

# The University of Edinburgh Commuter Travel Survey

Report of 2023 Commuter Travel Survey





## Change list

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# Executive Summary

The University of Edinburgh regularly conducts Travel Surveys across all its main campuses to monitor travel habits and evaluate the success of policies and measures. The University has recently transitioned to conducting annual Travel Surveys to monitor changes closely and to assist in annual carbon emissions reporting.

This report provides a summary of the results of the 2023 Travel Survey conducted in October 2023. Comparisons are made to previous Travel Surveys, the next most recent having been conducted in March 2022.

## Overall Mode Share

23% of staff and 10% of students responded to the 2023 survey. The results were weighted to ensure all campuses / colleges were evenly represented. The overall reported mode share takes account of response rate per location for staff against the total number of staff at that location and response per student per college and the total number of students in that college. This ensures that no location / college is under or overrepresented. For the purpose of the travel to university for the carbon calculations, staff and students were asked to provide full details of their journeys i.e., if walking and bus was involved in one journey then the distance was provided for both by the respondent. However, with respect to the mode share calculations, only the transport mode travelled over the longest distance was extracted from each response and used to form the overall mode share data.

The overall mode share, using the weightings, across all locations, is shown in **Table E.1** below.

Table E1: Overall Mode Share

Mode of Travel	Staff	Students
Walking / Wheeling	25.3%	40.6%
Cycle	14.8%	7.4%
Mobility Scooter	0.03%	0.04%
Public Bus	25.4%	30.3%
Shuttle Bus	0.6%	7.3%
Tram	0.7%	0.5%
Train	11.9%	8.2%
Taxi	0.2%	0.5%
Motorcycle	0.3%	0.1%
Car Driver with Passenger(s)	2.8%	1.0%
Car Passenger	1.8%	1.1%
Car Driver Alone	16.2%	3.0%

Amongst students, walking or wheeling and travelling by bus are the most common modes of travel. This trend was also observed in the 2022 Travel Survey. Walking and wheeling or travelling by bus are the most common modes of travel for staff.

## Historical Comparisons

The following section outlines comparisons to the results reported in the 2022 Travel Survey.

Rates of students walking to their main campus is continuing to fall, reducing by 6.3 percentage points between 2022 and 2023 and 9.8 percentage points when comparing 2019 and 2023. Rates of staff walking to their main campus has reduced by 1.1 percentage points between 2022 and 2023, however when comparing 2019 to 2023, there has only been a 0.2 percentage point reduction.

Rates of staff cycling to their main campus has fallen, after several years of steady increase, with 17% cycling to campus in 2022 compared to 15% in 2023. Rates of cycling to campus has stayed generally the same amongst students, from 7.7% in 2022 to 7.4% in 2023.

Bus use increased by 4.3 percentage points for staff and 4.4 percentage points for students from 2022, while rates of train travel increased by 4.0 percentage points for staff and 2.4 percentage points for students. Levels for staff and student combined bus travel now exceed those observed in 2019. These increases in rates of public transport patronage suggest recovering travel habits post the COVID pandemic, alongside lasting change in travel habits, in favour of bus travel.

Rates of car travel remained the same amongst students, accounting for 5.1% of the mode share, this is 0.2 percentage points above the rates observed in 2019. Staff car travel fell by 5.7 percentage points over the last year, with the largest decrease seen amongst those driving alone (-5.3 percentage points). The 2023 rates of staff car travel are now 1.3 percentage points less than those observed in 2019, with the main difference coming from car drivers with passengers.

## Campus Comparison

Walking continues to be the main mode of travel, for staff and students combined, across Central Area and King's Buildings. Bus travel is the most common mode at BioQuarter, Easter Bush, Western General and Pollock Halls. When looking at staff and student mode share separately, car travel becomes the most common mode for staff at Easter Bush and BioQuarter, while cycling becomes the main mode of travel for staff at King's Buildings.

## Carbon Emissions

The overall annual carbon footprint of commuter travel was calculated (using 2023 DEFRA conversion factors) to be 14,652 tonnes CO<sub>2</sub>e in 2023. This is a 23% increase since 2022. This is likely led by changing levels of working from home, as a result of the COVID pandemic, and the subsequent return to more class based teaching and onsite working. When compared to pre-covid levels (2019), there has been a 9% increase.

## Progress Towards Targets

**Table E.2** demonstrates the changing mode share, for both the University overall and per campus, compared with the 2022 Travel survey and the City Mobility Plan (CMP) 2030 targets. The CMP targets have been adopted by the University in its Integrated Transport Plan 2023-2030.



Table E.2: Mode Share Comparison

Overall University						
Mode	Staff (trips to employment)			Students (trips to education)		
	2030 Target (CMP)	2022 Travel Survey	2023 Travel Survey (PP change)	2030 Target (CMP)	2022 Travel Survey	2023 Travel Survey (PP change)
Car/Taxi	<24%	27%	21% (-6)	<3%	6%	6% (0)
Walk	>20%	26%	25% (-1)	>32%	47%	41% (-6)
Cycle	>9%	17%	15% (-2)	>7%	8%	7% (-1)
Bus/Tram	>47%	21%	26% (+5)	>57%	33%	31% (-2)
Train	>1%	8%	12% (+4)	>1%	6%	8% (+2)
Central Area						
Mode	Staff (trips to employment)			Students (trips to education)		
	2030 Target (CMP)	2022 Travel Survey	2023 Travel Survey (% change)	2030 Target (CMP)	2022 Travel Survey	2023 Travel Survey (% change)
Car/Taxi	<24%	17%	13% (-4)	<3%	4%	4% (0)
Walk	>20%	33%	30% (-3)	>32%	57%	49% (-8)
Cycle	>9%	15%	11% (-4)	>7%	5%	5% (0)
Bus/Tram	>47%	22%	27% (+5)	>57%	25%	30% (+5)
Train	>1%	12%	16% (+4)	>1%	7%	10% (+3)
King's Building						
Mode	Staff (trips to employment)			Students (trips to education)		
	2030 Target (CMP)	2022 Travel Survey	2023 Travel Survey (% change)	2030 Target (CMP)	2022 Travel Survey	2023 Travel Survey (% change)
Car/Taxi	<24%	31%	30% (-1)	<3%	6%	5% (-1)
Walk	>20%	22%	20% (-2)	>32%	33%	20% (13)
Cycle	>9%	27%	24% (-3)	>7%	12%	15% (+3)
Bus/Tram	>47%	17%	22% (+5)	>57%	45%	55% (+10)
Train	>1%	3%	3% (0)	>1%	3%	4% (+1)
BioQuarter						
Mode	Staff (trips to employment)			Students (trips to education)		
	2030 Target (CMP)	2022 Travel Survey	2023 Travel Survey (% change)	2030 Target (CMP)	2022 Travel Survey	2023 Travel Survey (% change)
Car/Taxi	<24%	44%	34% (-10)	<3%	9%	12% (+3)
Walk	>20%	12%	11% (-1)	>32%	14%	6% (-8)

Cycle	>9%	19%	19% (0)	>7%	17%	23% (+6)
Bus/Tram	>47%	22%	27% (+5)	>57%	55%	56% (+1)
Train	>1%	1%	5% (+4)	>1%	3%	4% (+1)
<b>Western General</b>						
Mode	Staff (trips to employment)			Students (trips to education)		
	2030 Target (CMP)	2022 Travel Survey	2023 Travel Survey (% change)	2030 Target (CMP)	2022 Travel Survey	2023 Travel Survey (% change)
Car/Taxi	<24%	31%	23% (-8)	<3%	2%	5% (+3)
Walk	>20%	22%	15% (-7)	>32%	38%	24% (-14)
Cycle	>9%	24%	31% (+7)	>7%	24%	20% (-4)
Bus/Tram	>47%	19%	30% (+11)	>57%	33%	46% (+13)
Train	>1%	4%	2% (-2)	>1%	1%	2% (+1)
<b>Pollock Halls</b>						
Mode	Staff (trips to employment)			Students (trips to education)		
	2030 Target (CMP)	2022 Travel Survey	2023 Travel Survey (% change)	2030 Target (CMP)	2022 Travel Survey	2023 Travel Survey (% change)
Car/Taxi	<24%	53%	46% (-7)	<3%	1%	0% (-1)
Walk	>20%	16%	12% (-4)	>32%	64%	47% (-17)
Cycle	>9%	2%	5% (+3)	>7%	6%	8% (+2)
Bus/Tram	>47%	22%	28% (+6)	>57%	27%	41% (+14)
Train	>1%	5%	7% (+2)	>1%	0%	1% (+1)
<b>Easter Bush *</b>						
Mode	Staff (trips to employment)			Students (trips to education)		
	2030 Target (CMP)	2022 Travel Survey	2023 Travel Survey (% change)	2030 Target (CMP)	2022 Travel Survey	2023 Travel Survey (% change)
Car/Taxi	<24%	75%	63% (-8)	<3%	22%	30% (+8)
Walk	>20%	3%	3% (0)	>32%	7%	2% (-5)
Cycle	>9%	9%	10% (+1)	>7%	5%	2% (-3)
Bus/Tram	>47%	14%	21% (+7)	>57%	58%	65% (+7)
Train	>1%	0%	1% (+1)	>1%	1%	0% (-1)

The results show that the overall University mode share is surpassing the City Mobility Plan targets for all modes (for employment and education trips) except from Bus/Tram journeys and the car mode share for trips to education. Although the bus/tram mode share target is not met, rail travel is 10 percentage points higher than the target for trips to employment and 6 percentage points higher than the target for trips to education.

The only campus to meet the CMP mode share target for bus/tram is Easter Bush, under the trips to education category. However, Easter Bush mode share for students doesn't meet any of the remaining mode share targets.

**Table E.3** shows the total km's travelled by each mode, by staff and students combined, for the 2019-20, 2022-23 and 2023-24 academic years. The University has adopted the CMP target to reduce car km's by 30% by 2030 (with 2019 as the baseline year).

Table E.3: Distance Travelled Comparison

Year (% Change)	Walk	Mobility Scooter	Cycle	Car	Bus	Tram	Train	Taxi	Motorcycle	Shuttle Bus
2019	40,098,922	26,295	13,004,069	46,596,700	56,481,295	970,888	57,258,430	833,899	1,143,449	4,260,111
2022	18,571,434	159,630	11,985,105	43,041,381	37,675,950	881,311	35,974,761	1,605,099	966,210	N/A
2023	22,068,627	69,460	11,899,273	49,875,590	57,510,502	1,643,185	77,784,582	1,944,418	1,217,466	5,146,670
2019-2023 % change	-45%	+164%	-8%	+7%	+2%	+69%	+36%	+133%	+6%	+21%

The results in **Table E.3** show that the km's travelled by all modes, except from Cycle, increased in the years between the 2019 and 2023 travel surveys. Car travel rose by 16% between 2022 and 2023, however only rose by 7% when comparing the 2023 results to 2019. Rates of walking rose by 19% between 2022 and 2023, however they are still 45% below the pre-pandemic 2019 levels.

## Next Steps

The University Transport Office will continue to analyse the results of the 2023 Travel Survey in detail to inform a review of the Integrated Transport Plan 2023-2030. A Travel Survey will be repeated in Autumn 2024.



# 1 Overview

## 1.1 Background

Sweco was commissioned by The University of Edinburgh (UoE) to analyse their 2023 staff and student Travel Survey.

UoE regularly undertake a staff and student Travel Survey, the previous carried out in 2022, in order to monitor and analyse changing travel behaviours, plan for future policies, and track the university's carbon footprint.

The survey was distributed to all staff and students based at campuses in Edinburgh, Scotland. The results were categorised for staff and students by main location of employment, as shown below:

- BioQuarter;
- Central Area;
- Easter Bush;
- King's Buildings;
- Western General Hospital;
- University Accommodation (staff only); and
- Other

Results were then weighted based on mode share and staff/student population. In regard to mode share weightings were based on where a respondent made use of multiple modes of travel, for example, if a respondent travelled nine miles by bus and one by walking then that is reflected in the mode share calculation, rather than attributing it all to bus travel as the mode where the greatest distance is covered. This allows the closest like-for-like comparison with previous years' data. In regard to population, weightings were attributed to campuses based on the actual staff/student population and the number of respondents stating that campus as their main campus.

## 1.2 Purpose

Through analysis of changing travel behaviours and barriers to sustainable travel for staff and students, the university can target measures and policy to enable as many people as possible to choose to walk, wheel, cycle or use public transport, in line with targets in the University's Integrated Transport Plan.

As in previous surveys, the results also assist in calculating the university's travel to work/study carbon footprint.

## 1.3 Design

The survey was available online, in the form of an 84-question questionnaire, with branching to target questions for individuals based on previous answers.

The survey was live for 4-weeks from the 2<sup>nd</sup> - 29<sup>th</sup> October 2023.

## 1.4 Responses

Over the 4-week period 7939 responses were received, excluding duplicate responses. 59% of staff responses were received within 3 days of the initial email to staff on the 3<sup>rd</sup> of October and 28% were received within 3 days of the reminder email sent to staff 24<sup>th</sup> October.

19% of student responses were received within 3 days of the initial email to staff on the 4<sup>th</sup> of October and 31% were received within 3 days of the reminder email sent to staff 25<sup>th</sup> October.

**Appendix A** shows the split by role over the engagement period.

## 1.5 Results Power Bi

As in 2022, a PowerBi page was created to display the results in a more user friendly and comparable layout. The interactive dashboard and mapping allow users to interrogate the data based on a selection of settings, such as campus, role or demographics.

## 1.6 Travel Planning Activities

This section highlights the most significant travel plan measures that have been delivered since the last travel survey in Spring 2022.

### 1.6.1 Adoption of the Integrated Transport Plan (ITP) 2023-30

Following the 2022 Travel Survey, a new University of Edinburgh Integrated Transport Plan was developed for 2023-30. It was developed as the country was evolving in the post BREXIT and Covid 19 pandemic periods, with the pandemic in particular having impacted all aspects of travel. The results of the 2022 Travel Survey confirmed that commuting travel habits at the University had undergone a significant and rapid change, and although the pandemic period was over as the Plan was being prepared, the new normal for the University and associated transport was and still is emerging.

The overall aim of the ITP is to ensure that the University campuses and accommodation sites are served as well as possible by sustainable transport options. The ITP aligns with the University's Residential Strategy with an increased focus on travel to and from accommodation. It also supports the University Strategy 2030, and aligns with the University Climate Strategy, which has a net zero carbon target of 2040 and will be amended to align with any update to the current Climate Strategy.

The ITP targets are from the City of Edinburgh Council City Mobility Plan (CMP) 2021-2030, which targets delivery of a safer and more inclusive net zero carbon transport system by 2030. It adopts the CMP target of a 30% reduction in kilometres travelled by car by 2020 (baseline 2019), together with accompanying mode share targets.

The ITP identifies themed actions to meet the 2030 targets:

- Walking and Wheeling
- Cycling
- Public Transport
- Private Motorised Vehicles
- University Fleet Vehicles

The ITP will be reviewed on an annual basis following the Commuter Travel Survey each autumn.

A summary of progress on a selection of these actions is provided below:

### 1.6.2 City Mobility Plan Consultation

During Spring 2023 the City of Edinburgh Council carried out an extensive consultation on a suite of Action Plans for the City Mobility Plan. These were: Active Travel Action Plan; Road Safety Plan; Public Transport Action Plan; Parking Action Plan; and a Future Streets Framework / Circulation Plan. The University took part in consultation workshops, and provided a detailed response to the consultation offering broad support, highlighting where the University can contribute/collaborate, and highlighting actions which would specifically support the ITP actions and targets.

### 1.6.3 Enhancing and expanding the active travel network

The University, together with the BioQuarter partners, has continued to pursue and secure funding from the Sustrans Places for Everyone fund to deliver high quality segregated cycling and walking routes to and within the developing BioQuarter site. There are further projects in the pipeline including a route between Cameron Toll and BioQuarter, a route to the south connecting to Sheriffhall and housing areas, and further connections with the BioQuarter and hospital area. They have also engaged with Midlothian Council on plans for active travel routes connecting new housing developments in the Roslin and Bilston area with the Easter Bush Campus.

### 1.6.4 Affordable access to bikes

Since September 2022 the University has been providing an e-Bike hire scheme called UniCycles for students living at Pollock Halls and Pentland House. The scheme offers students an affordable and convenient way to travel around the city and to campuses. The monitoring and evaluation of Year 1 showed that more students were cycling as a result of the scheme, there were carbon savings, and students reported a range of health, wellbeing, and financial benefits from hiring an e-bike. Following the success of Year 1, the scheme expanded for Year 2 (September 2023) from 60 to 80 bikes.

The University also secured funding from the Energy Savings Trust to re-launch the 'Try Before You Buy' electric bike hire scheme for staff. The match funding was used to purchase a variety of electric bikes to suit different scenarios: cargo bikes with child seats for families; folding bikes for rail users or tenement dwellers; and standard hybrid type ebikes. Staff can hire a bike for 1 month to help them consider if an e-bike would be suitable before making any significant investment.

### 1.6.5 Nurturing a cycle community and delivering behaviour change

Students and staff report through the Commuter Travel Survey that access to cycle training would help them to start cycling or to cycle more. Working with the City of Edinburgh Council the University provided staff and students with access to 15 cycling courses, and 3 bike maintenance classes during 2022-23. They also arranged 44 Dr Bike events across the campuses, providing free basic maintenance checks to 476 bikes and bike security marking to 322 bikes.

### 1.6.6 Improving public transport

The University continues to work closely with Lothian Buses to ensure campuses are well connected by public bus services, and that they are fully engaged in the planning for future developments. The launch of the Young Persons Free Bus Travel Scheme in January 2022 has led to changes in student travel behaviour, and Lothian Buses have responded to this by strengthening bus routes that specifically connect student residential areas and campuses.

The University has continued to engage positively with the Edinburgh Tram project, supporting the development of the Business Case for the North-South tramline between Granton and BioQuarter (and into Midlothian).



## 1.7 Report Structure

Following this introductory chapter, the report is structured as follows:

- Overall Survey Results;
- Location Travel Characteristics; and
- Conclusions and Recommendations.



Figures 2.2 and 2.3 show the split by age and gender of respondents, for staff and students.

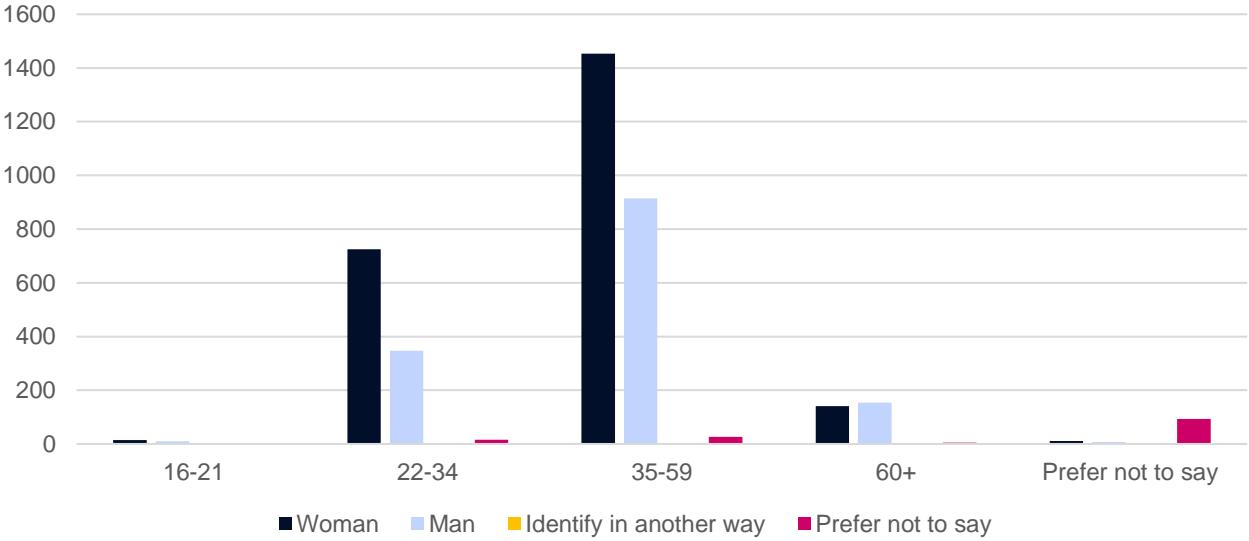


Figure 2-2: Age Group and Gender of Staff Respondents

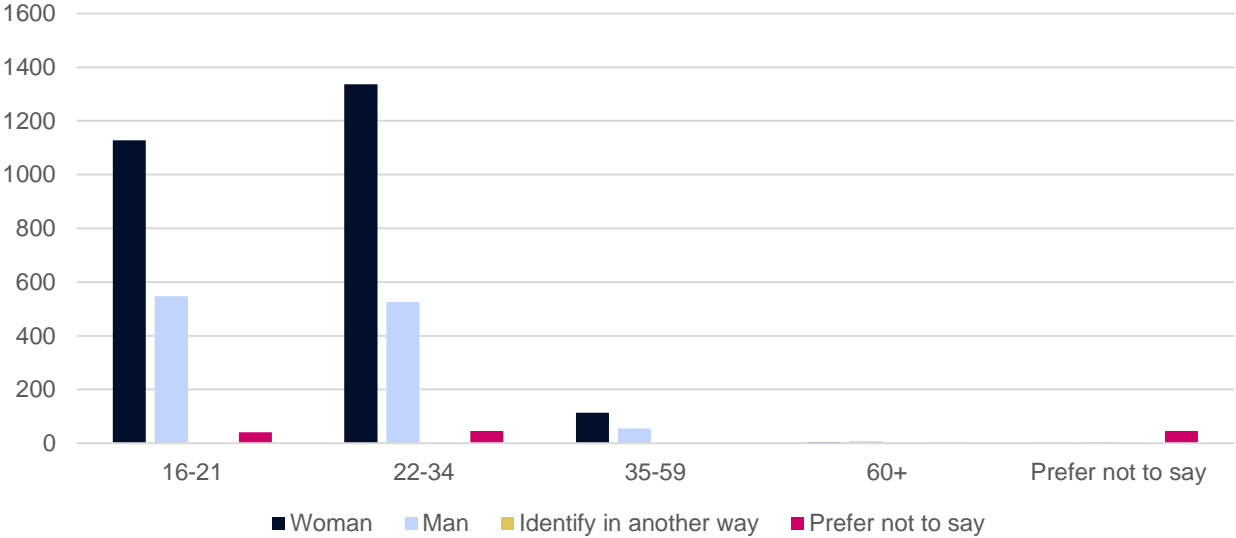


Figure 2-3 Age Group and Gender of Student Respondents

The results show that in both staff and students, a higher proportion of respondents identified as a woman. Staff were mostly aged between 22 and 59 while students were mostly aged between 16 and 34.

Figure 2.4 shows the student fee status of respondents, compared to the fee status of the University student population.



