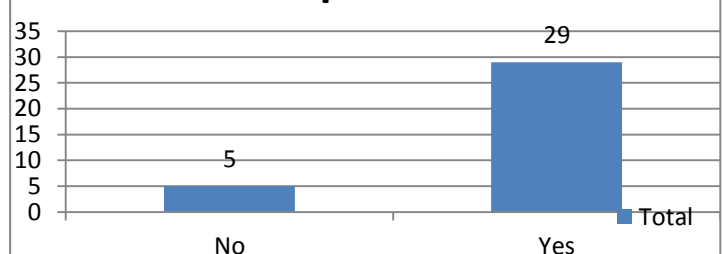
**GL51 postcodes**



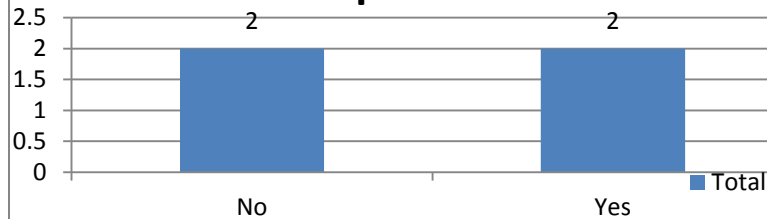
**GL52 postcodes**



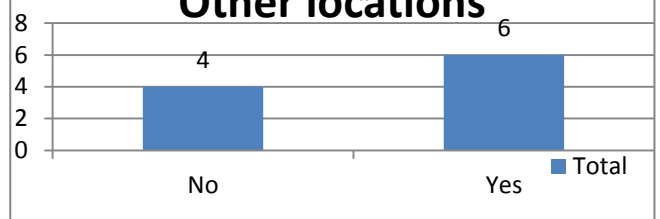
**GL53 postcodes**



**GL54 postcodes**

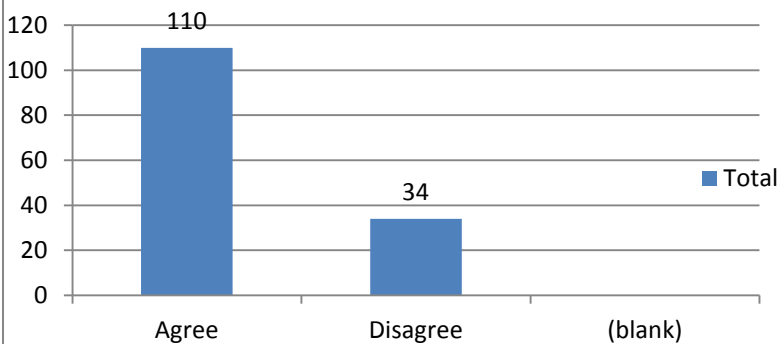


**Other locations**

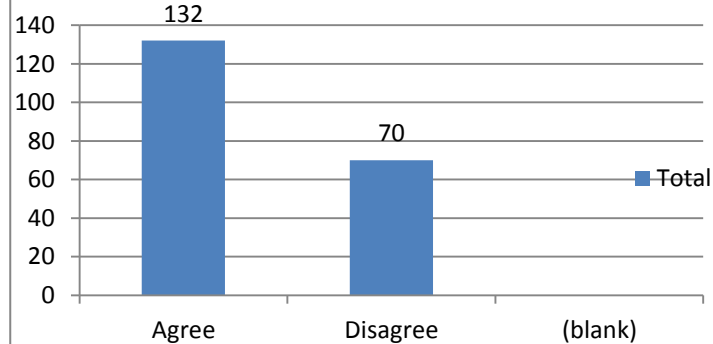


## 2.4 20mph limits should apply in residential areas

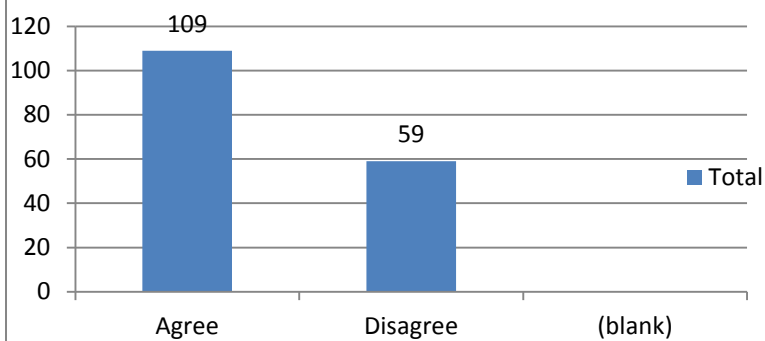
### GL50 postcodes



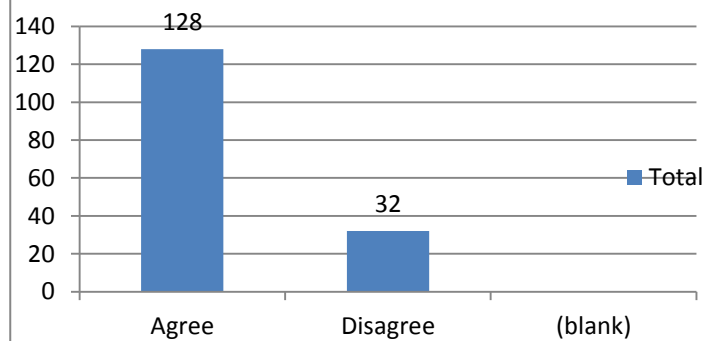
### GL51 postcodes



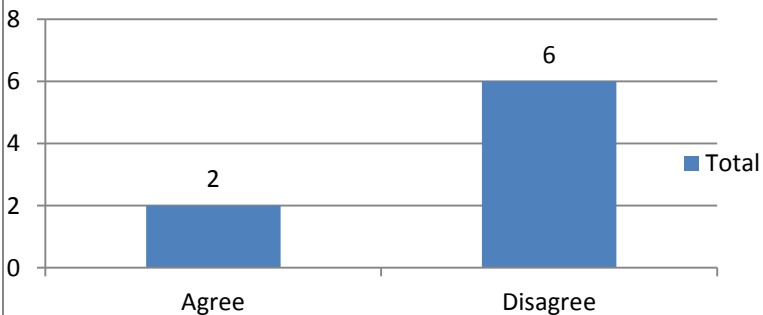
### GL52 postcodes



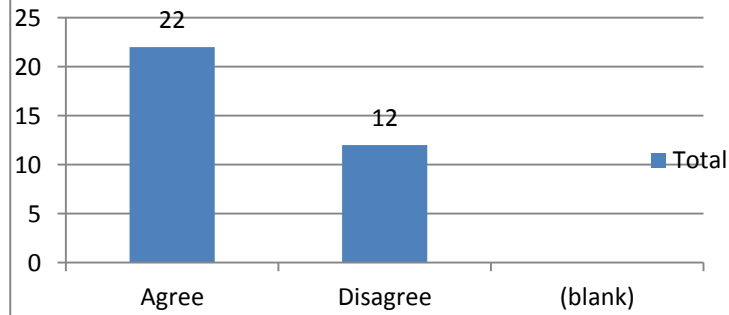
