UNIVERSITY TRAVEL SURVEY 2022 RESULTS

Report of the 2022 University of Reading staff and student travel survey

1 CONTENTS

1 Executive Summary

1.1 Introduction

This report highlights the findings of the 2022 University Staff and Student Travel Survey, which monitors progress against our Travel Plan target to reduce Single Occupant Vehicle (SOV) use and identifies opportunities to promote and enhance sustainable travel to the University.

1.2 Methodology and response rates

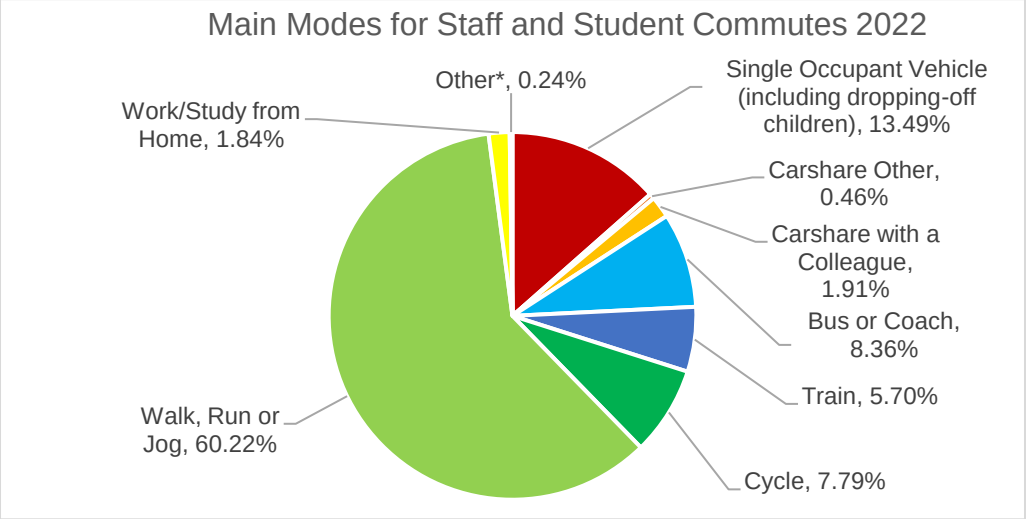
An online survey was run between 5 and 31 January 2022. There were 1,025 responses received from staff and students across the University:

- 618 staff (15.6% response rate)
- 407 students (2.5% response rate), which is comprised of 85 postgraduates (1.9% response rate) and 322 undergraduates (2.7% response rate)

The staff response rate has dropped compared to 2020 but does give only a 4% margin of error considering the standard confidence level[1] of 95%. The response rate for students was higher than 2020, resulting in a 5% margin of error at 95% confidence level.

1.3 Results

Figure 1: Overall (weighted) modal split for University of Reading 2022



The 2022 results show that the University has exceeded its 2017 sustainable travel target of 83% and **is close to meeting its 2018 5-year Travel Plan target stretch target** for 87% of commuter journeys to be by alternatives to SOVs (86.51% achieved). While the overall stretch target is very close to being met, it should be recognised that the **staff travel target is significantly off-track by 6 percentage points** - with only 57% of staff travelling sustainably.

The survey reveals there **is a lot of potential interest in using alternative modes of travel**, and that the majority of those respondents live close enough to their University location for these alternatives to be viable. The University needs to review, prioritise and address the key opportunities identified in this survey in its new 5-year Travel Plan which will be developed later this year, including in collaboration with local councils and transport providers.

The changes necessitated by the Covid 19 pandemic led to huge changes in working and travel patterns – the frequency of working from home has increased and has led to corresponding decreases in the frequency of use of other modes of travel. The 2022 survey asked people to

[1] *See Appendix 2 – Statistical definitions*

report on their travel patterns during a particular week when working from home guidance had been removed, to attempt to give a realistic representation of typical travel patterns. **The way the University measures and sets sustainable travel targets in the future will need to take better account of an increase in hybrid home/campus working patterns, particularly for staff. These changes should also be taken into account as part of the University's annual carbon reporting process.**

There is a need to broaden and embed a range of different incentives and changes to encourage people to choose more sustainable travel options. The University must increase promotion of the existing and any new incentives to maximise awareness and corresponding behaviour change.

1.4 Key issues identified

Information gained from the survey helps with understanding the issues faced by staff and students when commuting to the University; helps identify initiatives and actions that would improve travel choice and increase the use of more sustainable alternatives. The common issues and suggestions raised in the 2022 survey are summarised below.

Improvements for those travelling by foot

- There were a high number of comments received regarding **street lighting across our campuses**, this included faulty lighting and for an increase in lighting, particularly from the halls area to the main centre of the Whiteknights campus.
- **Pedestrian crossings on campus were highlighted as needing repainting and further crossings installed**. The **lack of a crossing on Whiteknights Road** to enable crossing from Bridges / Wessex halls was raised as a concern, as was a dedicated crossing at **Christchurch Road / Redlands Road and on Upper Redlands Road**.
- **Access to the Earley Gate** side of Whiteknights campus was highlighted, with the barrier at the entrance to the Wilderness identified as an issue; alongside the need to improve pedestrian access to the Earley gate side generally and for a **crossing across Wilderness Road**.

Improvements for cyclists

- There was **strong support for the introduction of a bike hire scheme** (including electric bikes).
- There were requests for **dedicated / segregated cycle lanes across Whiteknights** and for a **designated cycling bridge across the Lake**.
- **Off campus**, there was **very strong support for more segregated cycle routes**, particularly on the roads surrounding Whiteknights / London Road campuses and to have a dedicated cycle route to the centre of Reading.

Public transport

- There was **strong support for subsidised and cheaper tickets for bus and train travel**.
- Many **bus users wanted more choice of different routes, and an increase in direct services**.
- There were many requests for **improved bus waiting facilities both on and off campus**.

Car sharing

- Those car sharing wanted to see **reduced parking charges for car sharers**, a reward scheme and help finding car share partners. Sustainability Services will be shortly launching a new car sharing facility as part of the Doing #UoRBit platform.

Park and ride

- **No respondents said that they used Park and Ride** services as their main mode of travel, but **a number stated that they would like to see an improved service**, including direct services to University sites.

Electric Vehicle (EV) charge points and leasing options

- There was **strong support for more electric vehicle chargers across our campuses** and for the University to support staff to encourage their switch to an electric car.

1.5 Alternative modes of travel

A high number of respondents said they would consider other modes of travel – the most popular being cycling, travelling by foot and by bus or coach. A large portion of these people live within the commuting reach of these types of travel which makes their switch feasible, if incentives are put in place.

2 Introduction

2.1 Context and report structure

This report sets out the findings of the 2022 University Staff and Student Travel Survey. The Survey is undertaken every two years, with the first full survey completed in January 2012. The 2022 survey will be used to inform the next University Travel Plan and will deepen understanding of new travel trends as it is the first survey to be undertaken since the Covid 19 pandemic, which has had a large impact upon travel and working patterns.