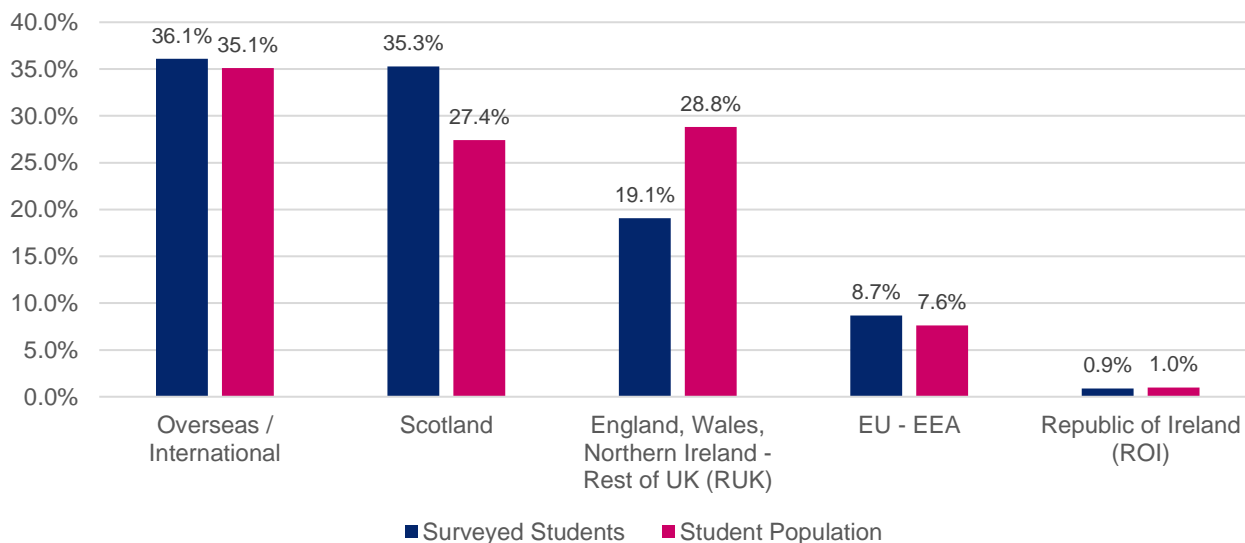


Figure 2-4: Student Survey Respondents Fee Status

The results show that the survey results are broadly representative, except Scotland which is slightly overrepresented and the rest of the UK which is slightly overrepresented.

## 2.3 Response Rate

3,954 responses were received from staff, representing a 23% response rate. This is up by 925 responses (4.4 percentage points) on the 2022 survey. 3,985 responses were received from students, representing a 10% response rate. This is down by 739 responses (1 percentage point) on the 2022 survey. The breakdown of staff response rates by location, excluding those who do not work or study on campus, is shown in **Table 2.1**.

Table 2-1: Staff Response Rate

Campus	Academic Staff	Non-academic Staff
BioQuarter	19%	30%
Central Area	16%	32%
Easter Bush	26%	20%
King's Buildings	13%	32%
Western General	17%	29%
Other	15%	17%
Pollock Halls	N/A	17%
Other University Accommodation Site	N/A	3%
<b>Total</b>	<b>23%</b>	<b>10%</b>

Although the level of responses by both staff and students provides an acceptable sample size when considering overall travel trends to the university, the results at smaller site locations should be treated with some caution given the smaller sample sizes.

The number of staff employed by the university has increased by 756 from the time of the 2022 survey. This equates to a 4.6% increase.

The breakdown of student response rates by college and student status is shown in **Table 2.2**.

Table 2-2: Student Response Rate

College	Undergraduate	Postgraduate
Arts, Humanities & Social Science	7%	12%
Medicine & Veterinary Medicine	11%	13%
Science & Engineering	11%	14%

The number of students enrolled at the university has decreased by 2,015 from the time of the 2022 survey. This equates to a 4.7% decrease. Those who are distance learners have been excluded, which was also the case in 2022, due to these students not commuting to university campuses.

The staff and student response rates are important as total carbon emissions are factored up from the sample respondents to reflect the total number of staff and students at the university.

## 2.4 Mode Share

### 2.4.1 2023 Mode Share

The overall university mode share is shown in **Figure 2.5**, split by staff and students.

The reported mode share takes account of response rate per location for staff against the total number of staff at that location and response per student per college and the total number of students in that college. On this basis a weighting was added to each response based on the location/college. This ensures that no location / college is under or overrepresented. The weightings are shown in **Table 2.3**.

Table 2-3: Weightings developed for Staff and Student Overall Mode Share

Location / College	Staff / Student	Weighting	
BioQuarter	Academic Staff	5.2	
Central Area		6.2	
Easter Bush		3.8	
King's Buildings		7.8	
Western General		6.0	
Other		6.6	
Pollock Halls		0.0	
Other University Accommodation Site		0.0	
BioQuarter		Non-Academic Staff	3.3
Central Area			3.1
Easter Bush	5.1		
King's Buildings	3.1		
Western General	3.4		
Other	5.8		
Pollock Halls	6.0		
Other University Accommodation Site	36.7		
Arts, Humanities & Social Science	Undergraduate Student		15.08
Medicine & Veterinary Medicine			9.43
Science & Engineering		9.15	
Arts, Humanities & Social Science	Postgraduate student	8.33	
Medicine & Veterinary Medicine		7.72	
Science & Engineering		7.00	

For the purpose of the travel to university for the carbon calculations, staff and students were asked to provide full details of their journeys i.e., if walking and bus was involved in one journey then the distance was provided for both by the respondent. However, with respect to the mode share calculations, only the transport mode travelled over the longest distance was extracted from each response and used to form the overall mode share data.

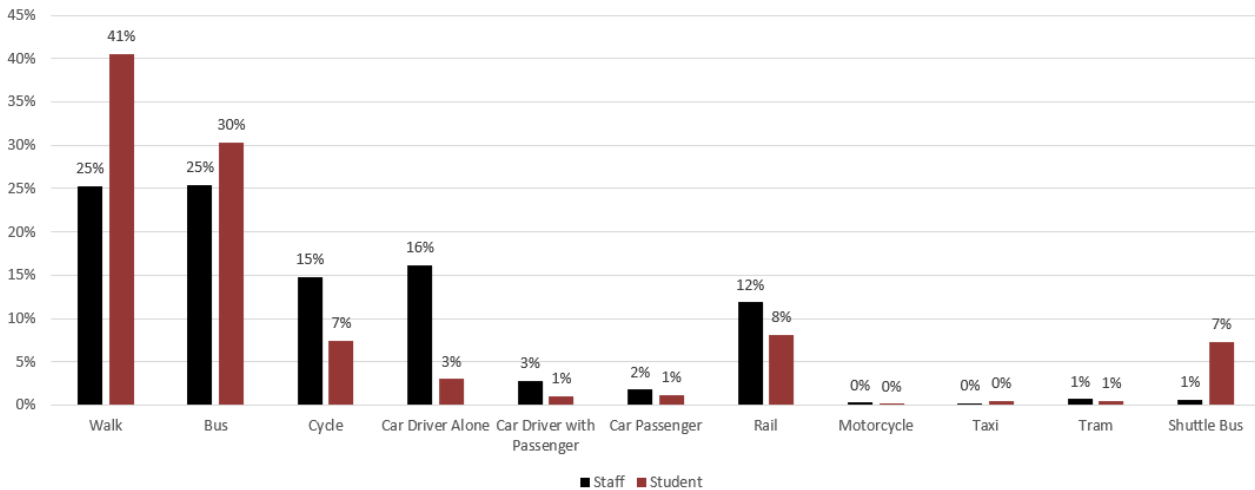


Figure 2-5: Staff & Student Mode Share

The results in **Figures 2.5** show high rates of sustainable travel by both staff and students. Rates of cycling are higher amongst staff (15%) than students (7%). The highest proportion of students walk (41%), compared to 25% of staff walking to campus. Nearly a third of students travel by bus (30%) compared to a quarter of staff (25%).

### 2.4.2 Mode Share Trends

**Figure 2.6** shows the change in mode share between 2000 and 2023 for staff and **Figure 2.7** shows the change in mode share between 2004 and 2023 for students (no student survey was undertaken in 2000). Supporting data is also provided in **Table 2.4** and **Table 2.5** below.

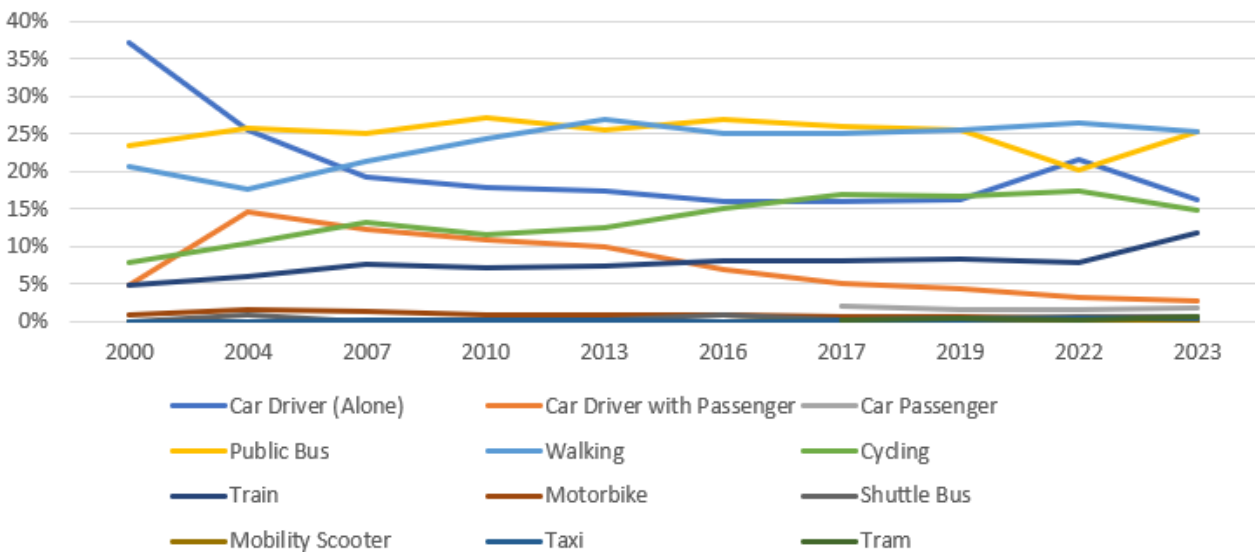


Figure 2-6: Staff Mode Share Change 2000-2023



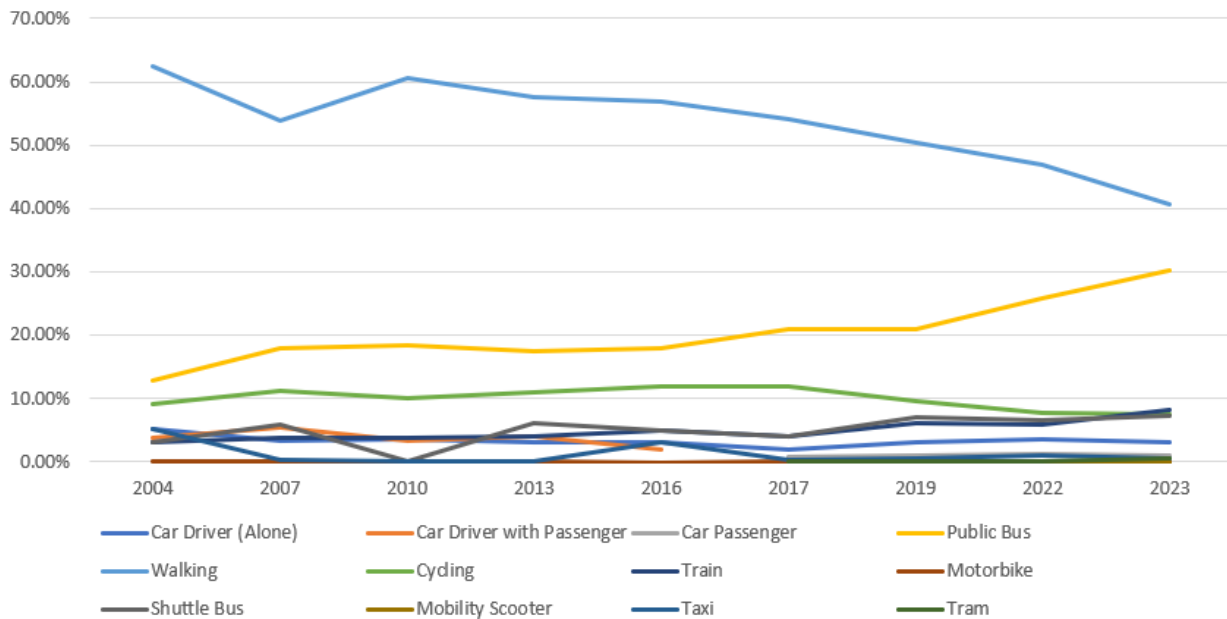


Figure 2-7: Student Mode Share Change 2004-2023

Table 2-4: Staff Mode Share Comparisons

Mode	2000	2004	2007	2010	2013	2016	2017	2019	2022	2023
Car driver (alone)	37.3%	25.5%	19.2%	17.9%	17.5%	16.0%	16.0%	16.2%	21.5%	16.2%
Car Driver with Passenger	4.8%	14.6%	12.2%	10.8%	10.0%	7.0%	5.0%	4.3%	3.3%	2.8%
Car Passenger							2.0%	1.6%	1.7%	1.8%
Public Bus	23.5%	25.8%	25.0%	27.3%	25.5%	27.0%	26.0%	25.6%	20.1%	25.4%
Walking	20.7%	17.6%	21.3%	24.5%	27.0%	25.0%	25.0%	25.5%	26.4%	25.3%
Cycling	7.9%	10.4%	13.3%	11.5%	12.5%	15.0%	17.0%	16.7%	17.3%	14.8%
Train	4.8%	5.9%	7.6%	7.1%	7.5%	8.0%	8.0%	8.3%	7.9%	11.9%
Motorbike	1.0%	1.5%	1.3%	0.9%	1.0%	1.0%	0.7%	0.7%	0.5%	0.3%
Shuttle Bus*		0.8%			0.1%	1.0%	0.3%	0.5%	0.6%	0.6%
Mobility Scooter							0.1%	0.1%	0.0%	0.0%
Taxi			0.1%	0.1%	0.1%		0.3%	0.2%	0.4%	0.5%
Tram							0.3%	0.4%	0.3%	0.7%

\*Shuttle bus count potentially included in 'Bus' counts

Table 2-5: Student Mode Share Comparisons

Mode	2004	2007	2010	2013	2016	2017	2019	2022	2023
Car driver (alone)	5.1%	3.3%	3.6%	3.0%	3.0%	2.0%	3.1%	3.5%	3.0%
Car Driver with Passenger	3.9%	5.4%	3.3%	4.0%	2.0%	0.5%	0.8%	0.8%	1.0%
Car Passenger						0.8%	1.0%	1.3%	1.1%
Public Bus	12.8%	18.0%	18.4%	17.5%	18.0%	21.0%	21.0%	25.9%	30.3%
Walking	62.5%	53.9%	60.5%	57.5%	57.0%	54.0%	50.4%	46.9%	40.6%
Cycling	9.2%	11.1%	10.1%	11.0%	12.0%	12.0%	9.6%	7.7%	7.4%
Train	3.1%	3.8%	3.7%	4.0%	5.0%	4.0%	6.2%	5.8%	8.2%
Motorbike	0.2%	0.1%	0.2%	0.1%	0.0%	0.1%	0.1%	0.2%	0.1%
Shuttle Bus*	3.1%	5.9%		6.0%	5.0%	4.0%	7.1%	6.5%	7.3%
Mobility Scooter				0.0%		0.1%	0.0%	0.1%	0.0%
Taxi	5.1%	0.3%	0.1%	0.1%	3.0%	0.4%	0.5%	0.9%	0.5%
Tram						0.2%	0.2%	0.2%	0.5%

\*Shuttle bus count potentially included in 'Bus' counts

The overall mode share for 2019, 2022 and 2023 is shown in **Table 2.6**, along with the percentage point change between the years.

Table 2-6: Overall Mode Share Change

Mode	2019	Percentage Point Change	2022	Percentage Point Change	2023
Walk	43.1%	-2.1	41.0%	-5.6	35.4%
Cycle	11.7%	-1.2	10.5%	-0.6	9.9%
Motorcycle	0.3%	0	0.3%	-0.1	0.2%
Car Driver (alone)	7.0%	+1.7	8.7%	-1.3	7.4%
Car Driver (with passengers)	1.8%	-0.3	1.5%	+0.1	1.6%
Car Passenger	1.1%	+0.3	1.4%	0.0	1.4%
Public Bus	22.4%	+1.8	24.2%	+4.5	28.7%
Shuttle Bus	5.1%	-0.3	4.8%	+0.2	5.0%
Tram	0.3%	-0.1	0.2%	+0.4	0.6%
Train	6.8%	-0.4	6.4%	+3.0	9.4%
Taxi	0.4%	+0.3	0.7%	-0.3	0.4%
Mobility Scooter	0.0%	+0.1	0.1%	-0.08	0.02%

### 2.4.2.1 Overall

In general, the mode share proportions have remained broadly similar to those observed in the 2019 and 2022 Travel Survey. The largest change has been in the proportion of those walking, with a 7.7 percentage point decrease between 2019 and 2023. The next largest change has been in the proportion of those travelling by bus, with a 6.3 percentage point increase over the same period. The minor increase in those travelling by car (0.5 percentage points) is noted, however the slight increase in those travelling with, or as, passengers is positive (0.4 percentage points).

### 2.4.2.2 Walking

Overall rates of walking to university have fallen by 5.6 percentage points in the past year. This decrease is largely attributed to student rates of walking which fell by 6.3 percentage points, while walking rates fell by 1.1 percentage points for staff. As mentioned in the 2022 Travel Survey, this decrease in walking rates amongst students is likely a result of students travelling further to university and therefore needing to use alternative modes of travel which are quicker, such as buses. It should also be noted that the Scottish Government under 22 bus travel scheme has been live since January 2022 which could also affect numbers of those who walk to university, given these students now have a free alternative option.

### 2.4.2.3 Cycling

Rates of cycling have decreased by 0.6 percentage points in the last year with the rate 1.8 percentage points lower than in 2019. Students cycling has generally remained static over the last year, while cycling has reduced overall for staff. Overall, the results suggest 2,373 staff and 3,227 students regularly cycle to university.

### 2.4.2.4 Mobility Scooter

Due to the low levels of staff and students travelling to university by Mobility Scooter as their main mode it is difficult to draw out conclusive trends. Only 2 students and 1 member of staff recorded their main mode of travel as Mobility Scooter in the 2023 Travel Survey.

### 2.4.2.5 Bus

Bus use has continued to increase and is 6.3 percentage points higher than the 2019 Travel Survey value. Rates for students increased by 9.3 percentage points between 2019 and 2023, whilst the staff rate reduced in 2022 and increased again in 2023 to generally the same level as 2019.

### 2.4.2.6 Tram

Rates of travel by tram to university have doubled since 2019, however they remain low, only accounting for 0.6%. Future proposed plans to extend the tram line to BioQuarter may result in a further increase as it will offer convenient access to the university Campus based there.

### 2.4.2.7 Train

Overall, train travel to the university has increased by 2.6 percentage points since 2019. The increase is observed amongst both staff and students. Scotrail are trialling the removal of peak time fares for the period of October 2023 to March 2024, this may have contributed to more staff and students choosing this mode of travel.

### 2.4.2.8 Taxi

Rates of those travelling to university by taxi have fallen by 0.3 percentage points compared to 2022, returning to similar levels observed in the 2019 Travel Survey.

### 2.4.2.9 Motorcycle

Overall, the use of a motorcycle to access University has remained similar since 2019 with no notable changes amongst staff or students and it continues to account for less than one percent of trips to the university.

### 2.4.2.10 Car

Car driver alone has reduced by 1.3 percentage points since 2022 and remains similar to 2019 levels. Overall, rates of car drivers with passengers and car passengers have remained static over the last year.

## 2.5 Distance Travelled

Using information collected through the survey it was possible to calculate total distance travelled by each mode. This was completed by converting survey responses to two-way trips, considering numbers of days each respondent travelled to the university and scaling based on the assumed number of weeks worked a year relating to their role. Data was then weighted by each mode by staff type and campus or student type and college. These values were then converted from miles to kilometres. **Table 2.7** below presents this information which shows total km travelled by each mode.

Table 2-7: Annual Commuting Distances for Staff, Students and Combined

Mode	Staff (km)	Student (km)	Total (km)
Public Bus	17,163,861	40,346,641	57,510,502
Shuttle Bus	348,206	4,798,463	5,146,670
Car	31,872,140	18,003,449	49,875,590
Cycle	7,467,689	4,433,475	11,901,164
Mobility Scooter	29,634	39,826	69,460
Motorcycle	1,001,771	215,695	1,217,466
Taxi	468,389	1,476,030	1,944,418
Train	28,017,955	49,766,627	77,784,582
Tram	606,700	1,036,485	1,643,185
Walk	7,495,507	14,577,613	22,073,119

## 2.6 Mode Share by Location

**Table 2.8** shows the 2023 mode share split by location for staff and students.

Table 2-8: Mode Share by Role and Campus

Location	Role	Mode								
		Walk / Wheel	Cycle	Public Bus	Shuttle Bus	Tram	Train	Taxi	Motor-cycle	Car
BioQuarter	Staff	11.1%	18.9%	27.3%	0.03%	0.0%	4.6%	0.0%	0.5%	34.1%
	Student	6.4%	22.7%	54.6%	0.9%	0.9%	3.6%	0.9%	0.0%	10.9%
Central Area	Staff	30.4%	11.1%	26.4%	0.4%	0.0%	16.3%	0.2%	0.3%	12.9%
	Student	48.5%	4.8%	26.7%	2.7%	0.6%	9.7%	0.5%	0.04%	3.6%
Easter Bush	Staff	3.0%	9.9%	21.1%	0.0%	0.0%	1.3%	0.0%	0.4%	63.0%
	Student	1.5%	1.5%	65.0%	0.0%	0.0%	0.0%	0.0%	0.0%	29.9%
King's Buildings	Staff	19.5%	23.8%	20.3%	1.8%	0.2%	3.3%	0.2%	0.2%	30.2%
	Student	20.1%	14.8%	30.9%	24.1%	0.1%	4.1%	0.0%	0.4%	4.9%
Western General	Staff	15.2%	30.5%	29.5%	0.0%	0.0%	1.9%	0.0%	0.0%	22.9%
	Student	24.4%	19.5%	46.3%	0.0%	0.0%	2.4%	0.0%	0.0%	4.9%
Other	Staff	5.9%	11.8%	29.4%	0.0%	0.0%	2.9%	0.0%	2.9%	47.1%
	Student	30.1%	2.6%	43.6%	0.0%	0.0%	10.3%	2.6%	0.0%	10.3%
Pollock Halls	Staff	12.4%	4.5%	28.1%	0.0%	0.0%	6.7%	0.0%	0.0%	46.1%
Other University Accommodation	Staff	33.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	66.7%

Results in **Table 2.7** show that walking, cycling, bus travel and driving alone were the most common modes of travel overall. However, rates of driving and cycling were consistently higher amongst staff, while walking and bus travel were higher amongst students. This is likely due to a higher proportion of students living close to their primary campus. Rates of Mobility Scooter, Motorcycle and Tram travel were all consistently low, often below 1%.

Easter Bush saw the highest rates of car travel while Central Area saw the lowest, this is likely a reflection of the increased levels of public transport and housing available around the Central Area compared to Easter Bush.

## 2.7 Days of travel

Staff and students were asked how many days they commute to university on an average week. The results are shown in **Figure 2.8**.

