

# Littlemore Parish Council LTN Questionnaire Analysis

November 2021, Anna Railton

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# Executive summary

We have surveyed 20% of Littlemore parish (525 out of around 2600 households) about the Church Cowley LTN and found that:

- 60% of households want the LTN removed
- 52% are in favour of reducing traffic in Littlemore
- 9% of households have had an increase in active travel since the LTN's installation
- 12% have had a decrease in number of car journeys
- 4% have had a detectable modal shift from cars to active travel
- 55% of households have no active travel (both before and after the LTN's installation)
- The least controversial filter is in Liddell Road, the most popular one is in Beauchamp Lane and the most hated are those in Littlemore and Bartholomew Roads

## Aims

The aim of this questionnaire and analysis was to get a better understanding of the effect of the Church Cowley Low Traffic Neighbourhood (LTN) on the residents of Littlemore, the majority of which live outside the LTN.

This report will be given to the relevant county council officers before the official consultation closes. The dataset will also be anonymised and made open source so others can analyse it further if they wish.

## The LTN scheme

Three LTNs were introduced in Cowley in March 2021. They introduced traffic filters at specific points across Florence Park, Temple Cowley and Church Cowley. These filters prevent motorised through traffic, while permitting people using active travel methods.

The county council's objective in implementing this scheme is "*to create streets with fewer vehicle movements so that residents can enjoy a quieter neighbourhood and feel safer when they walk or cycle<sup>1</sup>.*"

There are two official consultations on these three LTNs:

- The consultation on the LTN<sup>2</sup>, closing date 19th November 2021
- A Follow-Up Perception Survey<sup>3</sup>, closing 25th November 2021

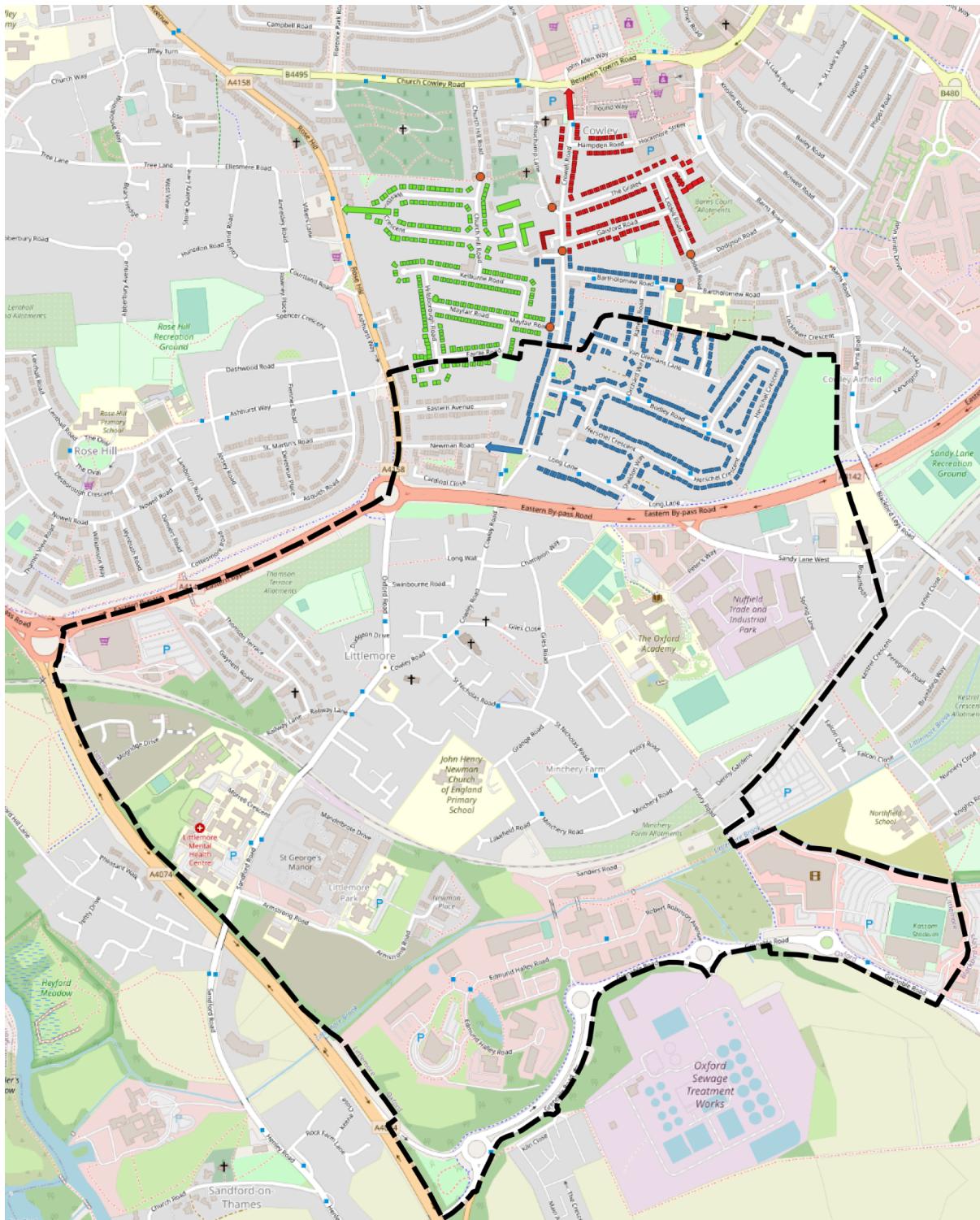
The residents of Littlemore are most affected by the Church Cowley LTN which lies between Littlemore and the Templar's Square shopping centre off Between Towns Road.

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<sup>1</sup> <https://news.oxfordshire.gov.uk/proposed-new-ltns-for-oxford/>

<sup>2</sup> <https://letstalk.oxfordshire.gov.uk/cowleyltn2021>

<sup>3</sup> <https://letstalk.oxfordshire.gov.uk/low-traffic-neighbourhood-cowley-20211>



Location of Littlemore Parish (black dashed outline). Blue, red and green coloured buildings show how the filtering works, with arrows showing the access roads.

Data source for parish boundary was government parish boundaries data 2016<sup>4</sup>, data source for LTN filters (orange circles) was OpenStreetMap<sup>5</sup>.

<sup>4</sup> <https://geoportal.statistics.gov.uk>

<sup>5</sup> <https://www.openstreetmap.org/>

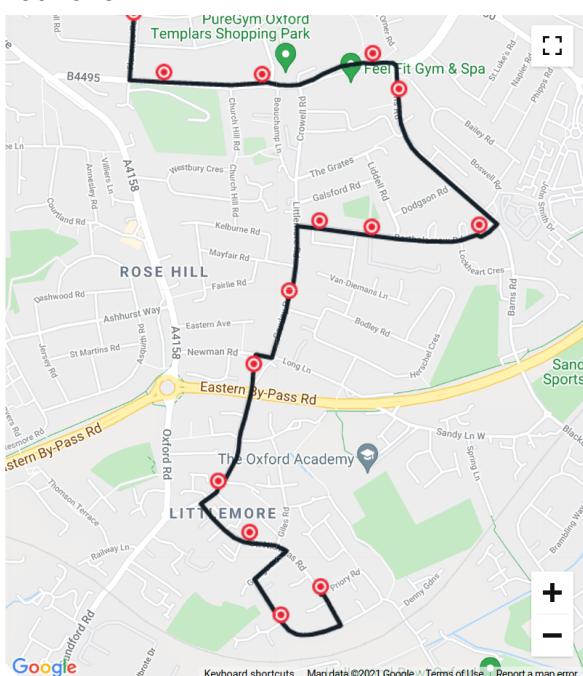
## Bus services

Littlemore has historically not been well served by the bus network and this affects how residents travel from and around Littlemore.

- Pre-pandemic, the 3A ran every 30 mins Monday - Saturday. From Feb 2021 (end date unknown) it is running an extended service to include both the railway station and the vaccination centre at the Kassam Stadium. A Sunday service has also been put on.
- The 16/16A runs every half an hour between Minchery Farm and Cowley Centre (to the centre of Oxford), with an hourly service on Sundays
- The 45 connects Littlemore and Cowley but only runs Monday-Friday and once every c. 2 hours (it is part of a much longer service that runs between Cowley, Culham and Abingdon).



Path of 3A



Path of 16 bus (16A includes Herschel Crescent).

# The dataset

All the data used in this report can be found at:

[https://github.com/annarailton/littlemore\\_ltn\\_analysis/tree/main/data](https://github.com/annarailton/littlemore_ltn_analysis/tree/main/data)

## Data collection

The data used in the following analysis was collected via a paper questionnaire in October 2021.

- Distributed paper copies of the questionnaire door-to-door (see Appendix for the copy)
- Questionnaires were only handed out to people who were in, then collected by going back to the same address. We chose to do it this way as experience has shown getting significantly better engagement than simply dropping a questionnaire through the door and expected people to drop them back
- The most successful approach in our experience is getting residents to commit to a specific time for collection
- Got 525 responses, from around 2600 households in total in Littlemore (about 20%)

Decided to go for a paper rather than online option as:

- Online is easy to brigade (spam with multiple responses)
- Paper version easier to get good geographic coverage from the whole ward
- Online not as accessible for older people
- Expected lower engagement with online form, with only the most engaged taking part

The disadvantages of this method are that it costs money (c. £100 to print the surveys) and is very labour intensive.

