

University for the Common Good



2018 Travel Survey Report

8 March 2019

Contents

Executive Summary
Introduction & Background5
Aims & Objectives
Methodology5
Results & Analysis
Response Categorisation6
Student & Staff Commuting11
Bike Ownership & Alternative Modes of Travel16
Car Type & Parking Arrangements18
GCU_SmartTravel Advisors
Season Ticket Loans for Staff21
Suggestions for Improvement21
Changes in Travel
Term-time Residency & Average Commute Distance24
Frequency of Travel25
Modal Distribution
Closing Remarks
Appendix A – Questionnaire Structure
Appendix B – Average Commute Summary
Appendix C – Suggestions for Improvement
Appendix D – Student and Staff Postcode clusters

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Executive Summary

Glasgow Caledonian University (GCU/the University) is committed to reducing its environmental impact by embedding sustainability into every aspect of its operations and uses a range of approaches to help identify and quantify environmental impacts.

Travel surveys are used to estimate carbon emissions associated with student and staff commuting (the second largest source of emissions in its inventory) and developing initiatives that encourage more sustainable travel (through the University's Sustainable Travel Plan).

The 2018 Travel Survey provides a snapshot of how student and staff commuted in October 2018, evaluates whether this has changed since 2015 and assist with the review and potential refresh of the University's Sustainable Travel Plan. With the exception of refreshing the questions posed, the survey methodology was broadly the same as that for previous travel surveys.

A total of 581 responses were received but due to data quality issues, only 563 could be used. Of those 336 were students (2.3% of the total student population) and 227 staff (14.9% of the staff population). A visual postcode cluster comparison confirmed that responses were representative of the broader student and staff population. A gender analysis of responses also found it to be representative of the University population.

The modal distribution for student and staff in 2018 is shown in Figure 1 with the main difference between student and staff commuting being that a higher proportion of students walk to the University, whilst a higher proportion of staff drive or car-share.



Figure 1 Modal distribution (%) for staff and students.

Train and bus are the most popular modes of transport for students (28% and 26%, respectively) and staff (35% and 23%). More staff commutes by car (19%), either alone or as passengers, than do students (7%). Whilst more students walk (25%) than staff do (7%), cycling rates are comparable (10% for students and 11% for staff).

Modal distribution was also evaluated by distance band, and in the 1 to 5 mile distance band, those that cycled had comparable journey times to those that used the subway and car and shorter journey times than those using the train and bus.

A few differences were also evident in the modal distribution by gender: more female students walk, take the bus or car share than males and more male students cycle or take the subway. For staff, the main differences were that more males cycled, whilst more females took the bus or drove alone.

Convenience, financial considerations and travel duration were the most common factors influencing the selection of mode of travel with no observable differences in responses between male and female or students and staff respondents.

The 2018 Travel Survey provided also sought to understand a number of factors around bike ownership, use and alternative modes of travel; where car users park, how much it costs and how long it takes them to walk to the University; awareness of the GCU_SmartTravel Advisors; staff interest in season ticket loans; and suggestions for making travel to the University more sustainable.

Comparing the 2018 to 2015 travel survey highlights that the proportion of respondents living within 10 miles of the University increased: from 54% in 2015 to 74% in 2018 for students; and from 58% to 63% for staff. This trend was corroborated by a visual analysis of student and staff postcode clusters for 2015 and 2018.

Student commuting continues to shift towards more active, lower modes of travel, with: walking up from 19% (2015) to 25% (2018); cycling from 3% (2015) to 10% (2018); subway journeys down slightly from 5% (2015) to 3% (2018); train travel down from 36% (2015) to 28% (2018, but still higher than in 2012); bus travel down from 30% (2015) to 26% (2018 with a downward trend continuing from 2012); car sharing is down slightly to 2% (from 3% in 2015) and single car occupancy remaining unchanged (at 5%).

Similar shift towards more active, lower carbon modes of travel was also observed for staff, with: walking rates comparable to those of 2009; cycling increasing to 11% (from 9% in 2015 and 2% in 2009); subway journeys falling from 3% (2015) to 2% (2018); train journeys increase relative to 2015 (35% vs 33%), but comparable to 2012; bus journeys continuing to fall to 23% (2018) from a peak of 26% (2009); car sharing is down from 11% (2015) to 8% (2018) and single car occupancy remaining unchanged (at 11%).