2.2 Aims of 2022 Survey

- To record the modal split for commutes to our campuses.
- To enable monitoring of the SOV modal split against our Travel Plan targets.
- To identify opportunities to facilitate and promote sustainable travel to the University in general.
- To identify specific locations/facilities which are most in need of improvement on campus.
- To provide feedback to local Councils and transport operators (e.g. Reading Buses) relating to how to improve their services for the University community.
- To understand the changes to travel and working patterns following the Covid 19 pandemic.

2.3 Methodology

The main method of delivery was through an online Microsoft Forms based survey which was open between 5 January and 31 January 2022[2]. A paper-based version of the survey was also used for inclusivity and to increase access amongst different staff departments - these were distributed through Cleaning Services and Catering. This greatly increased the response rate amongst those staff who cannot regularly access emails and computers.

To encourage engagement and increase the number of responses, all respondents were offered the opportunity to enter a prize draw. The same set of prizes were available for both staff and students – with the top prize being a £200 Eurostar voucher and smaller prizes one of five £10 catering vouchers.

A comprehensive communications plan was devised to raise awareness of the survey which included a range of different methods of communication – social media, webpages, email distribution lists, app-based communication, physical posters and a number of face-to-face promotional events.

[2] *See Appendix 1 – Survey Questions*

2.4 Responses

There were 1,025 responses from staff and students across the University. This comprises 618 staff (609 employees of the University of Reading and 9 associate staff / agency employees), 322 undergraduate students and 85 postgraduate students. There were a further 10 respondents from the local community or employees of other organisations located on University sites – these responses are not included within this analysis to ensure consistency.

The staff response rate was 15.6%, which has a 4% margin of error when considering a standard confidence level of 95%. The staff response rate has dropped to its lowest level since these surveys began. It is likely that the response rate was impacted by the Covid 19 work-from-home directive and the ongoing UCU dispute[3].

The student response rate was 2.5%, which has a 5% margin of error[4] when considering a standard confidence level of 95%. The 407 responses from students were from both postgraduates and undergraduates (giving a postgraduate response rate of 1.9% and undergraduate rate of 2.7%). The student response rate has slightly increased from 2020, but it was clear that a broad communications plan across numerous avenues is required to engage both staff and students.

The proportion of responses received from each of our campuses remains reasonably consistent to previous years, with 75% of responses coming from Whiteknights Campus[5]. The response rates for our other campuses remained broadly consistent with previous surveys. It is likely that our campuses will have different travel profiles, but response rates were too low to draw meaningful conclusions.

2.5 Travel Plan targets

The University Travel Plan 2017-2022 has a headline target of reducing the proportion of commutes to our campus being undertaken by single occupant vehicle (SOV), but a stretch target of 87% was approved in December 2018 as a direct result of improved data collection methods and analysis in the 2018 travel survey (which had shown that the 83% target was already being met).

Figure 2: Proportion of commutes by SOV compared to revised Travel Plan targets

SOV modal %	2012	2014	2016	2018	2020	2022	***Revised 2022 Target***
Overall	19.9%	15.5%	16.2%	15.2%	17.8%	13.5%	*13%*
Staff	49.4%	46.8%	40.4%	42.4%	43.7%	43.4%	*37%*
Student	11.3%	5.9%	8.4%	8.0%	11.2%	6.2%	*5%*

The results of the 2022 travel survey show that overall, the University is close to meeting this stretch target of 87%. However, the number of staff reporting that they use SOV to commute to work remains 6 percentage points above target, with only 57% of staff travelling sustainably. The number of students reporting they use SOV for commuting has declined since 2020 but remains just above the SOV target of 5%. These trends will be explored in detail in the next section.

Details of how the SOV modal split is calculated, and how this has changed since the 2017 Travel Plan was written, can be found in Appendix 3. This uses weighted figures to take into account the

[3] *See Appendix 4 – Response rates*

[4] See *Appendix 2 – Statistical definitions*

[5] *See Appendix 5 – Campus location*

proportion of staff, postgraduates and undergraduates in reality, versus the proportions in the survey sample.

3 Commuting to the University of Reading

The 2022 overall modal split for travel to the University of Reading can be seen in Figure 3, with comparisons to previous years shown in Figure 4.

Figure 3: Overall (weighted) modal split for University of Reading 2022

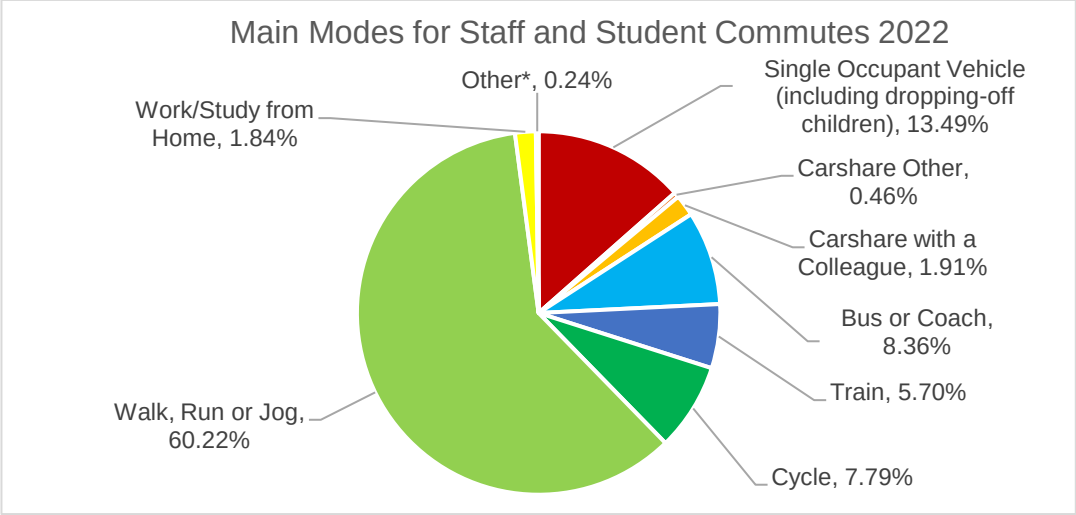
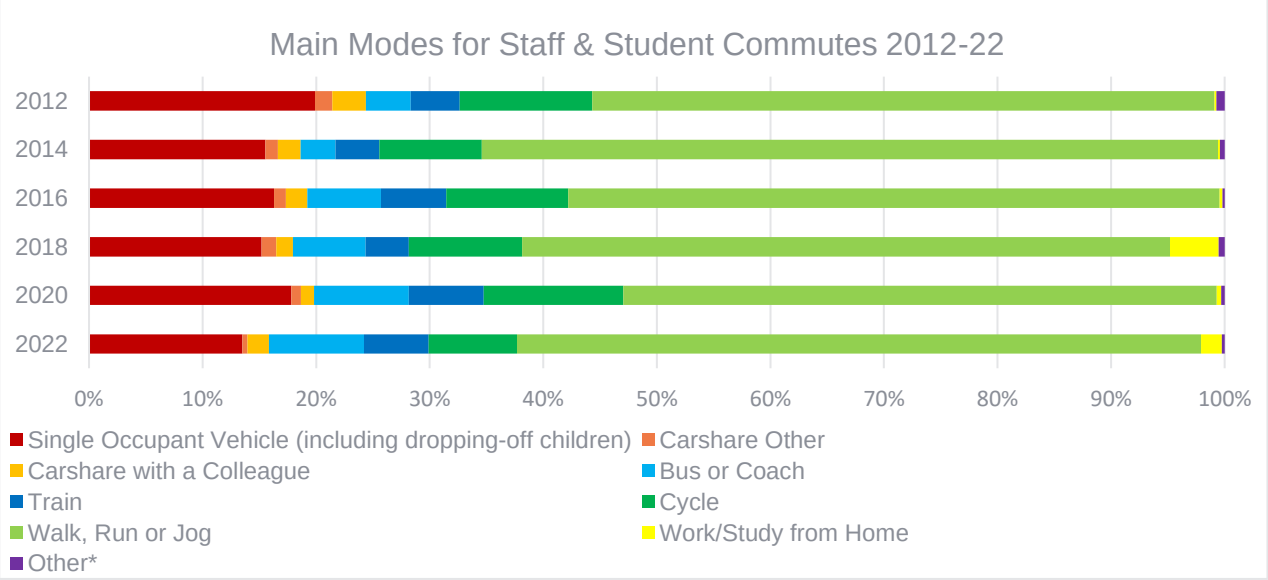