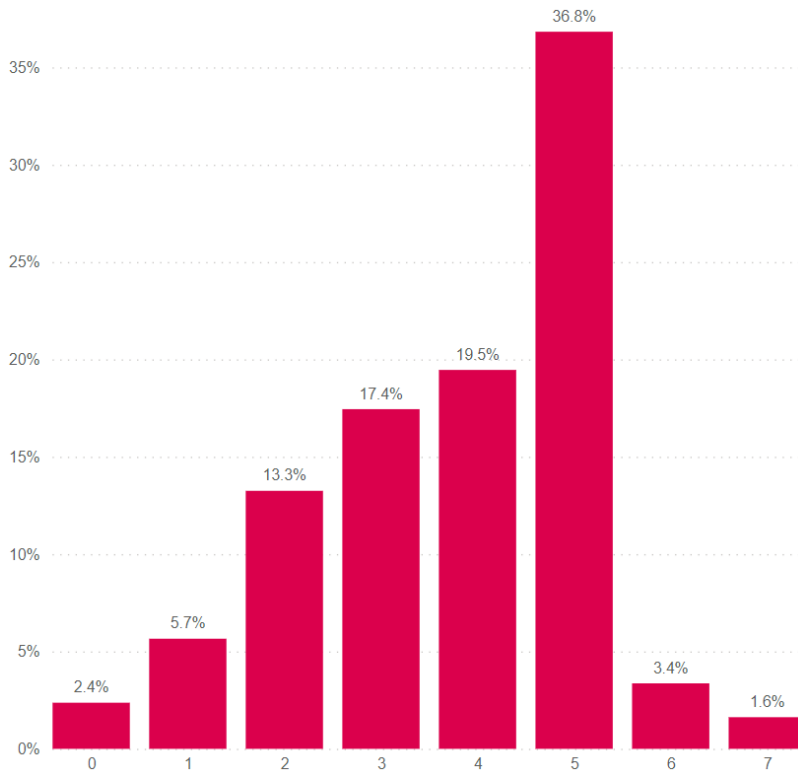


Figure 2-8: Average Number of Days on Campus

The majority of staff and students (56.3%) attend university 4-5 days a week, representing an 18.3 percentage point increase on 2022. However, this is still below the pre-pandemic levels observed in the 2019 Travel Survey where the majority (59%) attended 5 days a week and 76.5% attending 4-5 days a week. The results indicated that although more people are now attending campus more frequently, the hybrid approach to work and study remains common.

**Figures 2.9 and 2.10** show the data split by staff and student respectively.



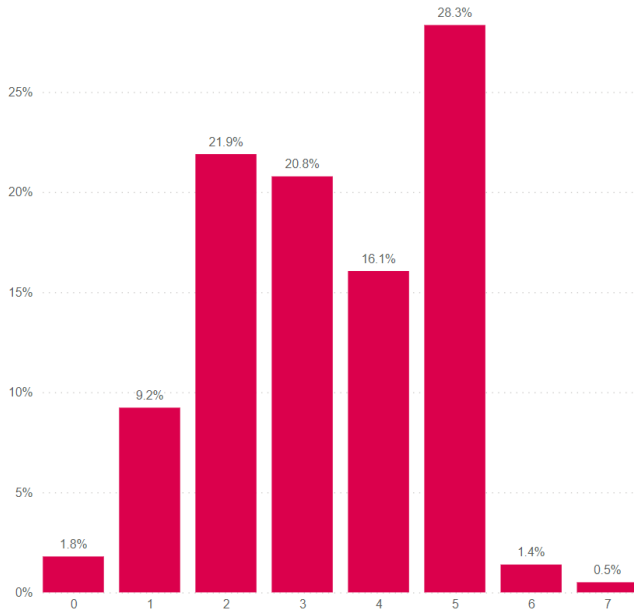


Figure 2-9: Staff Days on Campus

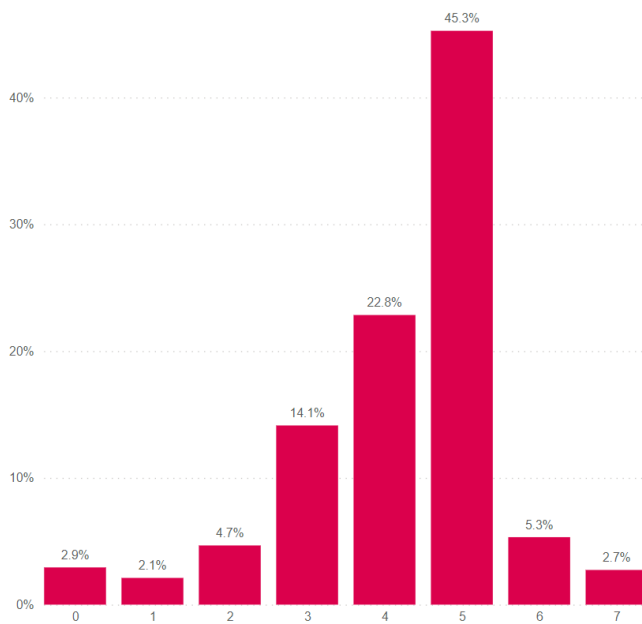


Figure 2-10: Student Days on Campus

The results show that staff are more likely to work remotely, compared with students. Prior to COVID 69% of staff worked on site 5 days a week, this has reduced to 28%, however 5 days a week is still the most common. The rates of students studying on campus 5 days a week has risen by 23% compared to 2022, however is still 8% lower than pre-pandemic levels.

## 2.8 Home Postcode

Respondents were asked to provide the postcode for their term time address. **Figures 2.11** and **2.12** show the mapped postcodes for staff and students.

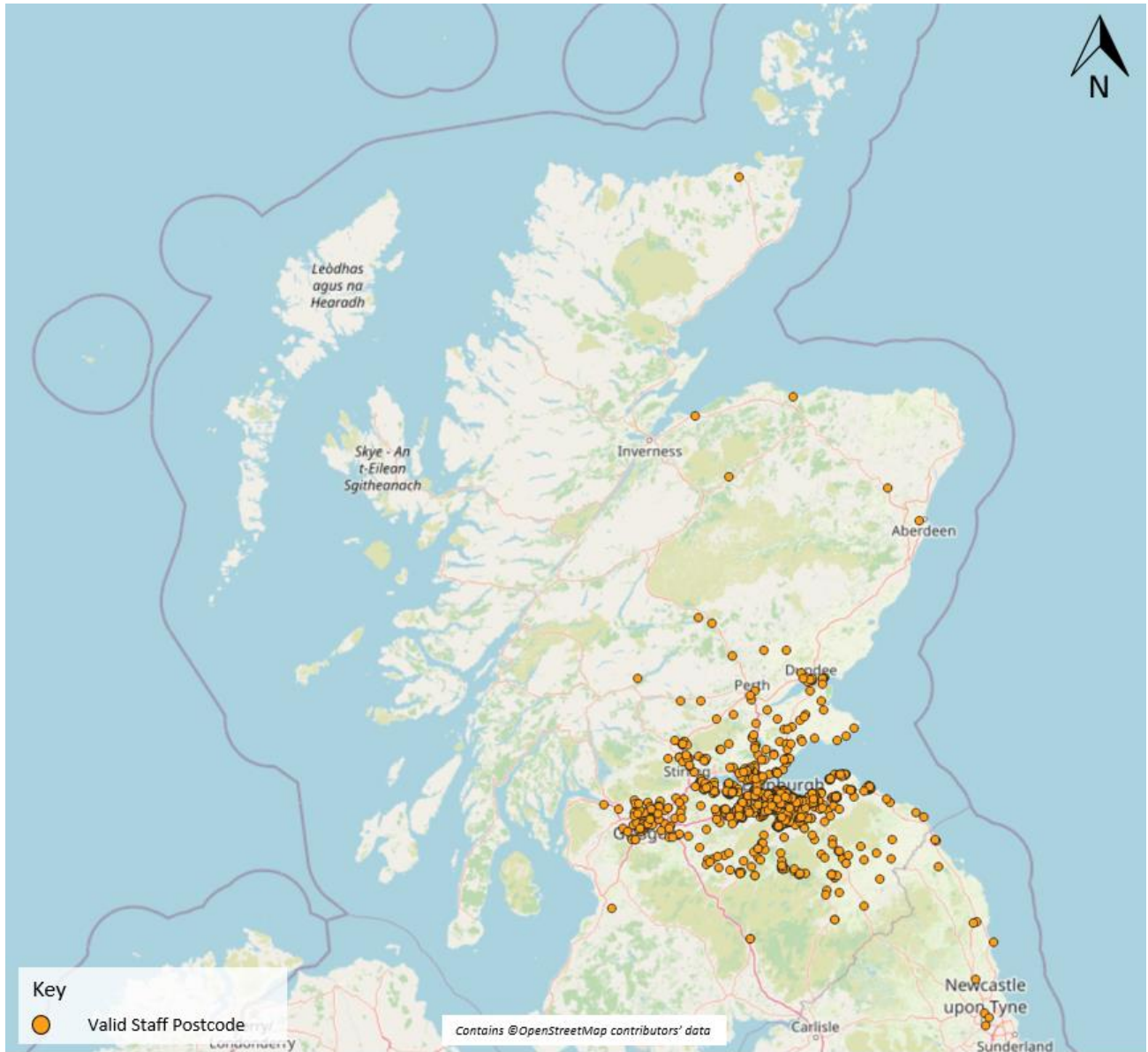


Figure 2-11: Staff Home Postcode

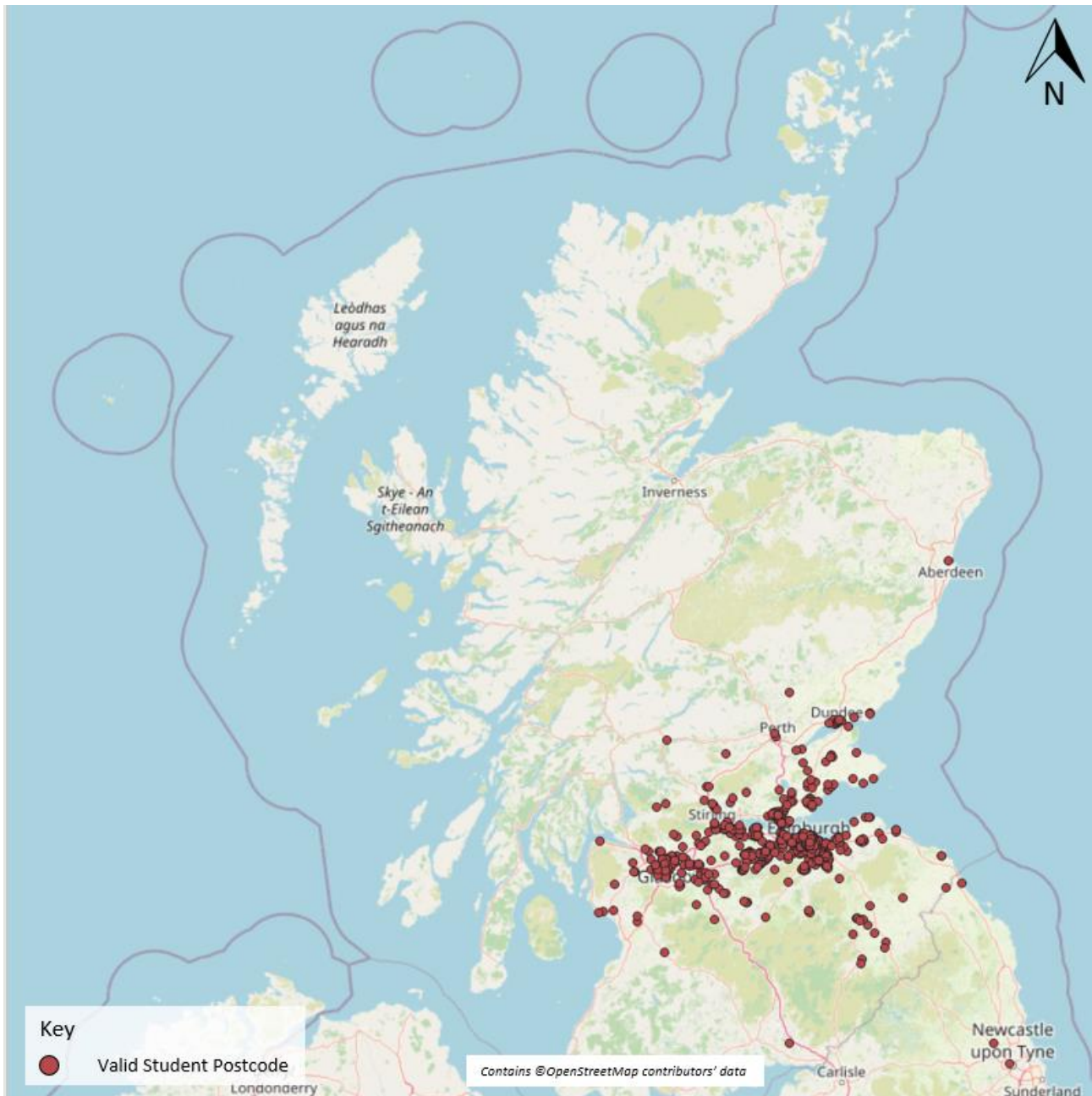


Figure 2-12: Student Home Postcode

The highest concentration of staff and students live within the City of Edinburgh during term time, followed by Glasgow and the surrounding towns within the Central Belt. 87% of Staff and 93% of students who logged a valid postcode live within the Central Belt.

Staff and students were also asked to note the average one-way journey in miles per day for their commute to university. They were sign posted to Google Maps in order to determine the commute distance.

The results, multiplied to show return journeys, are shown in **Figure 2.13**.

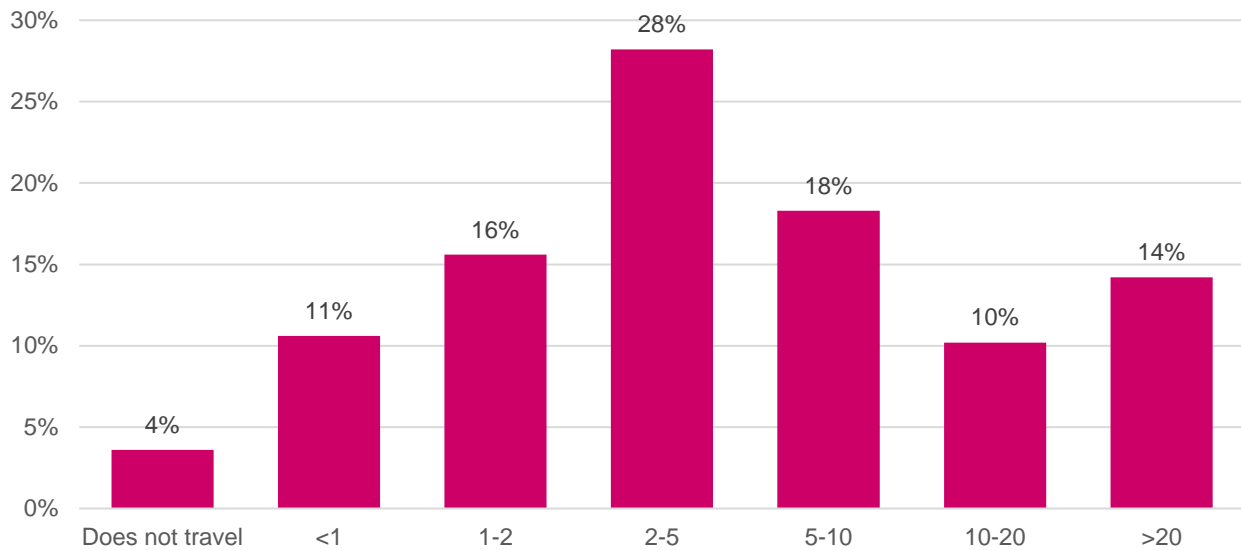


Figure 2-13: Average Commuting Distance

**Figure 2.13** shows that 54% of respondents who had a commute, travelled less than 5 miles per day to their main place of work/study. National guidance states that a cycle of less than 5 miles is an acceptable distance for your average person, this suggests that the majority of staff and students could undertake active travel as their main mode of travel, as long as there was adequate infrastructure in place.

Valid postcodes for both staff and students were mapped against the catchment mapping for each campus. **Table 2.9** shows the percentage of staff or students living within the following catchments of their main campus, alongside the percentage of staff of students living within the catchment and using the corresponding mode of travel:

- 20-minute walking catchment;
- 30-minute cycling catchment;
- 60-minute public transport catchment; and
- 60-minute car catchment.

Table 2-9: Percentage of Staff or Students within Postcode Catchment & Mode of Travel

Role	Staff				Student			
	Walk	Cycle	PT	Car	Walk	Cycle	PT	Car
<b>BioQuarter</b> (% already using mode within catchment)	11% (3%)	59% (13%)	71% (25%)	92% (30%)	3% (1%)	88% (23%)	89% (53%)	98% (8%)
<b>Central Area</b> (% already using mode within catchment)	23% (12%)	66% (9%)	77% (29%)	93% (12%)	46% (39%)	79% (5%)	83% (25%)	94% (3%)
<b>Easter Bush</b> (% already using mode within catchment)	6% (1%)	30% (4%)	55% (18%)	93% (57%)	1% (1%)	8% (1%)	83% (63%)	97% (28%)
<b>King's Buildings</b> (% already using mode within catchment)	16% (6%)	71% (19%)	80% (18%)	94% (28%)	6% (5%)	89% (15%)	92% (36%)	99% (5%)
<b>Western General</b> (% already using mode within catchment)	21% (7%)	72% (27%)	81% (26%)	98% (23%)	0% (0%)	94% (19%)	94% (50%)	94% (3%)
<b>Pollock Halls</b> (% already using mode within catchment)	28% (7%)	62% (4%)	75% (29%)	88% (10%)				

The results shown in **Table 2.8** demonstrate the potential audience for sustainable travel and shows that the majority of staff working at all campuses live within a reasonable distance by cycle. The majority of students based at all campuses, except from Easter Bush, also live within a reasonable distance by cycle.

## 2.9 Carbon Footprint

This section provides information on the university travel to work / study carbon footprint. The 2023 DEFRA carbon emissions factors<sup>1</sup> were used in the carbon footprint calculations. It should be noted that the carbon emissions factors take into consideration that some respondents use multiple modes as part of their usual journey, and they are weighted based on the response rate by location against the total number of staff and students normally based at each location. **Appendix B** provides details of the carbon footprint calculation methodology used.

For the purposes of calculating carbon emissions, the maximum commuting travel distances are assumed to be 5 miles for walking, 40 miles for cycling and 60 miles for all other modes. Distances for corresponding modes out with these limits were lowered to the limit. This is consistent with how the data has been analysed and reported in previous years. **Table 2.10** shows overall carbon footprint for each mode in the years 2019, 2022 and 2023. **Table 2.11** and **Table 2.12** split the carbon footprint by staff and students. **Table 2.13** shows the change in the Overall Carbon Footprint between 2016 and 2023.

<sup>1</sup> [www.gov.uk/government/publications/greenhouse-gas-reporting-conversion-factors-2023](http://www.gov.uk/government/publications/greenhouse-gas-reporting-conversion-factors-2023)

Table 2-10: Overall Carbon Footprint

Mode	Average Distance (miles)				Annual Estimated Total CO <sub>2</sub> e (tonnes)				Annual Estimates CO <sub>2</sub> e per Individual (tonnes)			
	2017	2019	2022	2023	2017	2019	2022	2023	2017	2019	2022	2023
Walk	1.0	1.2	1.1	1.1								
Mobility Scooter			2.3	2.0								
Cycle	2.3	2.8	3.2	3.1								
Motorcycle	9.1	9.5	9.4	7.2	87	130	120	101	0.8	0.6	0.5	0.5
Car Driver Alone	13.5	12.9	12.6	13.2	4,429	5,875	5,180	4,995	1.5	1.3	0.9	0.9
Car Driver with Passenger	11.0	10.1	9.1	11.2	908	523	297	370	1.3	0.5	0.3	0.4
Car Passenger	0.7	2.4	6.7	6.2	731	106	391	338	0.1	0.1	0.2	0.2
Bus	4.0	4.6	4.6	5.0	4,115	4,282	4,229	6,338	0.3	0.3	0.2	0.3
Tram	3.9	5.8	6.6	4.0	21	21	26	46	0.1	0.1	0.1	0.0
Rail	27.6	29.7	27.0	26.9	1,791	2,265	1,262	2,165	0.7	0.6	0.3	0.4
Taxi	1.6	3.0	3.6	3.6	40	152	356	299	0.1	0.3	0.3	0.4
<b>Total</b>					<b>12,122</b>	<b>13,354</b>	<b>11,860</b>	<b>14,652</b>				

Table 2-3: Staff Carbon Footprint

Mode	Average Distance (miles)				Annual Estimated Total CO <sub>2</sub> e (tonnes)				Annual Estimates CO <sub>2</sub> e per Individual (tonnes)			
	2017	2019	2022	2023	2017	2019	2022	2023	2017	2019	2022	2023
Walk	1.4	1.0	1.3	1.2								
Mobility Scooter				1.2								
Cycle	3.4	3.7	3.9	2.9								
Motorcycle	10.6	8.9	10.1	3.0	85	79	65	81	1.0	0.6	0.6	0.7
Car Driver Alone	13.7	13.3	12.7	9.7	3,420	4,396	3,745	3,251	1.6	1.4	1.0	0.9
Car Driver with Passenger	11.5	10.8	9.5	9.8	909	422	209	210	1.4	0.6	0.4	0.4
Car Passenger	8.3	2.2	7.5	6.1	439	52	133	101	1.0	0.1	0.3	0.2
Bus	4.6	4.8	5.7	5.8	1,602	1,815	1,272	1,828	0.4	0.4	0.3	0.3
Tram	4.0	4.6	4.8	3.2	20	7	7.5	17	0.3	0.1	0.1	0.1
Rail	24.7	25.8	24.8	23.9	728	1,016	481	710	0.8	0.7	0.3	0.3
Taxi	3.0	4.5	4.4	3.6	11	29	39	51	0.4	0.6	0.4	0.3
<b>Total</b>					<b>7,216</b>	<b>7,816</b>	<b>5,950</b>	<b>6,249</b>				



Table 2-4: Student Carbon Footprint

Mode	Average Distance (miles)				Annual Estimated Total CO <sub>2</sub> e (tonnes)				Annual Estimates CO <sub>2</sub> e per Individual (tonnes)			
	2017	2019	2022	2023	2017	2019	2022	2023	2017	2019	2022	2023
Walk	1.0	1.1	1.1	1.0								
Mobility Scooter			2.3	2.3								
Cycle	1.9	2.1	2.4	3.6								
Motorcycle	3.6	12.2	8.2	18.2	4	51	55	20	0.2	0.7	0.3	0.2
Car Driver Alone	12.9	11.7	12.2	26.3	1,071	1,479	1,435	1,744	1.1	0.8	0.6	0.8
Car Driver with Passenger	0.9	8.2	8.2	14.7	3	101	88	160	0.1	0.3	0.2	0.3
Car Passenger	6.9	2.5	6.2	6.4	301	54	259	237	0.6	0.1	0.2	0.2
Bus	3.8	4.4	4.0	4.3	2,477	2,466	2,956	4,511	0.2	0.2	0.2	0.2
Tram	3.9	7.2	8.2	5.2	12	14	18.8	29	0.1	0.1	0.1	0.0
Rail	29.3	33.8	29.3	31.4	1,093	1,248	781.1	1,454	0.7	0.5	0.3	0.4
Taxi	1.5	2.8	3.5	3.6	32	122	317	248	0.1	0.3	0.3	0.4
<b>Total</b>					<b>3,923</b>	<b>5,535</b>	<b>5,910</b>	<b>8,403</b>				

Table 2-5: Change in Carbon Footprint between 2017 and 2023

	Estimated Annual Carbon Footprint (tonnes of CO <sub>2</sub> e)				Estimated Annual Carbon Footprint per member (tonnes of CO <sub>2</sub> e)			
	2017	2019	2022	2023	2017	2019	2022	2023
Staff	7,223	7,859	5,950	6,249	0.5	0.6	0.4	0.4
Student	5,265	5,999	5,910	8,403	0.1	0.2	0.1	0.2
<b>Overall</b>	<b>12,400</b>	<b>13,858</b>	<b>11,860</b>	<b>14,652</b>	<b>0.2</b>	<b>0.3</b>	<b>0.2</b>	<b>0.3</b>

Overall, the University Carbon Footprint is steadily growing. For staff (academic and non-academic combined) it has reduced since 2017, but for students it has increased. When comparing the Carbon Footprint per individual, for staff it has reduced from 0.5 to 0.4t CO<sub>2</sub>e, and for students it has increased from 0.2 to 0.3t CO<sub>2</sub>e. Both staff and student populations have grown over these time periods, staff population has grown by 20.5% and Students by 3.2%, since 2017. This suggests that although staff behaviour change has resulted in a reduction in carbon emissions, student behaviours have not changed the individual emissions, however the population growth has caused the overall Carbon Footprint to increase.

