

UNIVERSITY TRAVEL SURVEY 2020 RESULTS

Report of the 2020 University of Reading staff and student travel survey

1 CONTENTS

1	Executive Summary	2
2	Introduction	5
3	Modal split of commutes to the University of Reading	7
4	Travel Plan targets	11
5	Walking and cycling to the University	13
6	Public transport	14
7	Driving and car initiatives	16
8	Working from home	17
9	Conclusions	17
10	Appendix	18

1 Executive Summary

1.1 Context

This report highlights the findings of the 2020 University of Reading Staff and Student Travel Survey. The aims of the 2020 survey include monitoring of the Single Occupant Vehicle (SOV) modal split against our Travel Plan targets (which were originally published in 2017 and then revised in December 2018), and identifying opportunities to promote and facilitate sustainable travel at the University.

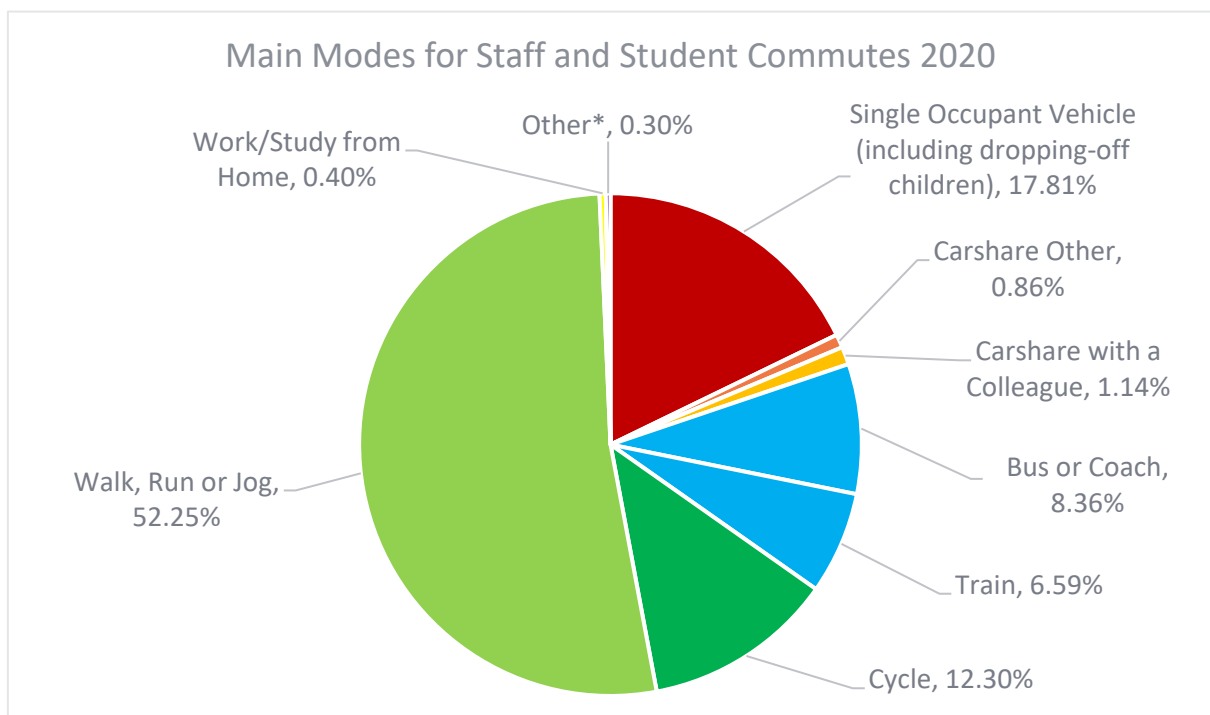
1.2 Methodology and response rates

An on-line survey consisting of nine questions was run between 13 January and 25 February 2020. A total of 1,177 responses were received from staff and students across the University; 805 responses from staff (giving a response rate of 19.1%) and 372 from students (giving a response rate of 2.2%). The 372 responses from students were from both postgraduates and undergraduates (giving a postgraduate response rate of 3.1% and undergraduate rate of 2.0%).

The response rate for staff is very similar to the 2018 survey, giving a 3% margin of error when considering a standard confidence level of 95%. The response rate for students was not as high as in 2018, nevertheless the sample size is still statistically significant with a 5% margin of error when considering a standard confidence level of 95%. The information gathered provides a useful picture of overall travel to the University and can help identify areas where improvements can be made.

1.3 Results – modal splits and targets

Figure 1: Overall (combined weighted) staff and student modal split for commutes



The 2017 University Travel Plan originally set a headline target of 83% of commuter travel to the University to be by modes other than SOV by 2022; 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). Based on results from the 2020 travel survey, Figure 1 shows that 17.8% of overall commutes were by SOV, and therefore 82.2% of commuter travel is by other modes – so the 2022 target is currently not being met.

Information about how the data was collected and analysed can be found within the body of this report and within the appendix.

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; and helps identify initiatives and actions that would improve travel choice and the development of sustainable modes of travel. The common issues and suggestions raised in the 2020 survey are summarised below.

Off campus routes and pedestrian crossings

- Concerns over a lack of pedestrian crossings outside entrances to Whiteknights campus were raised, particularly on Pepper Lane and Whiteknights Road (by Wessex Hall and near Childs Hall).
- There are significant concerns regarding the safety of cyclists on the orbital roads surrounding Whiteknights campus (i.e. Shinfield Road, Pepper Lane, Wilderness Road, Whiteknights Rd, Upper Redlands Road) with requests for cycle lanes to be built.
- A barrier to cycling, noted particularly by some car drivers, was the unwillingness to cycle on roads perceived to be dangerous – the installation of cycling lanes on orbital roads could help to alleviate these concerns.

Shared routes/paths on campus

- Since the 2018 survey, many routes on the Whiteknights campus have been improved and/or widened, including Queen's Drive, RUSU to Black Bridge, and routes to the Halls.
- The route with the most issues reported was Hopkins to Friends Bridge, particularly relating to the narrowness of the bridge.
- There were requests for marked cycle and pedestrian segregation on the widened routes on campus, due to safety concerns arising from speeding bikes and large numbers of pedestrians.
- Complaints about the paths in the Palmer Quad at Whiteknights have dropped compared to previous surveys.
- There is concern about the condition of the path surface in The Wilderness and around Whiteknights Lake, particularly in the winter when they can become water-logged and difficult to navigate in the dark¹. The access gate to the path through The Wilderness from Wilderness Road remains a concern to pedestrians and cyclists.