We had very modest success in trying to get volunteers from the wider community (i.e. outside the Parish Council) to help distribute these questionnaires, with the bulk of the work falling to a small group of people.

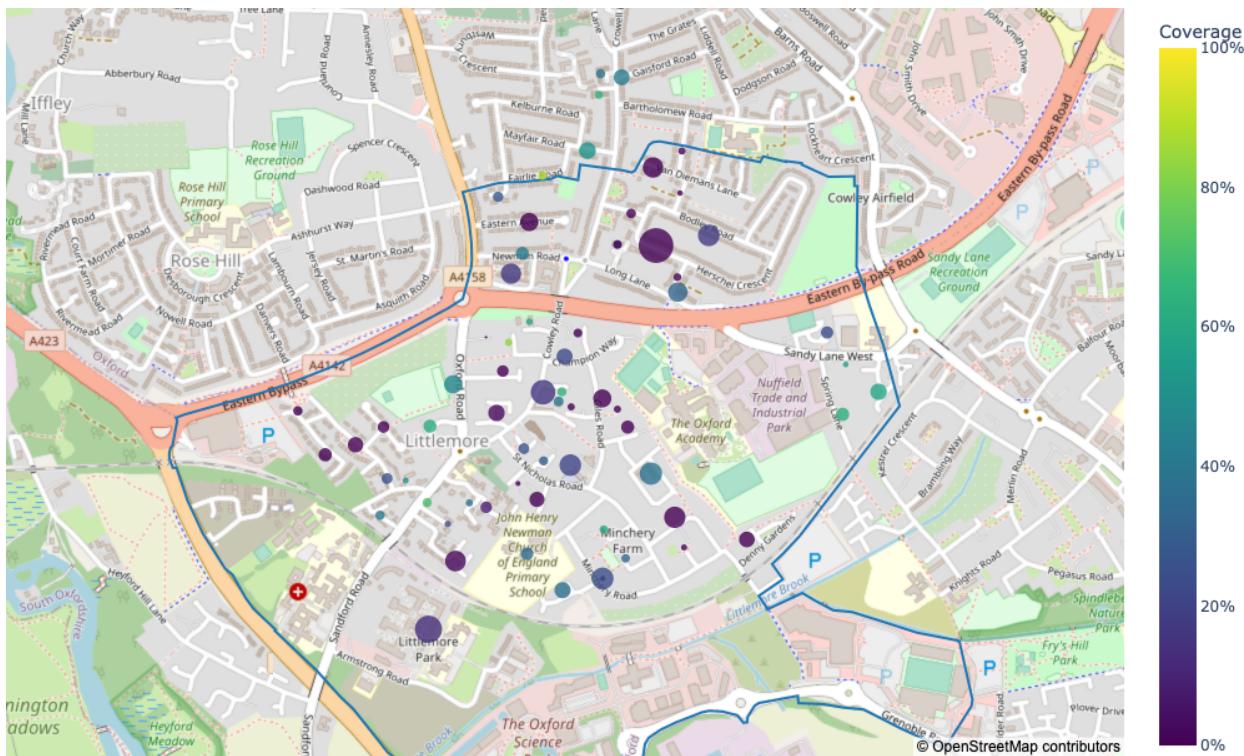
## Data entry

We created a google form “shadow” questionnaire to transcribe the paper copies. Treatment of specific questions in this step is detailed in the section “[Notes on specific questions](#)”.

## Data coverage

We got 525 responses in total which is 20% of 2649 households in Littlemore.

The map below shows the coverage by street. The size of the marker on the plot is related to the total number of dwellings on that street. The parish boundary is shown in blue.



## Limitations and representative sampling

We admit the following limitations of our surveying methodology:

- Flats difficult to do so we have poor coverage here
- Surveying was mostly done weekday evenings (5-7pm) or weekend afternoons (4pm-ish). We did not have time nor the manpower to visit multiple times so there will be a bias to those who are in (and willing to open the door!) at those times.
- Small bias to places closer to where parish councillors lived (more likely to get repeat call backs when very local)

Tiago Corais, who organised and did the majority of the surveying, found that where we actually handed over a questionnaire (i.e. they were in, opened the door to us and agreed to take a questionnaire), he got about 90% back.

We did not systematically record the numbers of questionnaires given out and subsequently returned, but anecdotally our return rate was very high. This was especially true when getting participants to commit to a collection time.

We do not fit the DfT's definition of representative sampling (see page 6 on weighting in this doc<sup>6</sup>). We only found out about this after the data collection was done and this report was written so that has to be filed under the section [Missed opportunities](#).

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[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/1004948/low-traffic-neighbourhoods-residents-survey.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1004948/low-traffic-neighbourhoods-residents-survey.pdf)

We do however draw a lot of confidence from both our geographic coverage, return rate (where we gave them out) and the use of door-to-door surveying to not exclude older demographics.

## Data anonymization

**Aim:** to make it impossible (as far as possible) to not identify individuals from the data, *i.e.* if you know an individual has filled in the questionnaire, you cannot identify their response in the dataset.

Only identifiable data is the street name (we collected no demographic data like age), so we bundle streets together geographically if there are less than **three** responses for a single street.

Doing this allows us to open source the data, which is available with the analysis at  
[https://github.com/annarailton/littlemore\\_ltn\\_analysis](https://github.com/annarailton/littlemore_ltn_analysis)

## Notes on specific questions

### Question 2

2. How many journeys per week did / do you make:	Before the LTN	After the LTN
By car		
By motorcycle		
By van		
By bus		
By foot		
By wheelchair / mobility scooter		
By bike		
By scooter		

The raw numbers from this question are difficult to use without knowing the number of people in a household (which we didn't collect).

### Question 3

3. If you drive by car, the reasons for this are (tick all that apply)

Work	<input type="checkbox"/>	School run	<input type="checkbox"/>
Shopping	<input type="checkbox"/>	Caring responsibilities	<input type="checkbox"/>
Gyms	<input type="checkbox"/>	Other	<input type="checkbox"/>
Health appointments	<input type="checkbox"/>		

We were unsure if people were filling this in as intended (i.e. missing the "driving" aspect); it could have been more carefully worded. It also needed a "Don't drive" box. In general this question did not produce much useful data.

### Question 4

4. Overall, has the LTNs' impact on you been (circle one)

**Very positive   Slightly positive   Neutral   Slightly negative   Very negative**

A number (15% of respondents) missed this question, probably because of its placement right at the top of the second page.

### Question 5

5. Please give your views on the location of traffic filters:

Church Hill Road	Agree	Remove	Change	No opinion
Beauchamp Lane	Agree	Remove	Change	No opinion
Littlemore Road	Agree	Remove	Change	No opinion
Mayfair Road	Agree	Remove	Change	No opinion
Liddell Road	Agree	Remove	Change	No opinion
Bartholomew Road	Agree	Remove	Change	No opinion

We made a data normalisation decision here when transcribing the data; where respondents circled a response for some, but not all, of the options, we transcribed in the remaining ones as "No opinion". Regretted this decision, but kept doing it to be consistent.

## Questions 7 & 8

7. What is the biggest benefit of the LTNs?

.....  
8. What is the biggest problem with the LTNs?

Some normalisation happened here when transcribing e.g.

- "It takes a long time to get to my destination" -> "Longer journeys"
- Mapped a lot of related things to "traffic displacement"
- Only written "None" if something was written there (normalised, e.g. "Nothing", "I can't see any benefit"), else left blank.

This was to:

- Make it quicker and easier to input, without losing data
- Make it easier to analyse later

Where people made specific complaints about LTNs in the space for question 7, the responses were moved to question 8.

## Question 9

9. Have you filled in the county council's online LTN consultation? Yes No

[https://consultations.oxfordshire.gov.uk/Cowley\\_ExperimentalLowTraffic/respondByQuestionnaire](https://consultations.oxfordshire.gov.uk/Cowley_ExperimentalLowTraffic/respondByQuestionnaire)

The County Council helpfully changed the address of the official consultation after we printed our questionnaires. There was also no redirect in place until November 2021.

## Question 10

10. Do you have any other comments or ideas to improve traffic in our area?

.....  
.....

A number of respondents used this for expanding on Question 8 (problems with LTN) rather than thinking of other solutions. Negatives of the LTN were moved to Question 8 responses. Similar to the free-text fields of Questions 7 and 8, some paraphrasing took place.

## Missed opportunities

We should've collected the following:

- Number of people in the household
- Number of cars in the household
- Age ranges for people in the household

We initially intended to run a pilot of questionnaires but print schedules meant we did not have time to do this.

We would have also liked to include a map of the LTN region in the questionnaire but felt it was more important to keep to two sides rather than including it.

It would have been great to hit the DfT's definition of a representative sample (see section [Limitations and representative sampling](#)) . If we ever do a similar exercise again we will try to design a methodology that hits this, while working around manpower and deadline constraints.

## Data cleaning

The responses to question 2 (modes of travel) required the most cleaning, e.g.