## 2.10 Active Travel Scheme Awareness

Respondents were asked about their awareness of sustainable transport initiatives which are provided by the university. The results are shown in **Figure 2.14**.

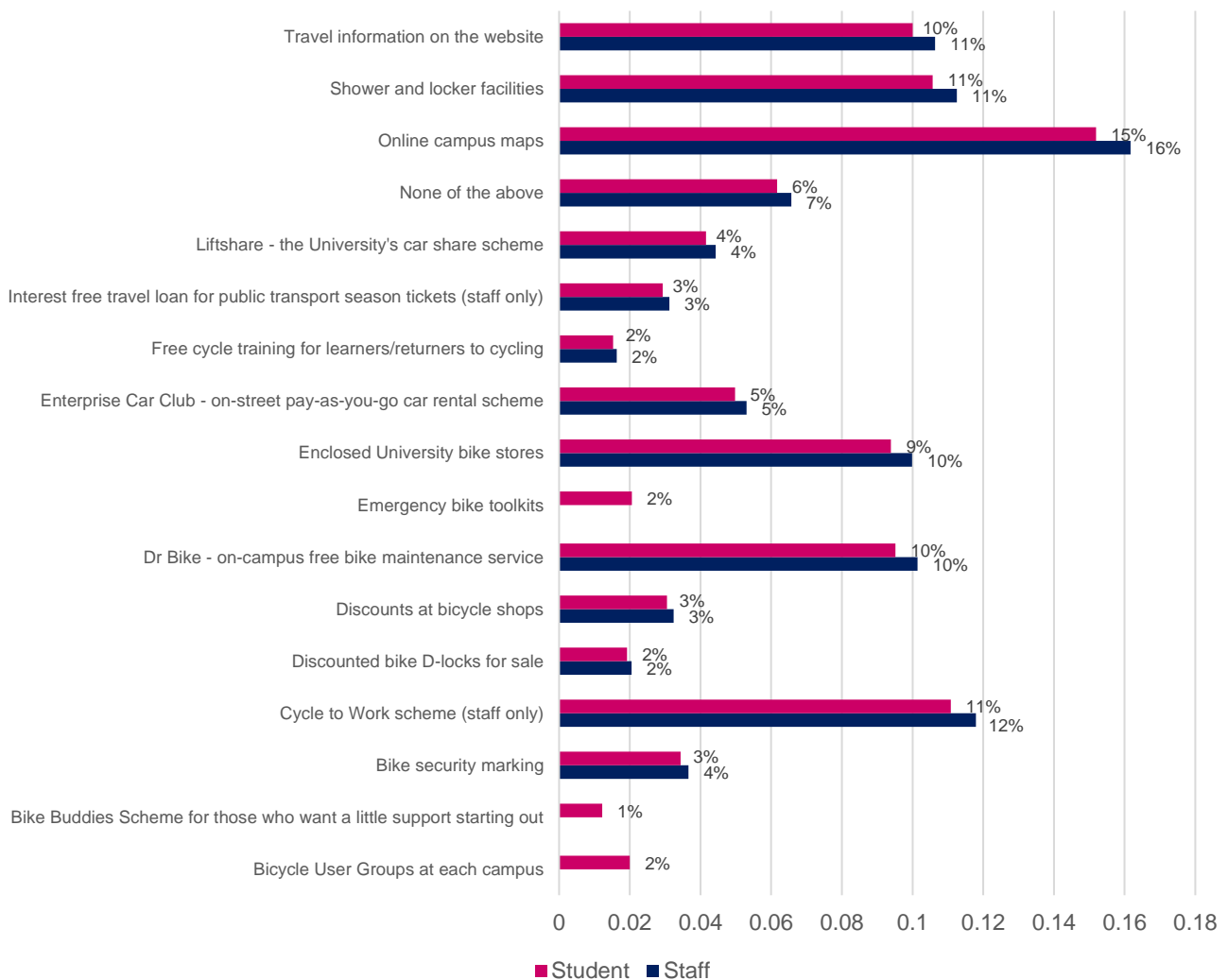


Figure 2-14: Active Travel Scheme Awareness

The results show that staff are most aware of the Online Campus Maps and least aware of the Free Cycle Training. Students are also most aware of the Online Campus Maps and are least aware of the Bike Buddies Scheme. Generally, staff have higher levels of scheme awareness than students. The number of students reporting they are aware of none of the mentioned initiatives fell by 13%, compared to the 2022 Travel Survey results.

### 2.10.1 Encouraging Walking

All respondents were asked what could be done to improve their journeys made by walking, running, or using a wheelchair or encourage them to use this mode of travel on a regular basis. The results are shown in **Figure 2.15**.

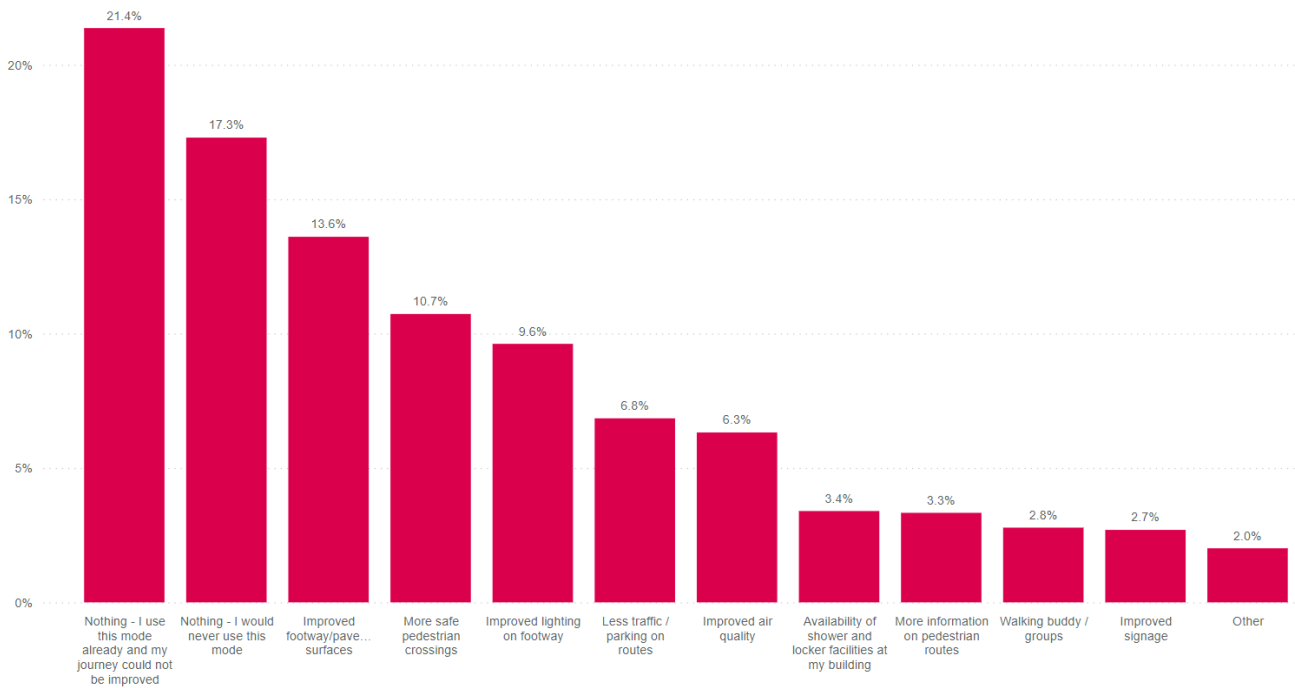


Figure 2-15: Encouraging Walking Solutions

The most common response was that nothing could be done to improve staff and students journey by walking, running, or wheeling. As in the 2022 Travel Survey, improvement to footways and pavement surfaces was the most commonly selected solution, followed by more safe pedestrian crossings (13.6% and 10.7% respectively). Of the soft measures within the university’s remit, improvements to shower and locker availability was the most commonly selected solution (3.4%).

### 2.10.2 Encouraging Cycling

All respondents were asked what could be done to improve their journeys made by bicycle or encourage them to use this mode of travel on a regular basis. The results are shown in **Figure 2.16**.

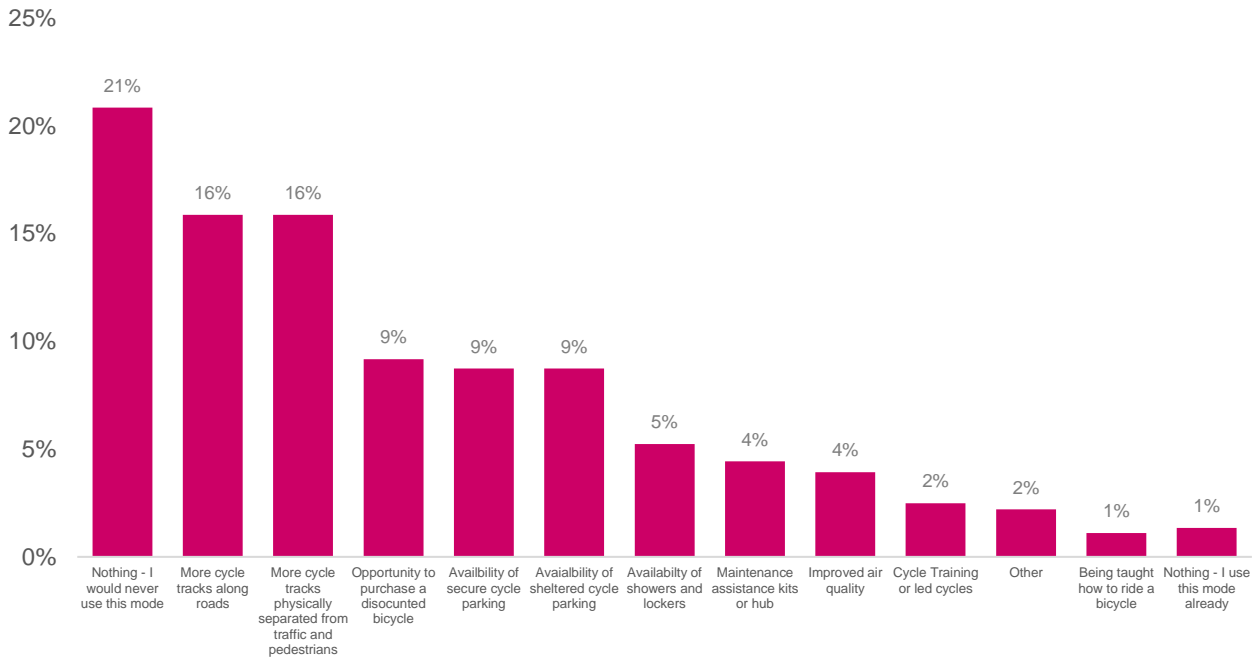


Figure 2-16: Encouraging Cycling Solutions

The most common response was that nothing could be done to encourage the respondent to cycle (21%). More segregated and on-road cycle infrastructure were the most commonly selected solutions (16% each), followed by ability to purchase a discount cycle (9%). Being taught how cycle was the least commonly selected solution, accounting for just 1% of votes, this was observed in the 2022 Travel Survey too.

## 2.11 Public Transport Satisfaction

### 2.11.1 Satisfaction with Bus Service

Staff and students were asked to rate their experience using the public bus, with regards to affordability, hours of operation, journey time, reliability, route, and timetabling. The results are shown in **Figure 2.17** for staff and **Figure 2.18** for students.

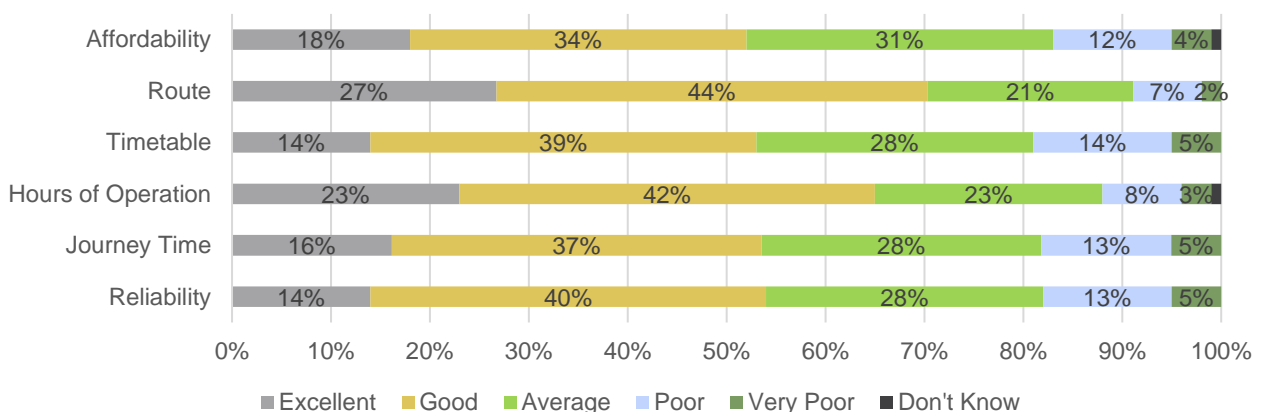


Figure 2-17: Staff Rating of Bus Journey

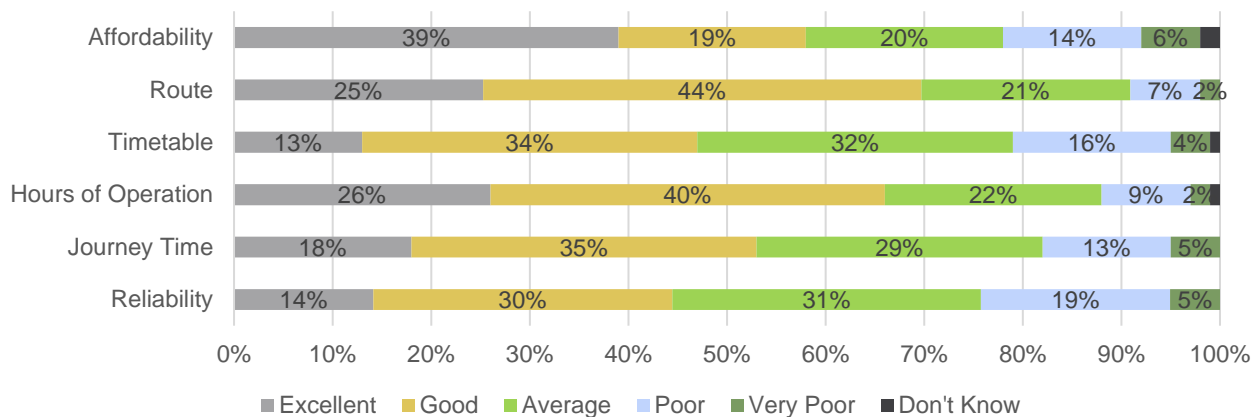


Figure 2-18: Student Rating of Bus Journey

Most staff and students reported the different aspects of their journey by bus as ‘Good’. Staff were particularly satisfied with route choice and hours of operation with 71% and 65% respectively rating them as ‘Good’ or ‘Excellent’. Students were also particularly satisfied with hours of operation, with 66% rating them as ‘Good’ or ‘Excellent’. 59% also rated Affordability as ‘Good’ or ‘Excellent’. This is an 8-percentage point increase on the 2022 Travel Survey results as is perhaps an indication of continued uptake in the free bus travel offered to under 22’s in Scotland.

Concerns were raised by staff regarding timetabling and journey time, with 19% and 18% respectively rating them as ‘Poor’ or ‘Very Poor’. Students were particularly concerned with reliability, with 21% rating it as ‘Poor’ or ‘Very Poor’.

Staff and students most frequently identified the following as improving their journey by public bus or encouraging them to use this mode of travel on a regular basis:

- More frequent services (19%);
- Improved reliability (16%); and
- Reduced journey time (15%).

Staff and students were also asked to specify the method of payment used on their bus journey. 65% of staff and 24% of students used contactless payment. 20% of staff and 23% of students used a Ridacard.

50% of students and 10% of staff reported using a National Entitlement Card, this includes those making use of the Under 22’s free bus travel scheme. When asked about awareness of the free under 22’s bus travel scheme, 82% of students and 70% of staff were aware.

### 2.11.2 Satisfaction with Train Service

Staff and students were asked to rate their experience using the rail service, with regards to affordability, hours of operation, journey time, reliability, route, and timetabling. The results are shown in **Figure 2.19** for staff and **Figure 2.20** for students.

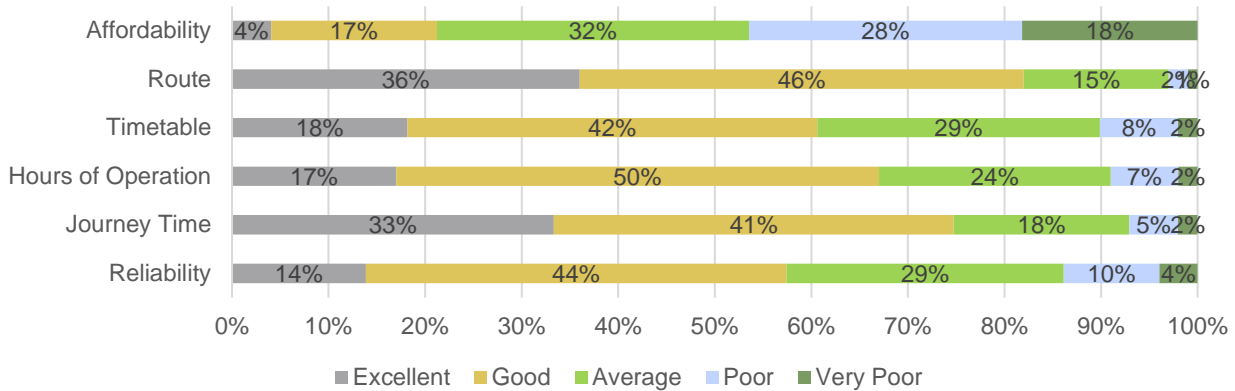


Figure 2-19: Staff Rail Travel Satisfaction

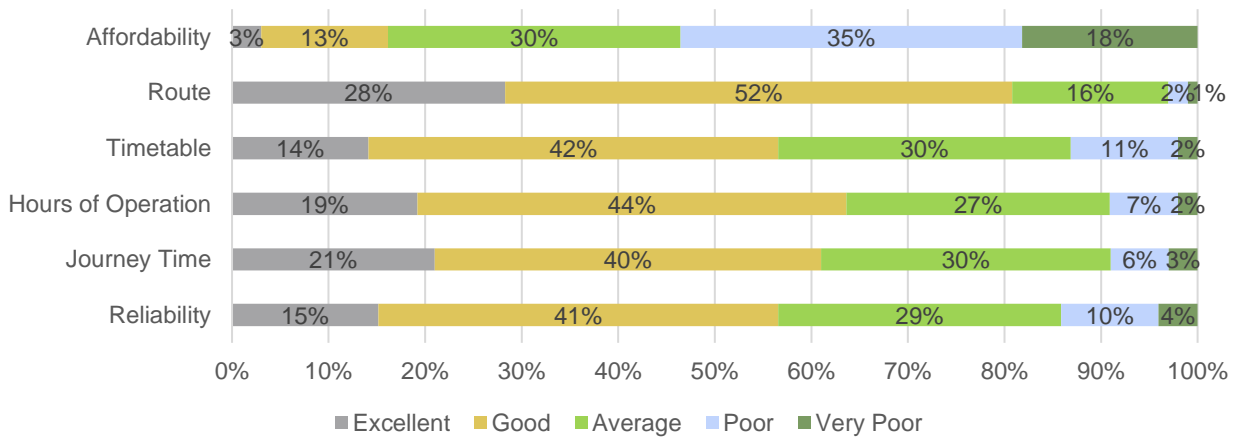


Figure 2-20: Student Rail Travel Satisfaction

Most respondents rated the different aspects of their rail journey as ‘Good’ or ‘Excellent’, except in regard to affordability, where both staff and students rated it low, with 46% of staff 53% of students rating it as ‘Poor’ or ‘Very Poor’. Route choice scored highest amongst staff and students, with 82% of staff and 80% of students rating it as ‘Good’ or ‘Excellent’.

Staff and students most frequently identified the following as improving their journey by train or encouraging them to use this mode of travel on a regular basis:

- More affordable travel (17%); and
- More frequent services (6%).

Scotrail’s trial of the removal of peak time ticket fares may help contribute to more staff and students feeling that rail travel is an affordable mode of travel.

### 2.11.3 Satisfaction with Tram Travel

Staff and students were asked to rate their experience using the tram, with regards to affordability, hours of operation, journey time, reliability, route, and timetabling. The results are shown in **Figure 2.21** for staff and **Figure 2.22** for students.

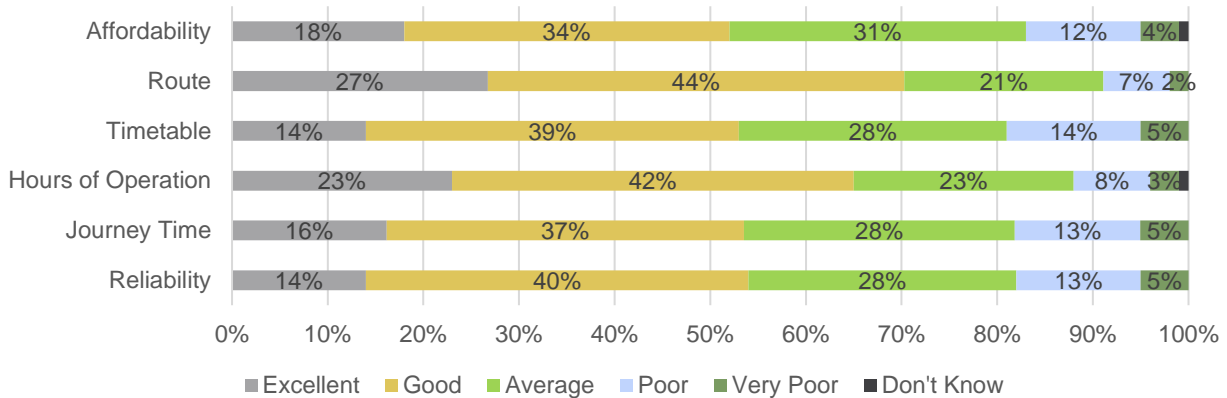


Figure 2-21: Staff Tram Travel Satisfaction

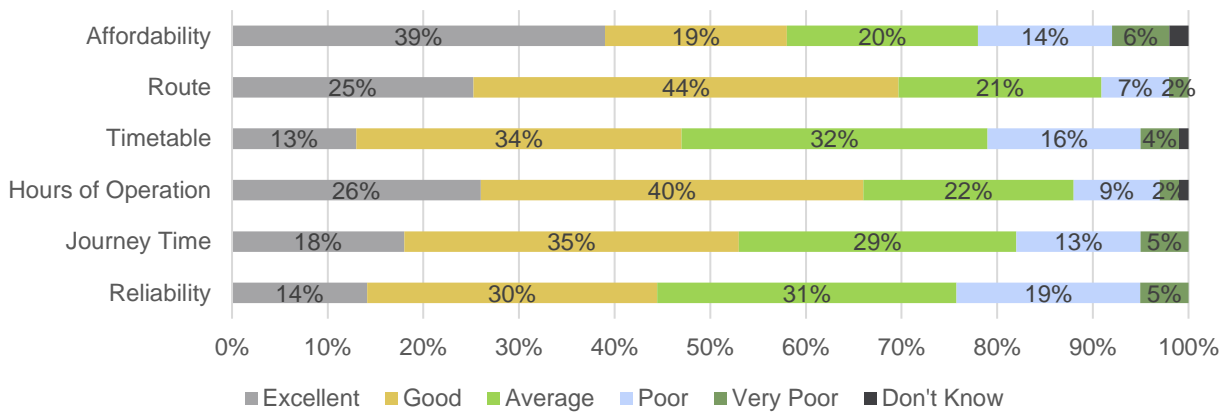


Figure 2-22: Student Tram Travel Satisfaction

The majority of staff rated all aspects of Tram travel as ‘Good’ or ‘Excellent’. The highest rated was hours of operation, with 65% rating it as ‘Good’ or ‘Excellent’. The lowest rated was timetable and journey time, with 19% and 18% respectively rating them as ‘Poor’ or ‘Very Poor’.