Overall, the 2018 Travel Survey indicated that the modal distribution at GCU is heading in the right direction and that the University should continue its efforts to encourage more sustainable travel.

Introduction & Background

Glasgow Caledonian University (GCU/the University) is committed to reducing its environmental impact by embedding sustainability into every aspect of its operations.

Travel surveys are used to estimate carbon emissions associated with student and staff commuting (the second largest source of emissions in its inventory¹) and developing initiatives that encourage more sustainable travel (through the University's Sustainable Travel Plan²).

The 2018 Travel Survey provides a snapshot of how student and staff commuted in October 2018, evaluates whether this has changed since 2015 and will be used to inform the review and potential refresh of the University's Sustainable Travel Plan.

Aims & Objectives

The 2018 Travel Survey will provide an updated dataset to enable the University to (a) accurately report emissions from student and staff commuting and (b) refresh its Sustainable Travel Plan.

These aims will be achieved by:

- Understanding how students and staff commute to the University and how this has changed over time.
- Understanding the key drivers behind the selection of mode of travel.
- Identify opportunities for more sustainable/active modes of travel to students and staff.
- Update metrics used to monitor the impact of travel.

Methodology

A similar methodology was used in the 2018 Travel Survey as in previous surveys, so that a direct comparison could be made with travel habits in 2012 and 2018. As with previous surveys, the 2018 Travel Survey was designed to help develop a deeper understanding of factors influencing student and staff travel choices. The key difference from the 2015 Travel Survey is that 'business travel' was excluded from the 2018 Travel Survey because it did not provide any more meaningful insights than available from other sources.

As with the 2015 Travel Survey, the 2018 Travel Survey included questions designed to help understand:

- Where from and how students and staff commute to the University, and
- What influences the selection of mode of travel.

¹ GCU's carbon footprint reports are available from: <u>www.gcu.ac.uk/sustainability/reporting/</u>

² GCU's Sustainable Travel Plan is available from: <u>https://www.gcu.ac.uk/sustainability/smarttravel/</u>

The 2018 Travel Survey builds on previous surveys by adding a number of new questions to help:

- Understand whether there were any gender specific patterns.
- Develop a better understanding of bicycle ownership and under what conditions they sought alternative modes of transport and what those alternatives were.
- Understand the fuel type of cars used to commute to the University and a number of other issues around parking in the City centre.
- Gauge interest in season ticket loans for staff.
- Assess awareness of GCU_SmartTravel Advisors.

A diagram of the 2018 Travel Survey questionnaire is included as Appendix A – Questionnaire Structure.

The Survey was distributed using a Google form, with the survey promoted to students and staff using a variety of internal communication, social media channels and face-to-face interactions with GCU_SmartTravel Advisors. Responses were collected during October 2018 and to elicit a higher response rate, all participants were given the opportunity to enter a random prize draw (for vouchers ranging between £10-£50 from a number of popular retailers).

Results & Analysis

This section summarises the results of the 2018 Travel Survey and provides a basis for comparisons with results from previous travel surveys (2009, 2012 and 2015).

Response Categorisation

A total of 581 respondents completed the survey online and at GCU_SmartTravel stalls (a slightly higher number of responses than the 508 responses received for the 2015 Travel Survey). After primary analysis, 18 responses were excluded from subsequent analysis because:

- 7 were not based in the Glasgow Campus and due to the small sample size could not be used to develop an anonymous understanding of travel at the respondents' locations.
- 6 were duplicate entries.
- 5 did not meet distance control checks (determined using starting postcode, distance and travel time).

Following this initial verification, 563 responses were used to evaluate travel habits at the University (a breakdown of response rates is provided in Table 1).

	Number of Respondents	Proportion of Respondents
Undergraduate – Year 1 (UG1)	102	18.12%
Undergraduate – Year 2 (UG2)	65	11.55%
Undergraduate – Year 3 (UG3)	73	12.97%
Undergraduate – Year 4 (UG4)	41	7.28%
Postgraduate (PG)	55	9.77%
Staff (S)	227	40.32%
Total	563	

Table 1 Number of respondents by respondent category.

Based on student and staff numbers (Table 2), 2.3% of students and 14.9% of staff completed the 2018 Travel Survey. These response rates were slightly higher than for 2015 Travel Survey.