- Replace ranges (e.g. 6-8) with averages
- Drop reasons (e.g. "0 (moved in before LTN)")
- Drop modifiers (e.g. "10+", "<5")

The free-form text fields (questions 7,8 and 10, and text written elsewhere on the form) were cleaned a little when doing data entry.

This process can be seen in the Jupyter Notebook containing the analysis at  
[https://github.com/annarailton/littlemore\\_ltn\\_analysis/blob/main/lpc\\_ltn\\_analysis.ipynb](https://github.com/annarailton/littlemore_ltn_analysis/blob/main/lpc_ltn_analysis.ipynb)

## Bad data

We only spotted a couple of obvious duplicates when doing data entry. These had the same handwriting, same pen, very similar content and were for the same road. These were removed from the data.

## Data augmentation

In addition the questionnaire responses, we created the following street-level data:

- Postcode (by scraping Zoopla, see script in the GitHub repo)
- Inside / borders / outside LTN (by looking at a map!)
  - The streets “bordering the LTN” were defined as Chestnut Close, Goodey Close, Long Lane and Newman Road
- Whether street is a cul-de-sac or not (looking at a map)
- Driving distance from LTN
  - Calculated using postcode -> lat-long mapper
  - Put each street through an open source routing service: <http://project-osrm.org/>
  - Distance was to southern side of Littlemore Road LTN barrier, sufficient for our purposes
- Index of multiple deprivation (by LSOA, accessed by postcode, from <https://www.gov.uk/government/statistics/english-indices-of-deprivation-2019>)
- Whether in Littlemore parish or not

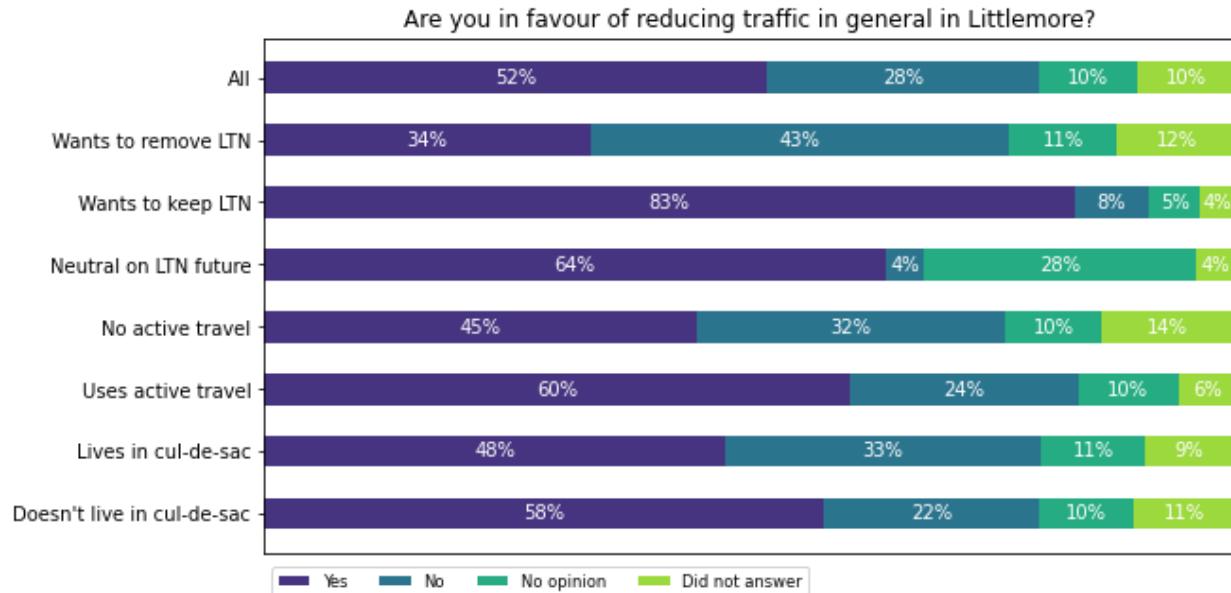
We also created some “active travel” metrics from the travel mode data from the responses to question two. This was defined as

- Walking
- Cycling
- Use of wheelchair or mobility scooter
- Scooter (electric or otherwise)

# Analysis

## Reducing traffic in Littlemore

This is from the data from question one. This could be seen as a potentially leading question. Indeed, how respondents answered this question was dependent on their opinions about LTNs. There was also some dependency on where people lived and how they typically travel.



Each horizontal bar plot here has the proportions answering the question “*Are you in favour of reducing traffic in general in Littlemore?*” with the set answers. *i.e.* the second bar down “Wants to remove LTN” shows how people who want LTNs removed answered the question about reducing traffic (34% of them were in favour of reducing traffic).

## Modes of travel



The raw counts in the results from question two were not particularly useful, but

- Whether that mode was used
- Change in these values

was useful.

It is worth noting there is likely to be a small effect here where respondents fill in this question in a way that backs up their other opinions, i.e. a pro-LTN respondent will play up active travel trips while an anti-LTN respondent will downplay any active travel. This effect is difficult to control for without doing a general “non-LTN” questionnaire.

## Active travel share

- Households with zero active travel journeys **before** LTN installation: **288 (55%)**
- Households with > 0 active travel journeys **before** LTN installation: **237 (45%)**
- Negligible change after LTN installation (+5 active travel)

## Bus use

- Households with any bus journeys before/after LTN installation: **122 (23%)**
- Households with **increase** in bus trips **after** LTN installation: **10 (2%)**
- Households with **decrease** in bus trips **after** LTN installation: **8 (2%)**

There were numerous notes in this section saying that bus use had been (negatively) affected by COVID so we do not feel there are any solid conclusions to draw here.

## Wheelchair and mobility scooter use

- Households with any wheelchair / mobility scooter trips before LTN: **4**
- Households with any wheelchair / mobility scooter trips after LTN: **3**

## Scooters

Scooters are a very minority pursuit (electric or manual not specified)

- Households with any scooter trips before LTN: **3**
- Households with any scooter trips after LTN (and Voi trial!): **6**

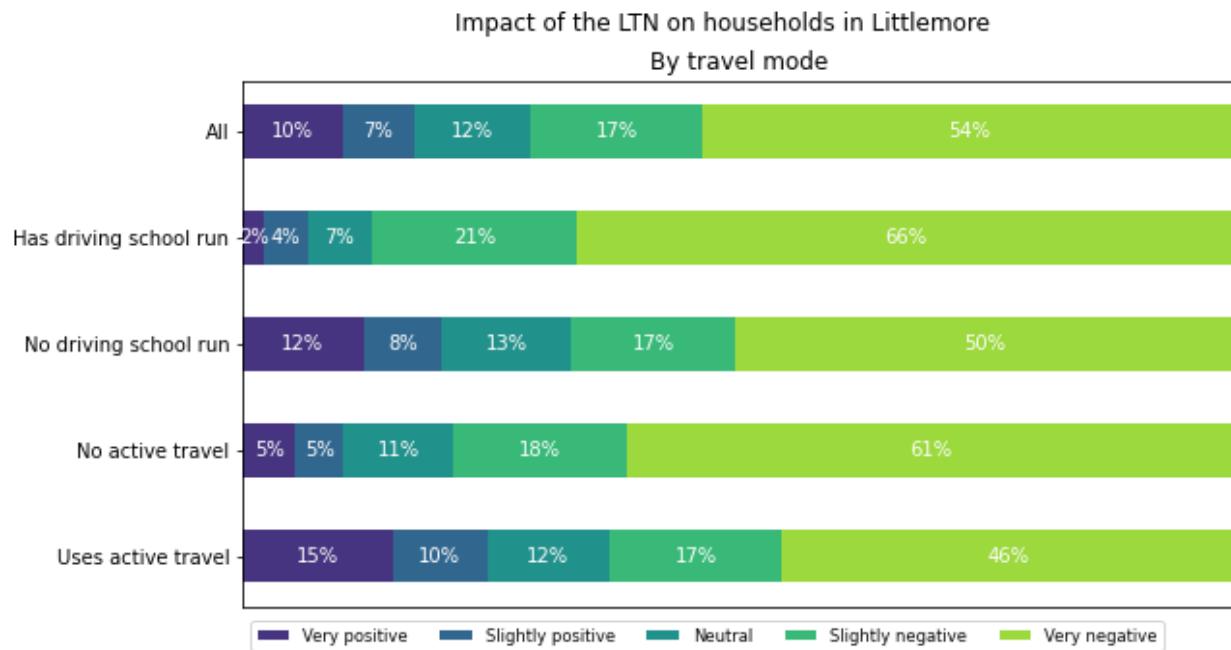
## Modal shift

- Households with **increase** in active travel journeys **after** LTN installation: **47 (9%)**
- Households with **decrease** in active travel journeys **after** LTN installation: **20 (4%)**
  - These responses were sometimes annotated with remarks about this being because Iffley Road is more busy. With no solid longitudinal traffic data for this road it is difficult to say what part is COVID recovery and what is due to the Church Cowley LTN installation.
- Average size of active travel change (for those who had any active travel): **5.04 trips**