Showers and changing facilities

- The availability of showers and changing facilities across buildings was a key concern for people who are not currently cycling (particularly car drivers), suggesting that improved facilities could encourage more staff, in particular, to cycle to work.
- There was also concern about the condition of showering facilities, including a lack of space to change, access to hooks to hang clothing, and no hair dryers. Where only one shower is available in a building, concern was raised about the time spent queuing.
- There were requests for lockers, or drying rooms, for staff to leave their wet clothes to dry.

Cycle parking

- A number of requests were received to install more secure cycle parking compounds on Whiteknights campus, but without clear indication of where new compounds should be installed.
- Concerns were raised over cycle theft, with requests for CCTV and lighting to be installed near cycle parking.

Working from home

¹ The survey was carried out before recent improvements to the lake pathways had been undertaken

- There were numerous requests from staff for more support and encouragement to work from home. The majority of these requests came from members of staff that recorded using a car as their main mode of transport
- There were also requests for the University to further adopt video conferencing as an alternative to travel.

Bus services

- Route 21/21a - complaints of peak-time overcrowding and out of term time bus frequency.
- Route 19a/c - requests for more improved frequency, particularly at peak times, as there are currently no 19c buses arriving before 9am, which is having a detrimental effect on commutes.
- Staff would like to see a specific staff discount for occasional bus travel reintroduced.
- Staff and students would like to see more direct bus services stopping at Whiteknights campus, particularly from locations for which travellers currently have to travel into and then out of Reading town centre to get to the University.

Train

- Easit discount – a number of concerns were raised regarding GWR ceasing their discount available via Easit, which has resulted in increased costs of rail travel. Senior University management have petitioned GWR regarding this.

Park and ride

- Requests were raised to consider setting up a Park and Ride scheme directly to the University. The majority of requests did not cite a location, but respondents suggested Mere oak or TVSP.

Car sharing

- Requests were raised for more support to car share. Sustainability Services will be launching a new car sharing facility as part of the Jump sustainability incentive scheme in summer 2020.

Electric Vehicle (EV) charge points

- A number of requests were made to install more EV charge points at new locations at Whiteknights campus, particularly at Earley Gate.

1.5 Conclusion

The 2020 Travel Survey has shown a concerning trend in the rise of travel to the University by Single Occupancy Vehicle (SOV), both for staff and students. The University is currently off track to meet both its original and stretch SOV targets for 2022.

The survey responses provide a clear indication of some priorities to consider when reviewing our Travel Plan Action Plan to further our progress towards the University Travel Plan targets. Some of the key activities that would benefit staff and students identified from the survey include:

- Continued feedback to local councils relating to pedestrian crossings and improvements to routes for cyclists outside campus, with a specific focus on Pepper Lane and Whiteknights Rd.
- A programme to improve existing shower and changing facilities on campus, including lockers.
- Contact with Reading Buses about the issues being experienced by peak-time and out of term time travellers, particularly on routes 19 and 21.
- Continued progress on opportunities for home-working, including flexible working practises.
- Improvement in the provision and promotion of carsharing initiatives.
- Improved promotion of the available travel offers via improved webpages and promotion of those pages, particularly to new staff and students.

These suggested activities will be considered for inclusion in the Travel Plan Action Plan which is reviewed annually. Action Plan Initiatives are prioritised according to the following criteria:

- Initiatives with the best potential for achieving our Travel Plan targets of reducing the need to travel to the University by single occupant vehicle.

- Initiatives supporting continued use of sustainable travel modes. Addressing issues raised / experienced by larger numbers of the University population are given greater priority.
- Initiatives aligning with the Carbon Hierarchy identified in the Travel Plan, where reducing the need to travel is prioritised over more carbon intensive alternatives to driving.
- Initiatives that fit with other University projects.

Given the trend of increased SOV travel, alongside greater support and incentive for the alternatives, consideration must also be given to initiatives that discourage further increases in SOV travel.

2 Introduction

2.1 Context and report structure

This report sets out the findings of the 2020 University of Reading Staff and Student Travel Survey. The University Travel Survey is undertaken every two years, with the first full survey completed in January 2012. Prior to this a site entry count at the Whiteknights campus was undertaken in 2006. It was decided to shorten the 2020 survey considerably in comparison to previous versions, which has nevertheless provided a comprehensive snapshot of commuting travel to/from the University.

2.2 Aims of 2020 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 at the University in general.
- To identify specific locations which are felt to have the greatest issues 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 monitor awareness of the different initiatives supporting sustainable travel provided through the Travel Plan.

2.3 Methodology

- The on-line survey data was run between 13 January and 25 February 2020. The nine questions used are included in section 1 of the appendix to this report.
- Promotional channels used included: the staff web portal; In Brief staff newsletter; posters in buildings; department secretaries email distribution; social media including Twitter and Facebook; paid adverts in the RUSU building; attendance at the RUSU Re-Freshers Fair.
- RUSU supported via social media as the RUSU President no longer sends all student emails.
- Paper surveys were not distributed this year as all University staff members now have access to email and computers and receive payslips online.
- Unlike previous surveys, no prizes were offered for participation in the survey.

2.4 Responses

- A total of 1,177 usable responses were received from staff and students across the University.
- 805 responses were from staff (giving a staff response rate of 19.1%; giving a 3% margin of error when considering a standard confidence level of 95%).
- 372 responses were from students (giving a student response rate of 2.2%; giving a 5% margin of error when considering a standard confidence level of 95%).
- The 372 responses from students were from both postgraduates and undergraduates (giving a postgraduate response rate of 3.1% and undergraduate rate of 2.0%).
- The proportion of responses received from each of our campuses remains reasonably consistent to previous years, with the majority of responses coming from Whiteknights Campus (see Figure 3).

- Very few students at London Road completed the survey this year.
- The response rate for staff is very similar to the 2018 survey, giving a 3% margin of error when considering a standard confidence level of 95%. The response rate for students was not as high as in 2018 (see Figure 2), nevertheless the sample size is still statistically significant with a 5% margin of error when considering a standard confidence level of 95%. The information gathered provides a useful picture of overall travel to the University and can help identify areas where improvements can be made.
- More detailed information and definitions of margin of error and confidence intervals can be found in the appendix.