Figure 3 shows the overall (combined weighted) staff and student modal split for commutes. The 2022 survey shows that we are now close to meeting this target as 86.51% of travel was made by other modes. This has improved since 2020, when the figure was 82.2% by other modes.

Figure 4: Overall (weighted) modal split for University of Reading 2012 to 2022



- The main mode for the majority of commutes to the University remains on foot, there was a large increase from 52% of respondents in 2020 to 60% in 2022.
- The impact of the Covid 19 pandemic can be seen in the decline is use of the train as the main mode of travel, but the number of people using the bus has remained static since 2020. This means that the use of public transport (combined train and bus) is now 14%, down from 15% in 2020.

- There has been a large decline in the number of people cycling as their main mode of travel, down from 12% in 2020, to 8% in 2022.

Figure 5: Staff and student modal splits for 2012 to 2022

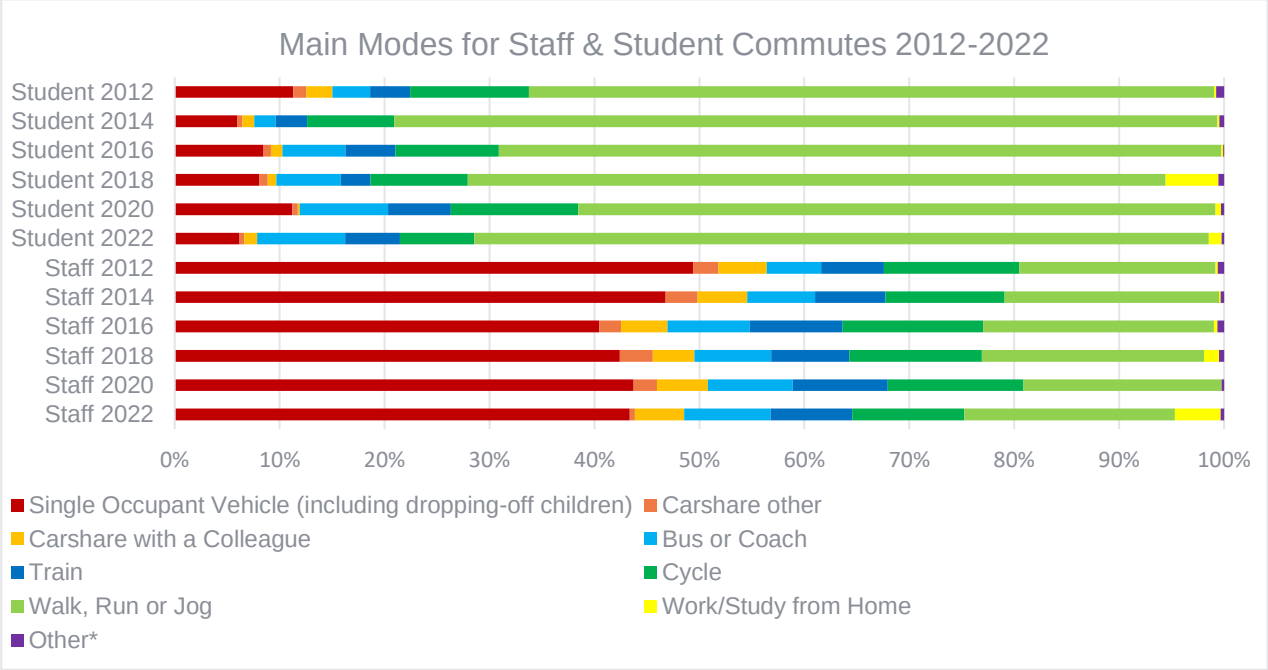


Figure 5 shows a strongly contrasting picture when main mode travel data is spilt into staff and students. For staff, the following trends are highlighted:

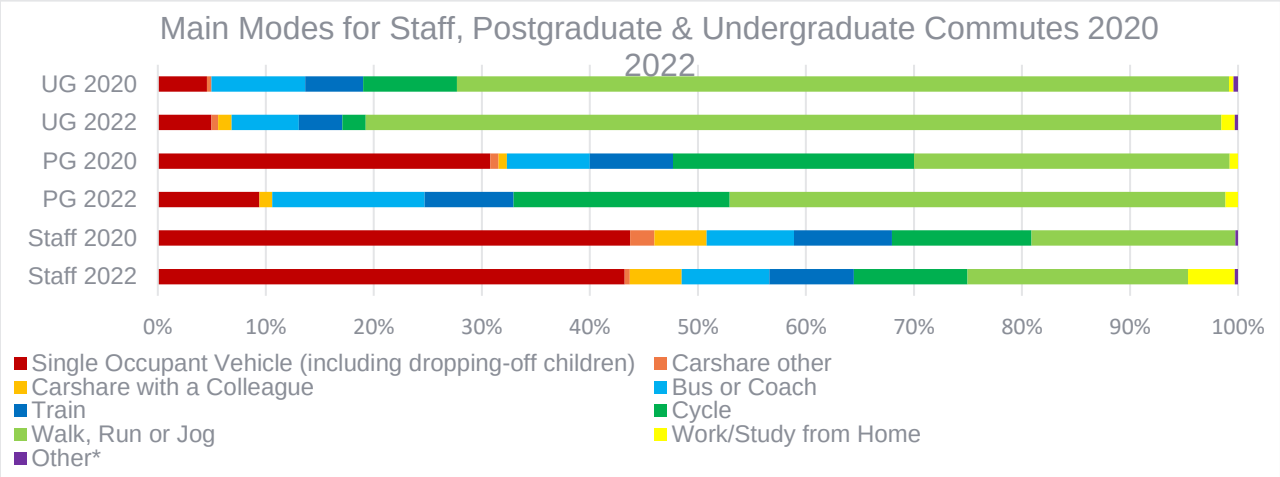
- The main mode of commuting is dominated by SOV use, which has remained largely static since 2018 at around 43%. This is 6% above the 2022 revised SOV targets as detailed in the Travel Plan.
- There has been an increase in the number of staff walking, running or jogging and reporting that they work from home as their main mode of travel.
- The number of staff travelling by bus has remained static since 2020, but train use has declined meaning that overall, the use of public transport (combined train and bus) is now 16%, down from 17% in 2020. This is expected, due to ongoing concern around Covid 19.
- Since 2020 there has been a decline in the number of staff using a bicycle as their main mode of travel.