The majority of students rated hours of operation and routing highly, with 66% and 69% respectively rating them as ‘Good’ or ‘Excellent’. However, 24% rated reliability as ‘Poor’ or ‘Very Poor’.

Staff and students most frequently identified the following as improving their journey by tram or encouraging them to use this mode of travel on a regular basis:

- Direct service within walking distance of home (10%); and
- More affordable travel (9%).

## 2.12 Low Emission Zone Compliant Vehicles

The City of Edinburgh Council introduced a Low Emissions Zone (LEZ) within the city centre on the 31<sup>st</sup> of May 2022. Enforcement is due to begin 1<sup>st</sup> June 2024. All survey respondents who answered that they owned or leased a private vehicle for personal use were asked to specify whether their vehicle would be LEZ compliant. The results are shown in **Figure 2.23**.



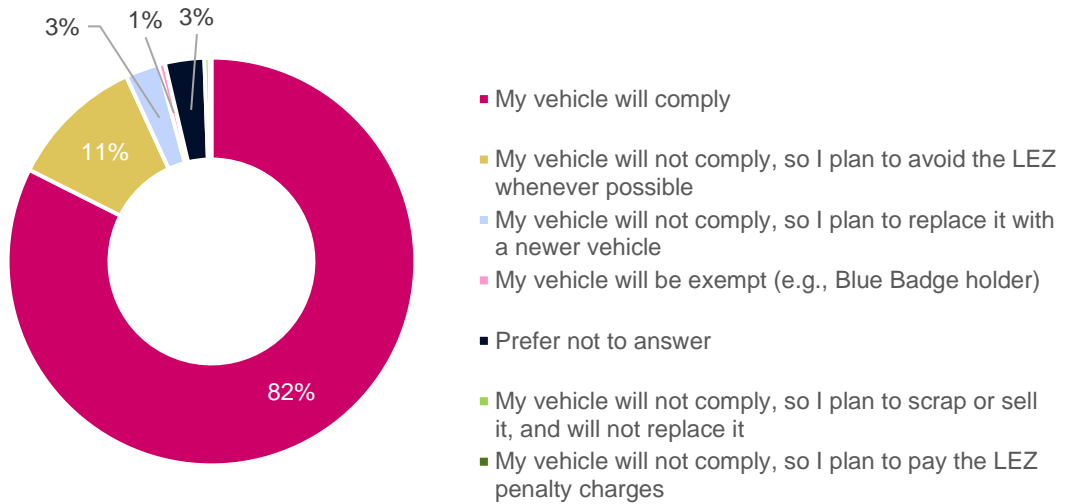


Figure 2-23: LEZ Vehicle Compliance

The results show that the majority of respondents current vehicles will be compliant, and not be required to pay a penalty when driving within the LEZ. Of those whose vehicle is not compliant, the majority plan to avoid driving within the LEZ.

## 3 Site Specific: Central Area

A total of 2,443 staff (academic and non-academic combined) based at the Central Area responded to the survey, which represents 25% of all staff based at Central Area. A total of 2,372 students based at the Central Area also responded, this represents 6% of all students at the University of Edinburgh.

Central Area respondents represent the greatest proportion of Travel Survey participants, and the findings are summarised in this section.

### 3.1 Mode Share

**Table 3.1** shows the overall, student and staff mode share for the Central Area.

Table 3-1: Central Area Mode Share 2023

Mode	Staff	Student	Overall
Walking / Wheeling	30.4%	48.5%	39.4%
Cycle	11.1%	4.8%	8.0%
Mobility Scooter	0.04%	0.1%	0.1%
Public Bus	26.4%	26.7%	26.5%
Shuttle Bus	0.4%	2.7%	1.5%
Tram	0%	0.6%	0.8%
Train	16.3%	9.7%	13.0%
Taxi	0.2%	0.5%	0.4%
Motorcycle	0.3%	0.04%	0.1%
Car Driver with Passenger(s)	2.1%	0.5%	1.3%
Car Passenger	1.5%	1.0%	1.3%
Car Driver Alone	9.3%	2.1%	5.7%

### 3.2 Staff

Walking remains the most common mode of travel for staff based at the Central Area (30%), however this is a 3% decrease on the 2022 results. Rates of driving alone have fallen by 4% since 2022, indicating a return to pre-pandemic levels of 8%. Public transport patronage has increased for both bus (+5%) and train (+4%) travel.

### 3.3 Students

The majority of students based at the Central Area walk to campus (49%), followed by bus travel (27%). Rates of those traveling by car, motorcycle and cycling have remained unchanged from the 2022 Travel Survey results. However, rates of public transport patronage increased by 5%.

## 3.4 Encouraging Alternative Modes

### 3.4.1 Active Travel

Staff and students based at Central Area most frequently identified the following as improving their journey by walking, running or wheelchair or encouraging them to use this mode of travel on a regular basis:

- Improved footway / pavement / footpath surfaces (14%);
- More safe pedestrian crossings (12%); and
- Improved lighting on footways (10%).

Staff and students based at Central Area most frequently identified the following as improving their journey by bicycle or encouraging them to use this mode of travel on a regular basis:

- More cycle tracks, segregated from traffic and pedestrians (15%);
- Availability of secure cycle parking (9%); and
- Maintenance assistance / kits / hubs (4%).

## 3.5 Catchment Mapping

The following section demonstrates the accessibility of key services and locations within a 20-minute walk, 30-minute cycle, 60-minute drive and 60-minute journey by public transport from Central Area. Valid postcodes, and the corresponding main mode of travel for staff and students have also been mapped for those who reported Central Area as their main campus. This methodology has been repeated across all the six main campuses.

All catchments are based on travel times during a weekday AM peak of 8:00-9:00am. The time bands chosen for walking, cycling and public transport relate to recommended distances for reasonable journeys in national guidance. The catchment for public transport considers the time to reach the services by foot. The time band for car travel was chosen to allow comparison to public transport.

20-minute Neighbourhood analysis has also been included, showing the number of key amenities located within a 20-minute walking round trip of Central Area. The criteria used for the analysis have been modified from the Scottish Government recommendations, to suit a university campus.

The catchment mapping will be used to indicate to the university areas of gaps in provision or to highlight areas that are well connected and where increased levels of sustainable travel could be achieved.

### 3.5.1 Walking Catchment

**Figures 3.1** and **3.2** make clear the walking catchment from Central Area for staff and students respectively. The walking catchment has isochrones of 5, 10 and 20-minute intervals.

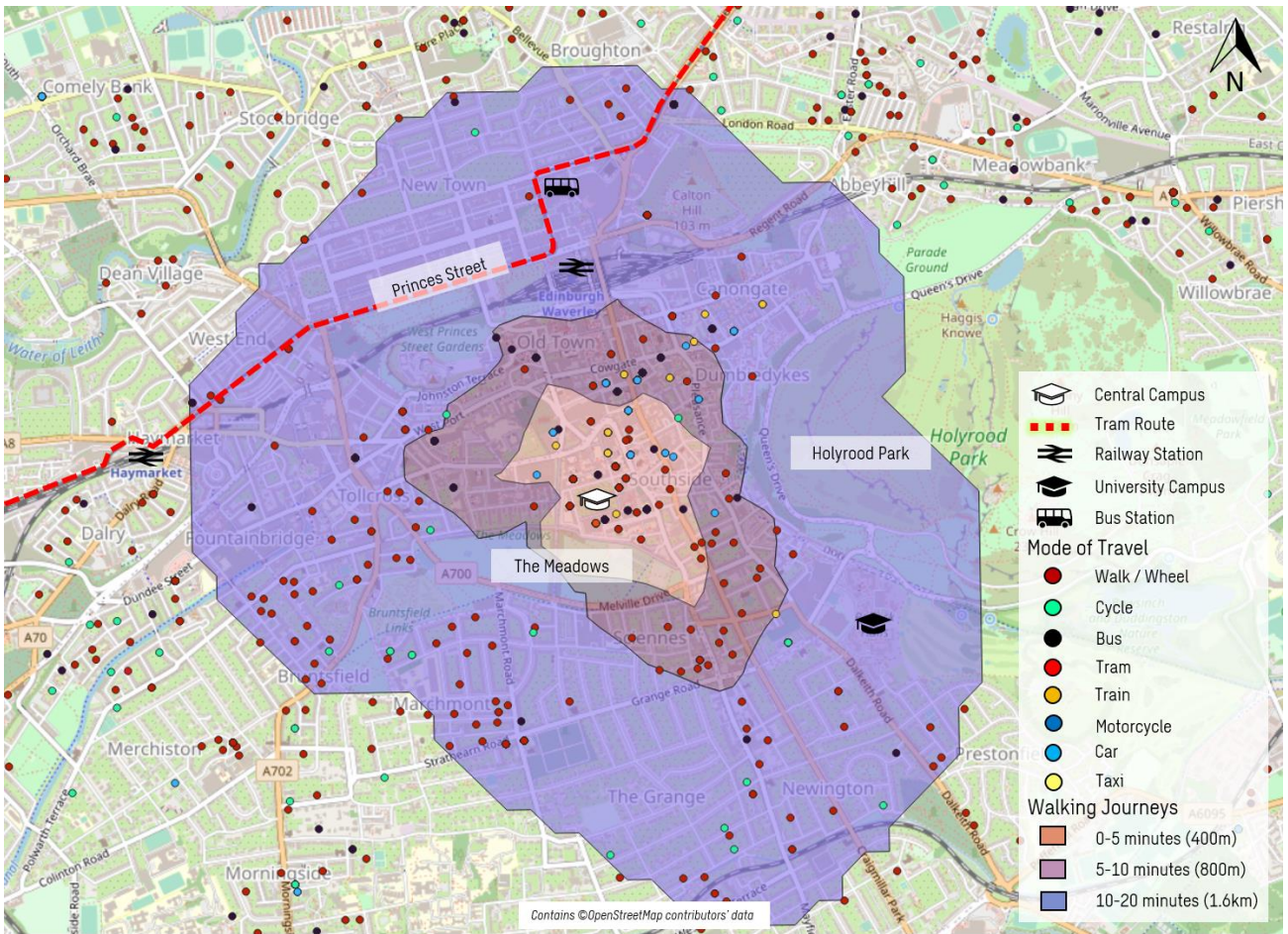


Figure 3-1: Staff 20-minute Central Area Walking Catchment



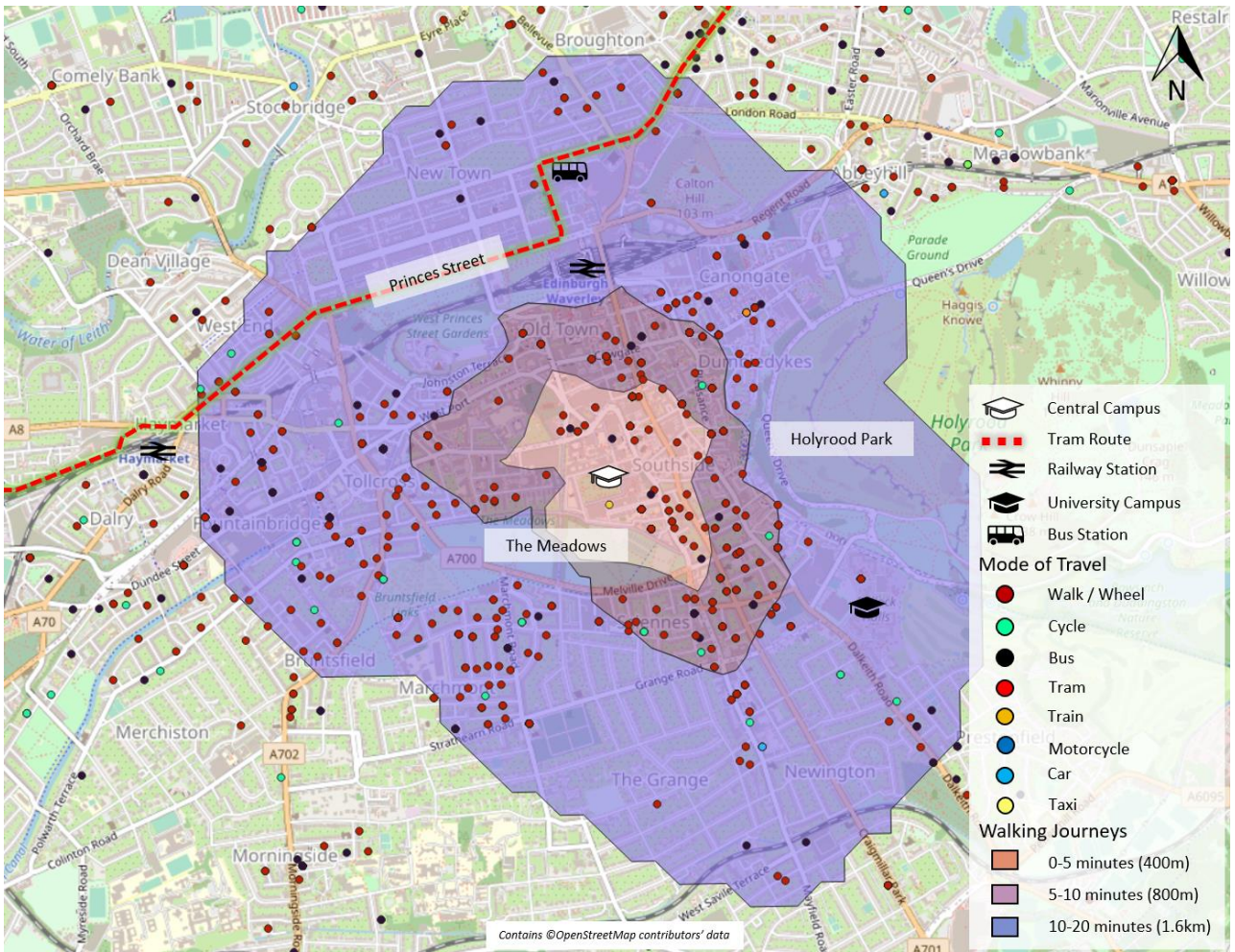


Figure 3-2: Student 20-minute Central Area Walking Catchment

From the figures, most of Central Edinburgh can be accessed within a 20-minute walk, with student accommodation in Pollock Halls and Newington also within the catchment.

Both Edinburgh Waverley and Haymarket Railway Stations, as well as Edinburgh Bus Station, are accessible on foot within 20-minutes.

The postcode mapping highlights a high proportion of both staff and students walking to campus, both from within and out with the 20-minute catchment. Of the staff with postcodes within the walking catchment, 12% walk, compared to 39% of students.

### 3.5.2 Cycling Catchment

Figures 3.3 and 3.4 highlight the cycling catchment from Central Area, for staff and students respectively. The cycling catchment has isochrones of 10, 20 and 30-minute intervals.

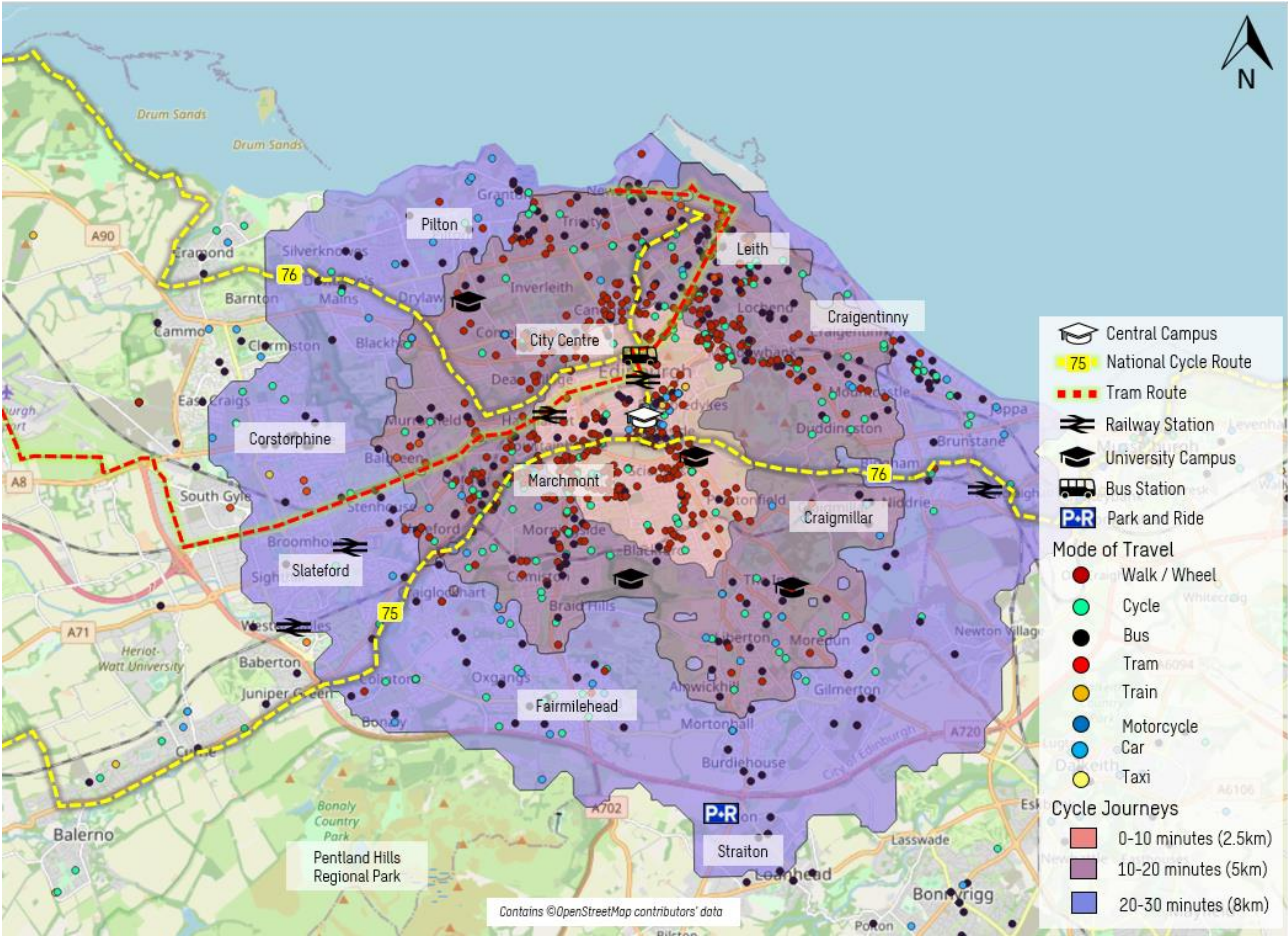


Figure 3-3: Staff 30-minute Central Area Cycling Catchment



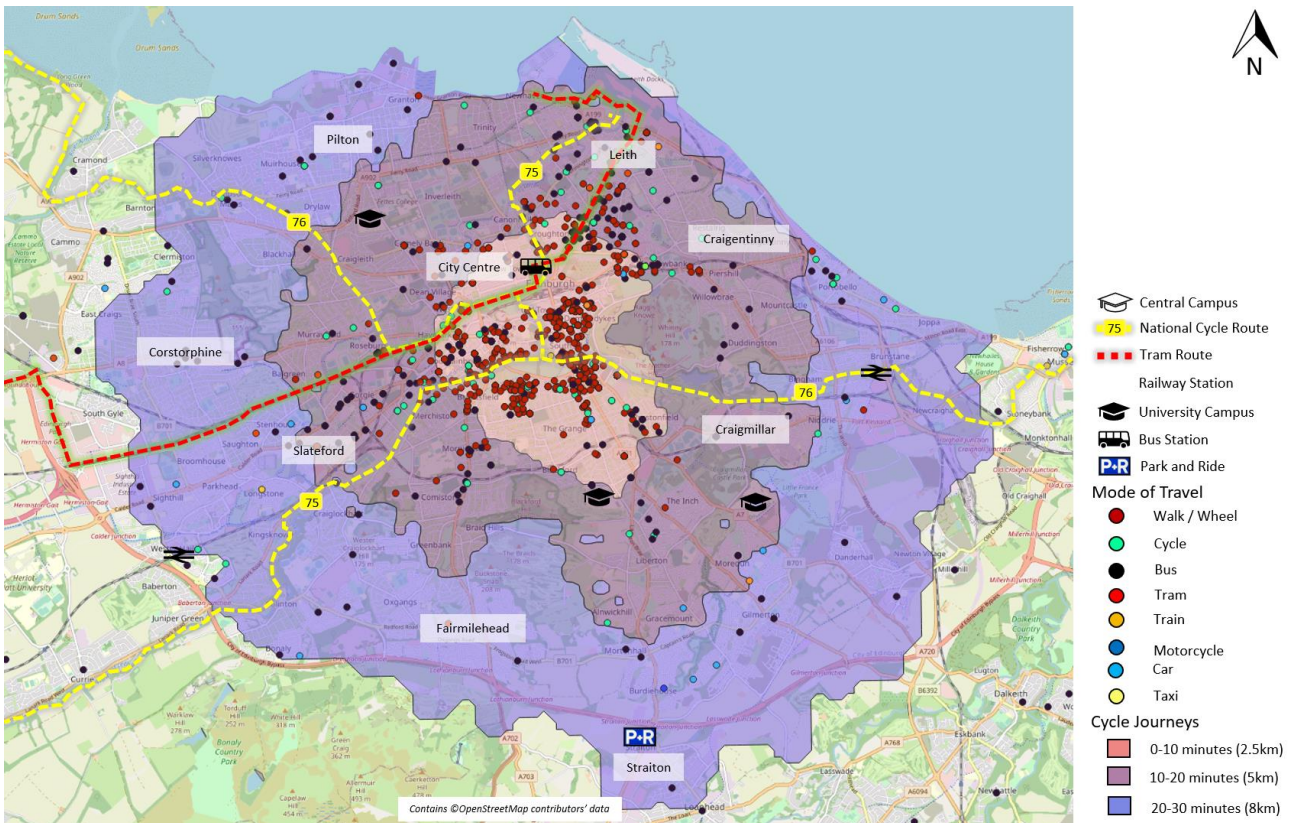


Figure 3-4: Student 30-minute Central Area Cycling Catchment

From the figures, the vast majority of Edinburgh is within a 30-minute cycle of Central Area with Leith, Musselburgh, Straiton and South Gyle all accessible. Edinburgh city centre and the Marchmont area of Edinburgh are within a 10-minute cycle.

National cycle routes of 75 and 76 provide safe cycling conditions for active modes users around the city of Edinburgh and these routes pass Central Area.

The postcode mapping shows a higher proportion of staff living within the catchment cycle, compared to students. Walking and travelling by bus are the most common modes of travel for students living within the cycle catchment.

### 3.5.3 Public Transport Catchment

Figures 3.5 and 3.6 highlight the public transport catchment from Central Area, for staff and students respectively. The public transport catchment has isochrones of 20, 40 and 60-minute intervals.