Figure 2: UoR 2020 Travel Survey response rates, with comparisons to previous years²

Survey year	Response Rate %		No. Survey Responses			University population (actual overall)		Response proportion staff vs. student	
	Staff	Student	Total responses	Staff	Student	Staff	Student	Staff	Student
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%

Figure 3: Campus base of travel survey respondents 2012-2020

Survey Year		Whiteknights	Earley Gate	London Road	Greenlands	Other	Total
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

² The figures reported in Figure 1 may be slightly different to those included in previous years survey reports due to an updated methodology for calculating University population data each year – see appendix for detail.

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

- The proportion of overall responses from staff and students based at Whiteknights has remained consistent over all surveys, with between 75 and 77% of respondents stating this is their base location.
- The proportion of respondents who say that Earley Gate is their main base increased slightly in the 2020 survey, whilst those at Greenlands decreased slightly.

3 Modal split of commutes to the University of Reading

The 2020 overall modal split for travel to the University of Reading can be seen in Figure 4, with comparisons to previous years shown in Figure 5. Please see footnote 2 on the preceding page for a summary of improvements to how we calculate our modal splits since 2016.

Figure 4: Overall (weighted) modal split for University of Reading 2020

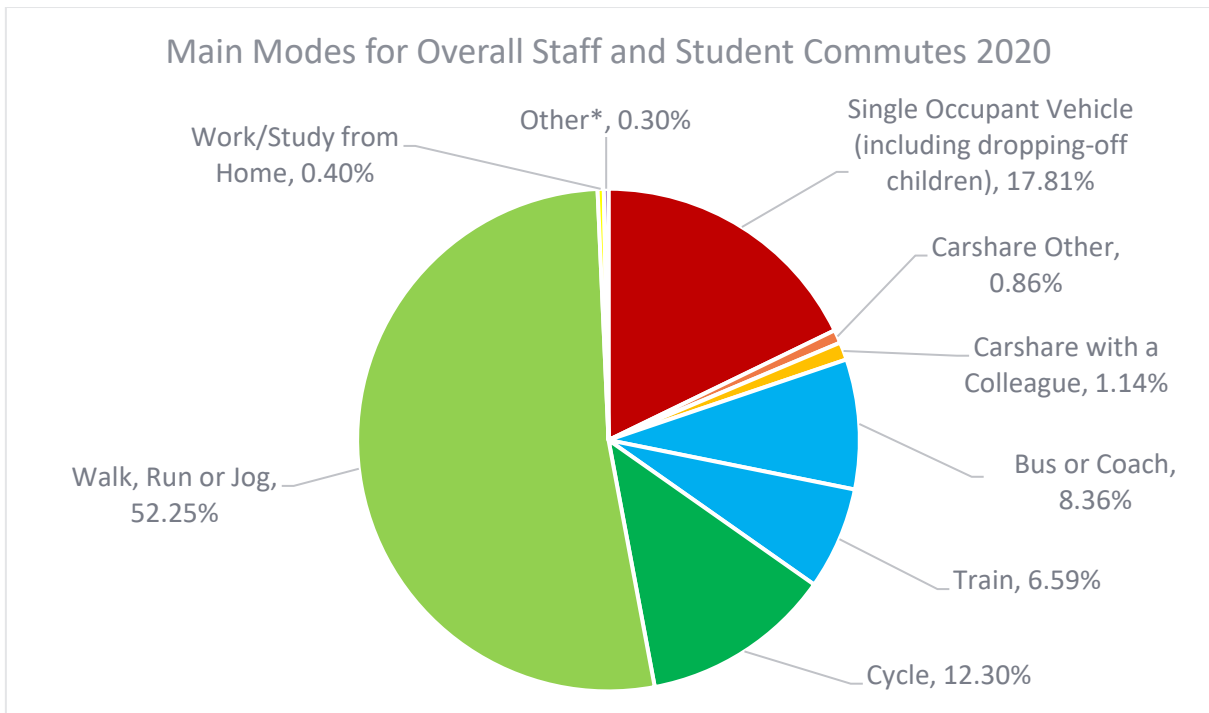
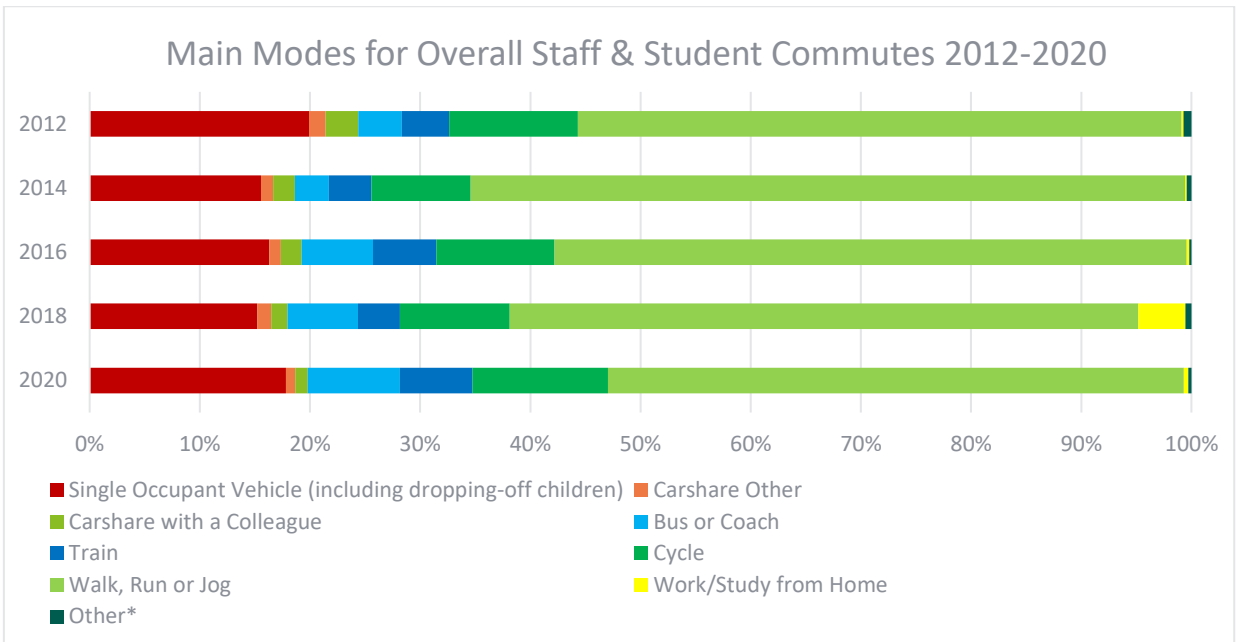
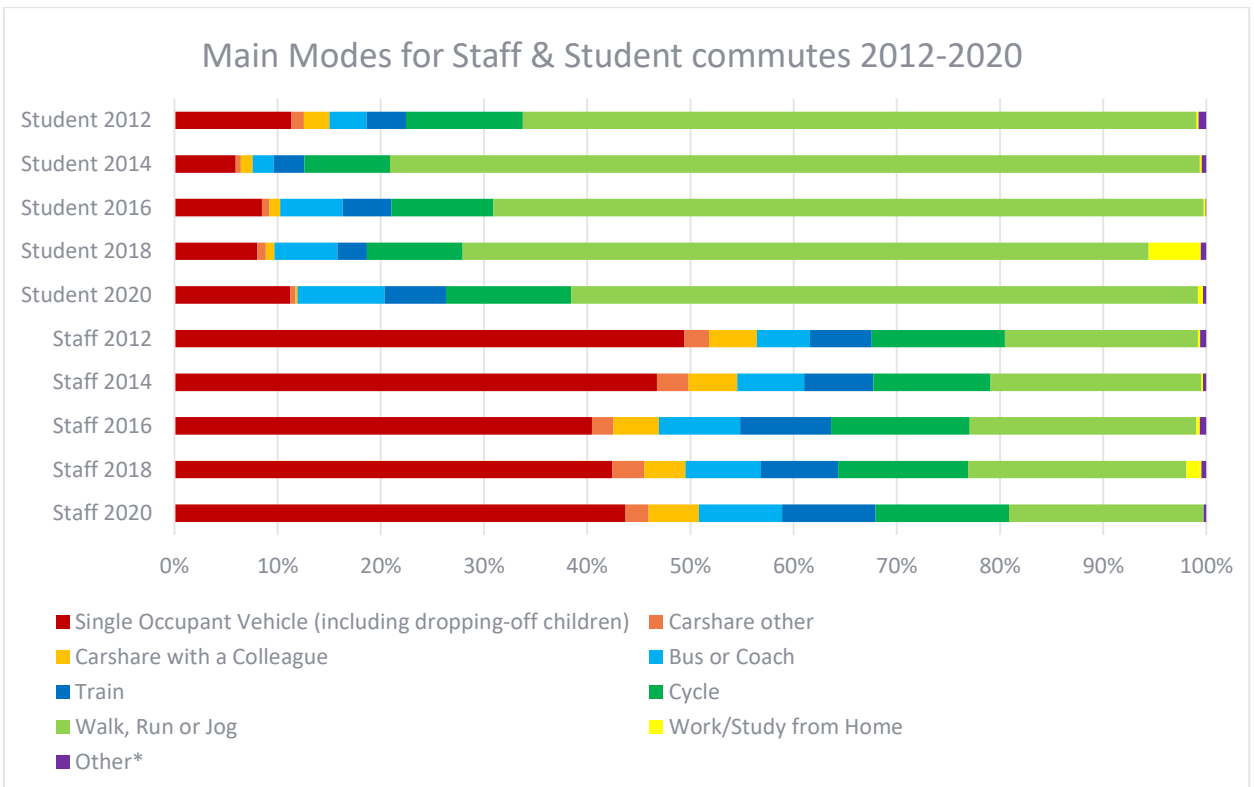