	Students	Staff			
Total	14,389	1,521			
Table 2 Student and staff numbers at GCU during Sentember and October 2015 (as provided by GCU's Strategy					

Table 2 Student and staff numbers at GCU during September and October 2015 (as provided by GCU's Strategy & Planning Office³ and People Services⁴).

As part of the data verification process to understand response representativeness, a visual comparison of respondent postcode clusters and student and staff postcodes was made and found that responses clusters were representative of the broader staff and student population postcode clusters (Figure 2, Figure 3, Figure 4 and Figure 5).

The 2018 Travel Survey included a question to categorise responses according to gender because it was felt that the additional insight might be beneficial in potentially identifying gender specific differences in factors influencing the choice of mode of travel. Respondents' split was similar to the overall gender split at the University⁵ (Table 3).

Gondor	Stud	lents	Staff		
Gender	GCU	2018 T. Survey	GCU	2018 T. Survey	
Females	58.7%	64.0%	62.3%	66.5%	
Males	41.3%	33.3%	37.7%	30.4%	
Other*		2.7%		3.1%	

Table 3 Respondent gender split and at the University. * includes blank answers and "prefer not to say".

The key findings from the survey are explored in the following sections, with results presented (as relevant) by gender and distance band (miles) away from the University and using mode-specific abbreviations (Table 4).

Mode of travel	Abbreviation
Walk	WLK
Cycling	BIKE
Subway	SUB
Train	TRN
Bus	BUS
Motorbike	МОТО
Car - shared	C_SHR
Car – single occupant vehicle	C_SOV
Other	OTH

Table 4 Abbreviations for the different modes of travel.

³ Student numbers as of 30 November 2018 (Strategy & Planning).

⁴ Staff numbers as of 9 October 2018 (People Services).

⁵ Gender split as of 10 October 2018 (Strategy & Planning).

The full dataset for the 2018 Travel Survey (with personal information redacted) is available from the data page in the sustainability section of GCU's website⁶ (as are the datasets for 2012 and 2015).

⁶ Redacted survey responses are available from: <u>http://www.gcu.ac.uk/sustainability/data/</u>



Figure 2 Survey respondent postcode cluster for students.



Figure 3 Students (2018-19) postcode cluster



Figure 4 Survey respondent postcode cluster for staff.



Figure 5 Staff (2018-19) postcode cluster

Student & Staff Commuting

The 2018 Travel Survey sought to build on the University's understanding of commuting habits and patterns by considering where students and staff travelled from, the length and duration of their commutes, modes of travel used and factors influencing the selection of mode of travel.



Distance (bands) from GCU (miles)

Respondents were asked about the length of their commutes and results grouped into distance bands (in miles) away from GCU (Figure 6). The data shows that a most students and staff live relatively 'close' to GCU: 51% of students and 39% of staff live within 5 miles of the University, whilst 74% of students and 63% of staff live within 10 miles. Due to their proximity to the city centre, these individuals have the greatest potential for travelling more sustainably (due to increased availability).

Typical journey distance and times by mode of travel were also noted (Table 5). This analysis is elaborated in Appendix B – Average Commute Summary to include average distance and journey time for each mode of travel by distance band.

Figure 6 Proportion of respondents by distance band (miles) away from GCU.

	Students (comb	oined) - average	Staff – average		
	Distance (miles)	Time (minutes)	Distance (miles)	Time (minutes)	
WLK	1	15	2	31	
BIKE	2	19	4	27	
SUB	4	21	3	26	
TRN	15	41	14	48	
BUS	12	48	15	58	
MOTO	N/A	N/A	11	30	
C_SHR	10	33	12	43	
C_SOV	19	39	13	39	
OTH	N/A	N/A	18	55	

Table 5 Self-reported average commute distance (miles) and duration (minutes) for students and staff.

The key difference between student and staff commuting is that a higher proportion of students walk to the University, whilst a higher proportion of staff drive or car-share (Figure 7).



Figure 7 Modal distribution (%) for staff and students.

Train and bus are the most popular modes of transport for students (28% and 26%, respectively) and staff (35% and 23%). More staff commute by car (19%), either as single occupants or as/with passengers, than do students (7%). Whilst more students walk (25%) than staff do (7%), cycling rates are comparable (10% for students and 11% for staff).