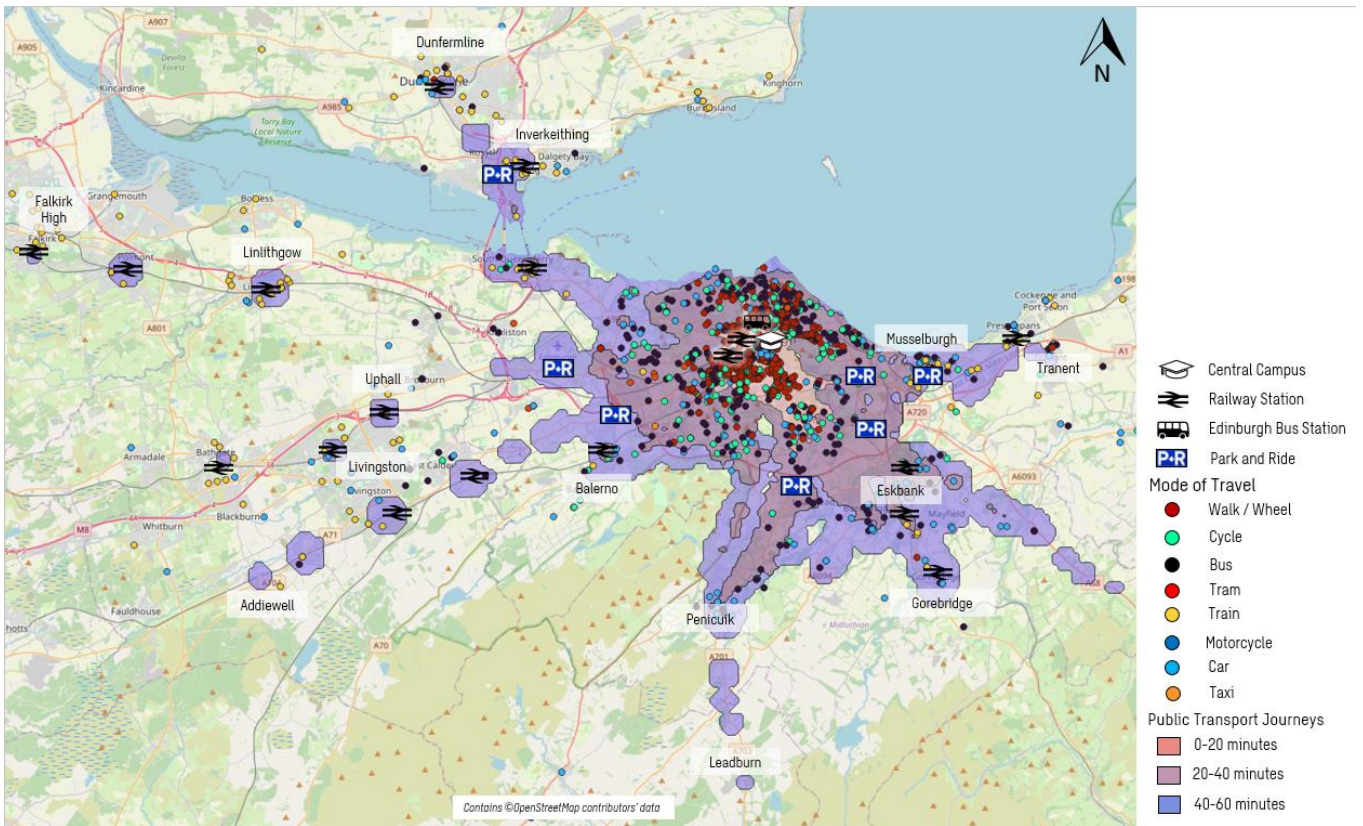


Figure 3-5: Staff 60-minute Central Area Public Transport Catchment



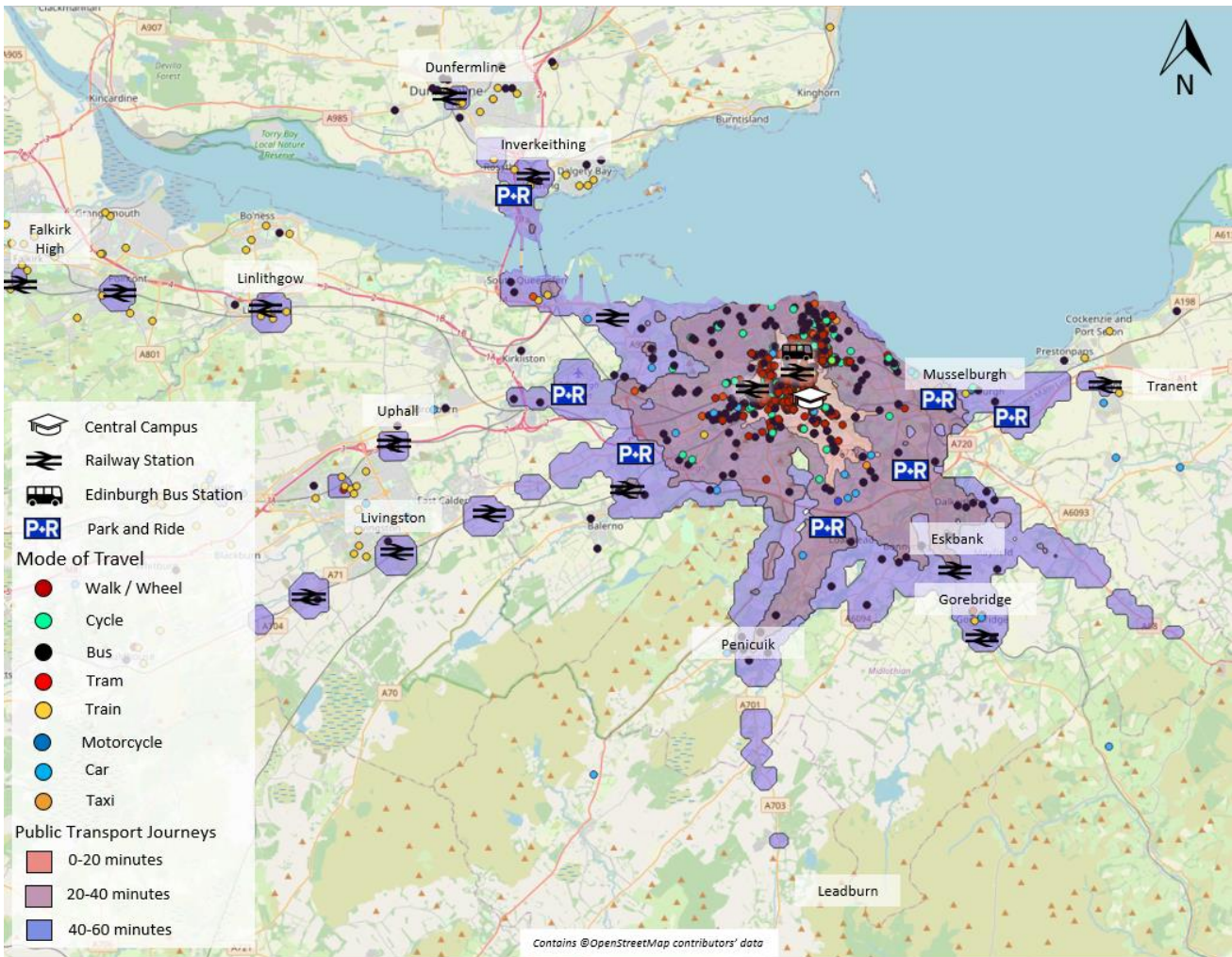


Figure 3-6: Student 60-minute Central Area Public Transport Catchment

From the figures, Dunfermline, Tranent, Leadburn and Falkirk High are all within a 60-minute public transport journey from Central Area. Areas of Newhaven, Musselburgh, Eskbank and Penicuik, South Gyle are all within a 40-minute journey.

Much of the Edinburgh City Centre is accessible within a 20-minute public transport journey, with connections to Edinburgh Tram also within this timeframe.

Clusters of staff and students travelling by train can be observed along the Train line to Glasgow, through Livingston, and the train line to Stirling through Linlithgow and Falkirk. Of those with postcodes within the catchment, 29% of staff and 25% of students use public transport.

### 3.5.4 Motorised Vehicle Catchment

**Figures 3.7** and **3.8** highlight the motorised vehicle catchment from the Central Area, for staff and students respectively. The motorised vehicle catchment has isochrones of 20, 40 and 60-minute intervals.

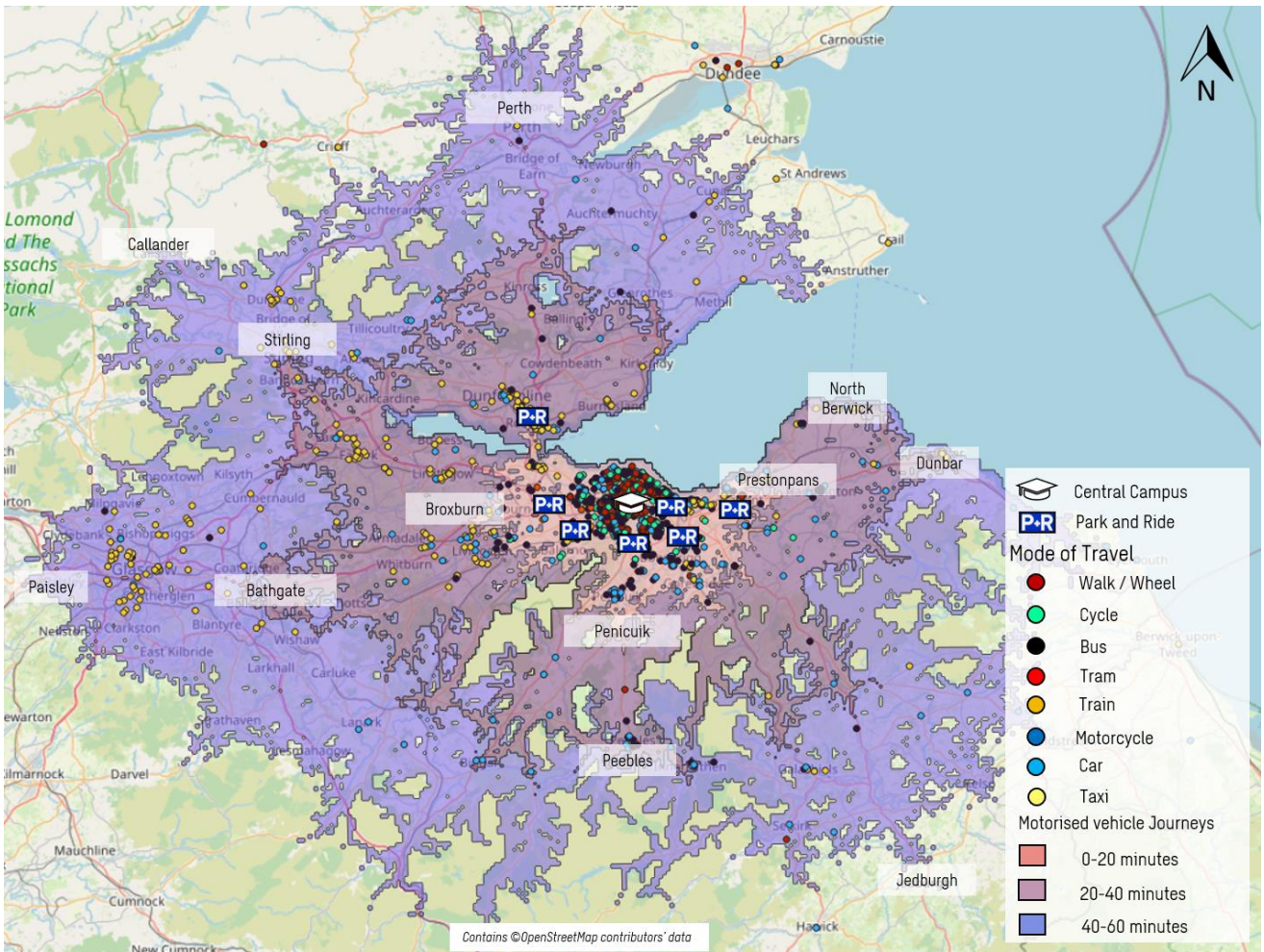


Figure 3-7: Staff 60-minute Central Area Motorised Vehicle Catchment



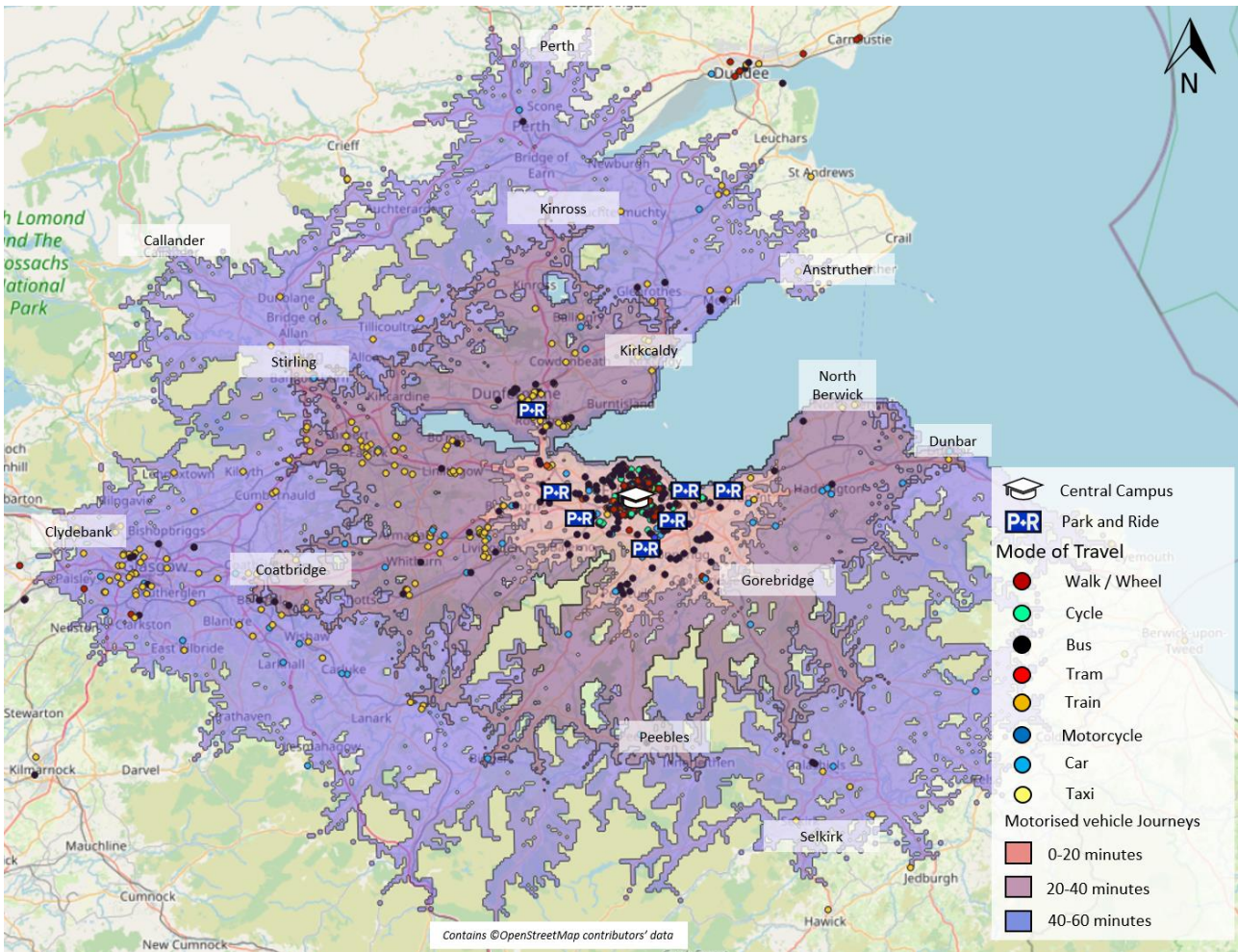


Figure 3-8: Student 60-minute Central Area Motorised Vehicle Catchment

From the figures, large areas of East Lothian, Midlothian, West Lothian, and Fife are all within the 40-minute driving catchment.

The park and rides surrounding Edinburgh city bypass are within a 20-minute drive of Central Area along with Leith, Prestonpans, Penicuik and Kirkliston.

Clusters of those travelling by car are observed more often amongst those living closer to campus. Of those living within the 60-minute catchment, very few are reside close to others travelling by car.

### 3.5.5 20-minute Neighbourhood Analysis

**Figure 3.9** reviews the number of 20-minute neighbourhood criteria within a 20-minute round-trip of Central Area. The catchment has isochrones of 2, 4, 6, 8 and 10-minute intervals.



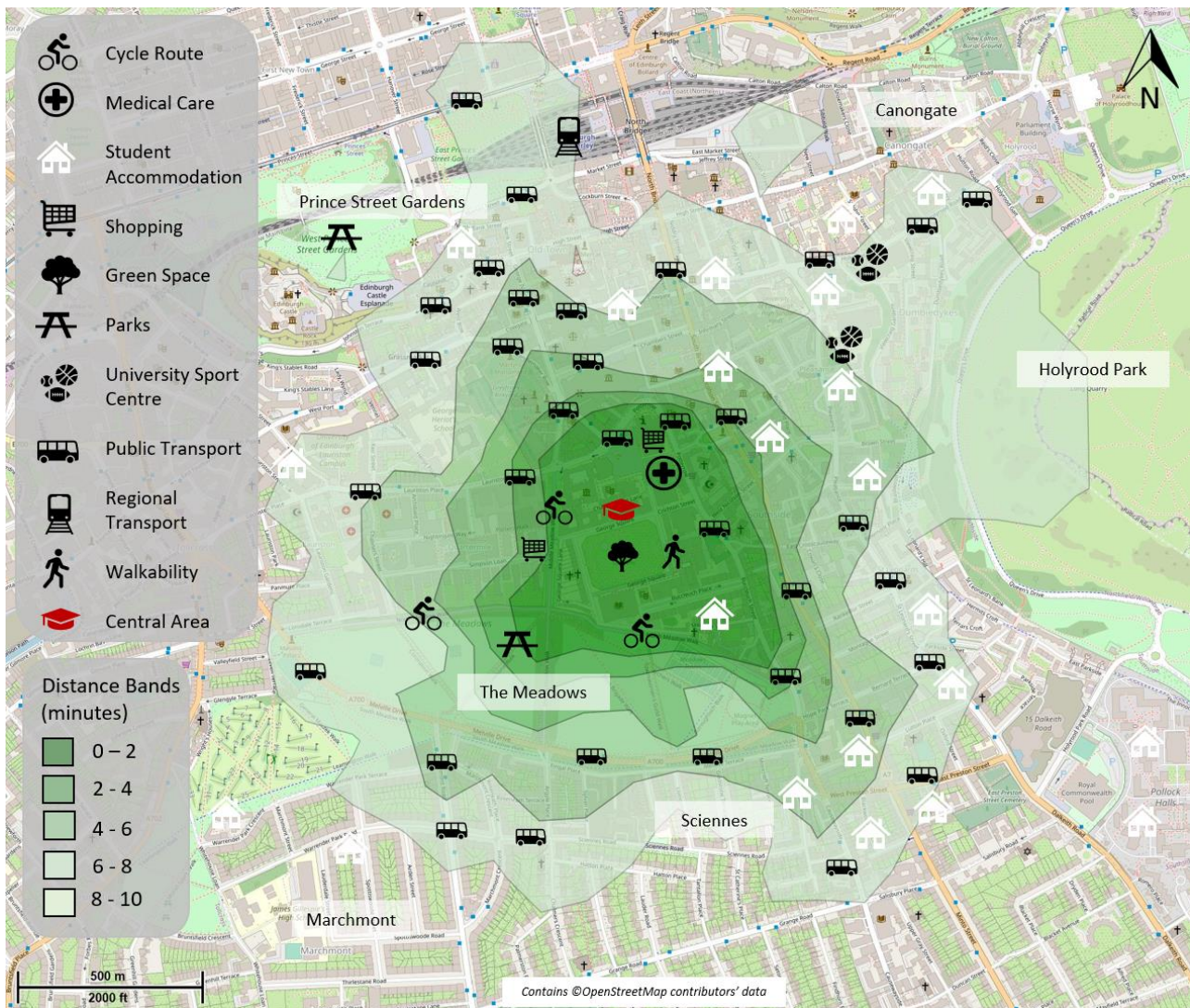


Figure 3-9: 20-minute Neighbourhood Analysis Central Area

From **Figure 3.9**, a considerable amount of the university accommodation is within a 10-minute walk of Central Area. Amenities such as shops, green space and a medical centre are less than a 4-minute walk.

Several bus stops are very accessible from Central Area. Edinburgh Waverley Railway Station can be accessed on foot within 10-minutes.

## 4 Site Specific: King's Buildings

A total of 610 staff (academic and non-academic combined) based at the King's Buildings responded to the survey, which represents 18% of all staff based at King's Buildings. A total of 1,068 students based at King's Buildings also responded, this represents 3% of all students at the University of Edinburgh.

King's Buildings respondent findings are summarised in this section.

### 4.1 Mode Share

**Table 4.1** shows the overall, student and staff mode share for King's Buildings.

Table 4-1: King's Buildings Mode Share 2023

Mode	Staff	Student	Overall
Walking / Wheeling	19.5%	20.1%	19.9%
Cycle	23.8%	14.8%	18.0%
Mobility Scooter	0%	0%	0%
Public Bus	20.3%	30.9%	27.1%
Shuttle Bus	1.8%	24.1%	16.1%
Tram	0.2%	0.1%	0.1%
Train	3.3%	4.1%	3.8%
Taxi	0.2%	0%	0.4%
Motorcycle	0.2%	0.4%	0.3%
Car Driver with Passenger(s)	4.6%	1.3%	2.5%
Car Passenger	2.3%	0.4%	1.1%
Car Driver Alone	23.3%	3.2%	10.4%

### 4.2 Staff

The most common mode of travel for staff based at King's Buildings is cycling (24%), followed by driving alone (23%) and walking / wheeling (20%). These results are reflective of those observed in 2022.

The number of staff travelling by bus has increased by 5 percentage points, returning to similar levels observed prior to COVID.

### 4.3 Students

More than a third of students based at King's Buildings travel actively to campus (35%), either walking, wheeling, or cycling. Rates of walking fell in the past year by 13 percentage points while rates of cycling rose by 3 percentage points.

Bus patronage has also risen considerably, from 19% in 2019 to 31% in 2023.

Rates of car travel amongst students based at King's Buildings has remained similar to those observed in 2022.

## 4.4 Encouraging Alternative Modes

### 4.4.1 Active Travel

Staff and students based at King's Buildings most frequently identified the following as improving their journey by walking, running or wheelchair or encouraging them to use this mode of travel on a regular basis:

- Improved footway / pavement / footpath surfaces (14%);
- More safe pedestrian crossings (11%); and
- Improved lighting on footways (8%).

Staff and students based at King's Buildings most frequently identified the following as improving their journey by bicycle or encouraging them to use this mode of travel on a regular basis:

- More cycle tracks, segregated from traffic and pedestrians (18%);
- Opportunity to purchase discounted cycle (10%); and
- Availability of secure cycle parking (8%).

## 4.5 Catchment Mapping

The following section demonstrates the accessibility of key services and locations within a 20-minute walk, 30-minute cycle, 60-minute drive and 60-minute journey by public transport from King's Buildings. 20-Minute Walking Catchment

### 4.5.1 Walking Catchment

**Figures 4.1** and **4.2** make clear the walking catchment from King's Buildings, for staff and students respectively. The walking catchment has isochrones of 5, 10 and 20-minute intervals.