Figure 5: Overall (weighted) modal split for University of Reading 2012 to 2020



- The main mode for the majority of commutes to the University remains as travel on foot (at 52% in 2020), but this rate is the lowest seen since the surveys started.
- The overall cycling rate has increased to 12% from 10% in 2018 and is now at its highest level since the surveys started.
- Public transport (combined train and bus) is now at 15%, which is also at its highest.
- Commuting by Single Occupant Vehicle is at 17.8%, up by 2 percentage points since 2018.

Figure 6: Staff and student modal splits for 2012 to 2020



- Staff SOV rates have increased from a low of 40.4% in 2016 to 42.4% in 2018, then to 43.7% in 2020. The rate of staff commuting via SOV is still lower than 2012 and 2014, but the year-on-year increase since 2016 shows a concerning trend.

- The use of public transport by staff has increased year-on-year, with Figure 6 showing that 17% of staff are using bus, coach or train as their main mode of travel in 2020. Car sharing and cycling have remained fairly consistent over the years.
- Student SOV rates have increased from a low of 6% in 2014 to 11% in 2020, with public transport and cycling rates also increasing.
- The differences between staff and student travel patterns remain similar to previous years, with a much higher rate of SOV driving for staff; and a much higher rate of walking for students, although student walking levels appear to have fallen substantially in 2020 – a possible reason for this can be seen in Figure 7.

Figure 7: Staff and student (postgraduate & undergraduate) modal splits for 2020

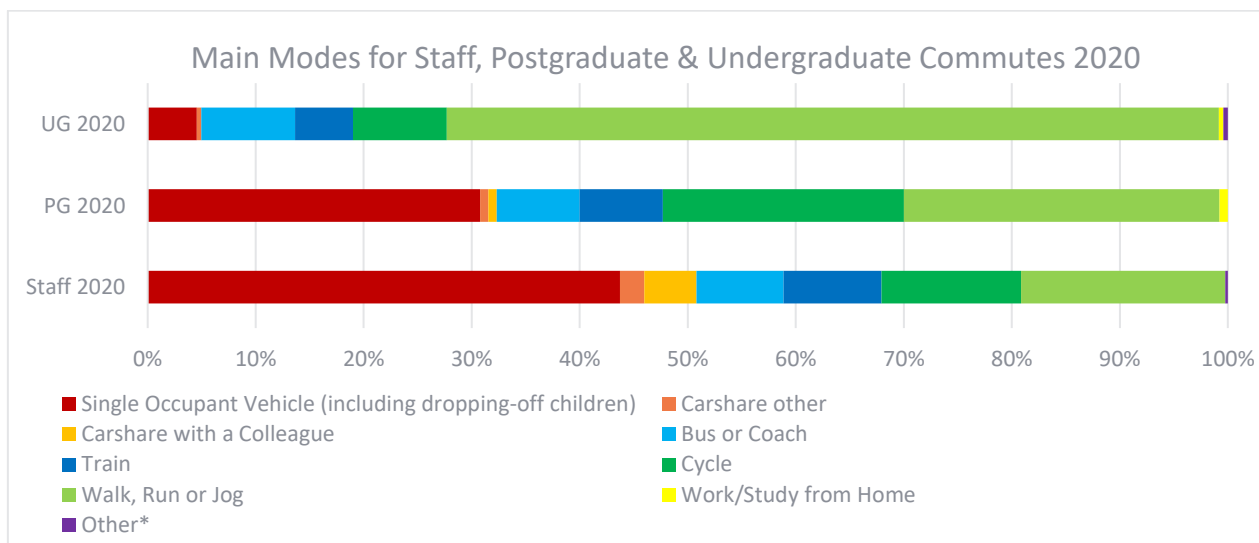


Figure 7 shows how undergraduate and postgraduate modal splits are very different. It is interesting to note that postgraduates are more like staff than undergraduates in their travel habits. 2020 is the first survey that has collected suitable data to enable these differences to be analysed – in previous years, the question asking whether a student was an undergraduate or a postgraduate was optional, so it was impossible to know the proportion of responses from undergraduates to postgraduates within the 'student' heading. This will be retained as a mandatory question for future surveys.

