

## Abingdon Carbon Cutters' Travel Survey Report - January 2021

In 2017, the carbon emissions from road transport generated directly by households totalled 68 million tonnes of CO<sub>2</sub> equivalent, which was up 5% from 1997 (DEFRA, 2017). Vehicle emissions also contributed 11% of all particulate emissions and 32% of nitrous oxide emissions in the same year nationwide (DEFRA, 2020). As such, the ways in which we travel to work play an important part in relation to both the UK's national carbon emissions and local scale air quality. The latter of these can have important health implications for local residents, particularly in relation to respiratory conditions which may be caused or exacerbated by vehicle emissions (Ando *et al.*, 1996). Figure 1 highlights some of the negative impacts of traffic and private car usage in the UK.

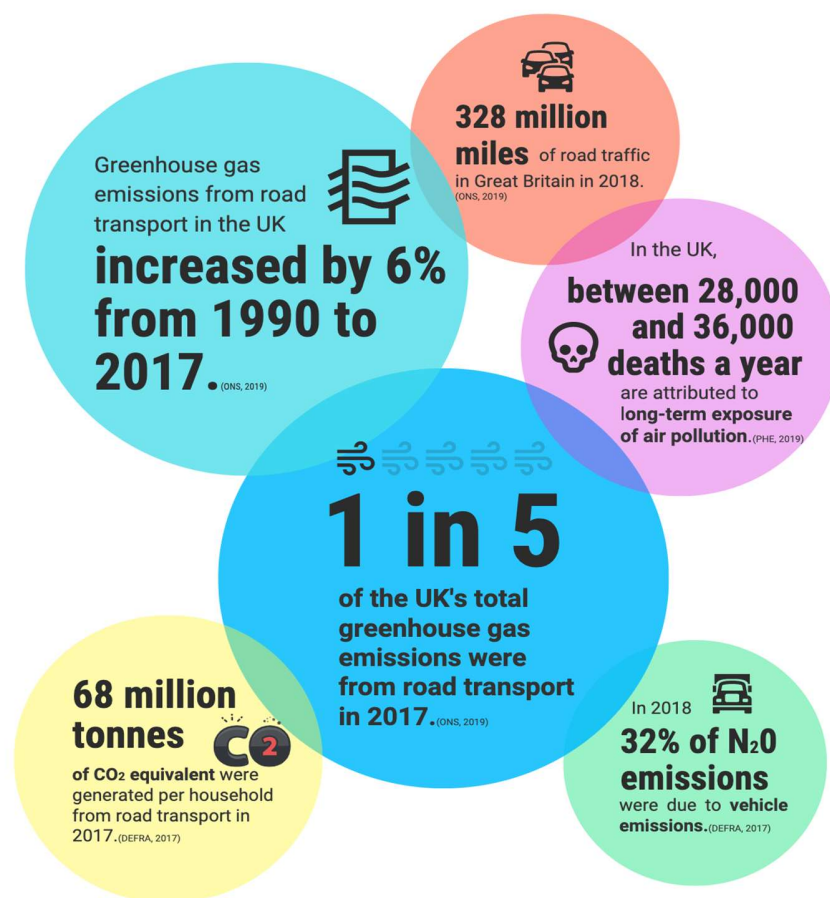


Figure 1. Statistics regarding UK Road Transport emissions

Abingdon, the focus location of this survey, is a town located in central Oxfordshire, around 6 miles south of Oxford with a population of around 40 000 (citypopulation.de, 2019). It is connected to local villages, towns and the city of Oxford via the A4183 (Oxford Rd), the B4017 (Drayton Rd) and the A415 (Marcham Road) which links to the A34. Although the town has no train station, it is part of the bus networks of Oxford Bus Company, Stagecoach Oxfordshire, and Thames Travel. Some of the major

employers in Abingdon include a number of independent businesses and some chain companies in the town centre, Fairacres Retail Park in West Abingdon, the Culham Science Centre, and Barton Lane business park in East Abingdon.