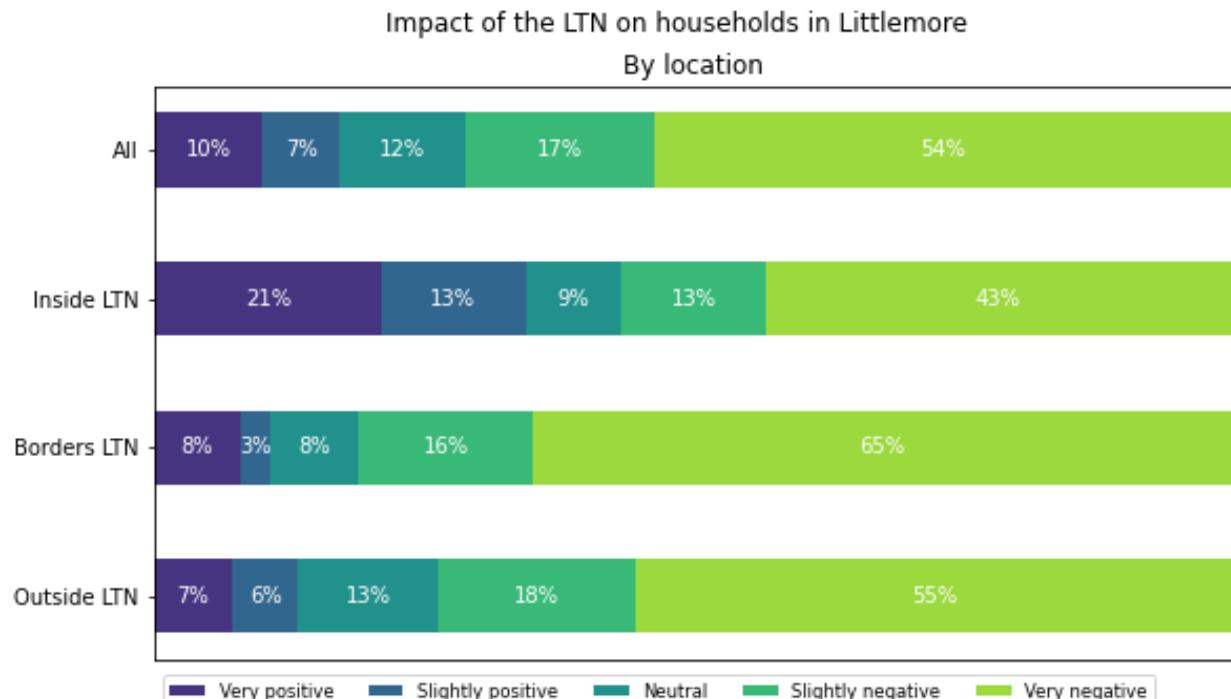
- Households with **decrease** in car trips **after** LTN installation: **63 (12%)**
- Households with **increase** in car trips **after** LTN installation: **28 (5%)**
- Households with **decrease** in car trips and **increase** in active travel trips: **22 (4%)**
- Households with **increase** in car trips and **decrease** in active travel trips: **3**

## LTN impact on households

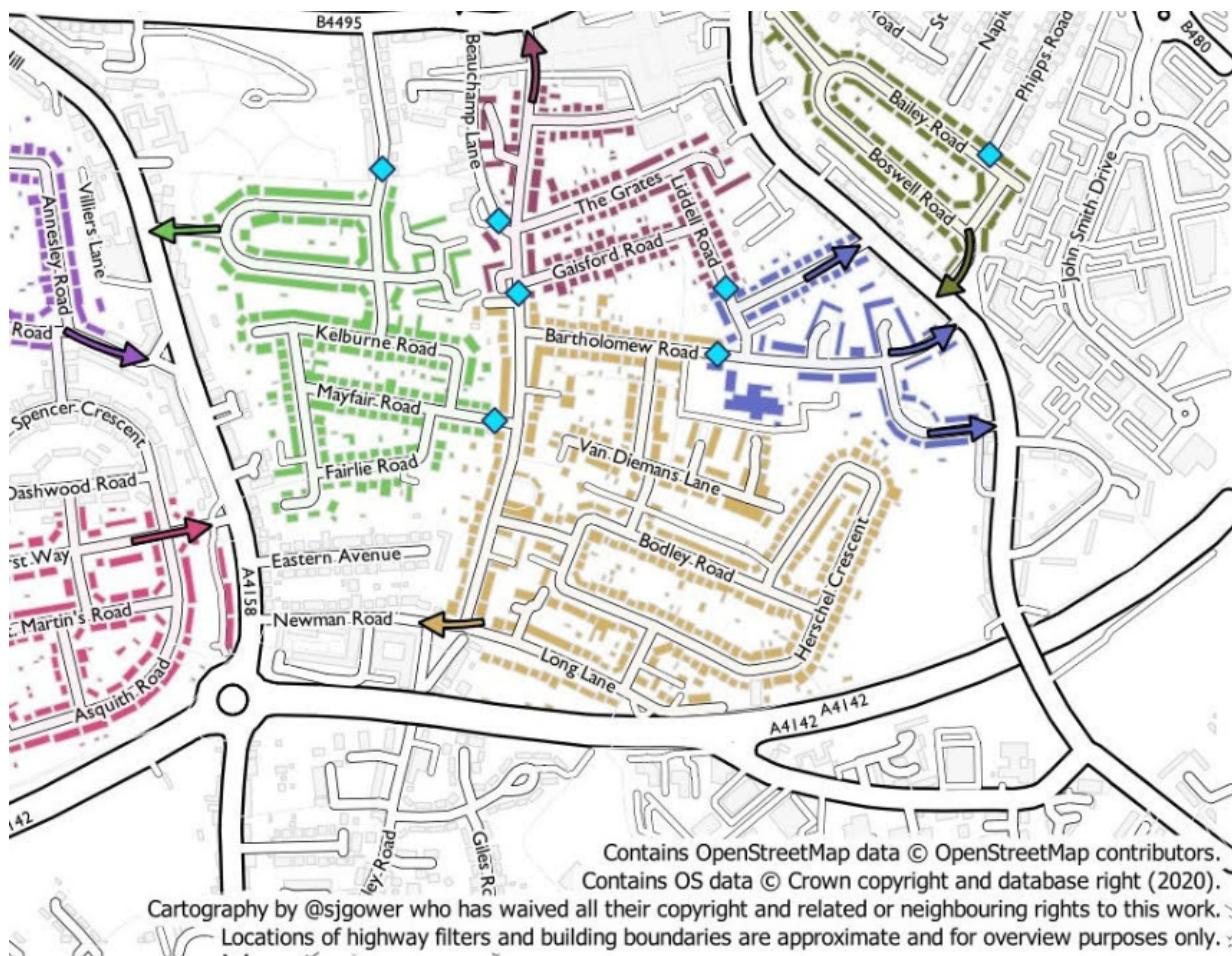
15% of respondents missed this question; these are being ignored in the following results. The segment of “doing a school run by car” (104 households) was done using the results of question three.



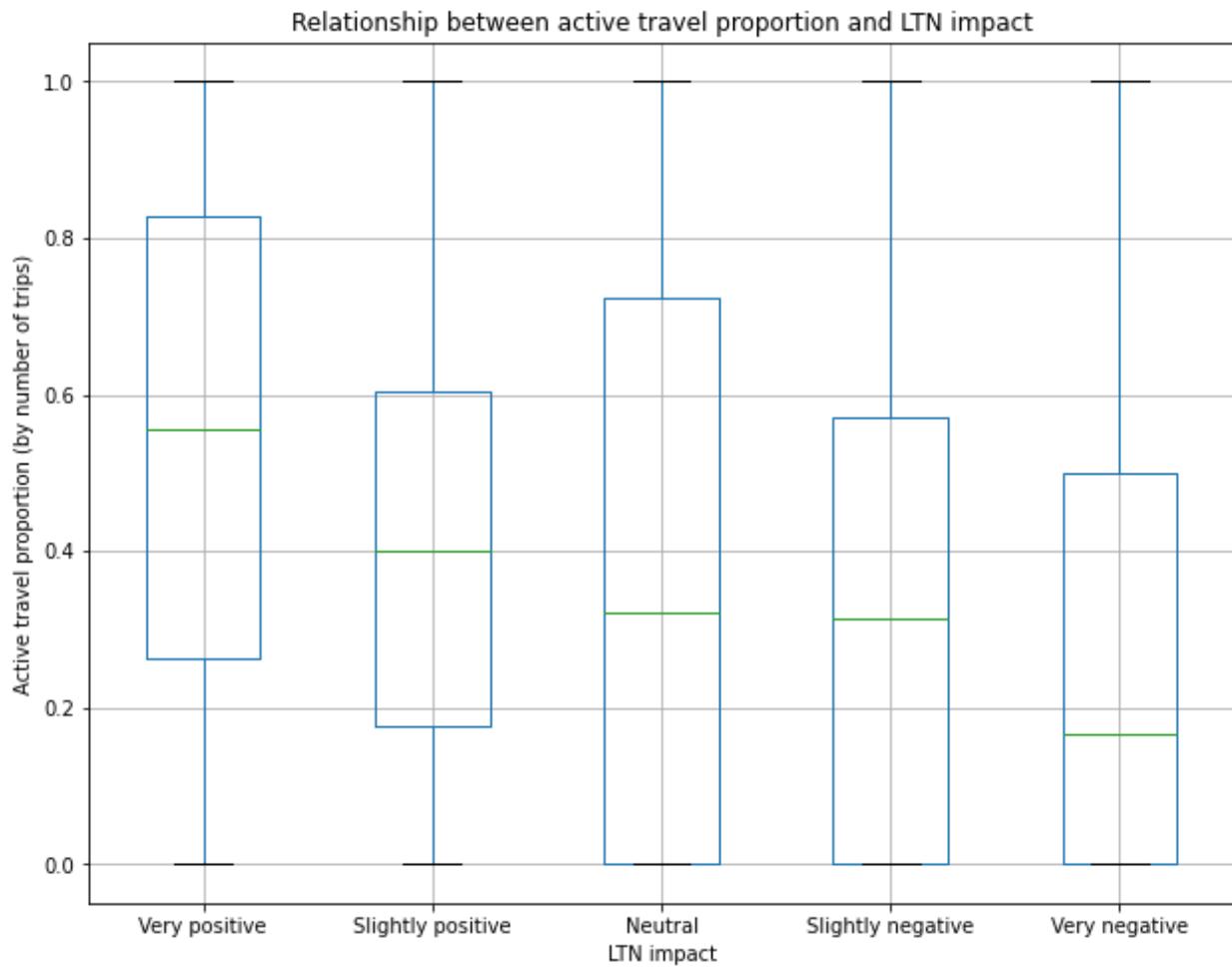
There is reasonable correlation between travel mode and the answer to this “impact of LTN” question.