Commuting preferences (modal distribution) were also evaluated in relation to distance (bands) away from the University (Figure 8 and Figure 9). This analysis help understand how active, more sustainable modes of transport compare to the prevalent modes of transport in each bands and where the potential for more sustainable travel is highest.



Figure 8 Modal distribution for students by commute distance (miles) from the University.



Figure 9 Modal distribution for staff by commute distance (miles) from the University.

For students and staff living in the distance band between 1 and 5 miles away from the University, cycling provides comparable journey times to the subway and car and is quicker than the train and bus (see also Appendix B – Average Commute Summary) and is significantly cheaper than all alternatives (excluding walking). Data for staff suggests that a similar opportunity may be available in the 5-10 mile distance band.

A few differences were also evident in the modal distribution by respondents' gender (Figure 10 and Figure 11). More female students walk, take the bus or car share than males and more male students cycle or take the subway. For staff, the main differences were that more males cycled, whilst more females took the bus or drove alone.





Figure 10 Modal distribution (%) by gender for students.

Figure 11 Modal distribution (%) by gender for staff.

The survey also gave respondents the opportunity to elaborate on what influenced their choice of mode of travel, with responses allocated one or two of 16 common themes. No significant differences between male and female and students and staff respondents were observed, with

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convenience,	financial	considerations	and	travel	duration	being	the	most	common	factors
influencing the selection of mode of travel (Table 6).										

	Students	combined)	Staff		
	Female	Male	Female	Male	
WALK	Convenience Cost	Convenience Cost	Active Cost	Active Cost	
BIKE	Quickest Cost/Convenience	Cost Quickest/Convenience	Convenience Cost	Convenience Quickest	
SUB	Convenience	nvenience Convenience Cost		n/a	
TRN	Quickest Convenience	Quickest Convenience	Convenience Quickest	Convenience Quickest	
BUS	Cost Convenience	Cost Convenience	Cost Convenience	Cost Convenience	
мото	n/a	Enjoyable/fun	n/a	Enjoyable/fun	
C_SHR	Convenience Cost	Convenience	Convenience Cost	Cost Convenience	
C_SOV	Convenience	Convenience Child care	Convenience Child care	Convenience Child care	
ОТН	n/a	n/a	Convenience Active	Cost	

Table 6 Eight main factors influencing choice of mode of travel.

The list below elaborates on the range of topics included in each of the main reasons for travel (included in Table 6):

- Cost mode of travel offers a financial benefit compared to other options available to respondent.
- Quickest the mode of travel offers a shorter journey than other options available to the respondent.
- Convenience the mode of travel allowed for fewer changes in the respondent's commute: enabled the respondent to start their journey closer to home or finish closer to the University; and/or was deemed easy to use.
- Active the mode of travel was deemed to provide exercise opportunities and/or to have health benefits compared to other modes of travel.
- Proximity to the University the respondent considered that they lived sufficiently close to GCU that other modes of travel were not really feasible.
- Enjoyable/fun the respondent enjoyed the particular mode of travel.
- Child care- the respondent had to plan journeys around a range of care commitments.
- Only option no alternatives available to the respondent.

While the factors influencing the selection of mode of travel tend to be journey specific, they provide useful insights into the perceived benefits associated with the different modes of travel and, combined with insights about typical journey lengths and times (as detailed in Appendix B – Average Commute Summary), will help encourage more active/sustainable travel to GCU.

Bike Ownership & Alternative Modes of Travel

The 2018 Travel Survey provided an opportunity to better understand a number of factors around bike ownership, use and alternative modes of travel.



Of the respondents that cycled, all said they owned their own bike⁷, with no respondent indicating that they borrowed a bike or used the City's mass hire scheme (nextbike).

However, with regards to nextbike use, results are unlikely to be representative of the use of the City's mass hire scheme by the wider University population because the question was only asked of cyclists. Future surveys should consider exploring bike ownership amongst non-cyclists as that will highlight the potential for more students and staff to cycle.

⁷ One respondent did not answer the question about bike ownership.

Asked about what made people that cycled use alternative modes of transport, 42 respondents (that cycled) indicated weather (52% for students and 43% for staff), followed by maintenance issues for students (29%) and convenience for staff (33% - for example an onward journey that was not suitable for cycling). Figure 12 provides a breakdown of the factors that lead to people that cycle to seek alternative travel arrangements.