Our survey received 214 responses from employees of various companies and institutions in Abingdon and the surrounding area, with 52.3% of these being employed in Abingdon town centre. The questions, which can be found in the appendix of this report, mainly concerned the travel habits of employees, their views on the environment, and reasons for choosing or avoiding certain means of transport. There were opportunities in the survey for both selecting provided options and for respondents to write their own thoughts and comments. In this report, we aim to summarise the current travel behaviours of employees in Abingdon, highlight some of the reasons why more environmentally friendly travel is not more widely used, and propose some suggestions for local policy makers to reduce Abingdon's carbon footprint and improve local air quality.

### **Current Travel Patterns in Abingdon**

**The majority of respondents of the survey (50.5%) said that their most common way of getting to work was by car.** 23.4% of responses said that they cycled to work most regularly, and walking was the third most popular mode of transport to work at 21.5%. 40.2% of responses, though, did suggest that they either walk or cycle as an occasional or alternative way of getting to work. Compared to the national average, this suggests that Abingdon is narrowly below the expected 61% of commuter journeys made by car and substantially above the expected 19% of journeys by foot and bicycle combined. Public transport was a negligible form of getting to work, with just 8 responses - well below the national average of 18% (Department for Transport, 2019).

As for the reasons why the majority of respondents travel to work by car, it is clear that this is mainly due to **practicality and convenience**. The majority of respondents (46.7%) said that it would take them longer than an hour to walk to work, which suggests that either car or public transport would be the only convenient way of travelling to work regularly. It is also apparent that this use of cars is not due to a disregard for the environment - more than 90% of respondents said that the environment was either important or very important to them. Indeed, one comment said:

*"I live in a very rural area but just outside Abingdon and I have to take two children to two different schools in two different directions, so I drive. I lived in London until two years ago and walked or took public transport everywhere. I hate the fact that now I live in the countryside I am actually less fit and damaging the environment more"*

### **Issues restricting other forms of transport**

A number of issues were highlighted by respondents to the survey in relation to walking, cycling, or getting public transport to work. **The most frequent of these was safety, particularly regarding cycling routes.** The most common response to a question of what would persuade commuters to cycle to work rather than drive was safer cycling routes, with around 71% who live within cycling distance of work but do not currently cycle. Concerns around cycling safety largely centred around poor road conditions

leading to punctures or unsafe travel, high levels of traffic, a lack of designated cycling routes, and unlit or poorly lit roads. The following comments were all made by respondents in relation to the safety of cycling in the Abingdon area:

*“The tracks for cyclists are either on the road or there aren't any. I would love to see more (safe) cycle tracks, so children can go on their bikes safely too.”*

*“I would like to cycle more but the town infrastructure is very poor - many of the roads are in poor condition (I got a puncture twice on Faringdon Road), cycle lanes are poorly marked and unobserved by vehicles, cycle lanes/routes around the one-way system extend journey times and many cyclists go the wrong way along one-way streets (East/West St Helens Street).” (see Figure 2)*