For students:

- The main mode of travel for students (undergraduate and postgraduate) reveals that the majority (70%) travel to University locations by walking, running or jogging. This has risen from 2020 by nearly 10%.
- The number of students using public transport has remained static since 2020. Of note is a 5% decline in the number of student cyclists.

3.1 SOV Use

Figure 6: Staff and student (postgraduate & undergraduate) modal splits for 2020 - 2022



The 2020 travel survey was the first to collect differentiated data so that patterns of travel in our postgraduate and undergraduate student populations could be analysed separately, this differentiation was continued for the 2022 survey.

Further analysis of the data for SOV use reveals that the decline from 17.81% in 2020 to 13.49% in 2022 has largely been caused by a decline in the number of postgraduate students saying that they use a SOV as their main mode of travel to University locations. The number of staff and undergraduates using SOVs has remained largely static since 2020 – as shown in Figure 6.

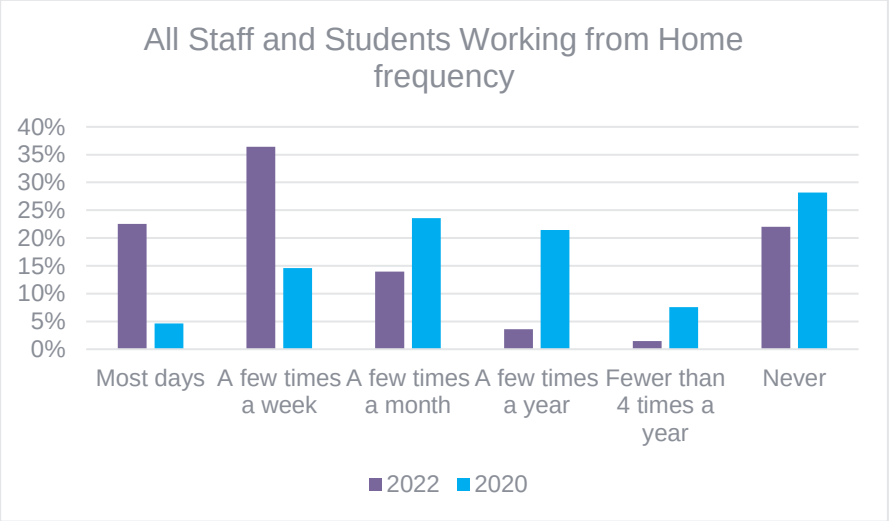
In 2020 the School of Mathematical, Physical and Computational Sciences requested that data be collected specifically for their school so they could gain an in depth understanding of their travel patterns. It appears that this trial artificially skewed the results of the 2020 survey with a large number of research postgraduates responding. The 2022 survey has also collected data for SMPCS, but with a much lower response level which means that the 2022 Travel Survey results more accurately reflect the travel habits of our postgraduate population.

It is of note that it is possible to further refine the methodology we use to calculate modal splits. They currently take account of the very different numbers of each individual group (staff, postgraduate and undergraduate) to make the figures more indicative of the overall University population. The University routinely also collects the number of taught postgraduates and research postgraduate students, which reveals a much larger cohort that are taught. It is recommended that future surveys differentiate our postgraduate population into these two categories – thereby giving an overall 4-way weighting to allow us to better understand the travel patterns of these different groups.

3.2 Frequency of use of different modes of travel and working from home

All respondents were asked to provide their frequency of use of different modes of travel, including working from home. Analysis reveals that there have been some stark changes in working patterns since 2020 – the last travel survey was conducted in January 2020, just before the COVID 19 pandemic began. At this time, the frequency of time that staff or students spent working from home was relatively low. The pandemic has clearly significantly altered travel patterns, which is shown starkly in Figure 7.

Figure 7: Staff and Student working from home frequency

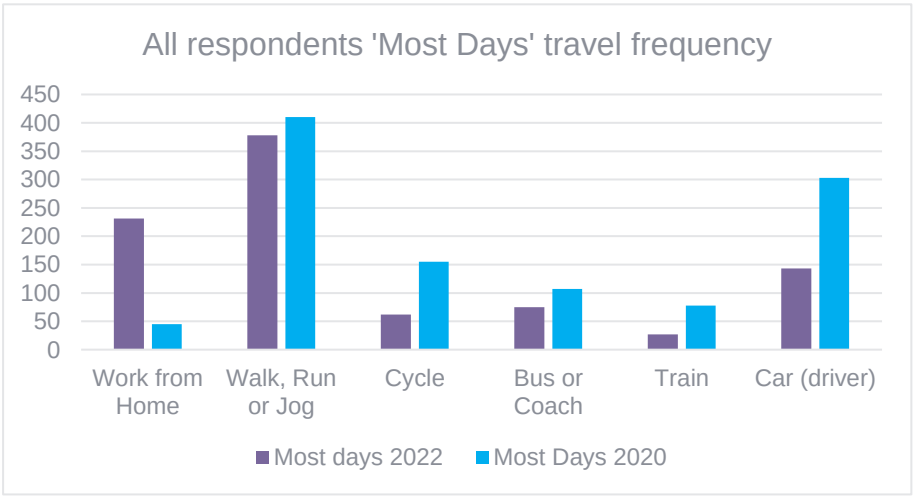


*NB: in 2020 respondents could select 'Never but I might consider it in future' or 'Never and I'm unlikely to in future'. These categories have been combined for the purposes of comparison

In 2020 most people worked from home a few times a month or less. In 2022 this has changed to most people saying they work from home most days or a few times a week, 18% and 21% increases respectively. These changes are driven largely by changes in working patterns by staff. There were corresponding declines in the lower frequency classes of a few times a month or year.

These changes have impacted travel behaviour with how people travel 'most days' has changing considerably. This has resulted in declines in all forms of travel modes from 2020 - particularly the number of people driving, cycling or taking the train. It is also of note that 58% of respondents say they never use their car, this is made up of 25% of staff and 33% of students (PG and UG combined).