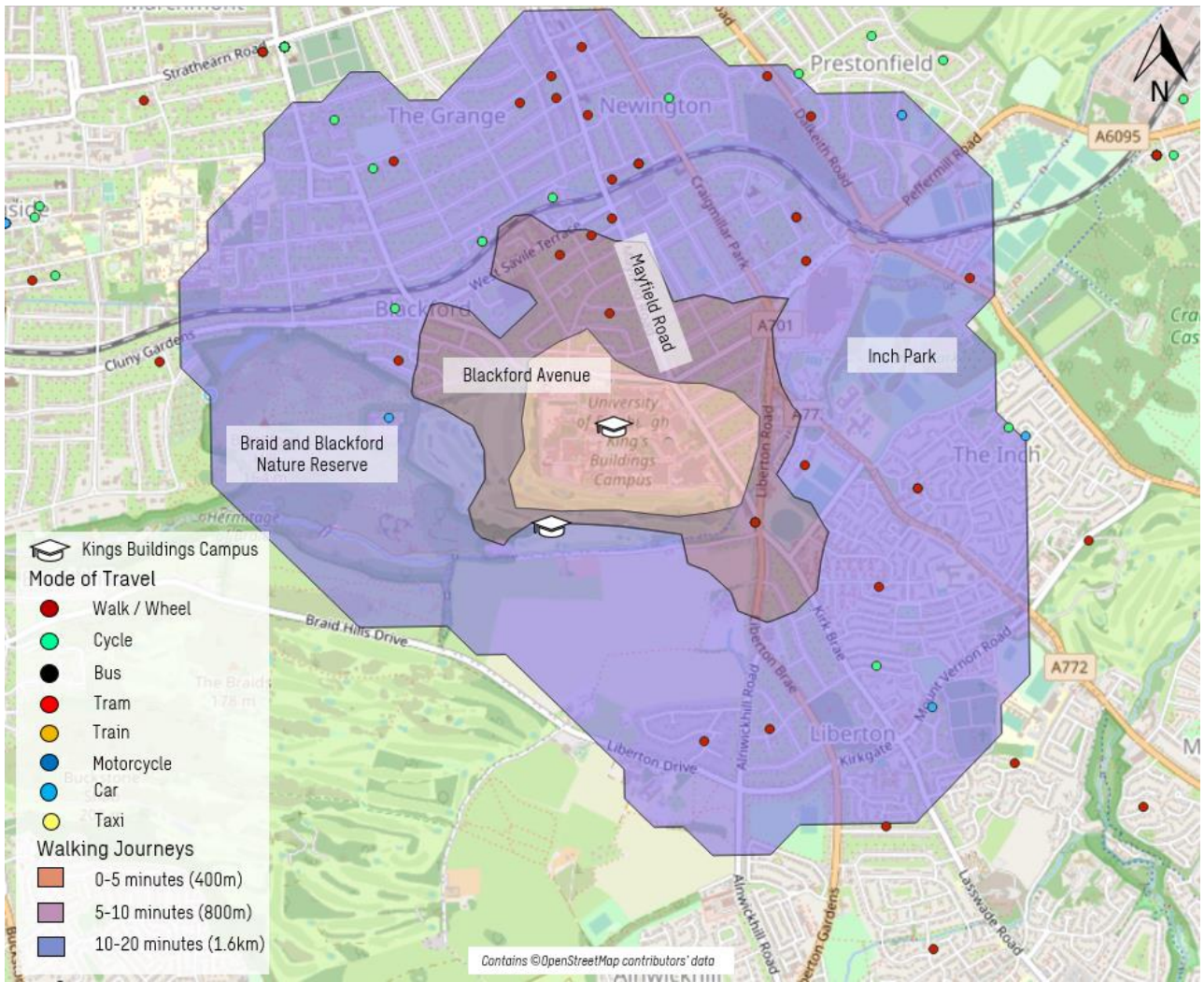


Figure 4-1: Staff 20-minute King's Buildings Walking Catchment

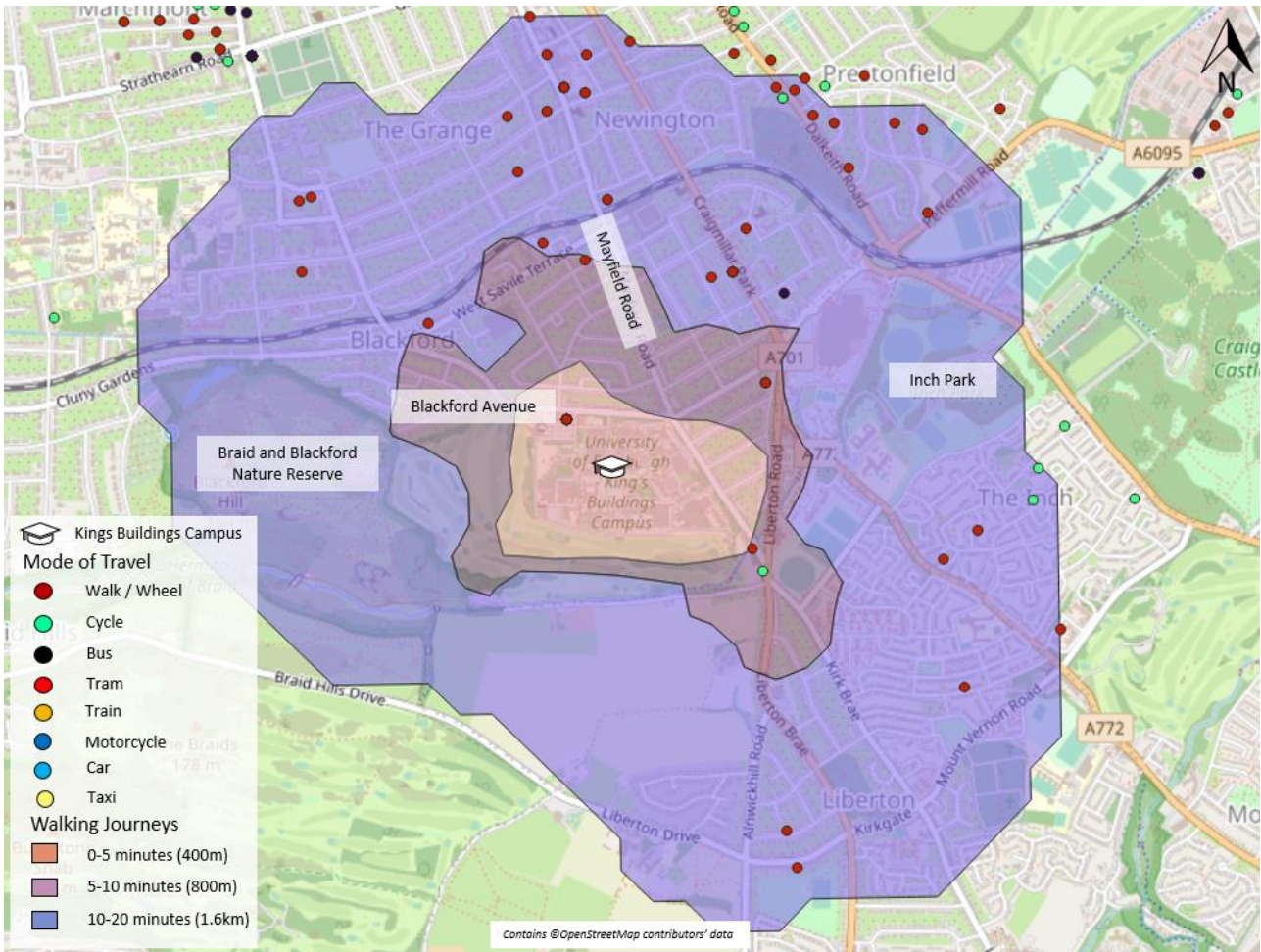


Figure 4-2: Student 20-minute King's Buildings Walking Catchment

Figure 4.1 and 4.2 show that student accommodation in Newington can be accessed within a 20-minute walk, with the student accommodation near Cameron Toll within a 10-minute walk. Kitchener House accommodation is less than 10-minutes from King's Buildings.

There are also numerous bus stops both within campus and along Mayfield Road and Blackford Avenue, offering connections throughout the city. Of those living within the walking catchment, 6% of staff and 5% of students walk to King's Buildings.

#### 4.5.2 Cycling Catchment

Figures 4.3 and 4.4 highlight the cycling catchment from King's Buildings, for staff and students respectively. The cycling catchment has isochrones of 10, 20 and 30-minute intervals.



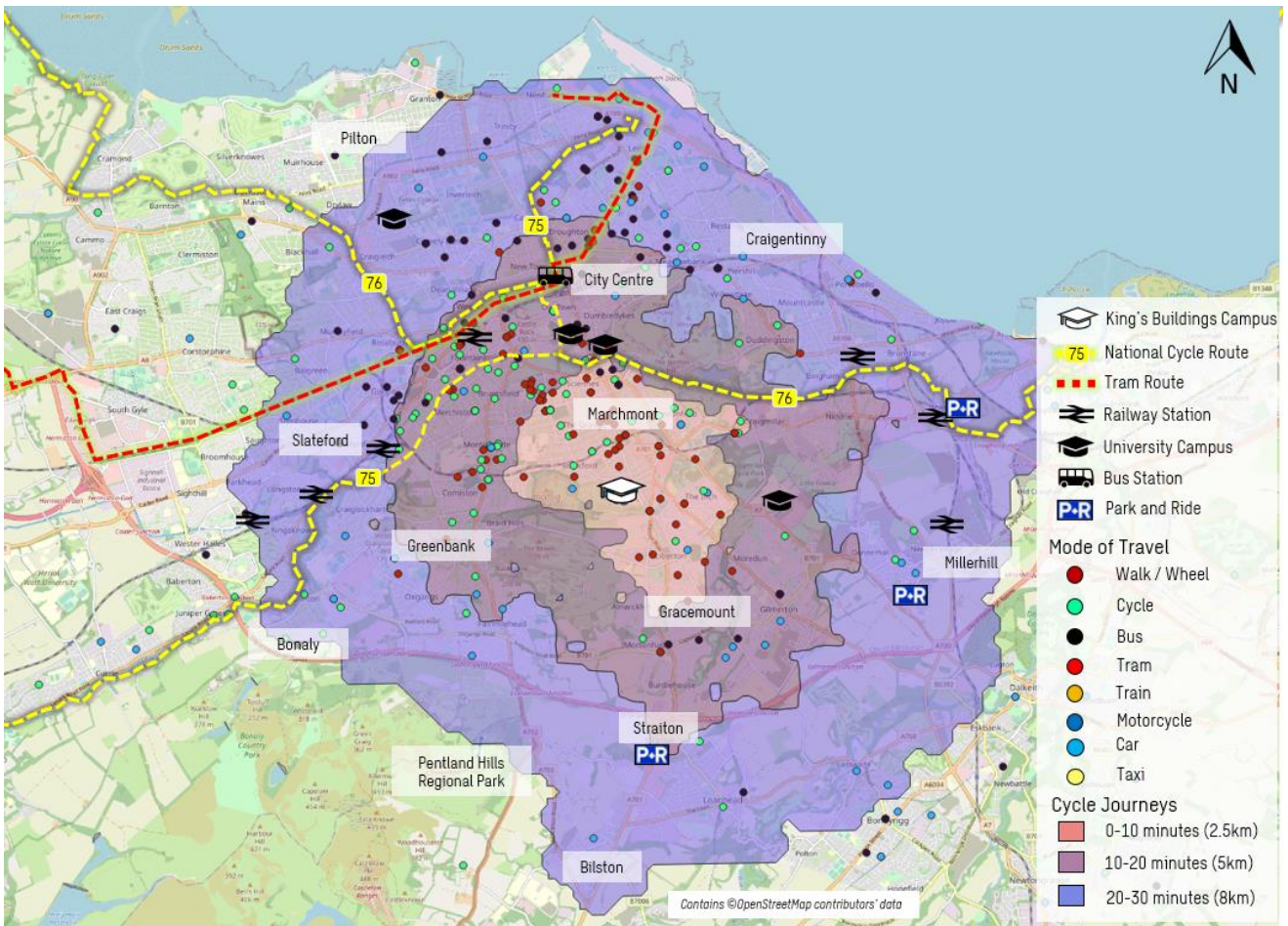


Figure 4-3: Staff 30-minute King's Buildings Cycling Catchment

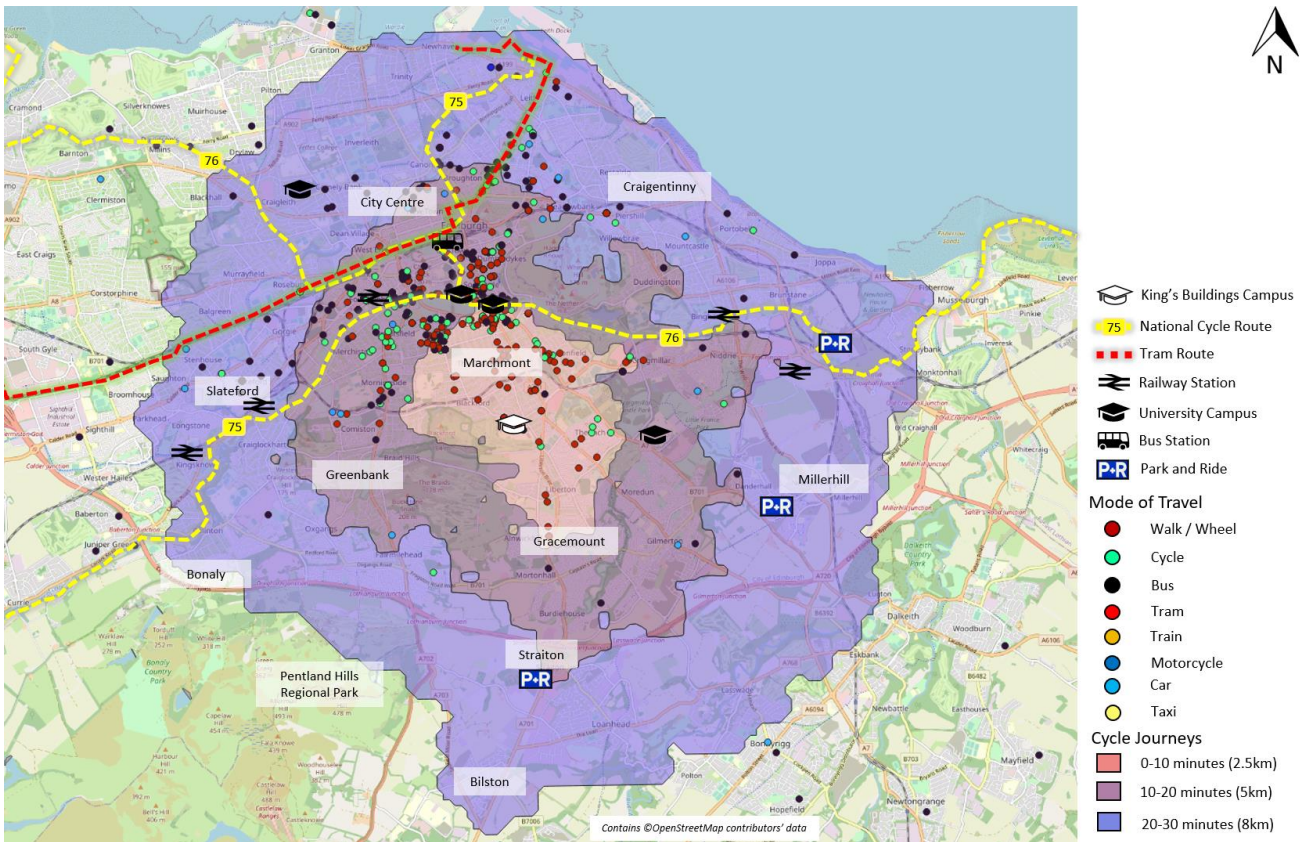


Figure 4-4: Student 30-minute King's Buildings Cycling Catchment

From **Figure 4.3** and **4.4**, the vast majority of Edinburgh, with the north-west as an exception, is within a 30-minute cycle of King's Buildings with Leith, Musselburgh, Bilston and Slateford all accessible. The Marchmont and Gracemount area of Edinburgh are within a 10-minute cycle.

National cycle routes 75 and 76 provide safe cycling conditions for active modes users around the city, there is also Quiet Route 6 that runs between King's Buildings and the Central Area campus.

Within the cycling catchment, for both staff and students, there is a variation in the mode of travel, including travel by motorised vehicle. Despite 71% of staff postcodes being within the cycling catchment, only 19% cycle. 89% of student's postcodes are within the cycling catchment, however only 15% cycle to King's Buildings.

### 4.5.3 Public Transport Catchment

**Figures 4.5** and **4.6** highlight the public transport catchment from King's Buildings. The public transport catchment has isochrones of 20, 40 and 60-minute intervals.



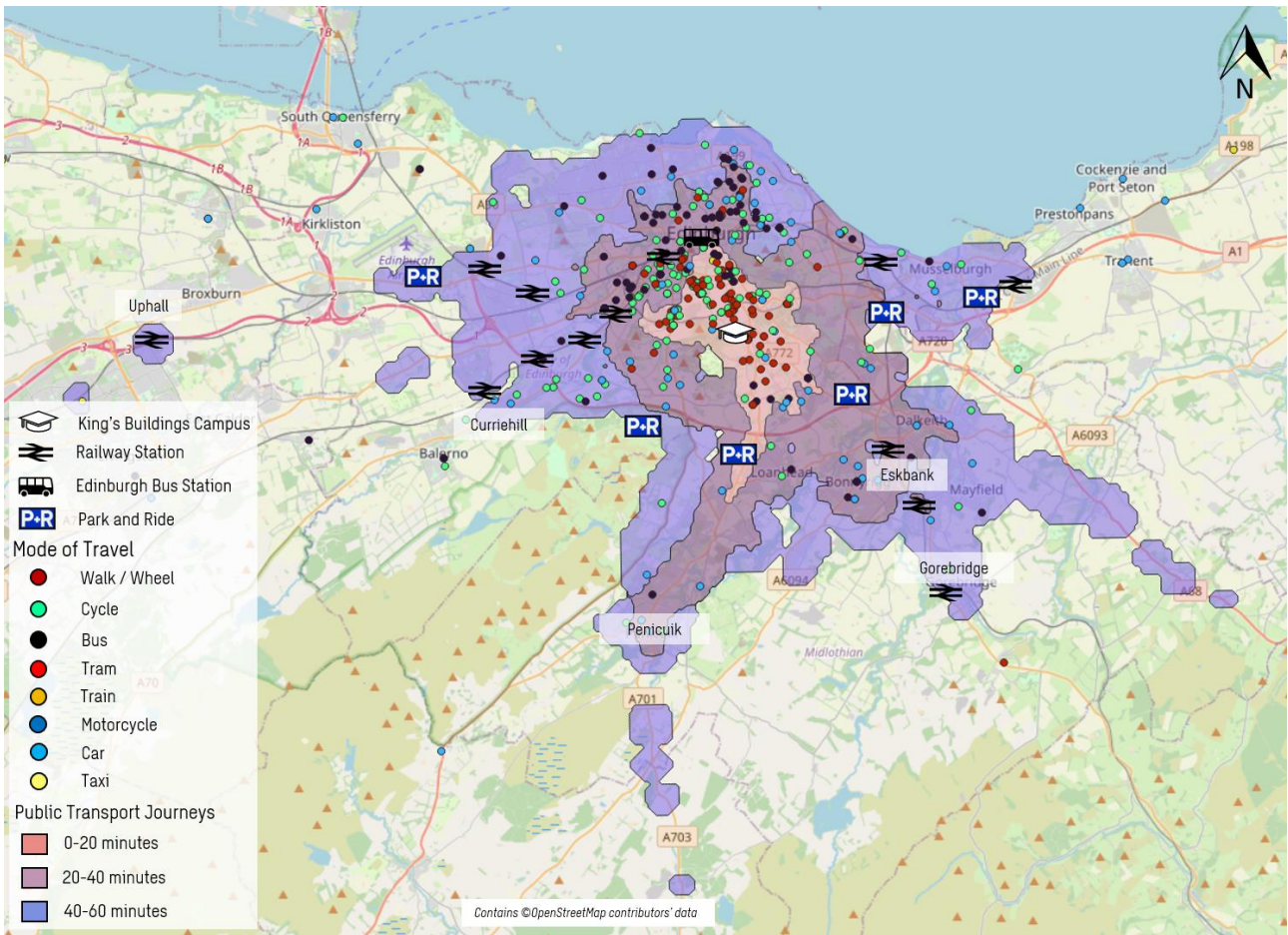


Figure 4-5: Staff 60-minute King's Buildings Public Transport Catchment

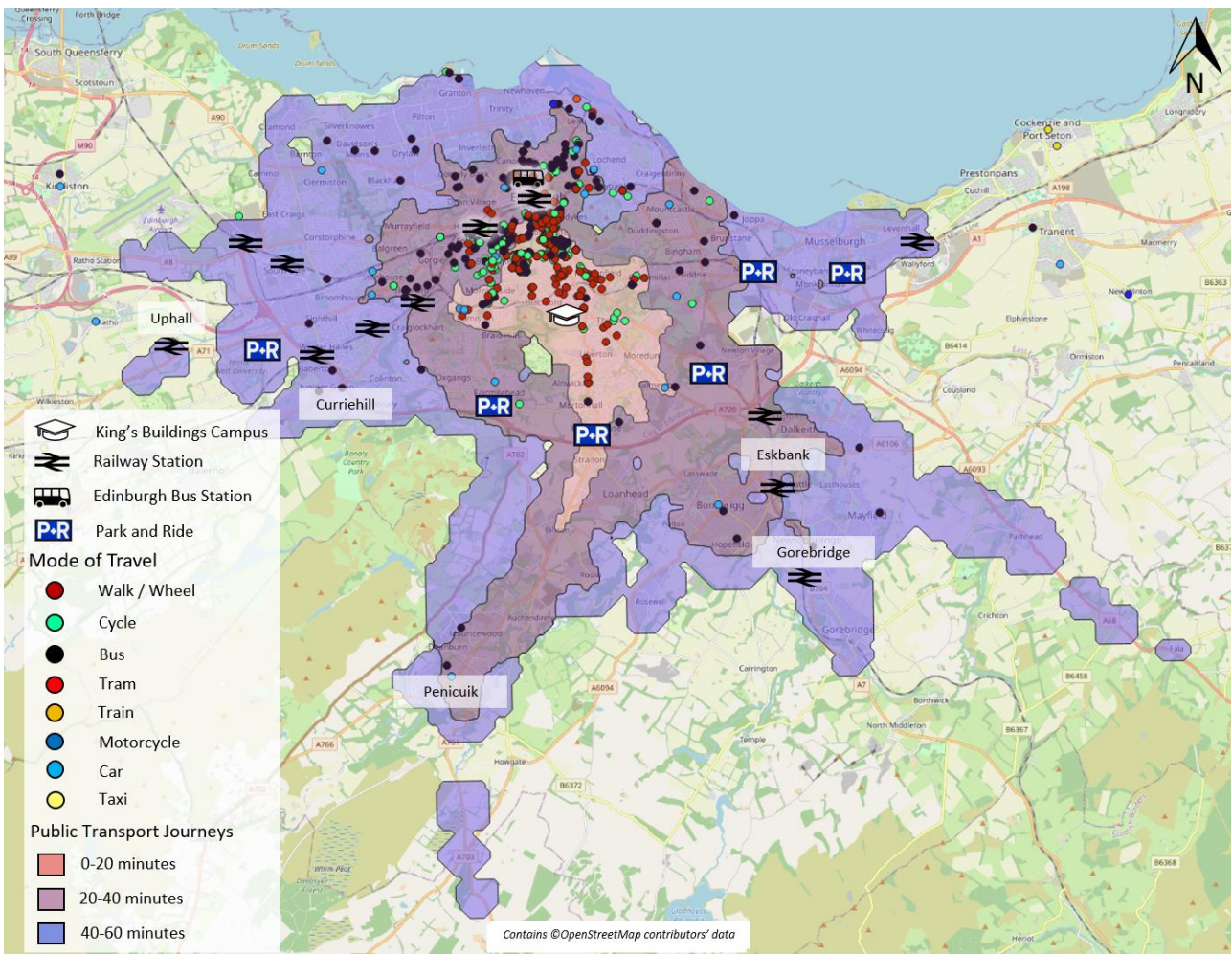


Figure 4-6: Staff 60-minute King's Buildings Public Transport Catchment

From **Figure 4.5 and 4.6**, Newhaven, Wallyford, Westloch and Livingston are all within a 60-minute public transport journey from King's Buildings.

The areas of Leith, Craightinny, Penicuik and Murrayfield can be reached within a 40-minute journey. Much of south Edinburgh is accessible within a 20-minute public transport journey.

Numerous train stations, the bus station and Park & Rides are all within 60-minutes travel by public transport. Very few staff or students are observed travelling to King's by train, out of those living within the catchment.