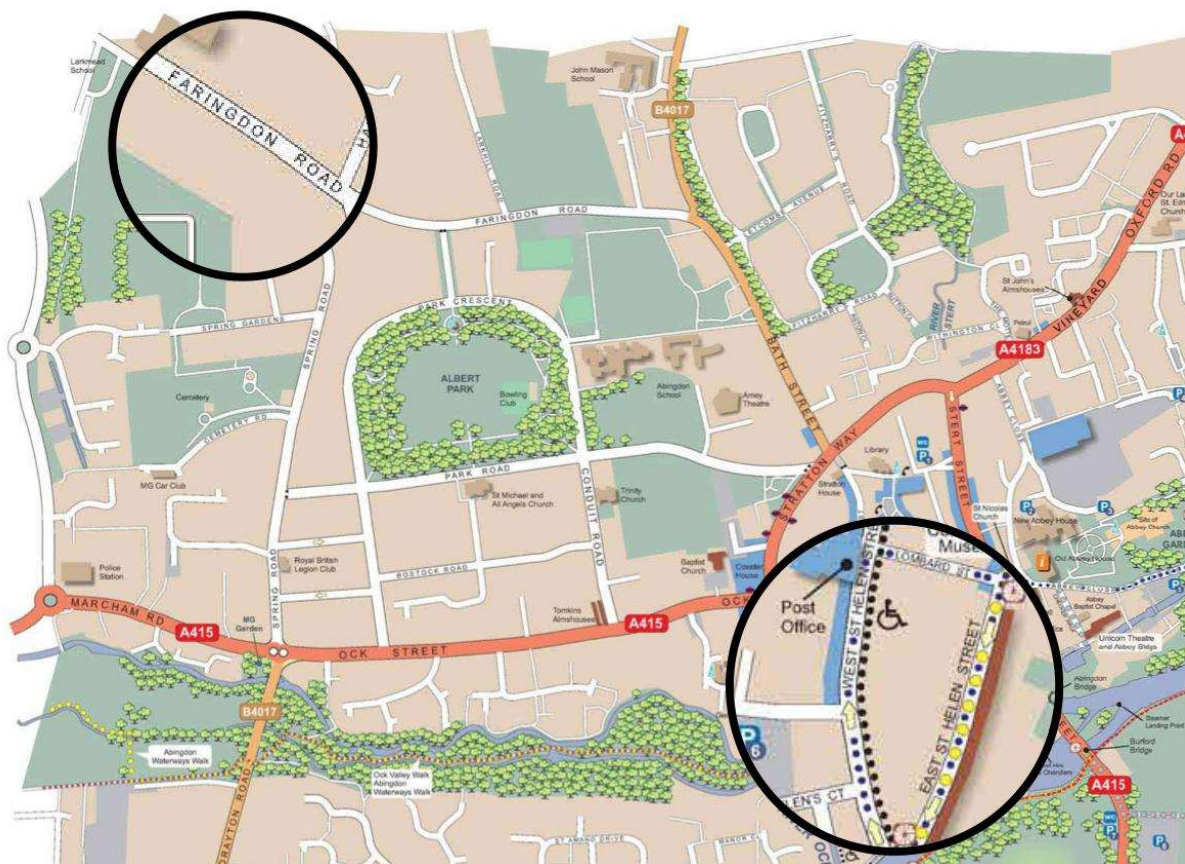


Figure 2. Map of Abingdon indicating problematic areas for cyclists, according to a survey respondent

*“Cycle paths and pedestrian areas mix up too much. Cycle paths suddenly end, and cars get too much priority unfairly. Dangerous driving attitude. Buses and cars on cycle lane[s] frequently putting cyclists in danger by having to get on the road. People opening their car door without checking. Aggressive behaviour from drivers towards cyclists when they cycle legally.”*

Additionally, there were some respondents who suggested that better facilities for cyclists at their place of work may encourage them to cycle. These included better shower or changing facilities (10%), more secure bike parking at work (6%), and an on-site bike repair service (4%).

In relation to walking, it is clear that **in almost all cases those who live within a short walking distance from work (around 15 minutes or less) already walk to work in Abingdon** - 78% of respondents said that they either live too far away from walk to work, or that they already walk to work. Therefore, it seems that little emphasis should be placed on improvements to pedestrian routes in order to achieve the greatest reductions in local traffic.



**Many respondents were critical of public transport in Abingdon.** These often came from residents of rural areas surrounding Abingdon, complaining that there is no access to public transport routes, or that buses came too infrequently to be practical. Some residents also suggested that buses would be taken more frequently if there were direct routes provided in and out of Abingdon, rather than going via Oxford which makes for extremely long journeys. The following comments were made regarding public transport services in and around Abingdon:



*“If there were regular, fast and reasonably priced public transport options then I would use them.”*

*“I know a lot of staff don't take public transport as there are not enough services that stop close enough to our office. It just doesn't give them flexibility”*

*“I take the train and cycle from Radley but even more reduced train timetables, people not wearing masks properly, increased fares and the bus into and out of Abingdon not being aligned to trains going west are frequently making me think of buying a car! That's after 44 years of being car free and proud of it. Public transport is grinding me down. Please use your voice to shout loudest about this (I'd happily pay 10% more tax if it were ring fenced!)”*