For the 2020 survey, of the 372 responses from students (giving an overall response rate of 2.2%), 242 of these were from undergraduates, with 130 from postgraduates (giving a postgraduate response rate of 3.1% and undergraduate rate of 2.0%). Therefore, the combined 'student' data contains a higher proportion of postgraduates than undergraduates, so the 'student' modal split for 2020 will be inclined towards the postgraduate levels shown in Figure 7, rather than towards the undergraduate levels.

Although it is impossible to know the split of undergraduates to postgraduates in previous surveys, anecdotally it does seem that this year's high proportion of responses from postgraduates is inflating the 'student' SOV figure compared to previous surveys; and this might go some way to explain the inconsistency in 'student' modal splits over the years shown in Figure 6.

Going forward, and in future surveys, a pragmatic approach would be to split 'student' data in order to record and monitor both undergraduates and postgraduates as separate groups.

Figures 8, 9 and 10 show the frequency with which each of the main modes are used, or considered, by staff and students for travelling to the University.

Figure 8: Frequency of undergraduate use of travel modes 2020

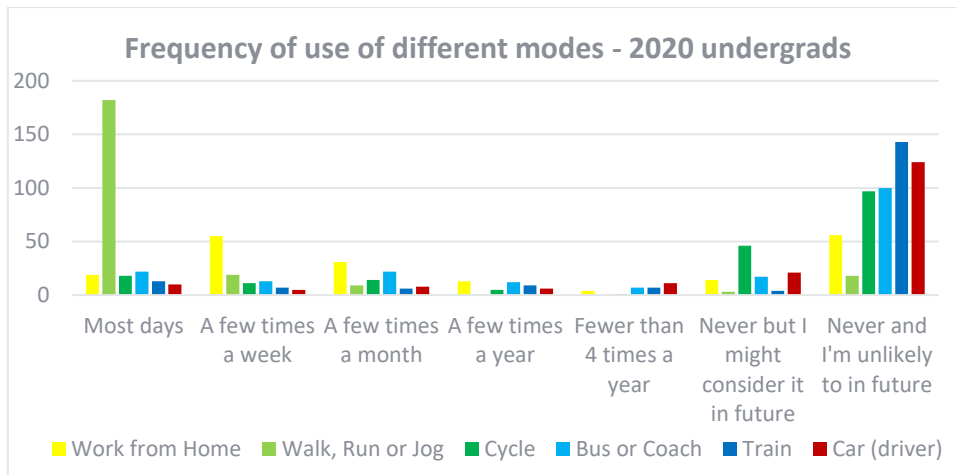


Figure 9: Frequency of postgraduate use of travel modes 2020

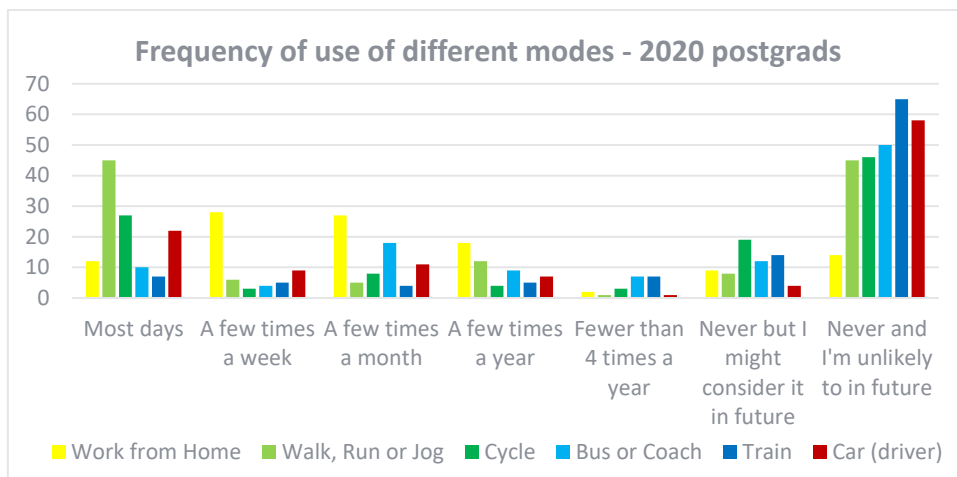
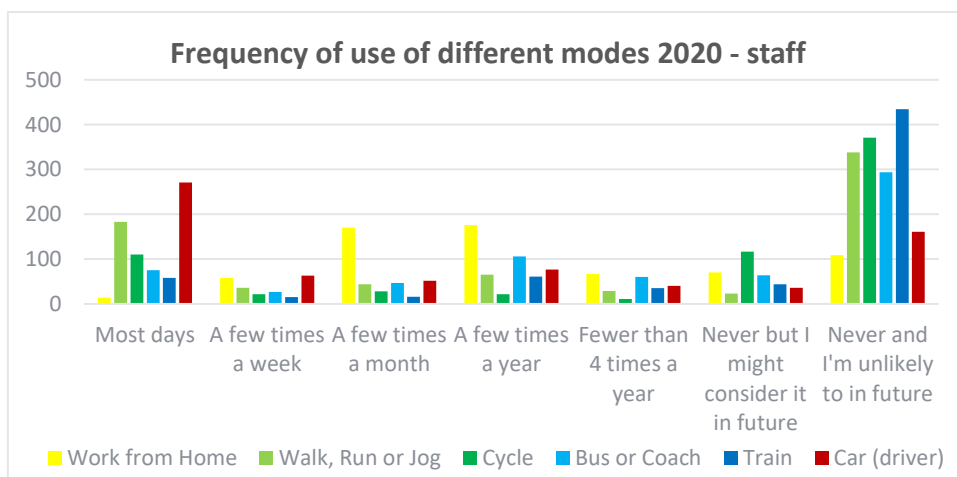


Figure 10: Frequency of staff use of travel modes 2020



- Travel by foot (walk, run or jog) is by far the most common mode for undergraduate travel.
- Staff and postgraduates are more likely to use a range of different modes to reach our campuses, rather than just a single main mode every single day. This could be different modes on different days, or using multiple modes within a journey (e.g. train then bus).