### GL53 postcodes



### GL54 postcodes

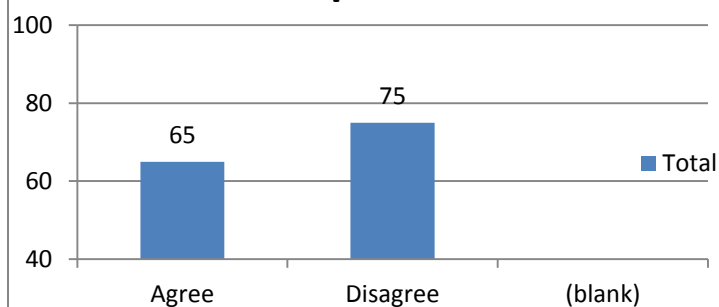


### Non-Cheltenham postcodes

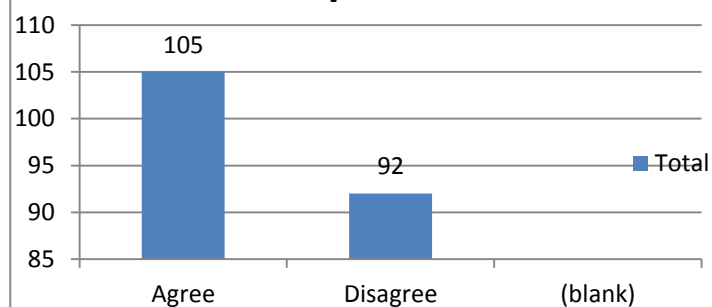


2.5 20mph limits should NOT apply on main roads in residential areas

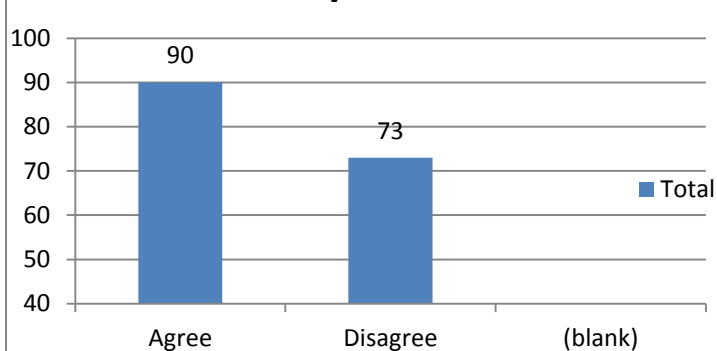
**GL50 postcodes**



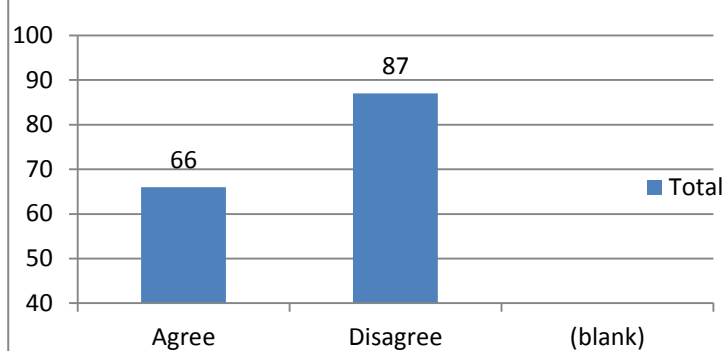
**GL51 postcodes**



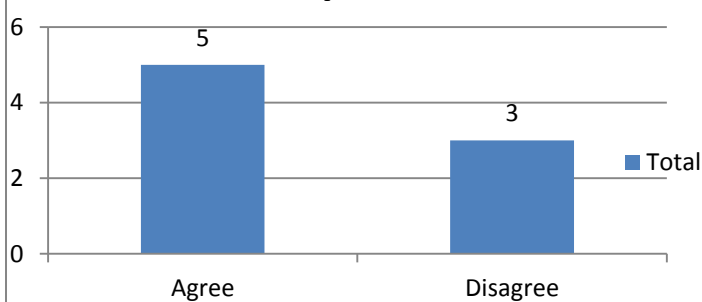
**GL52 postcodes**



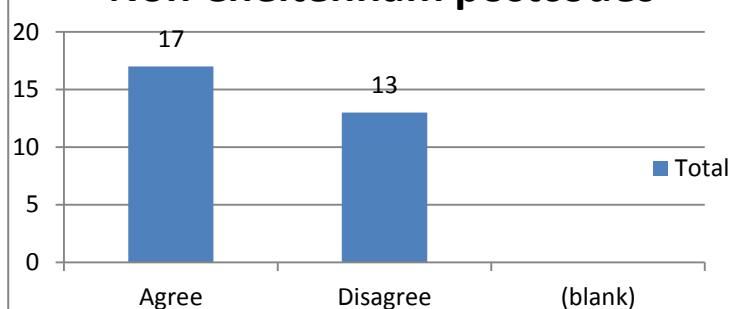
**GL53 postcodes**



**GL54 postcodes**

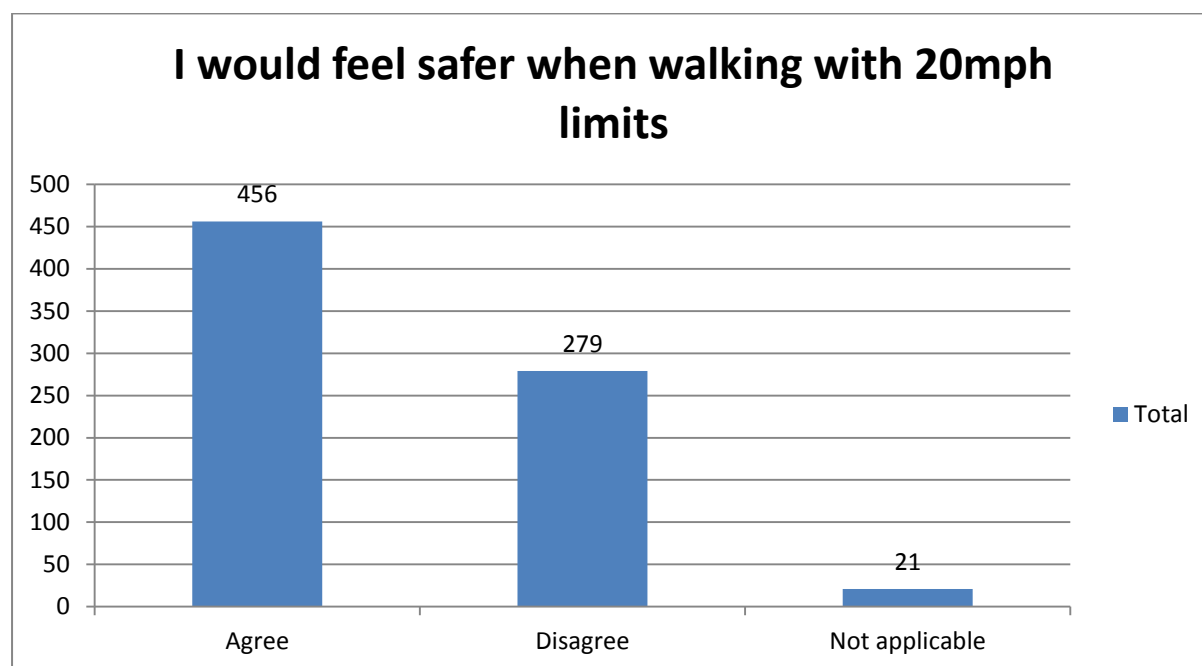


**Non Cheltenham postcodes**

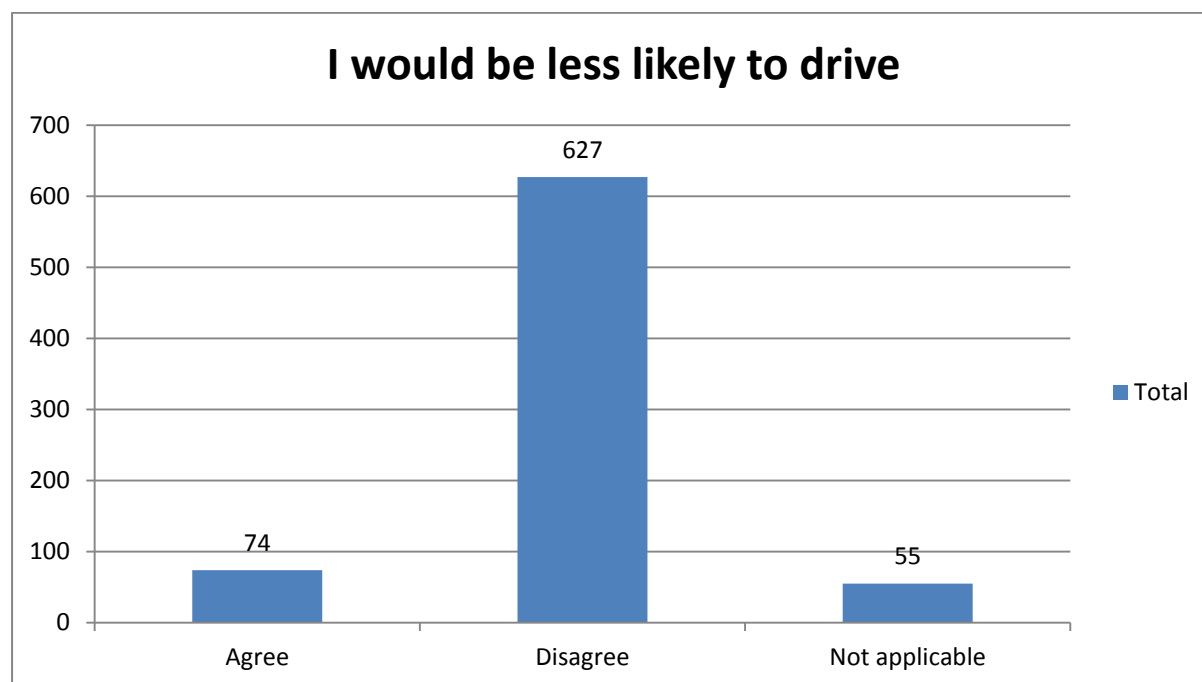