The residents of the streets that are in the “Borders LTN” category made a lot of very specific complaints about the extra traffic on Newman Road and the junction with Newman and Ifley Roads (A4158 on the below diagram).



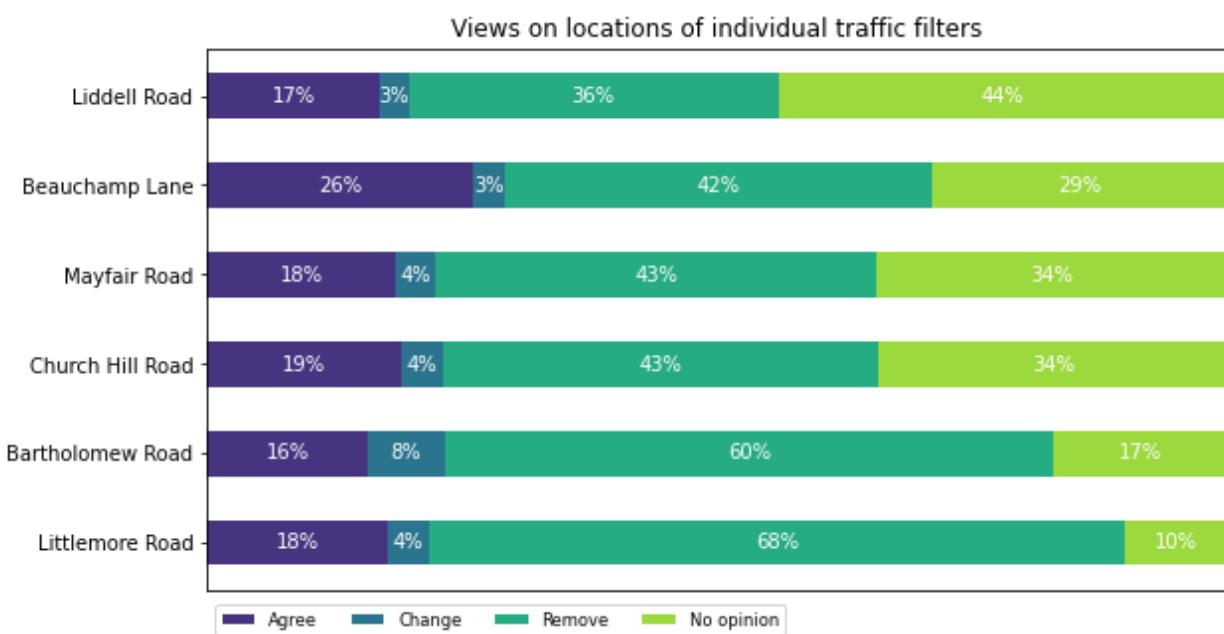
We calculated the “active travel proportion”, which is the proportion of all trips in the household done by active travel (with the definition given in the [Data augmentation](#) section). There is a positive correlation between this proportion and positive feelings towards the LTN.



# Opinions on individual filters

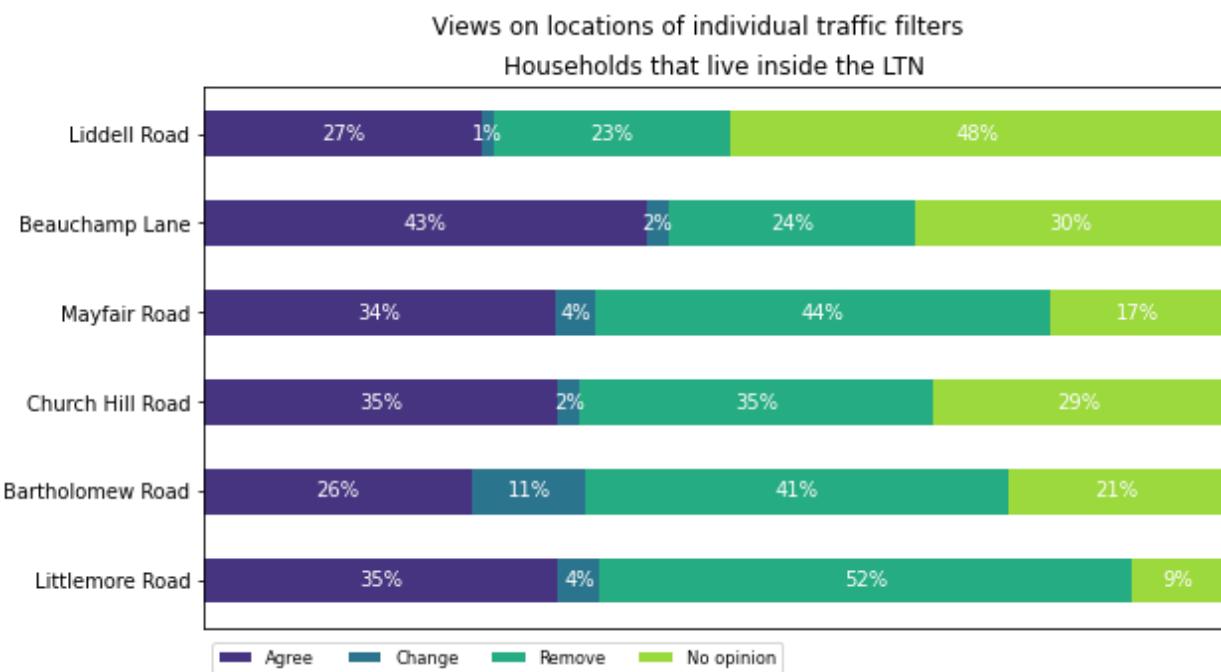
Headline figures:

- **Least controversial** (least “Remove” + most “No opinion”): **Liddell Road**
  - We suspect many respondents do not know where this is or do not ever interact with this corner of the LTN region.
- **Most favoured** (most “Keep”): **Beauchamp Lane** (26% keep)
- **Most hated** (most “Remove”):
  - Littlemore Road (68% remove)
  - Bartholomew Road (60% remove)

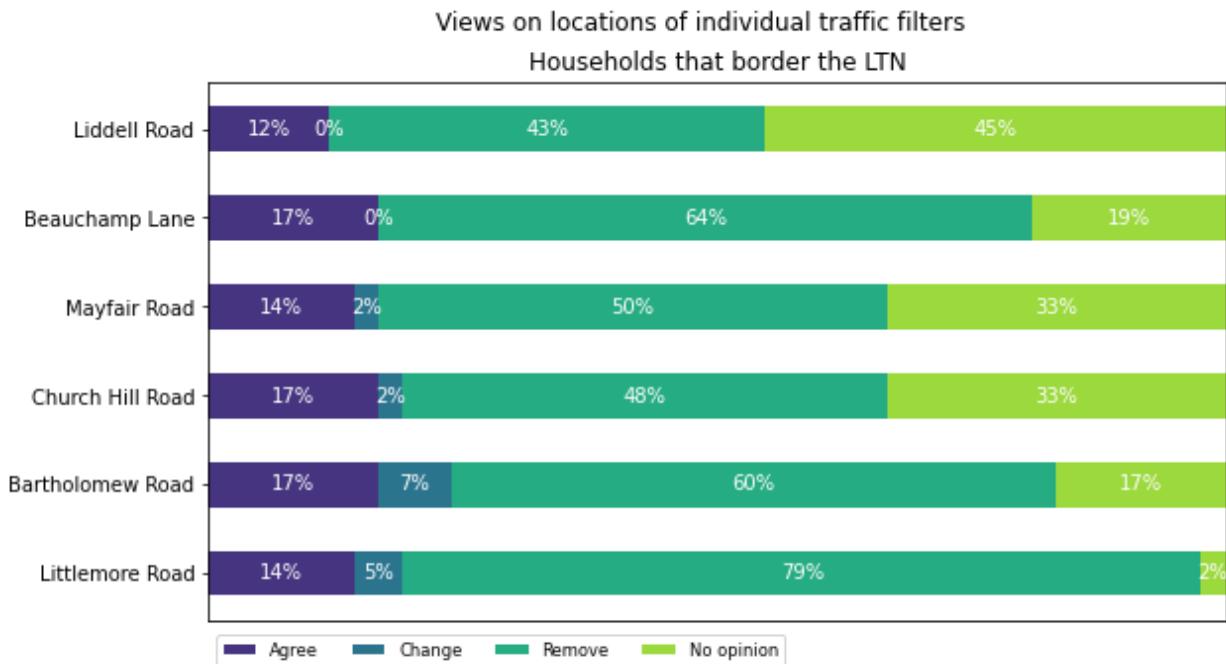


The larger share for “change” for Bartholomew Road is due to respondents wanting the bus lane camera that is meant to be there to be installed.