Figure 12 Factors that influence people that cycle to seek alternatives mode of travel.

The insight about students' bicycle maintenance requirements is interesting given the frequency with which the University offers free bike maintenance sessions. The University should perhaps consider whether there are opportunities for reducing the impact maintenance issues have on students' ability to cycle.

When asked about what alternative modes of travel they chose, there was a marked difference in response between students and staff (Figure 13) with walking, subway and the train being the most popular options for students and the train, walking or bus the most popular options for staff.



Figure 13 Alternative modes of travel for students and staff that cycle.

Car Type & Parking Arrangements

In addition to exploring car fuel type (which is used to estimate carbon emission from commuting), the 2018 Travel Survey sought to understand where people that travel by car, either alone as drivers or passengers, park, how much it costs and how much time they spend walking from where they park to the campus.

Figure 14 and Figure 15 show that the majority of students and staff travel in petrol vehicles (although a higher proportion of staff than students travel in diesel vehicles), which is a much higher proportion than that of the UK fleet⁸.



⁸ Department for Transport (2018) Vehicle Licensing Statistics - Table VEH203 - Licensed cars at the end of the year by propulsion / fuel type, Great Britain from 1994; also United Kingdom from 2014



Figure 14 Fuel type for cars used by students to commute to the University.

Figure 15 Fuel type for cars used by staff to commute to the University.

The most popular parking locations are the Concert Square and Buchanan Galleries multi-storey car parks, followed by 'free' on-street parking Figure 16.



Figure 16 Car parking locations used by students and staff.

The average amount paid to park ranged from £11.60 to £0.5p, with students generally paying more than staff (Table 7).

	Concert square	Buchanan Galleries	On street - free	Other parking	On street - paid	Dundas vale	Bridge Street	Duke Street
Students (parking fees)	£7	£6.8	£O	£11.6	£4.1	-	-	-
Staff (parking fees)	£7	£4.8	£0	£0.5	£2	£6	£5.4	£5
Walking time (average minutes)	4	4	15	5	8	5	20	20

Table 7 Average amount spent on fees and walking time from most popular parking locations

Students also seem to choose parking closer to the University and there may be an opportunity to direct more students (as well as staff) to Dundasvale car park, which is a comparable walk time-wise as the more popular parking locations.

GCU_SmartTravel Advisors

2018 Travel Survey was the first opportunity the University had to assess the impact of its GCU_SmartTravel Advisors, who deliver student centred travel advice about commuting to the University.

Launched in 2015, each year GCU_SmartTravel Advisors engage almost 1,500 students (equivalent to 25% of each year's student intake) and deliver around 300 hours of travel advice over 30 engagement sessions.

The 2018 Travel Survey showed that 20% of students recall speaking to GCU_SmartTravel Advisors and of those, 81% rated the quality of advice received as either "useful" or "very useful".



Season Ticket Loans for Staff

74% of staff completed the season ticket loan question with 23% indicating it would be of interest and 28% indicating that they would need more information (e.g. terms and conditions). There was no noticeable gender based differences in responses.

Suggestions for Improvement

As with previous surveys, the 2018 Travel Survey encouraged respondents to share ideas of how travel to the University could be made more sustainable. 267 (48%) respondents completed this section, with suggestions grouped into 24 categories (Figure 17).

Search	2
····· 🗹 (Select All)	
····✔ Car sharing - info	
Cycling - Bike library	
Cycling - CTW	
···· ✔ Cycling - discounts	
Cycling - lessons	
Cycling - segregated lanes	
Electric cars / car charging	
Flexible [home] working - staff	
✓ More facilities for cyclists	
More information/challenges/incentives	
···· ✔ None suggested	
••• • Other	
Parking - car - discounts	
Parking - car - discourage	
── Parking - car - more/better	
···· ✔ Parking - cycle - more	
Public transport - better	
Public transport - discounts	
Showers	
Timetabling Adjustments	
University shuttle bus	

Figure 17 Suggestion classification categories

The most popular suggestion from students were public transport discounts (33%), more cycling (11%) and more information, incentives and challenges to encourage more active travel (10%). For staff, the most popular suggestions were flexible [home] working (18%), public transport discounts (16%) and segregated cycle lanes (8%). Figure 18 details student and staff suggestions (by category) for making travel to GCU more sustainable.