### **3.0 Prospective benefits**

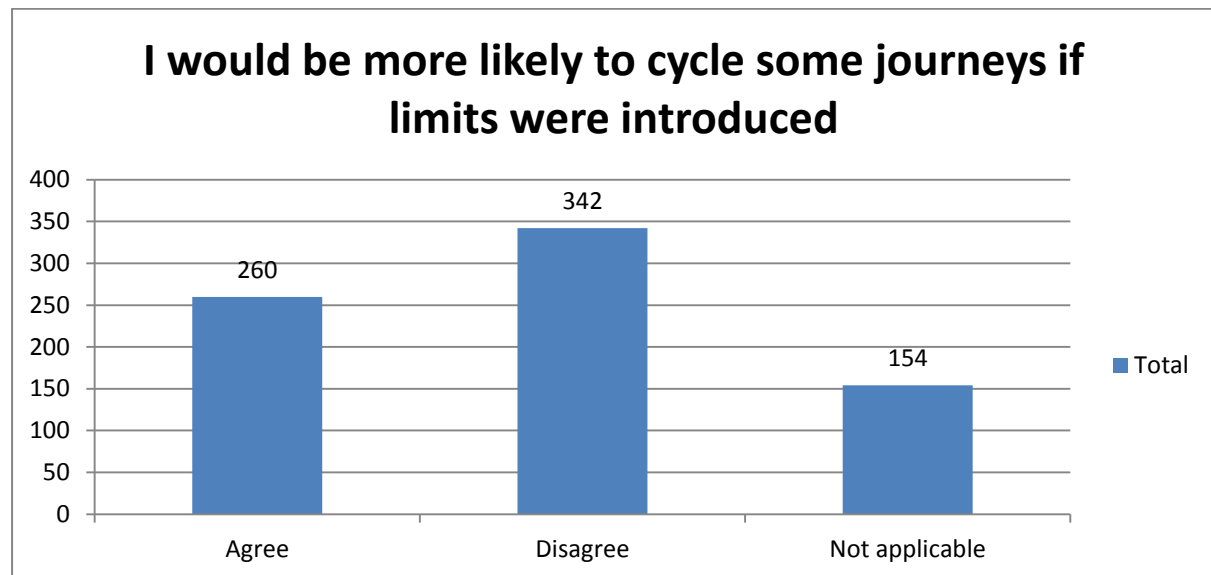
Most pedestrian respondents believe they would feel safer when walking if limits were introduced;



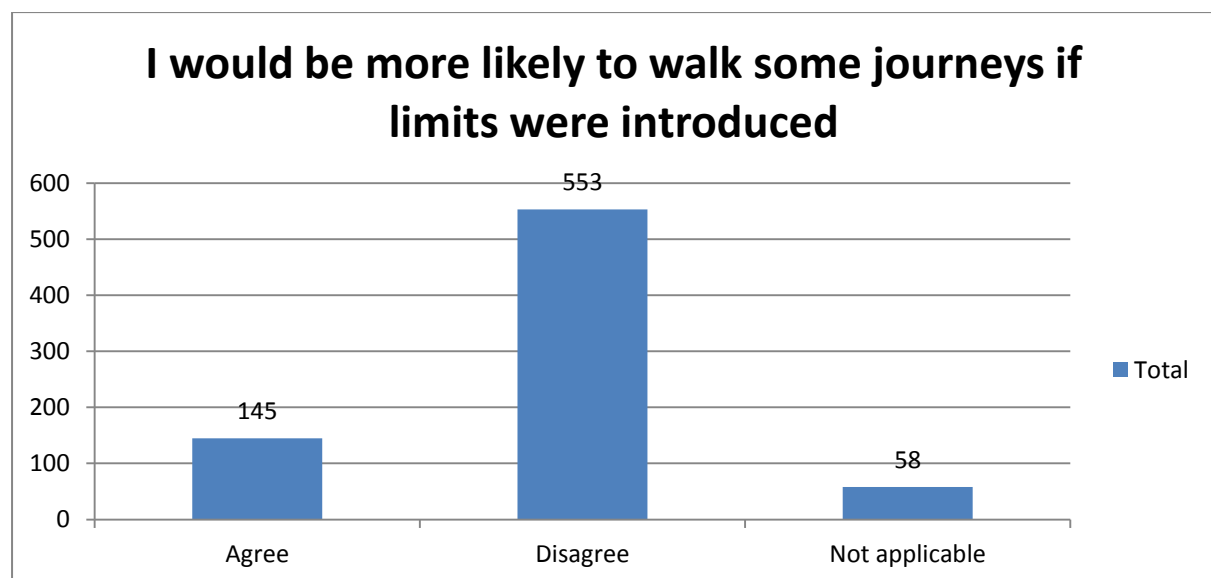
However, a considerable majority of motorist respondents (car, van, motorcycle / moped and lorry drivers) disagreed that they would be less likely to drive in the event limits were introduced;



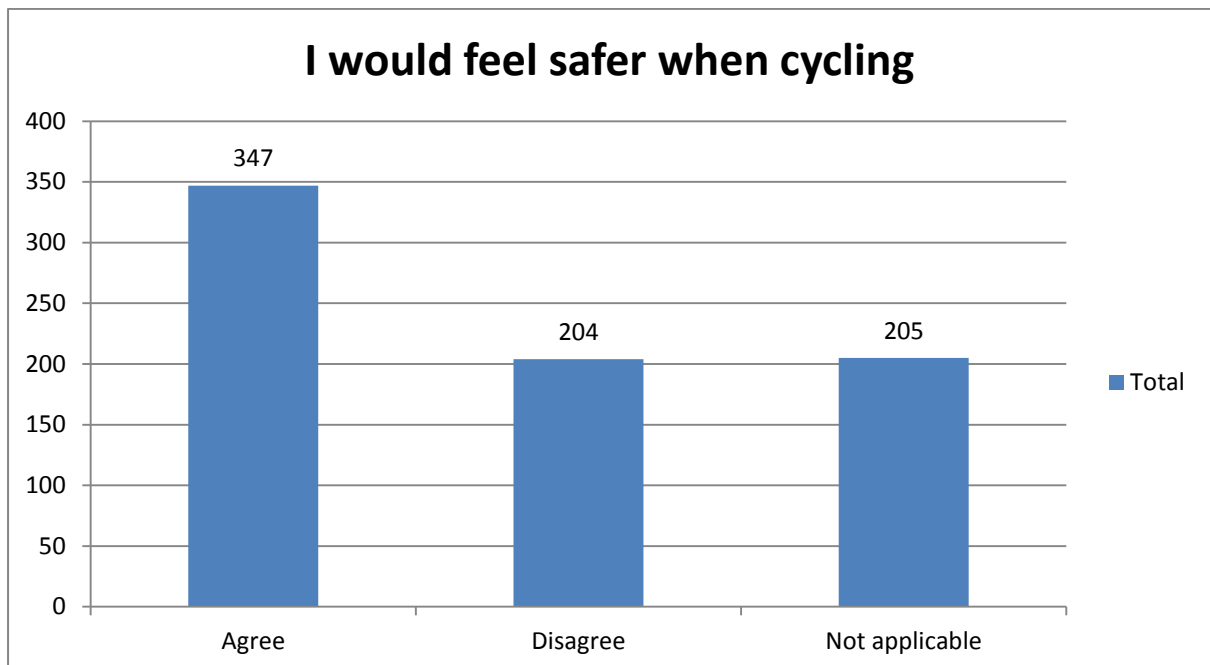
Most respondents indicated they would not be more inclined to cycle some journeys, however, a considerable 260 respondents indicated they would.