- A significant number of staff report working from home a few times a month or a few times a year.
- A large number of students, particularly postgraduates, work from home a few times a week.
- Cycling is the mode that students and staff would most likely consider using in the future.
- Train is the mode that students and staff are most unlikely to consider using in the future.

4 Travel Plan targets

The University Travel Plan has a headline target of reducing the proportion of commutes to our campus being undertaken by single occupant vehicle (SOV). The headline targets for commutes to the University by SOV in 2022 (following the revision approved in December 2018) are:

Figure 11: 2022 revised SOV targets

	2022 target
Overall	13%
Staff	37%
Student	5%

4.1 SOV proportion of modal split in 2020:

Following the 2020 travel survey, the proportion of staff and students indicating that single occupant vehicle (SOV) was their main mode of commute to the University is as follows:

Figure 12: Proportion of commutes by SOV compared to revised Travel Plan targets

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

The 2017 University Travel Plan originally set a headline target of 83% of commuter travel to the University to be by modes other than SOV by 2022; 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).

Based on results from the 2020 travel survey, Figure 1 shows that 17.8% of overall commutes were by SOV, and therefore 82.2% of commuter travel is by other modes – so neither the original 2022 target of 83%, nor the stretch target of 87%, are currently being met. It is clear that 'student' data sets are highly dependent on the level of responses from postgraduates, who act more like members of staff in terms of their travel, and therefore tend to skew the 'student' results towards travel by SOV.

Figure 7 shows that the SOV modal split for undergraduates in the 2020 survey is 4.6%, which is meeting the 2022 target for students. Whereas Figure 7 shows that the SOV modal split for postgraduates is 30.8%, which is over 6-times greater than undergraduates in 2020 and over 6-times greater than the 2022 target for students (but meets the 2022 target for staff). It is concerning that the

SOV modal split for staff is now more than 6 percentage points over the 2022 target and has progressively got worse in each survey since 2016.

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 the appendix.

The 'staff' data includes those respondents who indicated that they were University staff members, associate staff and agency staff. The 'student' data includes both postgraduates and undergraduates; and the 'student' SOV modal split % is a weighted figure taking into account the proportion of postgraduates and undergraduates in the actual student body, versus the proportions in the survey sample. Similarly, the 'overall' SOV modal split % is a weighted figure taking into account the proportion of staff, postgraduates and undergraduates in reality, versus the proportions in the survey sample.

There is a lack of clarity within the Travel Plan document itself about which groups should constitute and be included in the analysis of 'staff' and 'student' groups. For example, should associate staff (some of whom may be students) be included within the 'staff' group; and should postgraduate students be included within the 'student' group or be considered as a separate group. Future surveys and analysis will therefore adopt the approach set out in this report.

For the reasons detailed in section 3 of this report, going forward, and in future surveys, a pragmatic approach would be to split 'student' data in order to record and monitor both undergraduates and postgraduates as separate groups.

The rest of this report will look at each main mode of travel in turn to see what the survey results suggest can be done to address any increases in SOV rate, and to continue to encourage more sustainable forms of travel to our campuses.

5 Walking and cycling to the University

- Walking/running/jogging continues to be the most popular commute mode to reach our Reading campuses, with 52% of commutes in 2020 overall undertaken on foot.
- Cycling levels are fairly constant in surveys since 2012, with 12% of commutes in 2020 overall undertaken by bicycle.
- Many staff and students report that they do not currently cycle but would consider doing so in future, indicating scope for increased cycling levels (see figures in Section 3).

5.1 Off-campus routes and pedestrian crossings

- There are particular concerns within the survey over a lack of pedestrian crossings outside entrances to Whiteknights campus, particularly on Pepper Lane and Whiteknights Road (outside Wessex Hall and near Childs Hall – at the Upper Redlands Road / Eastern Avenue junction). These are issues that have been raised in previous surveys and that the University has petitioned the local councils about. Ultimately, decisions about roads, pavements and associated facilities outside the University's sites are not within the control of the University.
- There are significant concerns regarding the safety of cyclists on the orbital roads surrounding Whiteknights campus (i.e. Shinfield Road, Pepper Lane, Wilderness Road, Whiteknights Rd, Upper Redlands Road) with requests for cycle lanes to be built (30 comments).
- A barrier to cycling, noted particularly by some car drivers, was the unwillingness to cycle on roads perceived to be dangerous – the installation of cycling lanes on orbital roads could help to alleviate these concerns.
- The University will continue to petition and liaise with the local councils in relation to off-campus routes and facilities that affect staff, students, and visitors; and we will use this feedback to encourage improvements to be made.

5.2 On campus routes for pedestrians and cyclists

- A programme of route improvements on Whiteknights campus has been undertaken following feedback from previous travel surveys. In the 2018 survey many comments related to path overcrowding, however, since 2018, many routes on the Whiteknights campus have been improved and/or widened, including Queen's Drive, RUSU to Black Bridge, and routes to Halls.
- In the 2020 survey, there are proportionally less comments about path overcrowding. The route with the most issues reported was Hopkins to Friends Bridge, particularly relating to the narrowness of the bridge. This is an extremely expensive issue to address but is something that needs to be seriously considered to address persistent concerns.
- There have been requests for marked cycle and pedestrian segregation on the widened routes on campus, due to safety concerns arising from speeding bikes and large numbers of pedestrians. The University has a clear stance for improved shared space over segregation.
- Complaints about the paths in the Palmer Quad at Whiteknights have dropped compared to previous surveys. Proposals for Quad improvements exist but are unlikely to take place for the foreseeable future due to cost constraints. It may be worth reviewing what minor improvements could take place in the quads in the meantime.
- There is concern about the condition of the path surface in The Wilderness and around Whiteknights Lake, particularly in the winter when they can become water-logged and difficult to navigate in the dark³. The access gate to the path through The Wilderness from Wilderness Road/Beech Lane remains a concern to pedestrians and cyclists.
- Improvements to the Queen's Drive footpath undertaken in 2018/19 mean that there have been no major comments in the 2020 survey.

³ *The survey was carried out before recent improvements to the lake pathways had been undertaken*

- All additional comments about route issues on campus have been reviewed and where appropriate will be included within our review of the campus routes prioritisation programme.