Figure 18 Student and staff suggestions for making commuting to the University more sustainable.

A difference by gender was also evident for students. The most popular suggestions for female respondent being public transport discounts (39%), more information, incentives and challenges to encourage more active travel (13%) and a cycle library (7%). For male students, the most popular suggestions were public transport discounts (31%), followed by more initiatives promoting cycling (25%) and better cycle parking (14%).

Suggestions for improvement were further evaluated by mode of transport and are presented as Appendix C. These insights should be useful for the review of the University's Sustainable Travel Plan and associated sustainable travel initiatives.

Changes in Travel

As with the 2015 Travel Survey, the 2018 Travel Survey provides an opportunity to explore how travel habits and patterns have changed and where possible, comparisons are made with data for 2015, 2012 and 2009 (staff only).

Term-time Residency & Average Commute Distance

Since 2015 there has been an increase in the proportion of students and staff living within 10 miles of the University, the distance with the highest potential for commuters to switch to more sustainable modes of travel.

The proportion of students living within 10 miles of the University increased from 54% in 2015 to 74% in 2018 (Figure 19). The proportion of staff living within 10 miles of the University has also increased, albeit to a lesser extent, from 58% in 2015 to 63% in 2018 (Figure 20). This trend is corroborated by reported shorter commute distances (Table 8) and the postcode cluster analysis (Appendix D).



Distance band (miles) away from the University

Figure 19 Comparison of students' commute distance in bands (miles) in 2012, 2015 and 2018.



Distance band (miles) away from the University

Figure 20 Comparison of staff's commute distance in bands (miles) in 2012, 2015 and 2018.

Year	UG(1)	UG(2)	UG(3)	UG(4)	PG	Staff
2012	12.9	11.8	13.9	13.8	11.5	12.9
2015	14.2	11.8	13.9	11.2	10.7	11.9
2018	8.7	10.8	9.0	10.4	6.6	11.7

Table 8 Average self-reported commute distance (in miles).

The increased provision of student accommodation in the city centre could be one factor potentially driving the increase in more students living close to the University. No comparable explanation is available for staff.

Frequency of Travel

Whilst both students and staff are living closer to the University, the frequency that they travel to the University is comparable to that of 2015 (Table 9), with 37% of students travelling to the University 4 times per week and 78% of staff travelling 5 days per week. As with previous surveys, the frequency that students travel to the University falls as they progress through their studies.

Year	UG(1)	UG(2)	UG(3)	UG(4)	PG	S
2012	3.9	3.8	3.5	3.4	3.7	4.7
2015	4.1	3.9	3.5	3.7	3.9	4.7
2018	4.2	3.4	3.7	3.5	4.2	4.6

Table 9 Average number of trips to the University by respondent group.

Future surveys may provide an opportunity to consider whether there are any potential links between programme/employment type (fulltime/part-time) and frequency of travel.

Modal Distribution

The 2018 Travel Survey was designed to allow for a direct comparison of travel habits in 2015, 2012 and where data was available 2009. Figure 21 illustrates changes in modal distribution for students and Figure 22 for staff.



Figure 21 Changes in students' modal distribution between 2012, 2015 and 2018.

Student commuting continues to shift towards more active, lower modes of travel, with: walking up from 19% (2015) to 25% (2018); cycling from 3% (2015) to 10% (2018); subway journeys down slightly from 5% (2015) to 3% (2018); train travel down from 36% (2015) to 28% (2018, but still higher than in 2012); bus travel down from 30% (2015) to 26% (2018 with a downward trend continuing from 2012); car sharing is down slightly to 2% (from 3% in 2015) and single use car use remaining unchanged (at 5%). There was insufficient data to identify any trends for motorcycle use and other modes of transport.



Figure 22: Changes in staff modal distribution between 2009, 2012, 2015 and 2018. NB.: Subway was not a response option in the 2009 Travel Survey.

Similar shift towards more active, lower carbon modes of travel was also observed for staff, with: walking rates comparable to those of 2009; cycling increasing to 11% (from 9% in 2015 and 2% in 2009); subway journeys falling from 3% (2015) to 2% (2018); train journeys increase relative to 2015 (35% vs 33%), but comparable to 2012; bus journeys continuing to fall to 23% (2018) from a peak of 26% (2009); car sharing is down from 11% (2015) to 8% (2018) and single use car use remaining unchanged (at 11%). There was also insufficient data to identify any trends for motorcycle use and other modes of transport for staff.