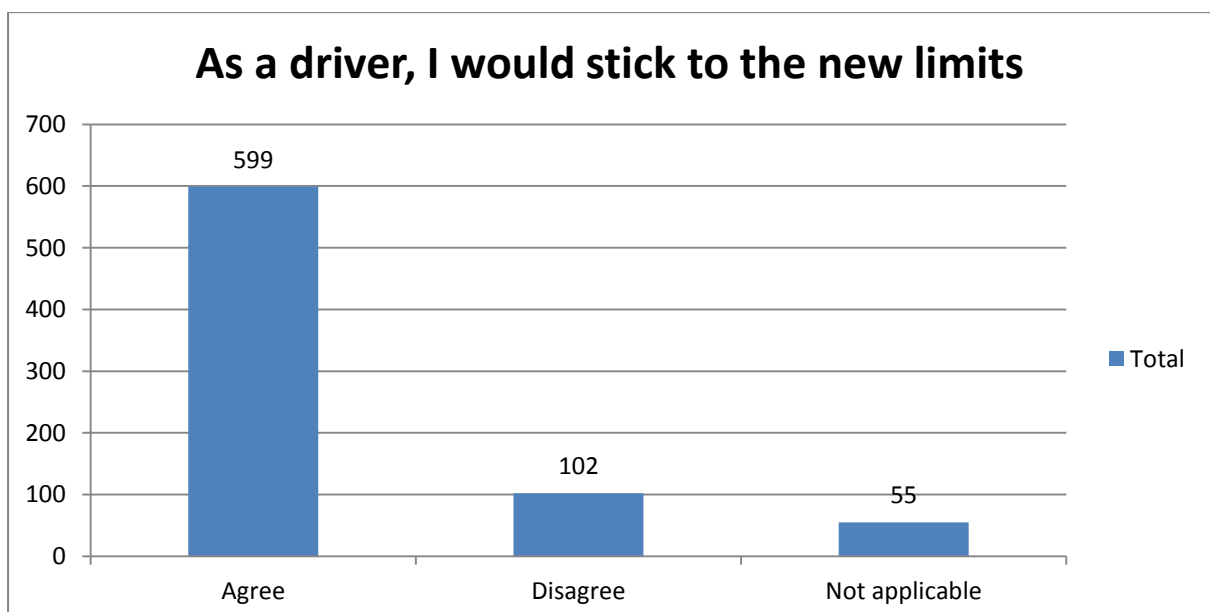
On the other hand, a considerable majority of respondents disagreed that they would be more likely to walk some journeys if limits were introduced.



A majority of respondents who indicated they cycle in Cheltenham agreed they would feel safer when cycling if limits were to be introduced.



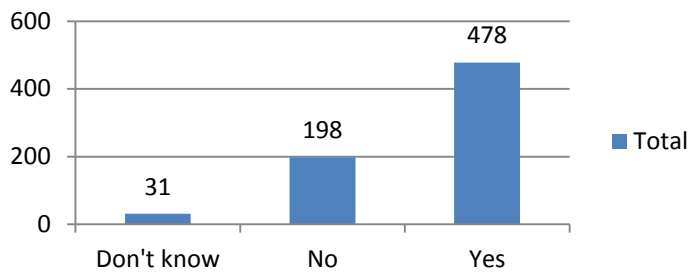
Most respondents who indicated they drive around Cheltenham agreed they would stick to the new limits if introduced.



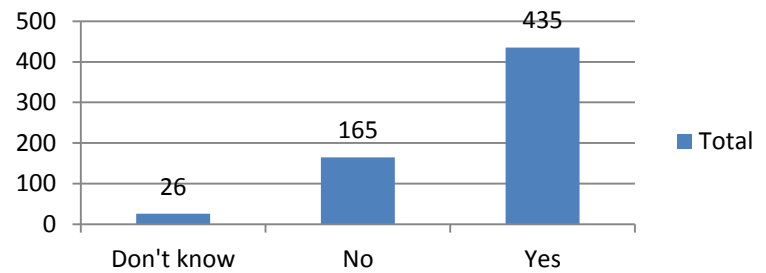
#### 4.0 Support for limits by transport method

To ensure the most accurate reflection of each transport type, “never” responses for each type have been excluded from the below charts.