### **Incentives for more sustainable travel**

It is clear from our survey results that many residents in Abingdon **have the motivation to travel more sustainably but lack the practical means to put this into action**. Although it was mentioned previously that a large proportion of respondents stated that the environment was highly important to them, it was also found that a significant number of residents said that they would not change their travel habits based on environmental reasons alone, as shown in Figure 3. It is therefore clear that 1) certain practical improvements must be made to cycling and public transport arrangements in Abingdon in order to reduce road traffic, and 2) that if these practical improvements are implemented, there are likely to be significant improvements to sustainable travel in Abingdon as residents already have a motivation to ‘do their bit’ for the environment.

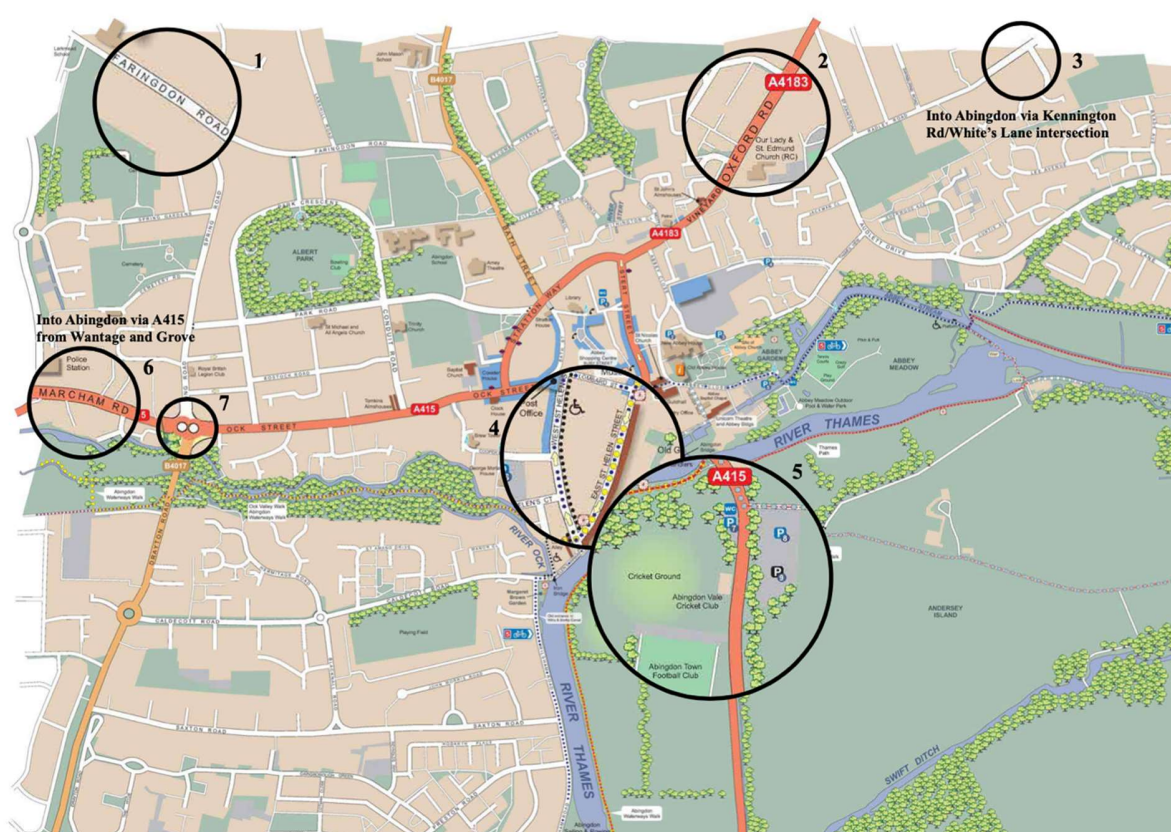


The most significant incentive to use alternative travel to work was found to be **improvements to cycling routes** in and around Abingdon. This would include the resurfacing of some roads that contain significant amounts of potholes, better street lighting on some routes (particularly in nearby rural areas), and the creation of more cycle-only routes (both cycle lanes and purpose-made cycle paths). Better facilities should also be introduced into workplaces for cyclists, including shower and changing facilities, and bicycle storage/parking. Charging points for electric cars should also be implemented in Abingdon town centre and nearby business/retail parks to encourage the purchase of electric or hybrid cars for local residents.