Overall, the changes in (commuting) modal distribution at GCU are heading in the right direction and that the University should continue its efforts to encourage more sustainable travel.

Closing Remarks

More students and staff are living closer to the University than in 2015 and more are choosing active, sustainable modes of travel. Cycling and walking are up, bus travel and car sharing continue to lose modal share and train and single car use seem to have plateaued.

Respondents' suggestions for improvement indicate that there is more the University can do to highlight and encourage more sustainable travel and the findings from the 2018 Travel Survey will help achieve this.

Appendix A – Questionnaire Structure





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Appendix B – Average Commute Summary

Students (combined)	0-1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	>70	[reason]
WLK	7 mins 0 mile	29 mins 2 miles															Convenience: 43% Cost: 22% Quickest: 17% Active: 7%
ВІКЕ		19 mins 2 miles															Cost: 38% Convenience: 24% Quickest: 24%
SUB		17 mins 2 miles	26 mins 7 miles														Convenience: 55% Cost: 27% Quickest: 18%
TRN		27 mins 3 miles	32 mins 8 miles	38 mins 11 miles	46 mins 17 miles	45 mins 22 miles	50 mins 27 miles	66 mins 31 miles	80 mins 37 miles	90 mins 44 miles	105 mins 46 miles					120 mins 76 miles	Quickest: 39% Convenience: 35% Cost: 18%
BUS		31 mins 3 miles	42 mins 7 miles	48 mins 11 miles	51 mins 17 miles	47 mins 22 miles	68 mins 26 miles	110 mins 32 miles	83 mins 37 miles	120 mins 40 miles				135 mins 60 miles			Cost: 46% Convenience: 37%
мото	3 mins 1 mile																Enjoyable/Fun: 100%
C_SHR		13 mins 2 miles	39 mins 7 miles	20 mins 11 miles					60 mins 35 miles								Convenience: 50% Cost: 25%
C_SOV		16 mins 2 miles	22 mins 8 miles		38 mins 16 miles	54 mins 21 miles										105 mins 80 miles	Convenience: 53% Child care: 12% Cost: 12% Only option: 12%

Staff	0-1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	>70	[reason]
WLK	11 mins 1 mile	37 mins 2 miles															Active: 29% Cost: 29% Convenience: 18%
ВІКЕ		22 mins 3 mins	31 mins 6 miles	60 mins 11 miles	60 miles 15 miles												Convenience: 31% Quickest: 23% Cost: 23% Active: 15%
SUB		26 mins 3 miles															Cost: 50% Quickest: 50%
TRN		32 mins 3 miles	45 mins 7 miles	47 mins 11 miles	55 mins 18 miles	53 mins 22 miles	63 mins 27 miles	68 mins 31 miles	90 mins 37 miles	60 mins 44 miles	100 mins 48 miles	88 mins 52 miles					Convenience: 49% Quickest: 25%
BUS		35 mins 3 miles	49 mins 7 miles	53 mins 11 miles	59 mins 16 miles	78 mins 22 miles	74 mins 26 miles		90 mins 35 miles	98 mins 41 miles			130 mins 55 miles	120 mins 60 miles			Cost: 47% Convenience: 32% Quickest: 11%
мото				30 mins 11 miles													Enjoyable/Fun: 100%
C_SHR		21 mins 3 miles	60 mins 7 miles	41 mins 12 miles	70 mins 17 miles	60 mins 20 miles	90 mins 25 miles	45 mins 31 miles		70 mins 40 miles							Convenience: 50% Cost: 28% Child care: 11%
C_SOV		21 mins 3 miles	38 mins 6 miles	39 mins 12 miles	48 mins 18 miles	35 mins 21 miles	60 mins 25 miles	45 mins 31 miles									Convenience: 52% Child care: 36%

Appendix C – Suggestions for Improvement

Respondents' suggestions for making travel to the University more sustainable.