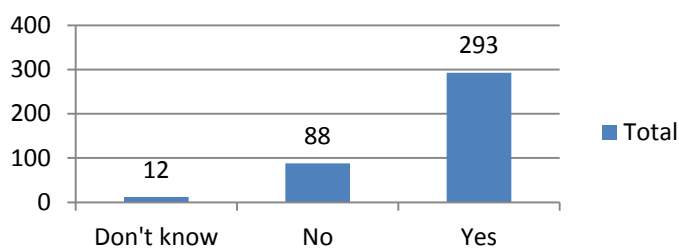
### Car / van driver



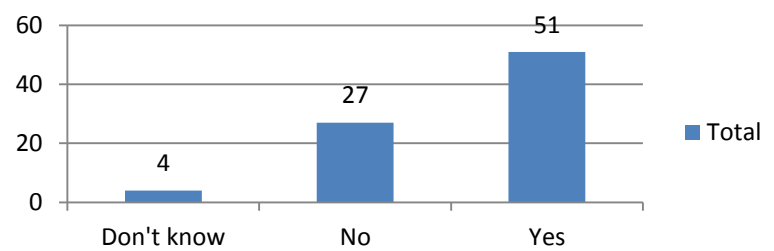
### Car / van passenger



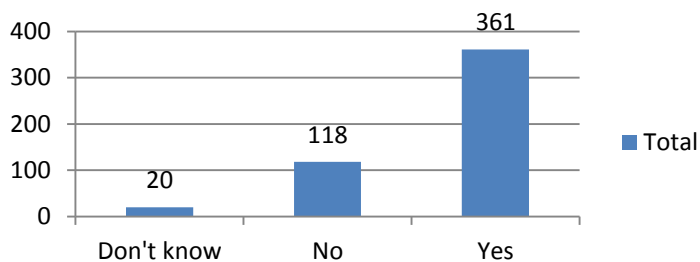
### Bicycle



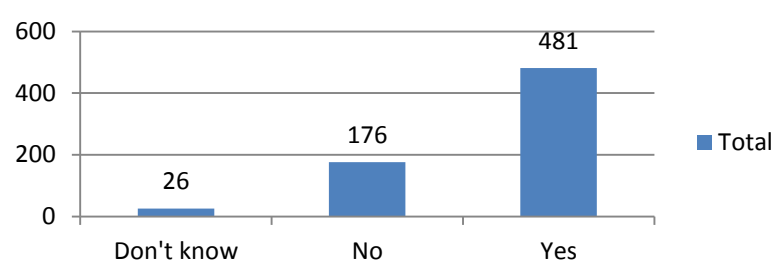
### Motorcycle / moped



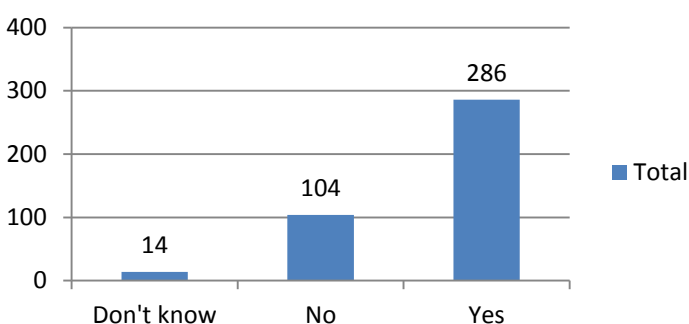
### Bus



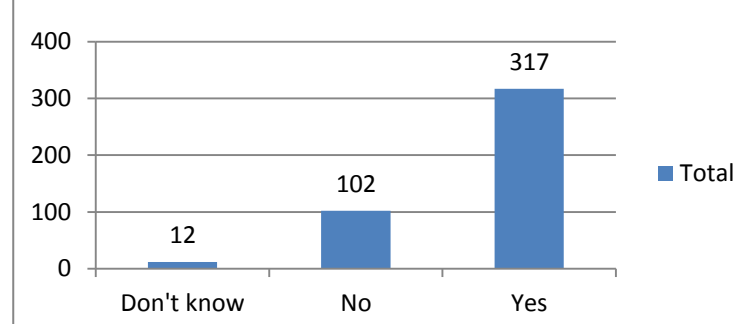
### On foot



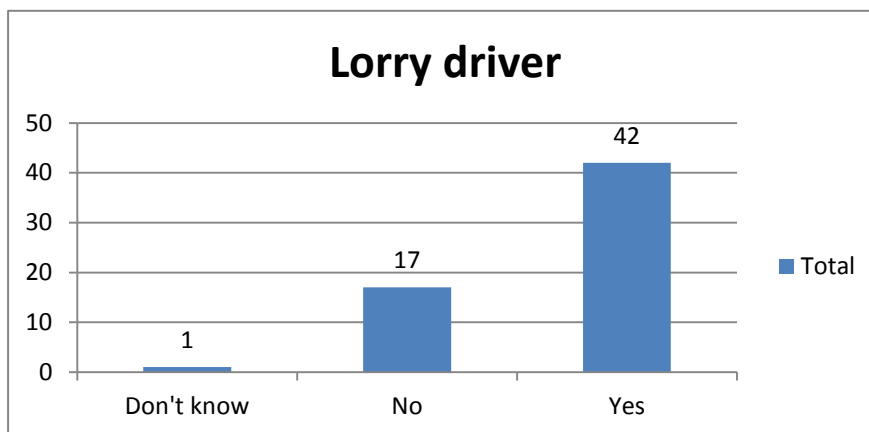
### Taxi



### Train

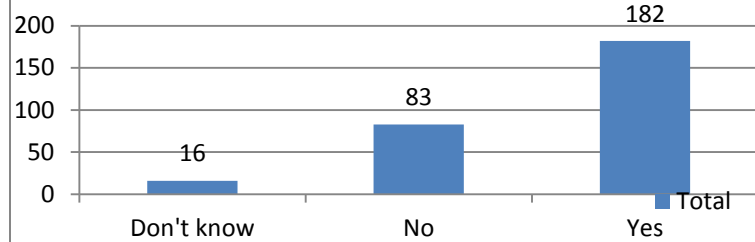




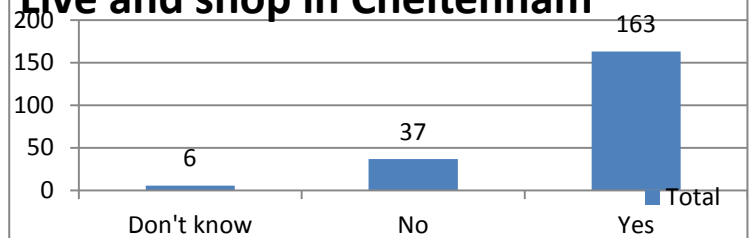


## 5.0 Support for limits; relationship with Cheltenham

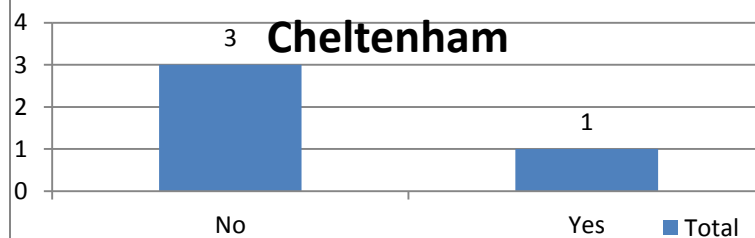
### Live in Cheltenham



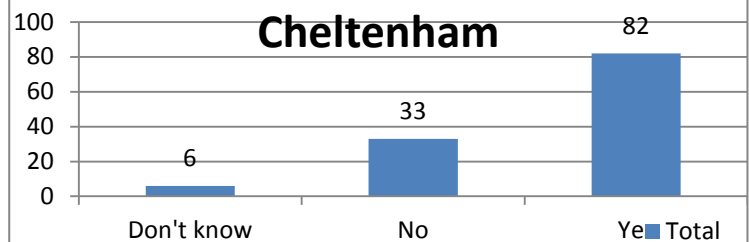
### Live and shop in Cheltenham



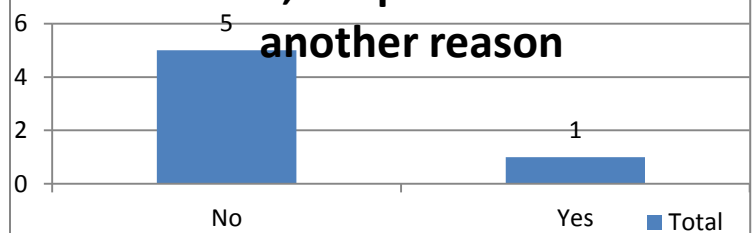
### Live and run a business in Cheltenham



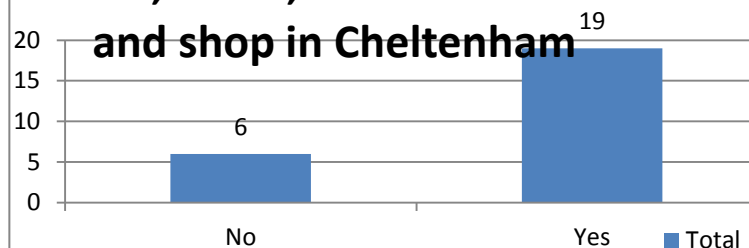
### Live, work and shop in Cheltenham

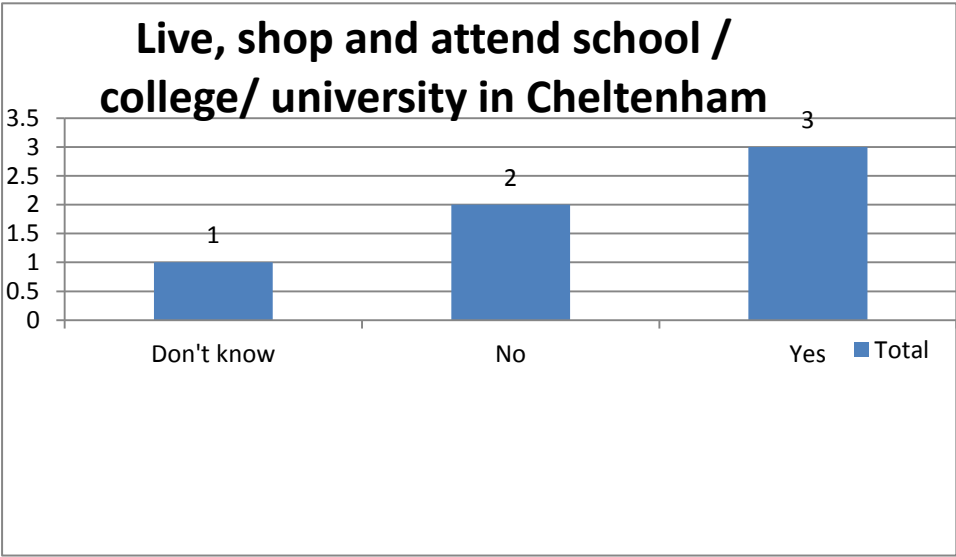
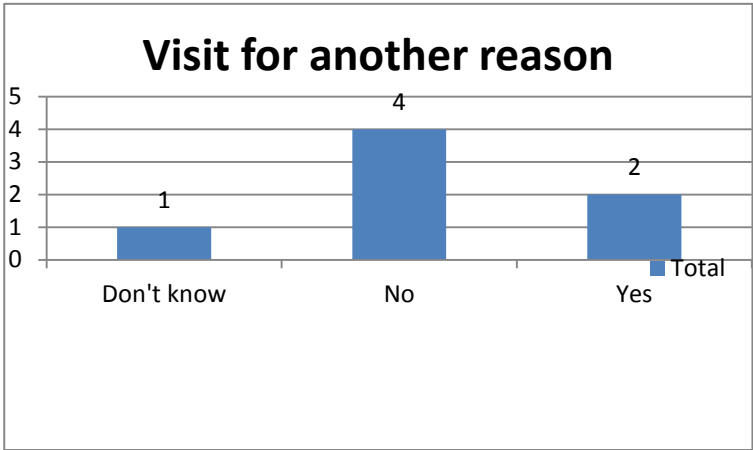
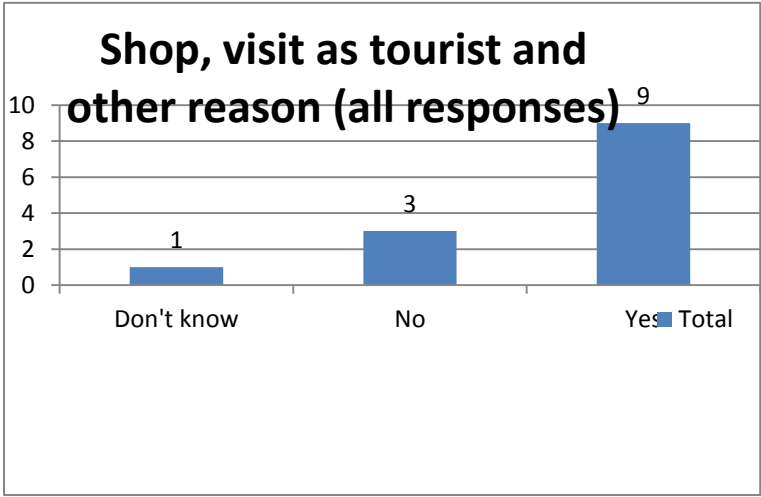