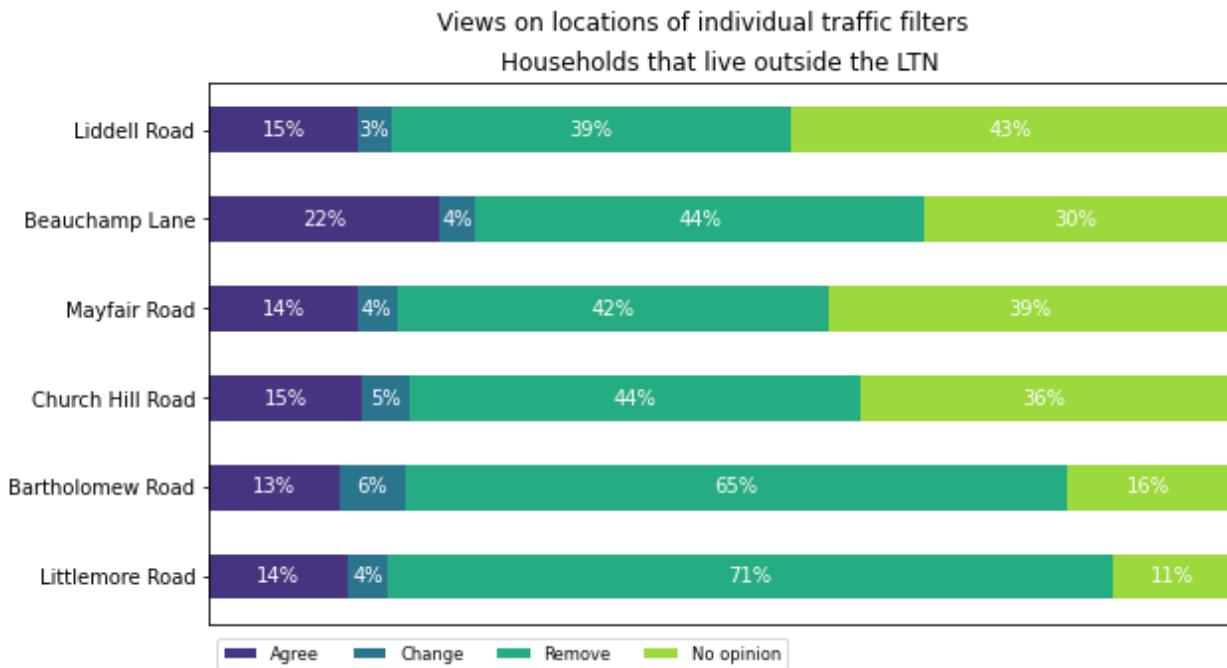
If we look at respondents who live inside the LTN (101 respondents), we find similar attitudes to the individual filters as for the whole dataset, with a boost to the “Agree” response for all.



If we look at households (of which there are 41) that live in streets that we have defined as “bordering the LTN” we find similar trends, but with a skew in the “Remove” direction. The Littlemore Road filter is especially hated as it explicitly diverts traffic through the Newman Road - Iffley Road junction.



The plot for the “*lives outside the LTN*” respondents (382 out of 525) is unsurprisingly similar to the “*all respondents*” plot.



## Nuance on filter views

It was common to find respondents circling the same box for each filter:

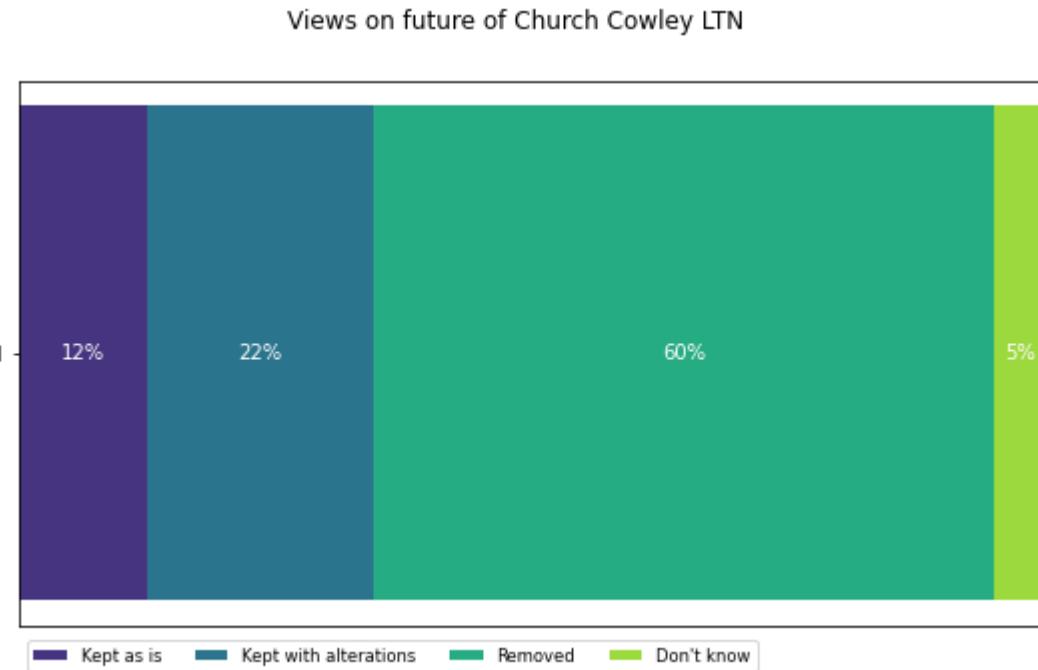
- Chose “*Remove*” for all filters: **27%**
- Chose “*Agree*” for all filters: **8%**
- Chose “*No opinion*” for all filters: **5%**
- Chose “*Change*” for all filters: **1%** (suspected to mean “*Remove*” in this case)

This leaves **57%** of respondents choosing different options for some filters.

## Desired future for the Church Cowley LTN

34 (6%) respondents missed this question and are not included in the following analysis.

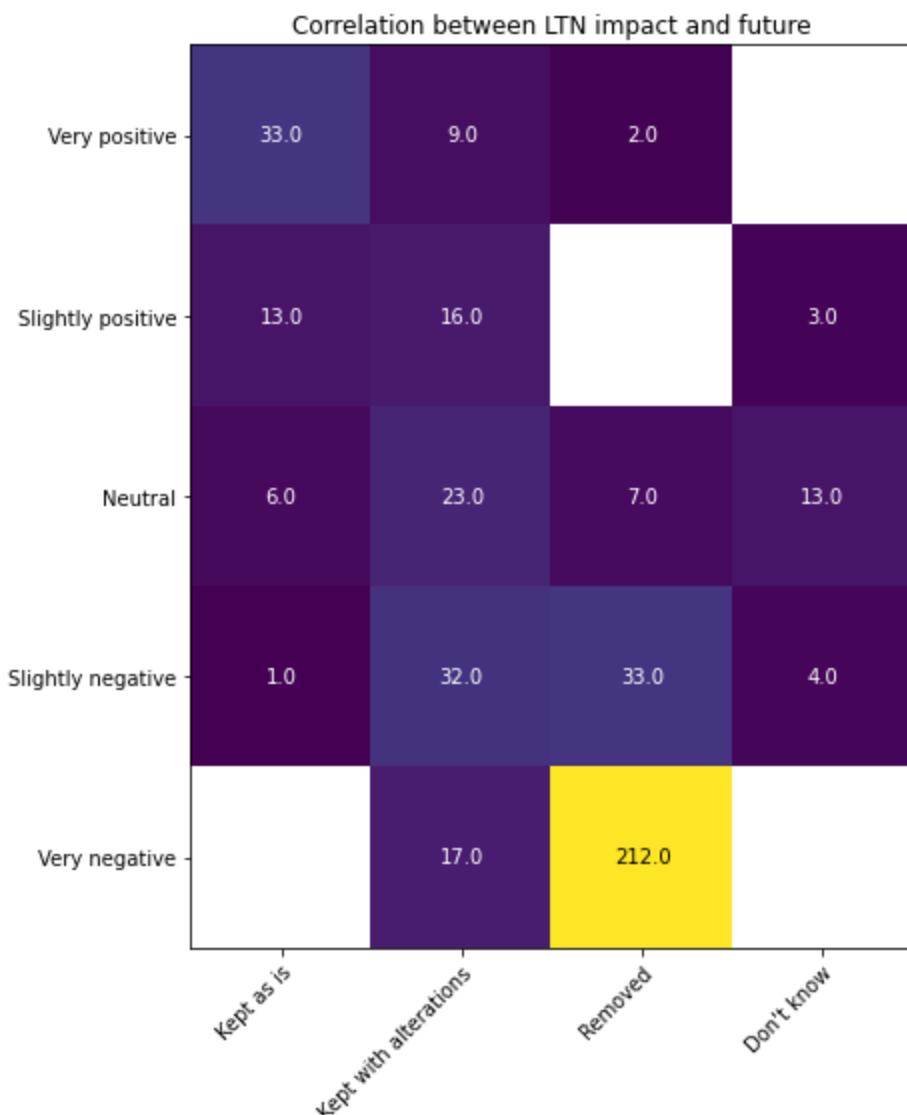
34% of respondents want the LTN kept, or kept with alterations (when a reason was given for this option, it was “install the Bartholomew Road bus gate camera”), while 60% want them removed. To continue a common theme, there are very few “neutrals” on this issue, with only 5% circling “*Don’t know*”.