Figure 8: 'Most Days' travel frequency



These changes are now being embedded by the Smart working framework which is important as removing the need to travel is the top priority in the carbon hierarchy. These changes must be considered within the way that the University sets and measures sustainable travel targets in the future. Any review should also explore how to capture mixed modes of travel, as these are not currently reflected well within the dataset.

The remainder of the report will look at each main mode in turn, in the order of the carbon hierarchy as detailed in the 2017-2022 Travel Plan. It will then examine alternative modes of

transport that respondents said they were willing to consider using and any changes they want to see to encourage these changes in modes of travel.

4 Travelling by foot

Travelling by foot to University locations continues to be the most common mode of travel and has increased in popularity since 2020 – most likely due to the impact of Covid 19.

Improvements for those travelling by foot[6]:

- There were a high number of comments received regarding street lighting across our campuses, this included faulty lighting, on pedestrian crossings and for an increase in lighting particularly from the halls area to the main centre of the Whiteknights campus.
- Pedestrian crossings on campus were highlighted as needing repainting and further crossings installed. The lack of a crossing on Whiteknights Road to enable crossing from Bridges / Wessex halls was raised as a concern, as was a dedicated crossing at Christchurch Road / Redlands Road and on Upper Redlands Road.
- Access to the Earley Gate side of Whiteknights campus was highlighted, with the barrier at the entrance to the Wilderness identified as an issue; alongside the need to improve pedestrian access to the Earley gate side generally and for a crossing across Wilderness Road.
- There were some comments made regarding poor lighting in the Northcourt Avenue area.
- A crossing has now been installed on Pepper Lane, which was regularly highlighted as an issue in previous surveys.

Whilst crossings and lighting off campus are not within the University's control; these issues should be highlighted to the relevant local councils.

5 Cycling

Cycling has declined in popularity since 2020 for the main mode of commuting to University locations, now accounting for 8% of journeys.

Improvements for cyclists[7]:

- There was strong support for the introduction of a bike hire scheme (including electric bikes).
- There were requests for dedicated / segregated cycle lanes across Whiteknights. The requests about segregated paths have been made in previous surveys, but it is positive to note that there were very few comments about overcrowding by people using the shared routes, given the significant investment that has been made to improve shared paths in recent years.
- There were some requests for a designated cycling bridge across the Lake to help access from Earley Gate.
- There were also some requests for increased secure cycle storage at various locations including Agriculture, URS, MERL, Windsor Hall and around central campus. There were some requests for improved lockers and changing facilities across our campuses, but there were fewer comments about this topic than in 2020.
- Off campus, there was very strong support for more segregated cycle routes, particularly on the roads surrounding Whiteknights / London Road campuses and to have a dedicated cycle route to the centre of Reading.

[6] *See Appendix 6 – Changes to improve travelling by foot*

[7] *See Appendix 7 – Changes to improve cycling*

- Some cyclists commented that the roads surrounding Earley Gate campus were dangerous to use and a few mentioned that the changes to Redlands Road have made cycling along this road more hazardous.

6 Public transport

The proportion of respondents using public transport has declined to 14%, most likely due to ongoing concerns around Covid 19.

Improvements to public transport[8][9]:

- There was very strong support for subsidised and cheaper tickets for bus and train travel.
- Many bus users wanted more choice of different routes, and an increase in direct services from across areas of Reading.
- There were many requests for improved bus waiting facilities both on and off campus, including covers and better lighting.
- Generally, the number of comments relating to train travel has reduced from 2020 but there were comments about the desire for more frequent services, improved reliability and more direct trains.

7 Driving and car initiatives

7.1 Commuting to the University by car

Figure 9: How far car drivers commute to work

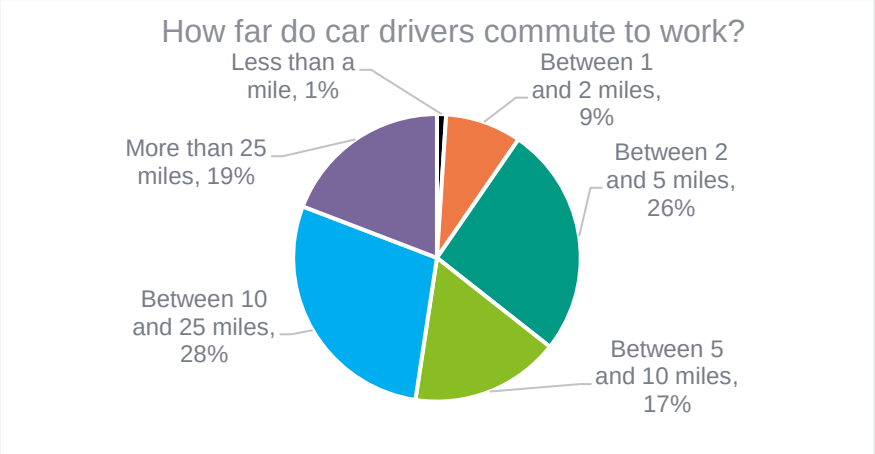


Figure 9 shows that 36% of car drivers said that they live within 5 miles of their main University location – these journeys should largely be able to be reached by a more sustainable alternative. It should be noted that 48% of car drivers live over 10 miles away, making their potential sustainable travel options more limited. All car drivers were asked the reasons why they use their car to commute to work– most chose convenience and because it is quicker.

There were some free text comments relating to the need to reduce speeds on campus with suggestions made to increase the number of speed bumps or speed awareness signs. Others suggested that it would be helpful if pay as you go parking rates were cheaper and for it to be easier to buy day passes[10].

[8] *See Appendix 8 – Changes to improve bus travel*

[9] *See Appendix 9 – Changes to improve train travel*

[10] *See Appendix 10 – Changes to improve driving commutes*

7.2 Car sharing

There has been a slight increase in the number of people carsharing since 2020, 2.3% of respondents said that carsharing was their main mode of travel. Car sharing should be encouraged as it is reduces the financial and impacts of commuting. Those car sharing wanted to see reduced parking charges for car sharers, a reward scheme and help finding car share partners[11]. Sustainability Services will shortly be launching a new car sharing platform for staff, which will form part of Doing #UoRBit sustainability incentive scheme. This should remove barriers to help people find car sharing partners. This is likely to be more successful if also combined with reduced parking permit charges for people who car share.

7.3 Car club

The University currently partners with Co Wheels, and there are 2 cars based on Whiteknights – at Dunsden Crescent and St Patricks Hall. There has been a marked increase in the use of both of these cars in the 2020/21 data period which shows resilient levels of demand despite the disruption caused by the pandemic. There is a need to raise awareness of this facility as it offers a great flexible alternative to car ownership.

7.4 Park and Ride

No respondents said that they use Park and Ride facilities as their main mode of travel to reach their University location – this is likely to be because there are no direct Park and Ride buses that serve any University locations. However, when all respondents were asked for changes they would like to see off campus, 80 choose an improved park and ride service. There were a few free text comments which asked for direct services to Whiteknights from park and ride sites, as well as sites to the south, east and junction 12 of the M4[12].