### Work, shop and visit for another reason



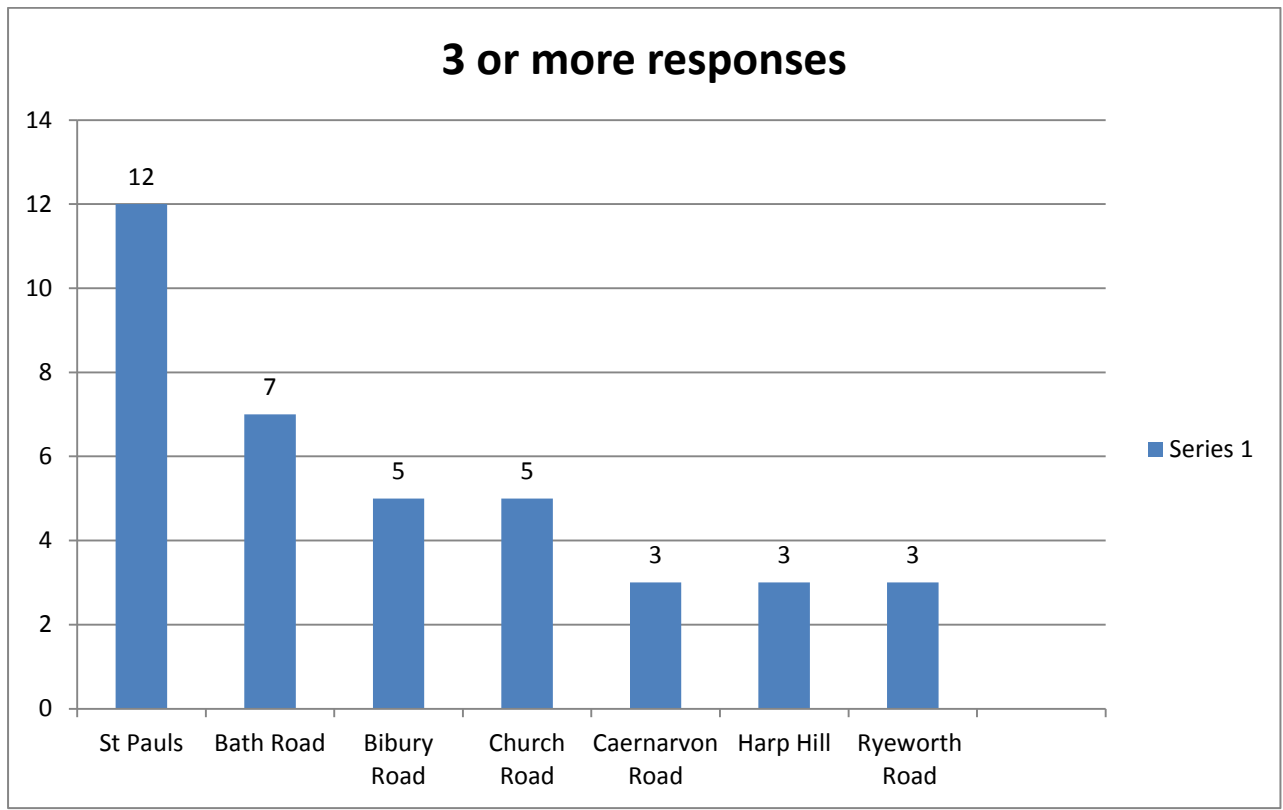
### Live, work , run a business and shop in Cheltenham