There is a very strong correlation between the answers given in question four (personal impact of LTN) and question six (what the respondent wants the future of the LTN to be).

Those responding with “*Slightly negative*” for the impact on themselves were interestingly exactly split between wanting them removed or kept (33 each).

Those two households responding with “*Very positive*” for the impact and “*Removed*” are assumed to have mis-read the impact question (which is backed up by how they answered the other questions).

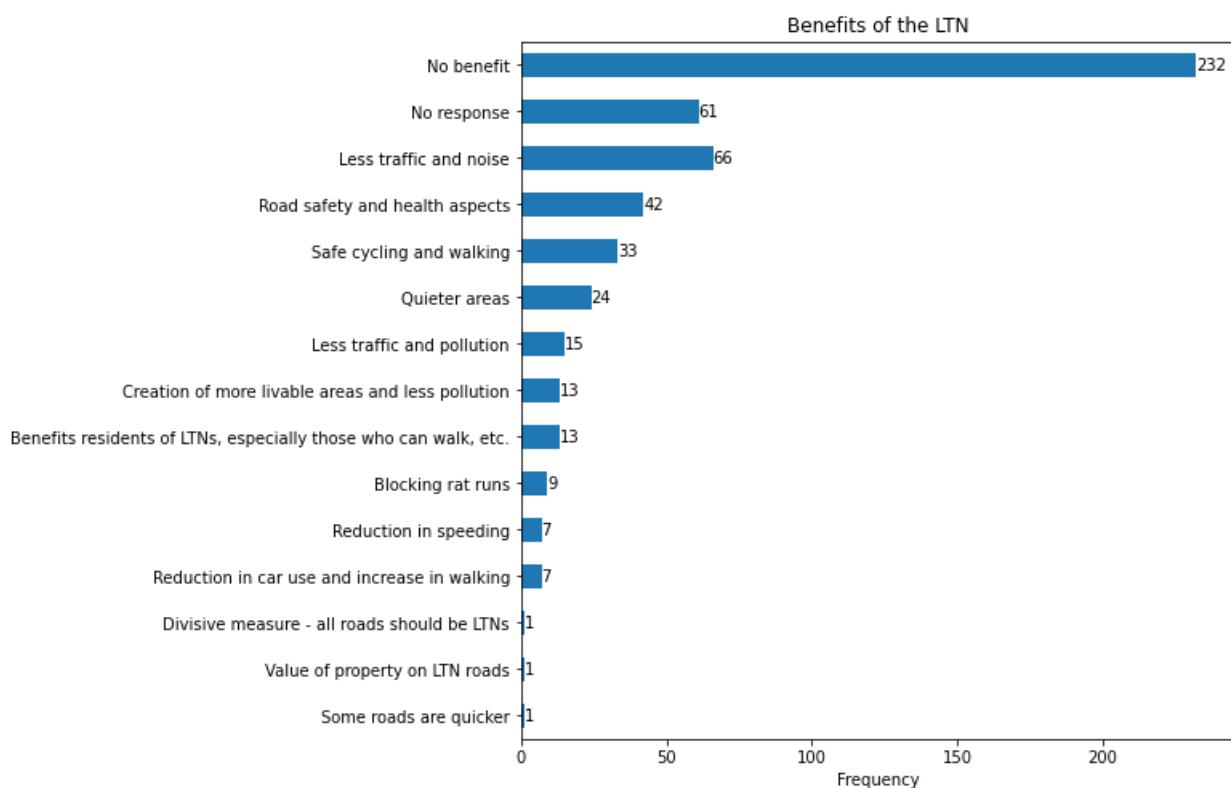


## Specific benefits of the Church Cowley LTN

232 respondents (44%) explicitly wrote “None”, or similar, in this box. These are distinct from those who simply did not fill in this section (61 respondents, or 12%). This is despite the wording of the question to include others apart from themselves (“What is the biggest benefit of the LTNs?”).

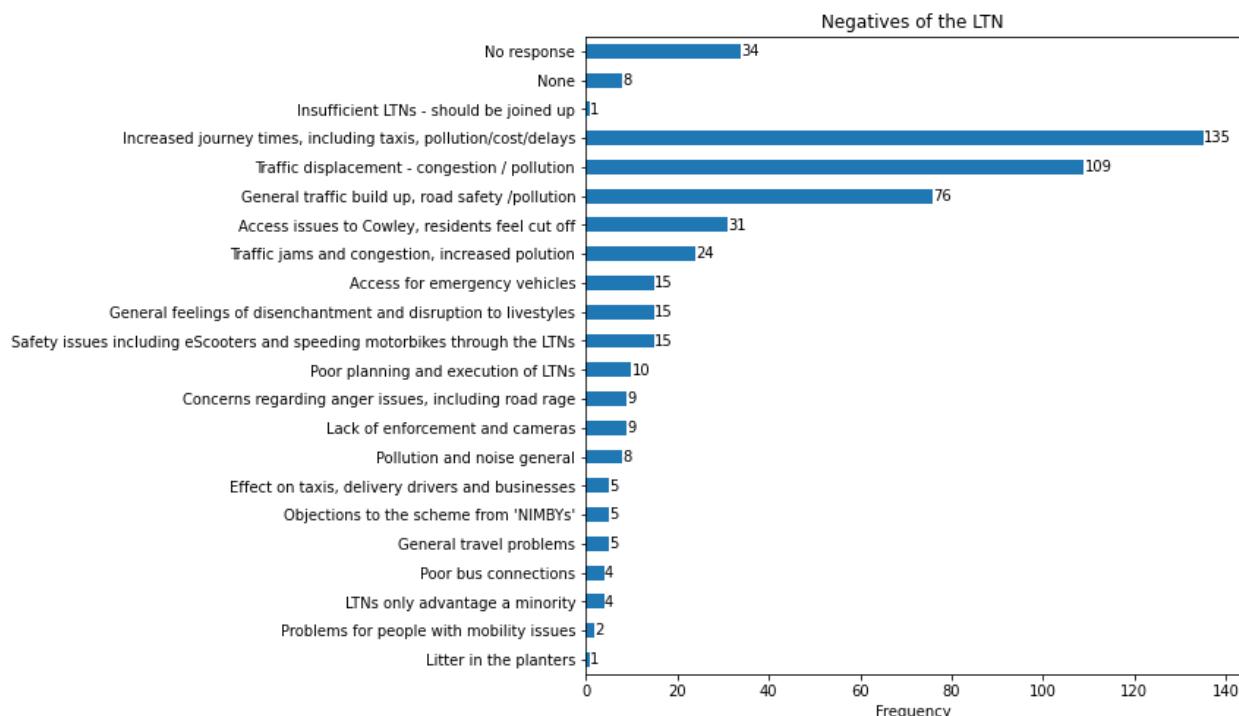
232 respondents (44%) gave a positive response to this question.

Where respondents gave more than one response for this (and the following) question, we tried to fit the general thrust of their response into one of the existing bins. With more time it would be possible to run the tally again to allow more than one response per person.



## Specific problems of the Church Cowley LTN

Only 8 respondents explicitly wrote “None”, or similar, in this box. These are distinct from those who simply did not fill in this section (34 respondents, or 6%). 483 respondents (92%) gave a positive response to this question.