In regard to public transport, although Abingdon has no train station, there is potential for improvements to local bus networks to more comprehensively cover a greater fraction of the local area. The fact that just 4% of respondents to our survey predominantly used public transport to get to work illustrates the existing issues with bus services in the area. Improvements could include a greater number of bus routes and services, more frequent buses operating along existing routes, and more affordable pricing schemes (possibly including discounts for regular use, such as annual passes). One respondent also suggested that a carpooling system for some major employment areas such as schools or business/retail parks could be organised locally to reduce the number of cars on the road for those who have no practical choice but to drive to work.

### Our suggestions for changes to transport infrastructure in Abingdon

From the results of our survey and the comments of residents and employees in Abingdon, we have assembled a number of specific suggestions to increase the number of commuter journeys made by bike, foot, or public transport rather than private cars. Figure 4 highlights the areas that were raised as issues by survey respondents. Our suggestions are as follow:



- Better traffic control (e.g., roundabouts, restricted turning) and resurfacing of the **Faringdon Road (1)**
- The creation of **designated cycling alternative routes** to the Oxford Road (2) and the A415 to Wantage and Grove (6), which are very busy and not suitable for less confident cyclists
- A resurfacing and better maintenance of the **Abingdon Road** to Culham, possibly including implementation of a cycle lane to make this route more bike-friendly – this was the **most commonly raised issue** from survey respondents (4,5)
- Better maintenance of the **Culham cycle path**, especially in the section alongside the Abingdon Vale Cricket Club (5)
- The conversion of the **double roundabout at the bottom of Spring Road** into a single roundabout to ease traffic flow and make this road more accessible to cyclists (7)
- A more substantial provision of **direct bus routes** to nearby rural areas around Abingdon, particularly in the directions of Radley (4) and Faringdon
- Encouragement for local employers to introduce **cycle to work schemes** which would provide potential cyclists with discounted bikes, lights, and maintenance, and to provide more **shower and changing facilities**
- Greater provision of **electric car charging points** in Abingdon, and subsidising employers who wish to implement their own into their workplaces

### **Summary and Conclusion**

The journeys that people make to and from work every day play an important role in determining a place's carbon footprint and local air quality. As such, it is important we encourage sustainable travel for commuters wherever possible. We understand that as two authors that do not live in Abingdon, our appreciation for the traffic and travel situation of Abingdon is insignificant compared to the employees who live and work here. Therefore, we have aimed to draw our conclusions and recommendations directly from the responses given by residents and employees of Abingdon in our survey. It is clear from our survey's responses that, **although Abingdon residents clearly try to use sustainable travel where possible, there are certain barriers that prevent greater numbers from doing so.** We summarise our findings as follows:

1. The **environment is of high importance** to most workers in Abingdon, but this in itself is **not enough to change commuting habits** - private cars remain the most used form of transport to get to work in Abingdon
2. The most **common method of getting to work** in Abingdon is currently **car**
3. Almost all residents who live within practical walking distance of their place of work already **walk to work**
4. There is a great concern for **cyclists' safety on the roads in and around Abingdon** especially in relation to road surface quality, road lighting, and the availability of bicycle-only routes - this is the most significant barrier preventing more people from cycling to work
5. Some respondents suggested **'bike to work' schemes** as a way to encourage more residents to cycle rather than take their cars
6. **Public transport usage in Abingdon is extremely low**, even considering the lack of train station in the town, which possibly reflects the poor coverage of bus services in the area

7. A greater provision of **electric car charging points** may encourage more residents to purchase these vehicles in the long-term, thus reducing Abingdon's carbon footprint and improving its air quality; increased use of electric cars, however, will not make the roads safer for cyclists and pedestrians
8. Specific roads and areas that were raised as particular problems can be found in the section above.

### References

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