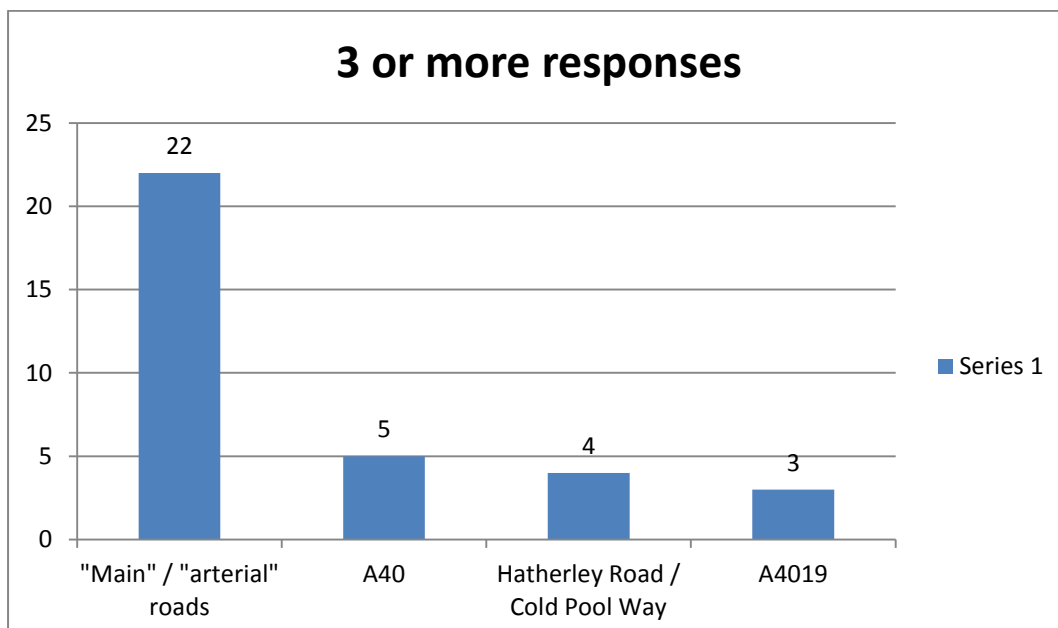


## 6.0 Highlighted places that limits should and should not apply to

### 6.1 Places stated where limits **should** be introduced



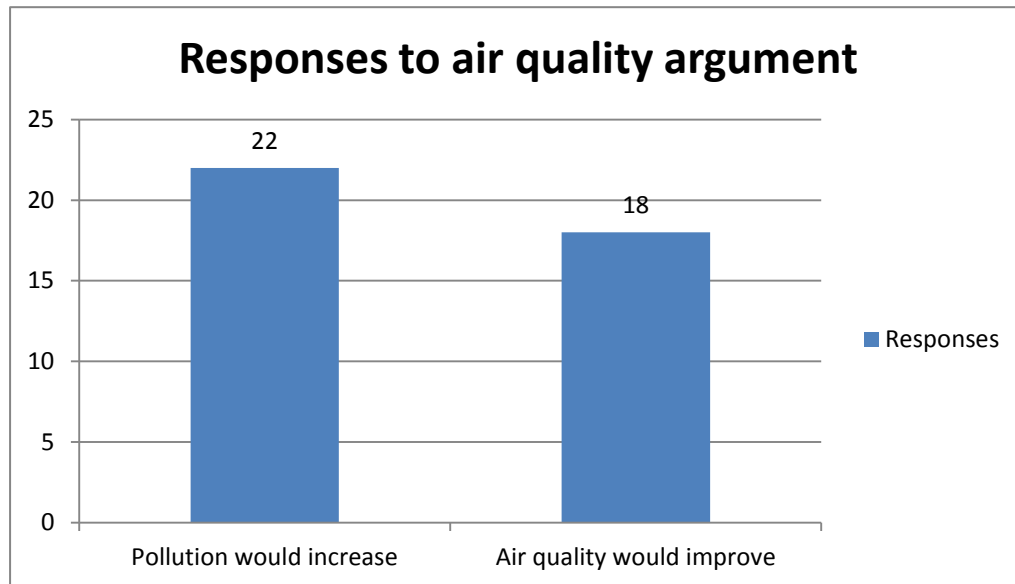
### 6.2 Places where limits **should not** be introduced



## **7.0 “Any other views” responses**

### **7.1 Air Quality argument**

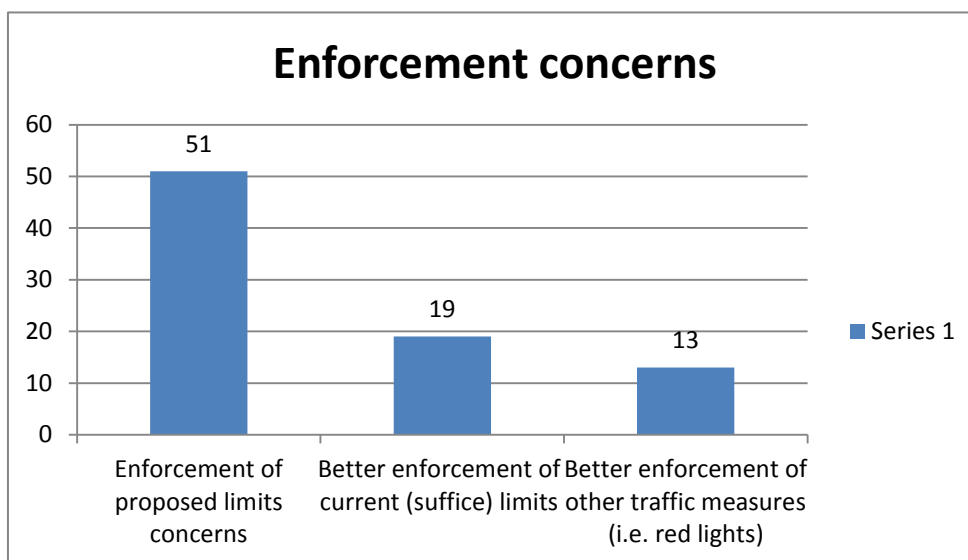
The argument around whether prospective limits would improve air quality was highlighted from the “any other views” question responses. The below information was compiled by locating responses containing “pollution”, “emissions” and “air quality”.



Some of the 22 responses providing rebuttal for the air quality improvement objective argued there would be increases in CO<sub>2</sub> emissions with vehicles travelling at 20mph and in turn, decreased air quality; citing the 2008 study and subsequent report by The AA (see Appendix A). These claims, and supporting evidence, are in contrast to the claims and supporting evidence referenced by the project team. GCC Officers provided further analysis of the air quality argument in their consultation response, which also recommended the consultation of the CBC Environmental Health team on the subject (see Appendix B). With studies supporting both sides of the argument, it is prudent to consider that the effectiveness of improving air quality through the introduction of 20mph speed limits is disputed, rather than certain.

## 7.2 Enforcement of limits

83 (11% of total) responses explicitly contained comments displaying concerns over the enforcement of the proposed speed limits, enforcement of current speed limits and or the enforcement of other traffic safety rules, such as traffic light command infringements. Some comments contained doubt about the effectiveness of the limits if a lack of enforcement were to be present, whereas others dismissed the introduction of limits / project entirely due to this factor.



## 8.0 Stakeholder responses

### 8.1 GCC Officers' response

GCC Officers' provided a response during the consultation, providing a balanced assessment of 20mph limits and schemes against the objectives set out, considerations and implications of introducing limits and offering their full support to CBC in the possible development of the scheme.

The full response is available at Appendix B.

## 9.0 Conclusion

There appears to be an appetite for 20mph limits in some capacities in Cheltenham. Support is considerably strong for limits in areas close to schools and support is strong in residential and town centre areas. However, a majority of respondents do not support limits being introduced on main roads; A and B distributor, or main residential, roads.

With limits in place, 456 respondents answered that they would feel safer when walking and 347 stated they would feel safer when cycling. However there are concerns, including from those in support of the limits, over the effectiveness the limits would have in achieving the desired objectives, with the enforcement of limits a reoccurring topic. Although, this is in contradiction to the considerable number of motorist respondents (599) who claim they would stick to the limits if introduced.

There is an argument around whether introducing 20mph speed limits would improve air quality or not, with both points of view supported by studies. Therefore, it is prudent to consider that the effectiveness of improving air quality through the introduction of 20mph speed limits is disputed, rather than certain.

## **10.0 Appendices**

Appendix A - Study by The AA into the impacts on air quality from 20mph speed limits (2008)

(Available at: [http://www.theaa.com/public\\_affairs/news/20mph-roads-emissions.html](http://www.theaa.com/public_affairs/news/20mph-roads-emissions.html))

# **20mph roads and CO2 emissions**

## **Lower limits can increase fuel consumption and CO2 emissions**



Cutting the speed limit from 30 mph to 20 mph on the wrong roads can increase CO2 emissions by more than 10% with the result that well-intentioned safety schemes may backfire in environmental terms.

On average, petrol car fuel consumption on longer and relatively free-flowing 20mph urban streets can worsen by 5.8 miles per gallon (1.3 miles/litre). Over a year this will significantly increase CO2 emissions – burning 1 litre of unleaded petrol produces 2.36kg of CO2.



Speed humps - popular with residents wanting to slow traffic in their street - pump up fuel consumption by 47% when installed on 30 mph roads. Compared to a 20 mph road, speed humps along a 30 mph road increase fuel consumption by 41%.

Targeted 20 mph speed limits in residential areas are popular and improve safety. Along shorter roads with junctions and roundabouts, limiting acceleration to up to 20 mph reduces fuel consumption. But on local distributor roads a 30 mph limit may be more environmentally-friendly.



Transport and highways planners have little or no official guidance on the environmental impact of 20 mph speed limits. It would be ironic if local authorities that have targeted owners of larger vehicles with environmental charges, are found guilty of increasing CO2 emissions through indiscriminate use of 20 mph restrictions.

In the past the Green Party advocated 20 mph limits across the whole of London, perhaps without realising that this policy would backfire in terms of environmental emissions.

It is important to ascertain both the safety and environmental implications of 20 mph zones.

## Fuel consumption figures

### 30mph/20mph/speed humps petrol car consumption figures

- **Steady 30mph (4th gear):**  
60.7 mpg (small petrol car), 55.6 mpg (medium petrol car)  
= 58.15 mpg (average)
- **Steady 20mph (3rd gear):**  
55.5 mpg (small petrol car), 49.1 mpg (medium petrol car)  
= 52.3 mpg (average)
- **Speed humps (6 over 1/2 mile at 20-30 mph):**  
33.8 mpg (small petrol car), 27.9 mpg (medium petrol car)  
= 30.85 mpg (average)

### 30mph/20mph/speed humps petrol car consumption differences

- **Change 30 mph zone to 20 mph:**  
increases fuel consumption by 5.85 miles per gallon, or 10.1 per cent.
- **Add speed humps to a 30 mph zone:**  
increases fuel consumption by 27.3 miles per gallon, or 46.9 per cent.