7.5 Electric vehicles and leasing options

Electric vehicles reduce air pollution but as stipulated in the carbon hierarchy – they are not the most sustainable method of travel. Nonetheless it is recognised that there is growing demand for electric vehicles and where there is no suitable lower carbon alternative, the University should help support the move towards electric vehicles from internal combustion engines. There was strong support for more electric vehicle chargers and for the University to offer staff assistance to encourage their switch to an electric car. Within the free text comments, there were a handful of comments wishing to see more chargers, including at different locations – London Road and Earley Gate[13].

8 Alternative modes of travel

Each respondent was asked what other modes of travel they might consider using and the changes they would like to see to encourage them to make that change.

[11] *See Appendix 10 – Changes to improve driving commutes*

[12] *See Appendix 10 – Changes to improve driving commutes*

[13] *See Appendix 10 – Changes to improve driving commutes*

Figure 10: Alternative modes of travel

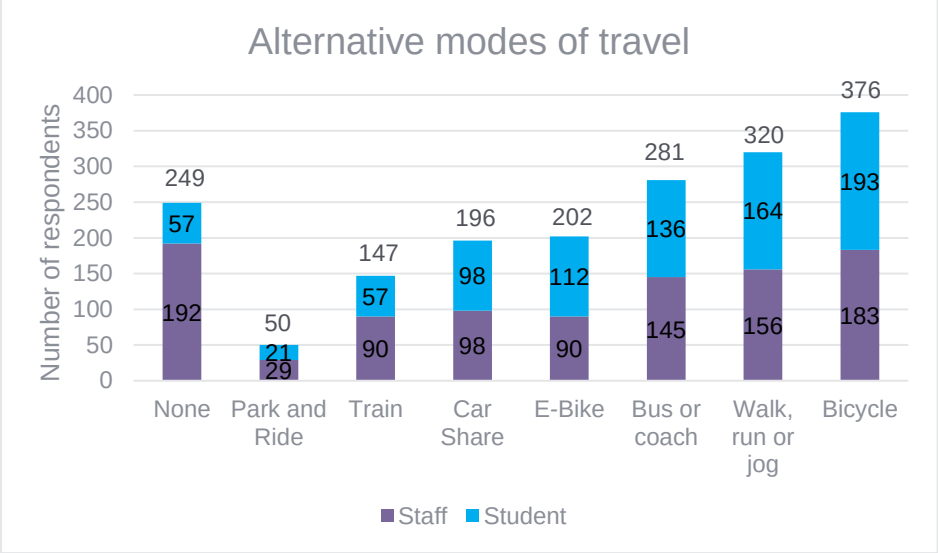


Figure 10 shows that the most popular alternative modes of travel that respondents would consider were cycling, travelling by foot and bus / coach. Figure 11 reveals that the majority of those selecting these alternative modes of travel live locally which makes their potential to switch more feasible:

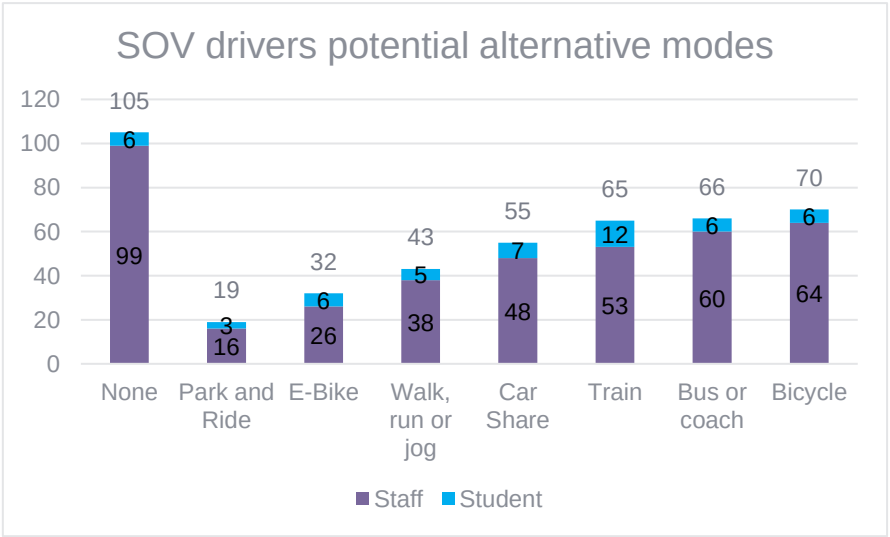
Figure 11: Distance respondents live from their University location and their alternative modes of travel

Alternative mode of travel	Distance respondents live from their campus	Percentage of those respondents
Bicycle	Less than 5 miles	83%
Travelling by foot	Less than 2 miles	71%
Bus or coach	Less than 5 miles	74%

It is encouraging to see strong support for these alternative modes of travel and actions to support use of these different modes should be prioritised to enable people to use other more sustainable forms of transport.

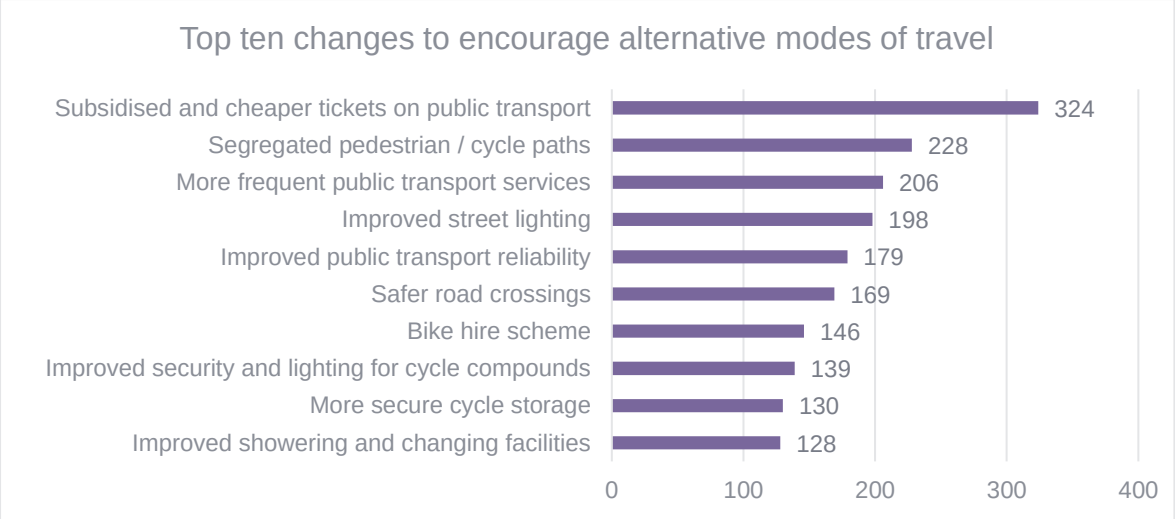
8.1 SOV drivers' alternative modes of travel

Figure 12: SOV drivers' alternative modes of travel



36% of SOV drivers said they would not consider an alternative mode of travel, but of those that would consider an alternative mode - the top three choices were cycling, bus or train. Analysis of their commuting distances again shows that these changes are feasible for at least 50% of respondents which again emphasises the need for a broader range of incentives to encourage use of alternatives.