5.3 Requests for improved showers and changing facilities

- The availability of showers and changing facilities across buildings was a key concern for people who are not currently cycling (particularly car drivers), suggesting that improved facilities could encourage more staff, in particular, to cycle to work.
- There is a clear demand for both additional and improved showers and changing facilities on our University campuses:
 - 26 students and staff members suggested that more showers and changing facilities should be created on campus due to a lack of convenient facilities. An additional 11 comments stated that there were no showers close-by for them to use.
 - Buildings mentioned a few times for lack of shower and changing facilities close by included Russell Building; Polly Vacher and JJT.
- There is clear demand for improved quality of the existing shower and changing facilities on our campuses.
 - Lack of hooks and benches to keep clothes dry while showering was an issue frequently raised, Lack of mirrors and hair dryers, and no changing space outside the shower were also a concern.
 - Where only one shower is available per building, this can create issues with queuing, or concern that there may be a long wait on any particular day.
 - The lack of lockers for shower equipment, and adequate drying facilities for wet clothes, were further issues raised (8 requests), in addition to lockers for cycle equipment).

The need to use showers or changing facilities on campus may not only affect those staff and students who are cycling long distances or very fast; indeed, those who are running/jogging to campus will also require these facilities. We need to continue to look at opportunities for improving the shower and changing facilities at the University, and promoting existing facilities.

5.4 Requests for improved cycle parking

- 22 requests were received to install more secure cycle parking compounds on Whiteknights campus, but without clear indication of where these should be installed.
- Concerns were raised over cycle theft, with requests for CCTV and lighting to be installed near cycle parking.

6 Public transport

- The proportion of staff using public transport has increased year-on-year, with Figure 6 showing that 17% of staff are using bus, coach, or train as their main mode of travel in 2020.

6.1 Train travel to the University

- Train travel makes up 6.6% of main travel mode to the University for staff and students combined. 9% of staff have train travel as their primary mode.
- Bus remains the most popular way to reach our campuses from the train station, but many staff and students opt to walk.
- Most of the 45 comments made about train travel relate to the cost or to the unreliability of timetables.
- The largest barrier to train use (for those with a feasible rail journey) seems to be cost, even when using available discounts.

- Easit discount – 11 people raised concerns regarding GWR ceasing the discount available via Easit, which has resulted in increased costs of rail travel. Senior University management have petitioned GWR regarding this.

6.2 Bus travel to the University

- Bus travel stands at 8% of main travel mode to the University for both staff and student groups.
- The proportion of staff and students stating that bus travel is their primary mode has steadily increased since 2012.
- Bus travel received many comments in the survey. A mixture of comments were received but many of them were negative.

Bus routes

- The vast majority of bus travel to the University is on the claret 21 and 21a services, which reflects that this is the only route that comes directly onto our Whiteknights campus, although other routes do come to the campus perimeter.
- The majority of bus travellers to the University live within Reading itself, across the whole town. There are a large number living in West Reading, which does not have a direct link to the University.
- Staff and students would like to see more direct bus services stopping at Whiteknights campus, particularly from locations for which travellers currently have to travel into and then out of Reading town centre to get to the University (35 requests); including a number of requests by staff and students living in West Reading/Tilehurst, Caversham, Woodley, Earley, Calcot, Burghfield Common, Cemetery Junction.
- 15 requests for buses to a Park and Ride site were received (MereOak was stated most frequently).

Bus tickets and fares

- Staff would like to see the reintroduction of a staff discount for occasional bus travel – 21 comments received.

Issues raised regarding frequency, reliability, and overcrowding on route 21/21a

- Issues with reliability, frequency and overcrowding on route 21/21a, particularly at peak times, received a large number of comments from staff and students. Comments included:
 - Buses are not able to keep to their advertised timetable (31 comments),
 - When buses do arrive on campus (or at the train station) on time, there are so many people waiting that it takes 10 minutes to load.
 - Buses are overcrowded at peak times (33 comments)
 - Buses often reach capacity and cannot take any more passengers, meaning people are left waiting at the stops for the next bus to arrive (which is often also at capacity and not able to take anyone else).
- Buses out of term time are no longer frequent enough which causes issue for staff particularly (10 comments)
- Route 19a/c - requests for more improved frequency, particularly at peak times, as there are currently no 19c buses arriving before 9am, which is having a detrimental effect on commutes.

Changes to route 21/21a were reflected in the 2018 and 2020 travel surveys with many staff and students being less happy with route 21/21a buses than when they ran every 5 minutes, and less happy after changes to route 19.

7 Driving and car initiatives

7.1 Commuting to the University by car

- Levels of driving in single occupant vehicles (SOV) as the main commuting mode has risen amongst staff, from a low of 40.4% in 2016 to 42.4% in 2018, then to 43.7% in 2020.
- The rate of staff commuting in 2020 via SOV is still lower than in 2012 and 2014, but the year-on-year increase since 2016 is of concern, as the Travel Plan seeks to reduce these levels.
- Overall student SOV rates have increased from a low of 6% in 2014 to 11% in 2020; although the undergraduate SOV rate is only 4.6% (postgraduate is 31%),
- A large proportion of staff and students report never traveling to the University by car, and that they are not likely to in future (see figures 8, 9 & 10 in Section 3).
- Drivers to the University live over a wide area, but 7% of drivers stated that they live under 2 miles from their place of work/study.
- 38 comments were made stating that there should be more parking on campus.
- Similar numbers of people said that car parking costs should increase and should decrease.

7.2 Carsharing

Carsharing is a good option for those with limited alternatives to driving, to reduce the impacts and financial costs of their commute, and something we encourage at the University.

- Only 2% of survey respondents said that carsharing was their main mode of travel.
- 22 requests were made for more support to car share. Sustainability Services will be launching a new carsharing facility as part of the Jump sustainability incentive scheme in summer 2020, to help promote car sharing.
- Further promotion of initiatives supporting carsharing, such as shared parking permit costs and emergency ride home, are required to encourage participation.
- Barriers to carsharing raised included: inability to participate due to different/awkward working hours; being unable to find people to share with; finding it impractical due to living rurally; and due to childcare/dependent commitments.

7.3 Car Club

The University is keen to encourage further use of the Co-Wheels Car Club vehicle located on Whiteknights campus, as a more sustainable method of car use compared to individual car ownership. The Car Club allows students and staff to hire a car by the hour, meaning they can still have access to a car when required without needing to bring their own vehicle to campus.