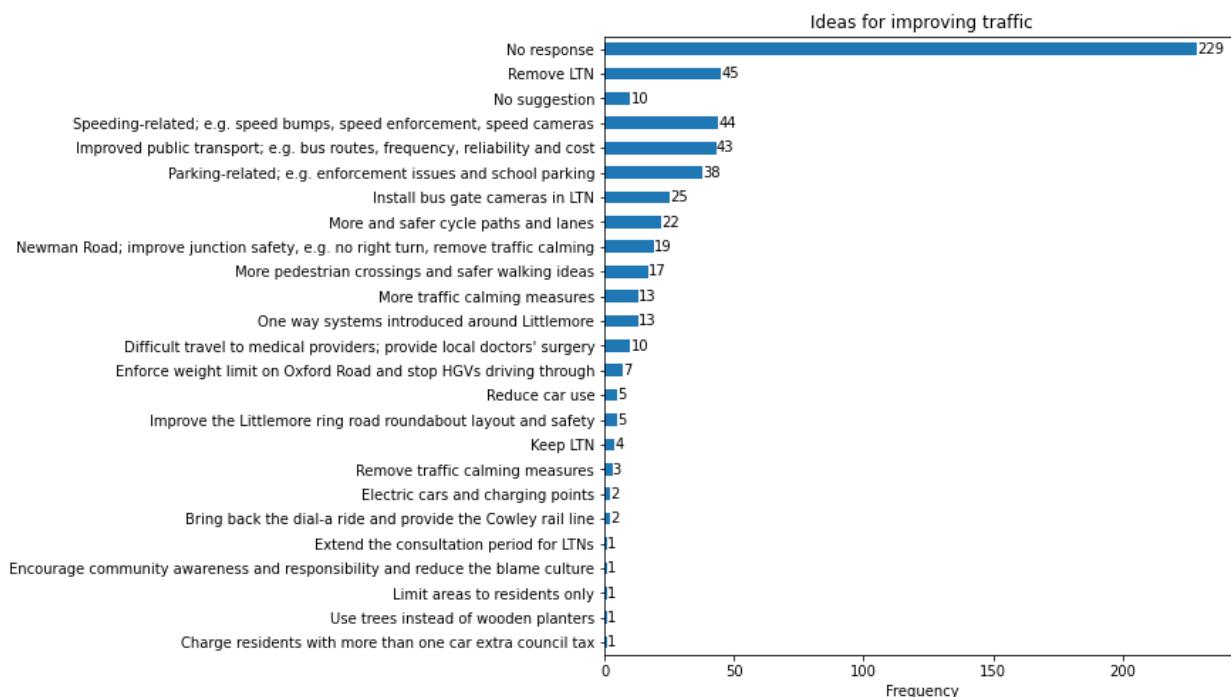


## Ideas for fixing traffic problems in Littlemore

229 respondents left this blank, with a further 10 writing “*None*” (or similar), totalling 46% of households not engaging with this question. A pro- or anti-LTN stance (by the response to qu 6) did not have any impact on engagement with this question.

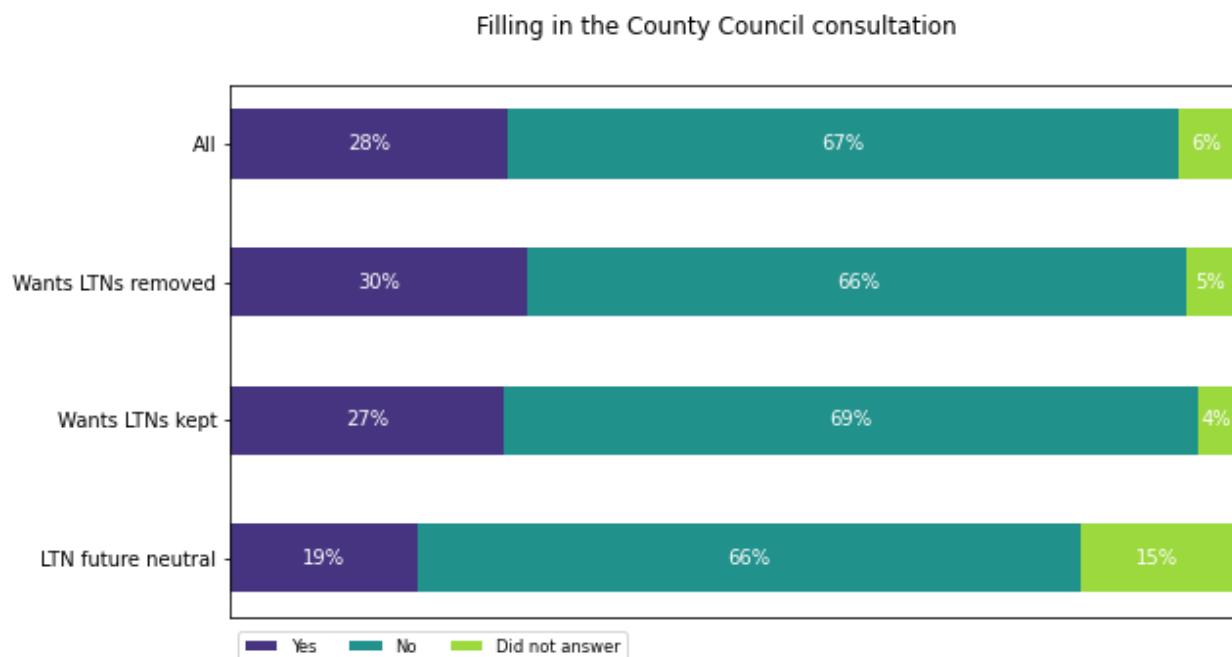
A further 31 (6%) just wrote “*Remove LTNs*” (or similar).

Lots of respondents gave multiple ideas here. A good proportion (25, 5%) explicitly wanted the bus gate camera that is supposed to form the Bartholomew Road filter installed.



## Engagement with the official consultation

Less than 30% of our respondents have filled in the official County Council consultation. This was consistent across those who want the LTN kept and removed. Engagement dropped further for those with no opinion on the future of the LTN.



# Acknowledgements

We would like to thank the following people for help with this questionnaire and analysis, as well as everyone who participated in this study.

Door knocking:

- Tiago Corais
- Michael Evans
- Jan Pullen
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- Nadine Bely-Summers
- Julia Brocklesby
- Angela Cox P Richards
- Sue Owen
- Peter Haworth
- Sue Nicholls

Data entry and processing:

- Anna Railton
- Chris Smowton
- Michael Evans
- Jan Pullen

## Littlemore Parish Council wants to listen to your views about the Cowley LTNs

The Cowley Low Traffic Neighbourhoods (LTNs) are an experimental scheme introduced in March 2021 from Oxfordshire County Council. They introduce traffic filters at specific points across Church Cowley, Temple Cowley and Florence Park that prevent motorised through traffic, while permitting pedestrians, cyclists and those with buggies or mobility scooters.

The county council's objective in implementing this scheme is "*to create streets with fewer vehicle movements so that residents can enjoy a quieter neighbourhood and feel safer when they walk or cycle.*" [1]

The scheme is being introduced using an experimental traffic regulation order. Littlemore residents can **express their views formally in the consultation by 19<sup>th</sup> November 2021.** [https://consultations.oxfordshire.gov.uk/Cowley\\_ExperimentalLowTraffic/respondByQuestionnaire](https://consultations.oxfordshire.gov.uk/Cowley_ExperimentalLowTraffic/respondByQuestionnaire)

After the consultation period, the county council will review all answers from the consultation (including this questionnaire). Based on this, one of the following actions will be taken:

1. **Cancel** the LTNs
2. **Confirm** the LTNs
3. **Change** and improve the LTNs
4. **Extend** the experimental period by up to 12 months

Littlemore Parish Council are aware that this controversial scheme affects Littlemore residents in different ways. We want to listen to all opinions from within Littlemore.

All residents are invited to participate in the following questionnaire.

1. Are you in favour of reducing traffic in general in Littlemore? **Yes**    **No**    **No opinion**

2. How many journeys per week did / do you make:

**Before the LTN**

**After the LTN**

By car

By motorcycle

By van

By bus

By foot

By wheelchair / mobility scooter

By bike

By scooter

3. If you drive by car, the reasons for this are (tick all that apply)

Work	<input type="checkbox"/>	School run	<input type="checkbox"/>
Shopping	<input type="checkbox"/>	Caring responsibilities	<input type="checkbox"/>
Gyms	<input type="checkbox"/>	Other	<input type="checkbox"/>
Health appointments	<input type="checkbox"/>		

4. Overall, has the LTNs' impact on you been (circle one)

**Very positive   Slightly positive   Neutral   Slightly negative   Very negative**

5. Please give your views on the location of traffic filters:

Church Hill Road	Agree	Remove	Change	No opinion
Beauchamp Lane	Agree	Remove	Change	No opinion
Littlemore Road	Agree	Remove	Change	No opinion
Mayfair Road	Agree	Remove	Change	No opinion
Liddell Road	Agree	Remove	Change	No opinion
Bartholomew Road	Agree	Remove	Change	No opinion

6. Do you think the current Cowley LTN arrangements should be...

**Kept as-is   Kept with alterations   Removed   Don't know**

7. What is the biggest benefit of the LTNs?

.....  
8. What is the biggest problem with the LTNs?

.....  
9. Have you filled in the county council's online LTN consultation?   **Yes   No**

[https://consultations.oxfordshire.gov.uk/Cowley\\_ExperimentalLowTraffic/respondByQuestionnaire](https://consultations.oxfordshire.gov.uk/Cowley_ExperimentalLowTraffic/respondByQuestionnaire)

10. Do you have any other comments or ideas to improve traffic in our area?

.....  
.....  
.....  
.....  
.....

Thank you

[1] <https://news.oxfordshire.gov.uk/proposed-new-ltns-for-oxford/>