Figure 14: Changes to encourage alternative modes of travel



All respondents were asked to select what changes they would like to see to encourage changes in travel habits. There was strong support for assistance to encourage a switch to public transport through subsidised and cheaper tickets on public transport, more frequent services and improved reliability. These findings suggest that were the University able to subsidise public transport then this would potentially encourage a lot more people to use these services. There were also a significant number of respondents who also wanted to see segregated pedestrian / cycle paths, improved street lighting and safer road crossings.

9 Conclusion

The University has exceeded its 2017 sustainable travel target of 83% and is close to meeting its 2018 5-year Travel Plan target stretch target for 87% of commuter journeys to be by alternatives to SOVs. However, the staff travel target is significantly off track, with large numbers of staff travelling by car. There is, however, a lot of potential interest in alternative modes and many of those respondents live close enough to the University for these alternatives to be viable. There is a need to broaden and embed a range of different incentives and changes to encourage people to choose more sustainable travel options.

The Covid 19 pandemic led to huge changes in working and travel patterns – the frequency of working from home has increased and has led to corresponding decreases in the frequency of use of other modes of travel. The way the University measures and sets sustainable travel targets in the future will need to take better account of an increase in hybrid home/campus working patterns, particularly for staff. The key opportunities identified in this survey need to be addressed in the University's new 5-year Travel Plan to be developed later this year.

10 Summary of Recommendations

These recommendations follow the carbon hierarchy to assist prioritisation.

10.1 Travelling by foot

- Review street lighting across all campuses, to ensure all lights are functioning correctly and identify locations for improvements.
- Review pedestrian crossings on all campuses so that those in need of repainting are prioritised.
- Review pedestrian entrances / exits to all campuses.

10.2 Cycling

- Consider the practicalities and costs of introducing a bike hire scheme (potentially electric bikes), including the option to extend RUSU's long standing hire scheme.
- Review cycle facilities across all campuses to ensure parity of access to secure storage, covered storage, lockers and changing facilities.
- A directed information campaign to advertise the existing secure facilities would be beneficial to increase usage.
- Consider designating dedicated cycling routes across Whiteknights / Earley Gate.
- Review cycling entrances / exits to all campuses.

10.3 Public Transport

- Explore opportunities to reduce the costs of bus travel and train travel.
- Review bus waiting facilities and implement a rolling system for improvements.

10.4 Driving

- Review of car parking charges, including possible reduced fees for car sharers and more options for those using their cars infrequently.
- Investigate the viability of locating Co Wheels cars at additional University locations.
- Further awareness and promotion of the Co Wheels scheme.
- Investigate options to install EV chargers on other parts of our campuses.
- Explore with HR what support they can offer to enable the switch to electric cars.

10.5 General

- Future surveys to utilise a range of communications methods – digital, paper and in person to engage with all sections of our University community.
- Future surveys to ensure further promotional work is focused across all campuses to improve the response rate from all University of Reading locations.
- Future surveys to collect mandatory data about whether postgraduate students are taught or research focused.
- The new travel plan to clearly stipulate definitions for 'staff' and 'student' and adopting the approach used in the 2020 and 2022 travel surveys and reports.
- A review to be conducted of how sustainable travel targets are set and measured. This should look to focus on more granular targets for different sections of the University population and seek to take account of variations in travel mode frequency which should also be considered as part of the University's annual carbon reporting process.
- Future travel surveys to include a mandatory frequency of travel question to ensure consistency.
- University to develop a broader range of incentives to use alternative modes of travel and to embed promotion of these different options.
- Prioritisation of recommendations in this report will be based on the carbon hierarchy.

11 Appendix

1. Survey Questions

The questions used in the University of Reading Travel Survey 2022 are available on request by emailing sustainbility@reading.ac.uk

2. Statistical definitions:

- Definition of 'Confidence level': The probability that if the survey were repeated over and over again, the results obtained would be the same i.e. that the survey respondents (the sample) accurately reflect the attitudes of the entire University (the overall population). The industry standard is 95%. See https://www.surveymonkey.co.uk/mp/margin-of-error-calculator/
- Definition of 'Margin of error': The amount of random sampling error in the results of the survey; and therefore, a way of measuring how effective the survey is in reflecting the views of the overall population. The smaller the margin of error, the more confidence one may have in the results. The bigger the margin of error, the farther the results could stray from the views of the overall population. See https://www.surveymonkey.co.uk/mp/margin-of-error-calculator/

3. Calculating the SOV modal split proportion:

There have been improvements to how we collect and analyse travel data since 2017. The following changes are of note.

Improved carsharing data:

Previous surveys identified that it was important to differentiate between adult passengers (car sharing) and those carrying only child passengers. This improvement in definition has been continued for the 2022 survey.

Weighting of student and staff figures:

In 2017 it was identified that the overall modal split calculations did not use weighting to take account of the vastly different numbers of staff and students that are based at the University, instead viewing them as equal. This was amended so that overall modal split figures are calculated with weighting to make the figures more indicative of the overall University population.

Splitting of 'student' population into postgraduates (taught and research) and undergraduates

2020 was the first travel survey that collected suitable data to enable the differences between postgraduates and undergraduates to be analysed – this has been retained in 2022 which allows analysis of these distinct groups within the student data. This is significant as it is clear that these groups have very different travel habits. The University routinely also collects the number of taught postgraduates and research postgraduate students, which reveals a much larger cohort that are taught. It is recommended that future surveys differentiate our postgraduate population into these categories – thereby allowing a 4-way weighting to allow us to better understand the travel patterns of these different groups.

4. Response rates

	Response Rate %		No. Survey Responses			University population (actual overall)		Response proportion staff vs. student	
Survey year	**Staff**	**Student**	**Total responses**	**Staff**	**Student**	**Staff**	**Student**	**Staff**	**Student**
2022	15.6%	2.5%	1025	618	407	3965	16233	60.3%	39.7%
2020	19.1%	2.2%	1177	805	372	4208	16545	68.4%	31.6%
2018	18.9%	4.4%	1566	832	734	4394	16718	53.13%	46.87%
2016	25.4%	10.5%	2670	1171	1499	4620	14317	43.86%	56.14%
2014	31.4%	8.7%	2386	1252	1134	3991	12988	52.47%	47.53%
2012	39.9%	12.8%	3088	1471	1617	3683	12628	47.64%	52.36%