The AA's fuel consumption tests were carried out at Millbrook proving ground by an independent engineer and car tester, using a fuel flow meter.



In 2000, the then [Department of Environment, Transport and the Regions](#) argued against reducing the 30 mph limit for fear of increasing emissions.

#### Appendix B – GCC Officers' response to proposed 20mph limits

### **Cheltenham 20mph consultation – Gloucestershire County Council Officer Response**

#### **Summary**

Cheltenham Borough Council (CBC) are undertaking an online consultation to understand residents, businesses and visitors' views on proposals to reduce vehicle speeds in residential roads and the town centre in Cheltenham to 20 mph.

Gloucestershire County Council (GCC) officers have considered this proposal, specifically looking at implications on safety, environment, enforcement and costs. While there are a few issues that need to be considered, GCC officers would be happy to actively cooperate further with Cheltenham Borough Council in the further development of the proposed scheme.

#### **General comments:**

A 20mph speed limit/ zone could apply in streets that are primarily residential and in other town or city streets when pedestrian and cyclist movements are high, such as around schools, shops, markets, playgrounds and other areas, where motor vehicle movement is not the primary function.

General compliance needs to be achievable without excessive enforcement (i.e. existing appropriate mean speeds of 24mph or less).

Traffic speed reductions to 20mph can be achieved through either 20mph speed limits or 20mph zones:

- **20mph speed limits** are signed with terminal signs and at least one repeater sign. Traffic calming features are not required for a limit. Limits normally apply to individual roads or a small number of roads but can be used in a large number of roads.
- **20mph zones** require at least one traffic calming feature, which include speed humps, chicanes/build outs, speed tables, speed cushions, repeater signs or roundel road markings. Zones usually cover a number of roads.

A Traffic Regulation Order (TRO) is required for 20mph speed limits as well as 20mph zones.

GCC has produced a guidance note providing factual information in more detail which can be made available on request.

## **Gloucestershire's Local Transport Plan:**

Gloucestershire's adopted Local Transport Plan identifies 20mph zones as both short and long term priorities. They are referenced primarily within the Cycle Policy Document as part of the 'Invisible infrastructure' tool box which contribute to the creation of a cycle-friendly road environment, as a measure to improve road safety and as an operational priority for improving the quality of the cycle network.

### **Safety benefits:**

Research shows, that the risk of death for pedestrians struck by cars increases at higher impact speeds, although the exact risk levels varied between the studies.

A Department for Transport (DfT) evaluation of the implementation of 20mph Speed Limits in Portsmouth showed a disappointing increase of 6% for Killed and Seriously Injured (KSI), but also a very encouraging 22% reduction in overall casualties in the areas where 20mph speed limits were introduced. When comparing these figures with urban areas in Cheltenham and Gloucester, GCC officers found that both of Gloucestershire's main urban areas have benefitted from a greater casualty reduction than the introduction of 20mph areas in Portsmouth.

There are therefore concerns that a 20mph limit signed on its own (without traffic calming features) is unlikely to have a significant impact on average speeds or accidents. The Department for Transport Circular 01/2013 states that: "Research into signed-only 20 mph speed limits shows that they generally lead to only small reductions in traffic speeds. Signed-only 20 mph speed limits are therefore most appropriate for areas where vehicle speeds are already low." It is suggested that, on average, 20mph schemes reduce traffic speeds by 0.7 mph which can be a lot less than what is expected by local residents, if a 20mph scheme is introduced. It is therefore important to manage public expectations.

GCC officers would like to point CBC officers' attention to a DfT study on the effects of 20mph limits, expected to be published later in 2017, which should provide authoritative data on changes in speeds and casualties.

### **Environmental benefits:**

The difference between a signage only 20mph speed limit and one that uses traffic calming measure is also likely to have a significant impact on air pollution levels. While recent studies show that 20mph speed limits may not lead to a direct change in air pollution, there can be an indirect benefit, if reduced traffic speeds encourage people to switch to active modes of travel, such as cycling and walking.

However, there is an increasing national debate around traffic calming and links to air pollution. Whilst introducing a 20mph speed limit without any traffic calming measures could lead to it not being effective, these measures (e.g. humps, chicanes, etc.) are known to create the slow down then accelerate driving habits, which has now been linked to increased air pollution.

GCC officers feel that this is an important consideration, particularly with the whole of Cheltenham Town Centre being an Air Quality Management Zone. A House of Commons briefing paper on speed limits in England, published in September 2017, states that "Where limits for air quality are in danger of being exceeded, compliance with those air quality limits could be an important factor in the choice of speed limit. But depending on the individual circumstances the imposition of a speed limit

will not always be the solution. And the visible characteristics of a road affect the speed that a driver chooses: to be effective, the reasons for a limit need to be apparent.”<sup>1</sup>

GCC officers would therefore suggest that the CBC environmental health team is consulted before a decision on the 20mph speed limit is made.

### **Enforcement:**

The consultation refers to the fact that physical measures are no longer required on 20mph limits as part of the requirements in the Traffic Signs and General Directions. This is true, however the general stance from the Police is that 20 mph limits need to be self enforcing to minimise the need for police enforcement and therefore physical measures are encouraged. Additional police enforcement is not currently undertaken on 20 mph speed limits however this is currently being reviewed. Any potential order(s) would require support from statutory parties such as Gloucestershire’s Police and not just at local officer level. We would therefore strongly recommend that CBC officers contact Gloucestershire Constabulary to discuss the proposed 20mph speed restrictions and how Gloucestershire’s police would be able to support them.

### **Costs:**

GCC officers are concerned that whilst signing and lining may be perceived to be low cost the cost, of implementing across an entire town would be extremely high, given that every side road would need to be signed with repeater signs and if physical measures were deemed to be necessary the costs are unlikely to be achievable. While it is difficult to establish an accurate cost estimate based on the lack of previous TRO’s of this size and nature, the West of Cheltenham Parking Scheme (which in area is about a tenth of the area of the 20mph limit proposed) included approx. £80-100k of consultation costs and works costs quoted in the region of £137k. Therefore as a ballpark range the costs of an area wide 20mph limit could be somewhere in the range of £1million to £2.5million.

The full scope of the works would need to include:

- Speed and traffic surveys required on every street
- Preliminary and Detailed Design
- All stages of TRO Consultation including Statutory, Informal and Formal Consultation
- Responding to consultation, letter drops, advertising in the press
- Consultation events
- TRO Committee and/or TRO Report
- Streetlighting assessment for all terminal and gateway signs
- Construction works including: sign and post installation, illumination, lining works (where roundels specified), traffic management

Whilst GCC has introduced 20mph speed limits in the past, there would have to be a clear link to high benefits for either safety, air quality or congestion reduction to justify putting any capital funding toward such a project. Any such project would also have to also score high in comparison to other requests for 20mph speed limits and safety improvement schemes in Gloucestershire.

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<sup>1</sup> <http://researchbriefings.files.parliament.uk/documents/SN00468/SN00468.pdf>

**Conclusion:**

20mph schemes can encourage healthier and more sustainable transport use, potentially leading to less congestion, improved accessibility and environmental benefits. They can also improve the local environment, creating community benefits and improving quality of life.

Gloucestershire County Council is well aware of the benefits of reducing traffic speed to 20mph at the appropriate locations. However, there have recently been concerns about their effectiveness, particularly of 20mph speed limits only. Compliance will depend on existing measured speeds and the road characteristics. Blanket 20mph proposals over streets which vary in nature and purpose are unlikely to have a dramatic impact on measured road speeds. To ensure the 20mph speed reductions would be enforced efficiently, consultation with the Gloucestershire Constabulary is essential.

The environmental benefits of a 20mph scheme depend on the exact specification of the project and should be carefully considered, particularly within Cheltenham's AQMA.

The financial costs of implementing 20mph speed reductions across an entire town could potentially be very high and a highly scoring business case would have to be presented to GCC in order for it to consider making any capital financial contributions to the scheme.

GCC officers would be happy to actively cooperate further with Cheltenham Borough Council in the further development of the proposed scheme and are looking forward to hearing the outcome of this consultation.