	Transport mode													
Category	Cycling		Bus		Car – Alone		Car – Share		Subway		Train		Walk	
	Suggestions %		Suggestions	%	Suggestions	%	Suggestions	%	Suggestions	%	Suggestions	%	Suggestions	%
	Parking – cycle – more	53.8%	Public transport – discounts	41.9%	Electric cars / car sharing	14.3%	Public transport – discounts	75%	Public transport – discounts	80%	Public transport – discounts	51.2%	More information/ challenges/incentives	33.3%
	Cycle more 30.8% Cycling – bik		Cycling – bike library	9.7%	Parking – car – discounts	14.3%	Car sharing - info	25%	More information/ challenges/incentives	20%	Cycle more	14.6%	Cycle more	18.2%
	Cycling – segregated lanes	7.7%	Parking – car – more/better	6.5%	Public transport – discounts	42.9%					Public transport - other	4.9%	Public transport - discounts	12.1%
	Cycling – bike library	7.7%	University shuttle bus	6.5%	Timetabling Adjustments	14.3%					Timetabling Adjustments	4.9%	Cycling – bike library	12.1%
			Public transport – other	6.5%	University shuttle bus	14.3%					Car sharing – info	4.9%	Public transport – better	6.1%
Students			Parking – car – discounts	6.5%							More information/ challenges/incentives	4.9%	Cycling – discounts	6.1%
			Car sharing – info	6.5%							More facilities for cyclists	2.4%	Public transport – other	3.0%
			Timetabling Adjustments	3.3%							University shuttle bus	2.4%	Showers	3.0%
			Showers	3.3%							Cycling – bike library	2.4%	Car sharing – info	3.0%
			Cycling – segregated lanes	3.3%							Public transport – better	2.4%	Parking – cycle – more	3.0%
			Public transport – better	3.3%							Parking – cycle – more	2.4%		
			Parking – cycle - more	3.3%							Cycling – discounts	2.4%		

Category	Transport mode													
	Cycling		Bus		Car – Alone		Car – Share		Subway		Train		Walk	
	Suggestions	%	Suggestions	%	Suggestions	%	Suggestions	%	Suggestions	%	Suggestions	%	Suggestions	%
	Cycle more	18.8%	Public transport – discounts	23.1%	Flexible [home] working – staff	30.8%	Cycling – segregated lanes	28.6%	Parking – car – discourage	100%	Public transport – discounts	22.5%	Car sharing – info	36.4%
	Parking – cycle – more	12.5%	Flexible [home] working – staff	23.1%	Parking – car – more/better	23.1%	Parking – car – more/better	28.6%			Flexible [home] working – staff	22.5%	Cycling – discounts	18.2%
	Public transport – discounts	12.5%	Cycling – segregated lanes	11.5%	Electric cars / car sharing	15.4%	Electric cars / car sharing	14.3%			Car sharing – info	10%	Parking – car – more/better	9.1%
	Cycling – segregated lanes	12.5%	Cycle more	11.5%	Public transport – discounts	7.7%	Public transport – discounts	14.3%			Public transport – season ticket loan	7.5%	Public transport – other	9.1%
	Flexible [home] working – staff	12.5%	University shuttle bus	7.7%	Public transport – other	7.7%	Public transport – better	14.3%			Parking – cycle – more	5%	Public transport – season ticket loan	9.1%
	Cycling – lessons	6.3%	Public transport – season ticket loan	7.7%	Cycling – lessons	7.7%					Cycle more	5%	Cycling – segregated lanes	9.1%
Staff	More facilities for cyclists	6.3%	Public transport - other	3.9%	Car sharing - info	7.7%					Showers	5%	Flexible [home] working – staff	9.1%
	Public transport – other	6.3%	Public transport – better	3.9%							Cycling – segregated lanes	5%		
	Parking – car – discourage	6.3%	Cycling – Cycle to Work Scheme	3.9%							Cycling – Cycle to Work Scheme	5%		
	Cycling - discounts	6.3%	Parking – car – more/better	3.9%							More information/ challenges/incentives	5%		
											Public transport – other	2.5%		
											Cycling – bike library	2.5%		
											Public transport – better	2.5%		

Appendix D – Student and Staff Postcode clusters

Postcode cluster for the student population in 2018-19 (top image) shows a higher concentration around the city centre than in 2015-2016 (bottom image).



Postcode cluster for the staff population in 2018-19 (top image) shows a higher concentration around the city centre than in 2015-2016 (bottom image).







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