5. Campus location

Survey Year		Whiteknights	Whiteknights (East)	London Road	Greenlands	Other	Total
2022	Total	75.6%	14.0%	7.4%	2.2%	0.7%	1025
	Staff	420	109	59	23	7	618
	Students	355	35	17	0	0	407
2020	Total	74.7%	17.4%	5.9%	1.4%	0.6%	1177
	Staff	574	152	57	17	5	805
	Students	305	53	12	0	2	372
2018	Total	76.8%	12.6%	6.1%	3.5%	1.0%	1566
	Staff	606	91	79	55	0	832
	Students	596	107	17	0	14	734
2016	Total	77.6%	13.5%	5.2%	2.2%	1.5%	2632
	Staff	823	185	67	52	7	1134
	Students	1220	170	70	5	33	1498
2014	Total	75.6%	15.3%	4.9%	3.2%	0.8%	2387
	Staff	864	231	73	75	9	1252
	Students	942	135	45	2	11	1135
2012	Total	76.6%	13.0%	7.8%	1.5%	1.1%	3088
	Staff	1123	214	76	45	13	1471
	Students	1243	187	166	1	20	1617

6. Changes to improve travelling by foot

Response category	Type of question	On or off campus	Proposed change	Location	Number of respondents
People who already walk, run or jog	Tick box	On	Improved street lighting	N/A	193
People who already walk, run or jog	Tick box	On	Improved pavement surfaces	N/A	99
People who already walk, run or jog	Tick box	On	Segregated pedestrian / cycle paths	N/A	89
People who already walk, run or jog	Tick box	On	Improved pedestrian crossings	N/A	88
People who already walk, run or jog	Tick box	On	Measures to improve personal safety	N/A	63
All respondents	Free text	On	Street lighting – increase quantity or repair	• Improve lighting around the Lake and bridges • Paths from halls area to main academic centre • Wilderness	127
All respondents	Free text	On	Pedestrian crossings – repainted, improved lighting and more crossings	• Old Whiteknights House, Estates, Sportspark, Queens Drive, Chancellors Way, Greenlands	29
All respondents	Free text	On	Path improvements	• Improve path and lighting in Wilderness	11
All respondents	Free text	On	Path improvements	• Around Polly Vacher, Harborne and RSSL.	4
All respondents	Free text	On	Entrance improvements	• Entrance to the Wilderness on Wilderness Road to make more accessible to all users • Further entrances along Wilderness Road	14
All respondents	Tick box	Off	Street lighting	N/A	282
All respondents	Tick box	Off	Pedestrian crossings	N/A	261
All respondents	Free text	Off	Pedestrian crossings	• Crossing across Whiteknights Road, from Bridges / Wessex halls. Whiteknights Road remains dangerous.	22
All respondents	Free text	Off	Pedestrian crossings and access	• Wilderness Road • Earley Gate side of Whiteknights	19
All respondents	Free text	Off	Pedestrian crossing	• Christchurch Road / Redlands Road	14
All respondents	Free text	Off	Pedestrian crossing	• Upper Redlands Road	7
All respondents	Free text	Off	Pedestrian crossing	• Upper Redlands Road / Eastern Avenue / Whiteknights Road	7
All respondents	Free text	Off	Street lighting	• Northcourt Avenue	10

7. Changes to improve cycling

Response category	Type of question	On or off campus	Proposed change	Location	Number of respondents
People who already cycle	Tick box	Off	More dedicated cycle lanes on roads outside campus	N/A	62
People who already cycle	Tick box	On	Segregated pedestrian / cycle paths on campus	N/A	34
People who already cycle	Tick box	On	More secure cycle storage	N/A	31
People who already cycle	Tick box	On	More dedicated cycle lanes on campus	N/A	30
People who already cycle	Tick box	On	Improved changing and showering facilities	N/A	28
All respondents	Tick box	On	Bike hire scheme (including electric bikes)	N/A	318
All respondents	Free text	On	Dedicated / segregated cycle lanes	• Throughout Whiteknights campus	17
All respondents	Free text	On	Dedicated cycle bridge	• Across the Lake	6
All respondents	Free text	On	Secure cycle storage	• Agriculture, URS, MERL, Windsor Hall and around central campus	17
All respondents	Free text	On	Showers and lockers	• Whiteknights House, Wager, Russell, Estates	15
All respondents	Tick box	Off	Segregated pedestrian / cycle paths	N/A	308
All respondents	Free text	Off	Dedicated cycle routes	• Shinfield Road	4
All respondents	Free text	Off	Dedicated cycle routes	• Pepper Lane	3
All respondents	Free text	Off	Dedicated cycle routes	• Whiteknights to Reading town centre	7
All respondents	Free text	Off	Dangerous roads	• Earley Gate	5
All respondents	Free text	Off	Dangerous roads	• Redlands Road	4

8. Changes to improve bus travel

Response category	Type of question	On or off campus	Proposed change	Location	Number of respondents
Bus users	Tick box	N/A	Subsidised and cheaper tickets	N/A	43
Bus users	Tick box	N/A	More frequent services	N/A	29
Bus users	Tick box	N/A	Improved reliability	N/A	29
All respondents	Tick box	N/A	Improved bus stops	N/A	222
All respondents	Free text	N/A	More choice of bus routes	• Direct services to Whiteknights from: Caversham, Whitley Wood, Earley train station, Reading train station, Calcot and West of Reading	24
All respondents	Free text	N/A	Quicker, more reliable and more frequent bus services	• Into our campuses	25
All respondents	Free text	N/A	Cheaper tickets for staff and students	N/A	13
All respondents	Free text	On	Improved bus waiting facilities	N/A	18
All respondents	Free text	N/A	Covered bus stops	• Bridges and Wessex Hall 19a • Shinfield Road / Christchurch Green • Whiteknights Road • Pepper Lane	9
All respondents	Free text	N/A	Lighting at bus stops	N/A	4

9. Changes to improve train travel

Response category	Type of question	On or off campus	Proposed change	Location	Number of respondents
Train users	Tick box	N/A	Subsidised and cheaper tickets	N/A	51
Train users	Tick box	N/A	More frequent services	N/A	20
Train users	Tick box	N/A	Improved reliability	N/A	17
Train users	Free text	Off	More direct trains to Reading and Earley	N/A	5

10. Changes to improve driving commutes

Response category	Type of question	On or off campus	Proposed change	Location	Number of respondents
People who travel by car	Free text	N/A	Reduce speeds	• On campus and surrounding roads	7
People who travel by car	Free text	On	Speed awareness signs or bumps	N/A	4
People who travel by car	Free text	On	Cheaper for infrequent use of parking	N/A	5
Car sharers	Tick box	N/A	Reduced parking charged for car sharer	N/A	19
Car sharers	Tick box	N/A	Reward scheme	N/A	14
Car sharers	Tick box	N/A	Help finding car share partners	N/A	12
Car sharers	Tick box	Off	Designated parking spaces	N/A	12
All respondents	Tick box	Off	Improved P&R service	N/A	80
All respondents	Free text	Off	More P&R sites	• Junction 12 M4 • Eastern side of Reading • South of M4	9
All respondents	Tick box	On	More EV chargers	N/A	233
All respondents	Tick box	On	Encourage staff to switch to an EV	N/A	228
All respondents	Free text	On	More EV chargers	• London Road, Earley Gate, Whiteknights	12