- Awareness and use of the Co-Wheels car on campus is fairly low, indicating that more promotion is required.
- Sustainability Services are investigating whether further Co-Wheels cars can be located on University sites,

7.4 Electric vehicles

We have installed charging points on our Whiteknights campus to facilitate use of electric vehicles for commuting; and are actively pursuing the inclusion of electric vans within the University's vehicle fleet.

- 10 requests were received for further EV charge points at different locations, particularly Earley Gate, to enable charging during the daytime. Additional EV charging points might encourage greater uptake of electric vehicles and thereby reduce local tailpipe emissions.

7.5 Summary of more sustainable car travel

- The clear message from the survey is that initiatives to support those who do drive to choose less impactful ways of doing so need better promotion.

8 Working from home

The carbon hierarchy in the 2017 Travel Plan places removal of travel (which includes working from home) as a top priority.

- Working from home was the main mode for a tiny proportion of staff and students (0.4%) at the time of the survey; although a significant number of staff report working from home a few times a month or a few times a year. A large number of students, particularly postgraduates, work from home a few times a week (see figures 8, 9 & 10 in Section 3).
- Working from home is one form of flexible working that can assist individuals with different needs to remain employed, so has potential benefits other than reducing travel impacts.
- There were 47 comments from staff requesting more support and encouragement to work from home. The majority of these requests (42) came from members of staff that recorded using a car as their main mode of transport.
- There were requests for the University to further adopt video conferencing as an alternative to travel.
- During the coronavirus lockdown (subsequent to this Travel Survey), the University has rapidly enabled a transition to home working/study for many staff and students. The lessons learnt from this will be invaluable in determining the future adoption of homeworking, as well as the use of video conferencing for meetings and conferences where travel might have been the norm previously.

9 Conclusions

The 2020 Travel Survey has shown a concerning trend in the rise of travel to the University by Single Occupancy Vehicle (SOV), both for staff and students. The University is currently off track to meet both its original and stretch SOV targets for 2022.

The survey responses provide a clear indication of some priorities to consider when reviewing our Travel Plan Action Plan to further our progress towards the University Travel Plan targets. Some of the key activities that would benefit staff and students identified from the survey include:

- Continued feedback to local councils relating to pedestrian crossings and improvements to routes for cyclists outside campus, with a specific focus on Pepper Lane and Whiteknights Rd.
- A programme to improve existing shower and changing facilities on campus, including lockers.
- Contact with Reading Buses about the issues being experienced by peak-time and out of term time travellers, particularly on routes 19 and 21.
- Continued progress on opportunities for home-working, including flexible working practises.
- Improvement in the provision and promotion of carsharing initiatives.
- Improved promotion of the available travel offers via improved webpages and promotion of those pages, particularly to new staff and students.

These suggested activities will be considered for inclusion in the Travel Plan Action Plan which is reviewed annually. Action Plan Initiatives are prioritised according the following criteria:

- Initiatives with the best potential for achieving our Travel Plan targets of reducing the need to travel to the University by single occupant vehicle.
- Initiatives supporting continued use of sustainable travel modes. Addressing issues raised / experienced by larger numbers of the University population are given greater priority.
- Initiatives aligning with the Carbon Hierarchy identified in the Travel Plan, where reducing the need to travel is prioritised over more carbon intensive alternatives to driving.
- Initiatives that fit with other University projects.

Given the trend of increased SOV travel, alongside greater support and incentive for the alternatives, consideration must also be given to initiatives that discourage further increases in SOV travel.

10 Appendix

1. Survey Questions:

Q1. In a normal week during term-time, on which days of the week do you travel to University locations for work/study?

Q2. In a normal week during term-time, what is your main mode of travel to University locations from your term-time address? (Your 'main mode' is the one that covers the longest distance in your journey, or that you use most frequently)

Q3. For your main mode of travel listed in the previous question, on how many days in a normal week during term-time do you travel to University locations by that method?

Q4. How often do you travel to University locations for work/study by the following modes of travel?

A1. Walk, run or jog

A2. Bicycle

A3. Motorbike or moped

A4. Bus or coach

A5. Train

A6. Car driver, with no passengers

A7. Car driver, with on-site passenger

A8. Car driver, with off-site passenger

A9. Car driver, with no adult passengers only children

A10. Car or taxi passenger

A11. Work/study from home

Q5. Which of these options best describes your situation at the University? (Select the one that applies to your main position)

Q6. At which University site are you mainly based for work/study? (Select the one that applies to your main position)

Q7. How far do you travel to the University on a normal day (one-way only) from your term-time address? Use your best estimate if you don't know exactly.

Q8. Are there any issues relating to travel or transport that you would like to raise (e.g. routes, facilities, options)?

Q9. Do you have any suggestions or ideas that you think would improve travel to/from the University? If you travel by car, what would encourage you to reduce your car use?

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:

Improvements to data have meant that we have made some alterations to how we calculate our SOV modal split proportion since we developed the targets in 2017. Three significant changes have been made since the original 83% (17.5% SOV) target was identified:

Improved carsharing data:

The 2018 and 2020 surveys were clearer in the question wording relating to car sharing and has identified the need to differentiate between adult passengers (car sharing) or for only children passengers (caring responsibilities and arguably single occupant vehicles as the child would not be driving themselves separately). Given this we have gone back to our data from the previous years and amended our modal split and SOV proportions accordingly.

Weighting of student and staff figures:

We identified an anomaly in the calculations of our targets for the 2017 Travel Plan, as 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. We have now amended this to better reflect the proportions of staff and students on campus, and their different travel mode patterns. We have now recalculated the modal splits for the previous years. Going forwards overall modal split figures are calculated with weighting; and 2020 data has also used separate weighting for undergraduate and postgraduate students, since their travel behaviours are distinctly different.

Splitting of 'student' population into postgraduates and undergraduates

2020 is the first travel survey that has collected suitable data to enable the differences between postgraduates and undergraduates to be analysed – in previous years, the question asking whether a student was a postgraduate or an undergraduate was optional, so it was impossible to know the proportion of responses from both groups within the overall 'student' sample. Retaining this as a mandatory question for future surveys will allow split 'student' data in order to record and monitor both undergraduates and postgraduates as separate groups.

The results from the 2020 survey clearly show that undergraduate and postgraduate travel habits and modal splits are very different. The overall modal split figures in the 2020 survey have been calculated using a 3-way weighting to take account of the different numbers and habits of staff, postgraduates and undergraduates, and to make the figures more indicative of the overall University population.