#### 4.5.4 Motorised Vehicle Catchment

**Figure 4.7 and 4.8** highlights the motorised vehicle catchment from King's Buildings of the University of Edinburgh. The motorised vehicle catchment has isochrones of 20, 40 and 60-minute intervals.



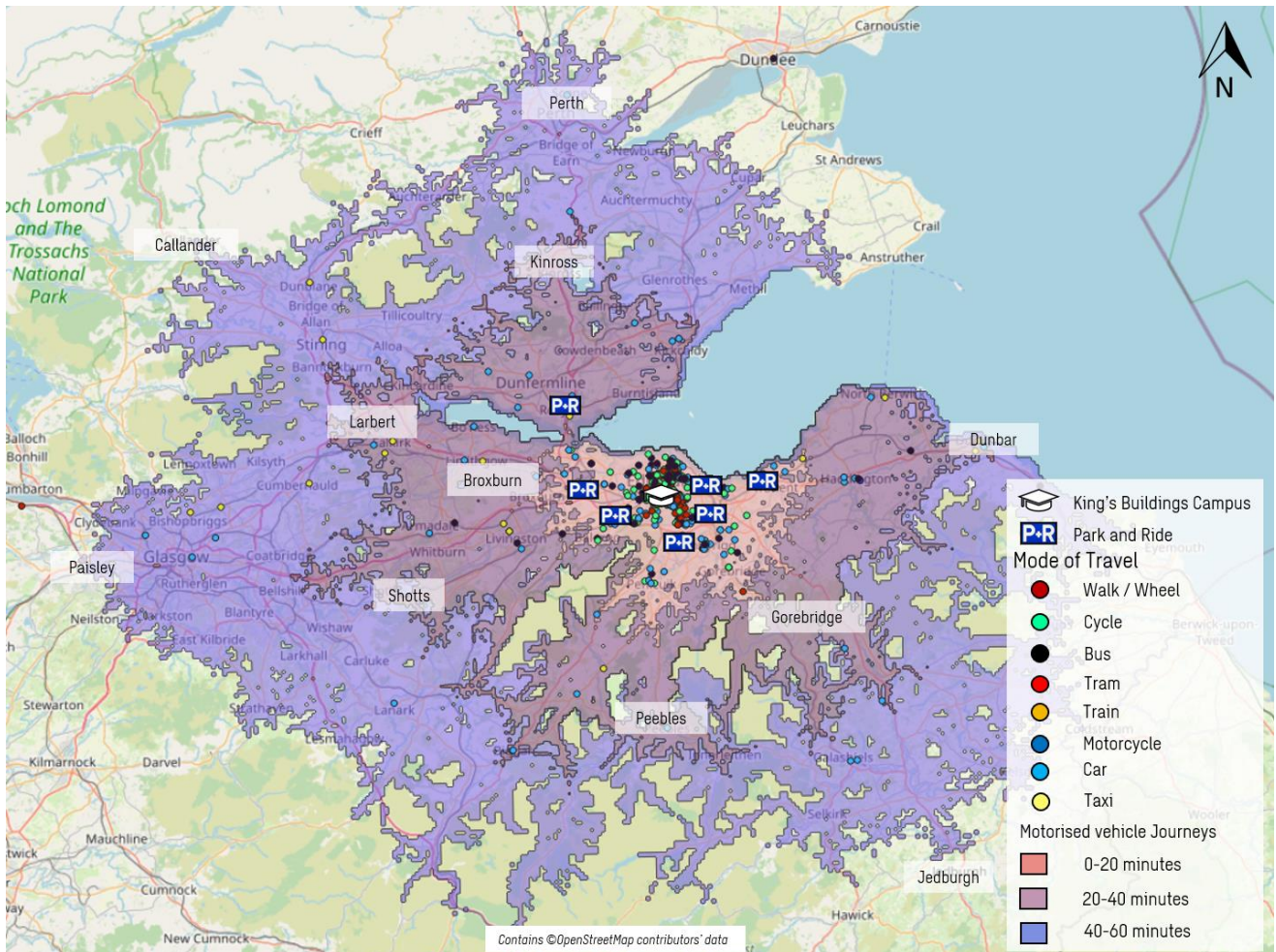


Figure 4-7: Staff 60-minute King's Buildings Motorised Vehicle Catchment

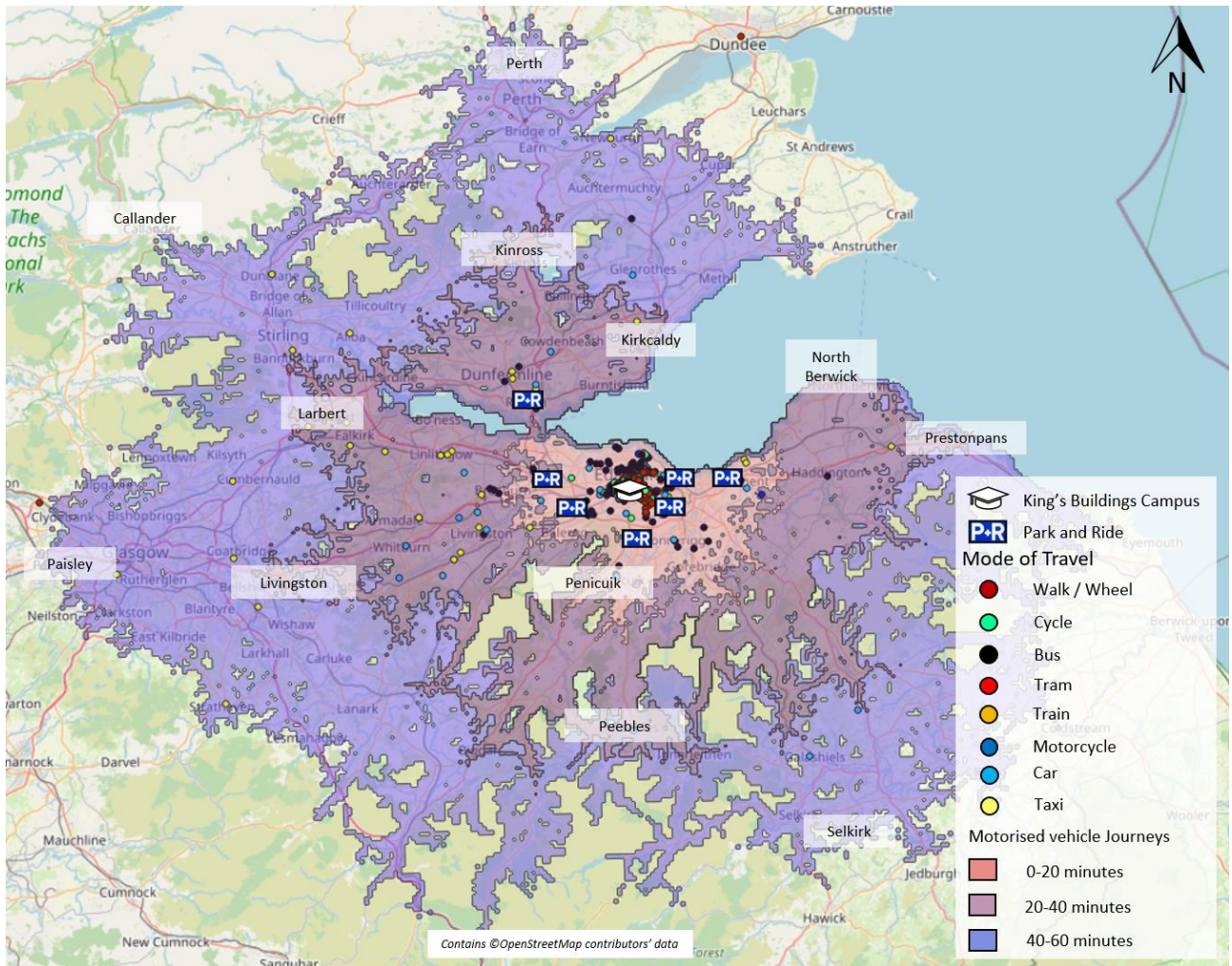


Figure 4-8: Student 60-minute King's Buildings Motorised Vehicle Catchment

From **Figure 4.7** and **4.8**, large areas of East Lothian, Midlothian, West Lothian, Stirlingshire, Fife, Glasgow and Perth & Kinross are all within the 60-minute driving catchment.

The Sheriffhall Park & Ride provides access to King's Buildings within 30 minutes at weekday peak times. There are further Park & Rides surrounding the city providing access to King's Buildings for those driving to the city boundary.

A high proportion of staff and students travelling by motorised vehicle to King's Buildings live within a 20-minute journey by car, within the City of Edinburgh boundary. Many of these individuals could reasonably travel to campus by active or sustainable modes of travel, for example 80% of staff and 92% of students live within a 60-minute commute by public transport.

#### 4.5.5 20-minute Neighbourhood Analysis

**Figure 4.9** reviews the number of 20-minute neighbourhood criteria within a 20-minute round-trip of King's Buildings. The catchment has isochrones of 2, 4, 6, 8 and 10-minute intervals.



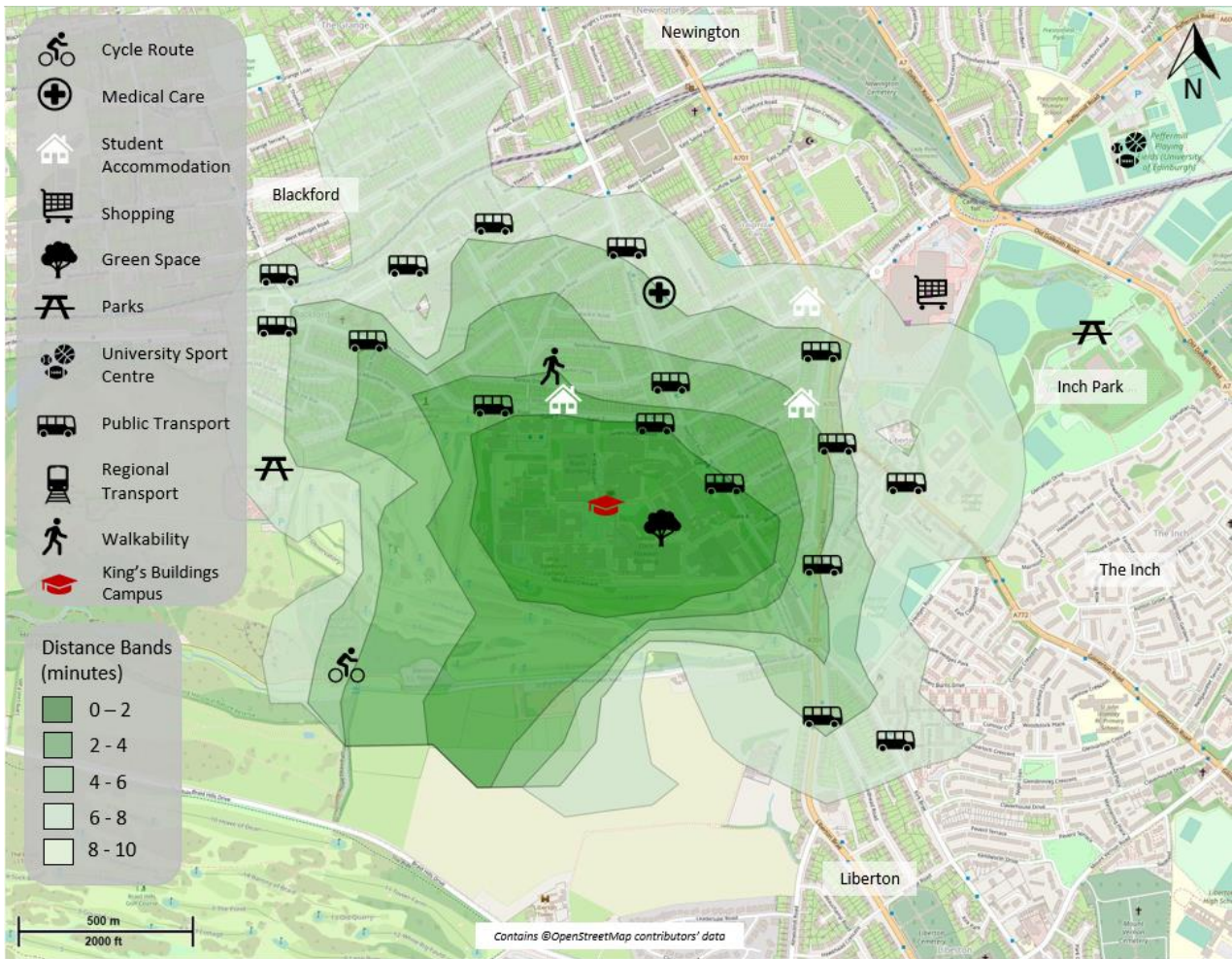


Figure 4-9: 20-minute Neighbourhood Analysis King's Buildings

From **Figure 4.9**, university accommodation in West Mains Road, Kitchener House and David Horn are all within a 10-minute walk of King's Buildings. Several bus stops are very accessible from King's Buildings, offering connections throughout Edinburgh.

## 5 Site Specific: BioQuarter

A total of 370 staff (academic and non-academic combined) based at BioQuarter responded to the survey, which represents 24% of all staff based at BioQuarter. A total of 110 students based at BioQuarter also responded, this represents 0.3% of all students at the University of Edinburgh.

BioQuarter respondents' findings are summarised in this section.

### 5.1 Mode Share

**Table 5.1** shows the overall, student and staff mode share for BioQuarter.

Table 5-1: BioQuarter Mode Share 2023

Mode	Staff	Student	Overall
Walking / Wheeling	11.1%	6.4%	10.0%
Cycle	18.9%	22.7%	19.8%
Mobility Scooter	0%	0%	0%
Public Bus	27.3%	54.6%	33.5%
Shuttle Bus	0.03%	0.9%	0.4%
Tram	0%	0.9%	0.2%
Train	4.6%	3.6%	4.4%
Taxi	0%	0.9%	0.2%
Motorcycle	0.5%	0%	0.4%
Car Driver with Passenger(s)	3.8%	0.9%	3.1%
Car Passenger	2.4%	0.9%	1.9%
Car Driver Alone	27.8%	9.1%	23.5%

### 5.2 Staff

The most common mode of travel for staff at BioQuarter is driving alone (28%), followed by travelling by bus (27%). This trend was also observed in the 2022 Travel Survey, however, since 2022 rates of driving alone have fallen by 9 percentage points and rates of bus travel have risen by 5 percentage points. Rates of cycling have remained the same, while rates of walking have fallen by 1percentage point.

### 5.3 Students

As in 2022, the majority of students based at BioQuarter travel by bus (55%), followed by cycling (23%). Rates of cycling have risen by 6% since the 2022 Travel Survey, however rates of walking fell by 7%.

Car travel by students at BioQuarter has increased by 1%.



## 5.4 Encouraging Alternative Modes

### 5.4.1 Active Travel

Staff and students based at BioQuarter most frequently identified the following as improving their journey by walking, running or wheelchair or encouraging them to use this mode of travel on a regular basis:

- Improved footway / pavement / footpath surfaces (12%);
- Improved lighting on footways (10%); and
- More safe pedestrian crossings (10%).

Staff and students based at BioQuarter most frequently identified the following as improving their journey by bicycle or encouraging them to use this mode of travel on a regular basis:

- More cycle tracks, segregated from traffic and pedestrians (18%);
- Opportunity to purchase a discounted bicycle (8%); and
- Availability of secure cycle parking (8%).

## 5.5 Catchment Mapping

The following section demonstrates the accessibility of key services and locations within a 20-minute walk, 30-minute cycle, 60-minute drive and 60-minute journey by public transport from BioQuarter.

### 5.5.1 Walking Catchment

**Figures 5.1** and **5.2** make clear the walking catchment from BioQuarter, for staff and students respectively. The walking catchment has isochrones of 5, 10 and 20-minute intervals.

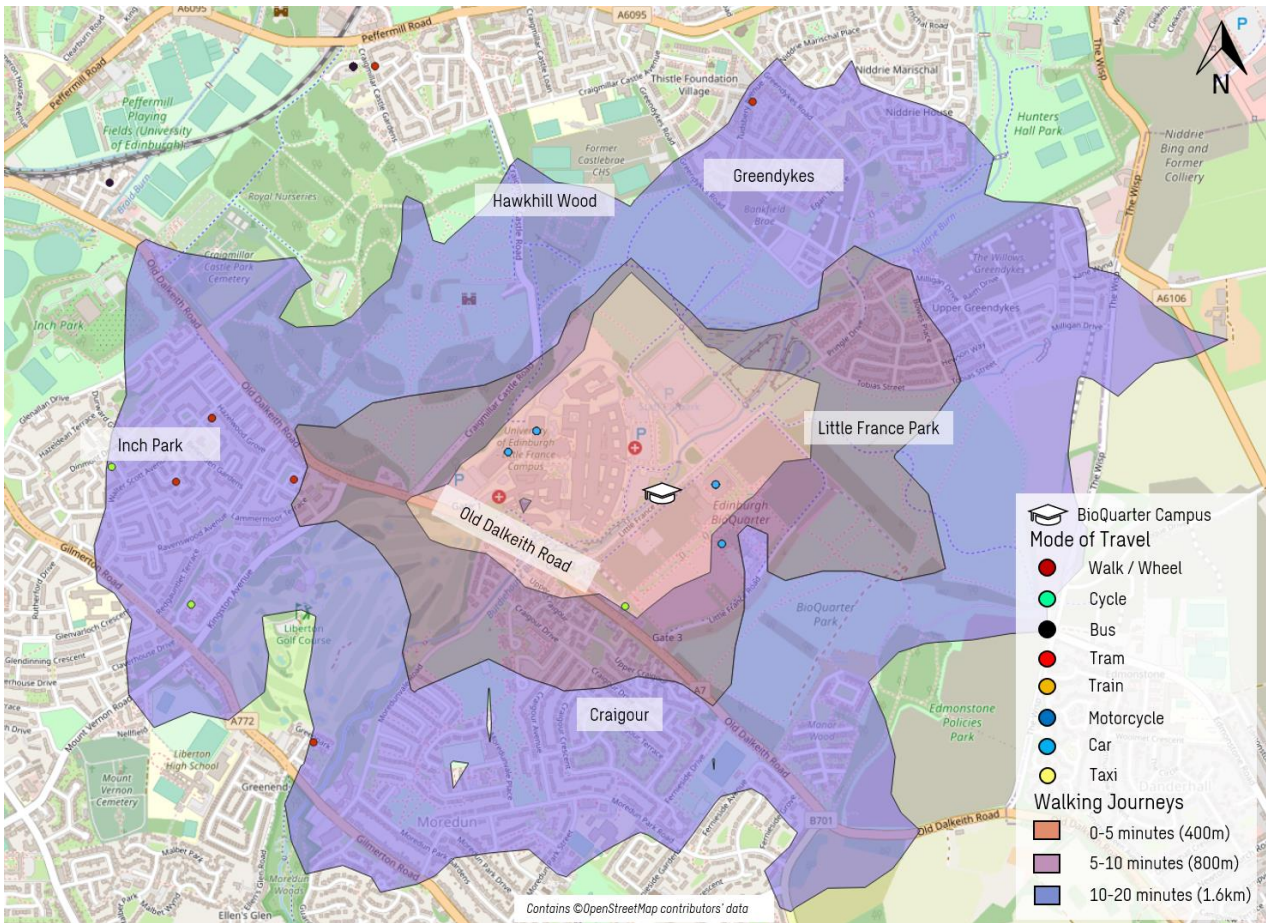


Figure 5-1: Staff 20-Minute BioQuarter Walking Catchment

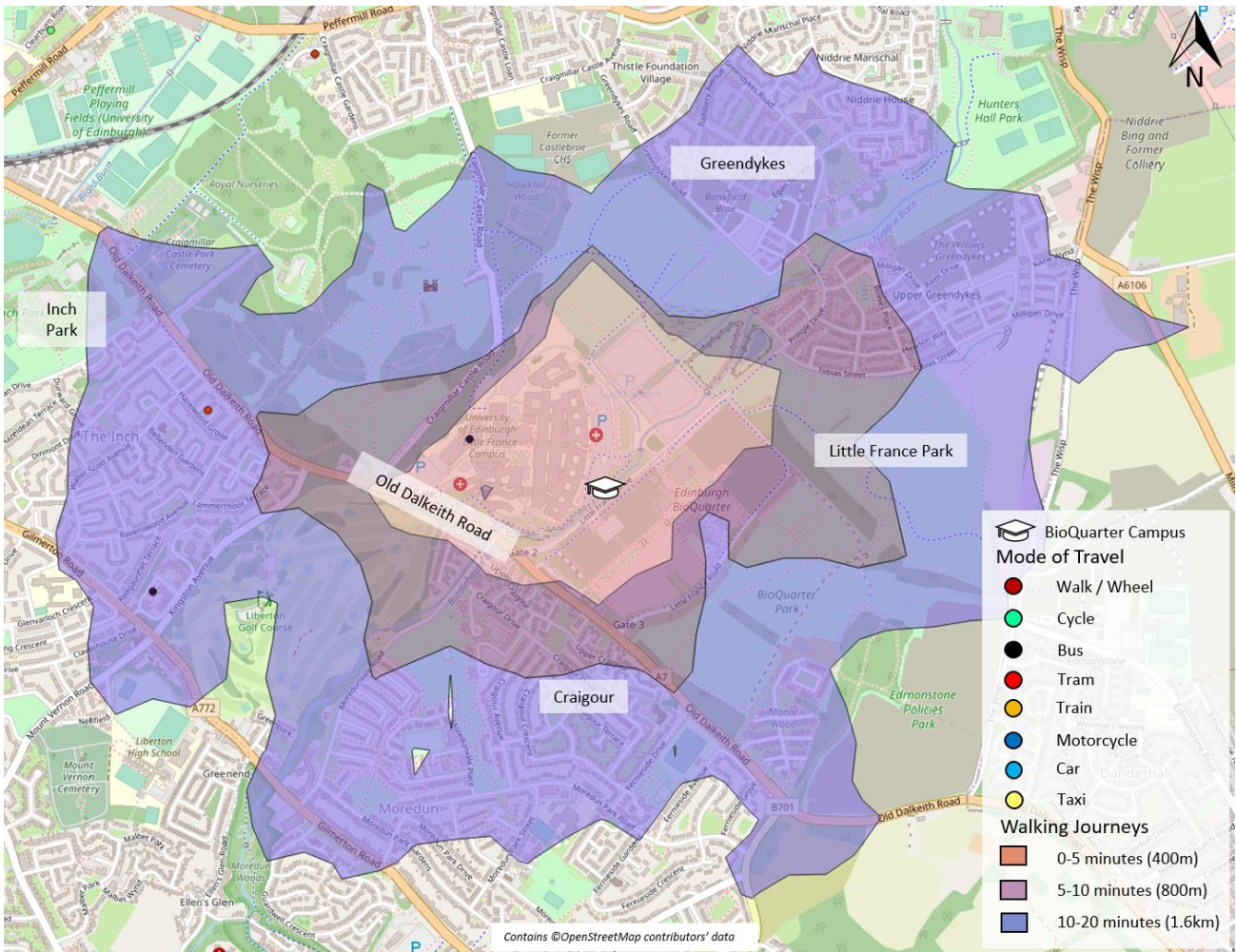


Figure 5-2: Student 20-minute BioQuarter Walking Catchment

From **Figure 5.1** and **5.2**, Little France Park, Greendykes, Moreduin, The Inch and Inch Park entrance, and Craigmillar Castle are within a 20-minute walk from the BioQuarter. These areas are mainly residential and offer multiple walking and cycling routes for commuting and leisure.

Very few staff or students live within the 20-minute walking catchment of BioQuarter.

### 5.5.2 Cycling Catchment

**Figures 5.3** and **5.4** highlight the cycling catchment from BioQuarter, for staff and students respectively. The cycling catchment has isochrones of 10, 20 and 30-minute intervals.



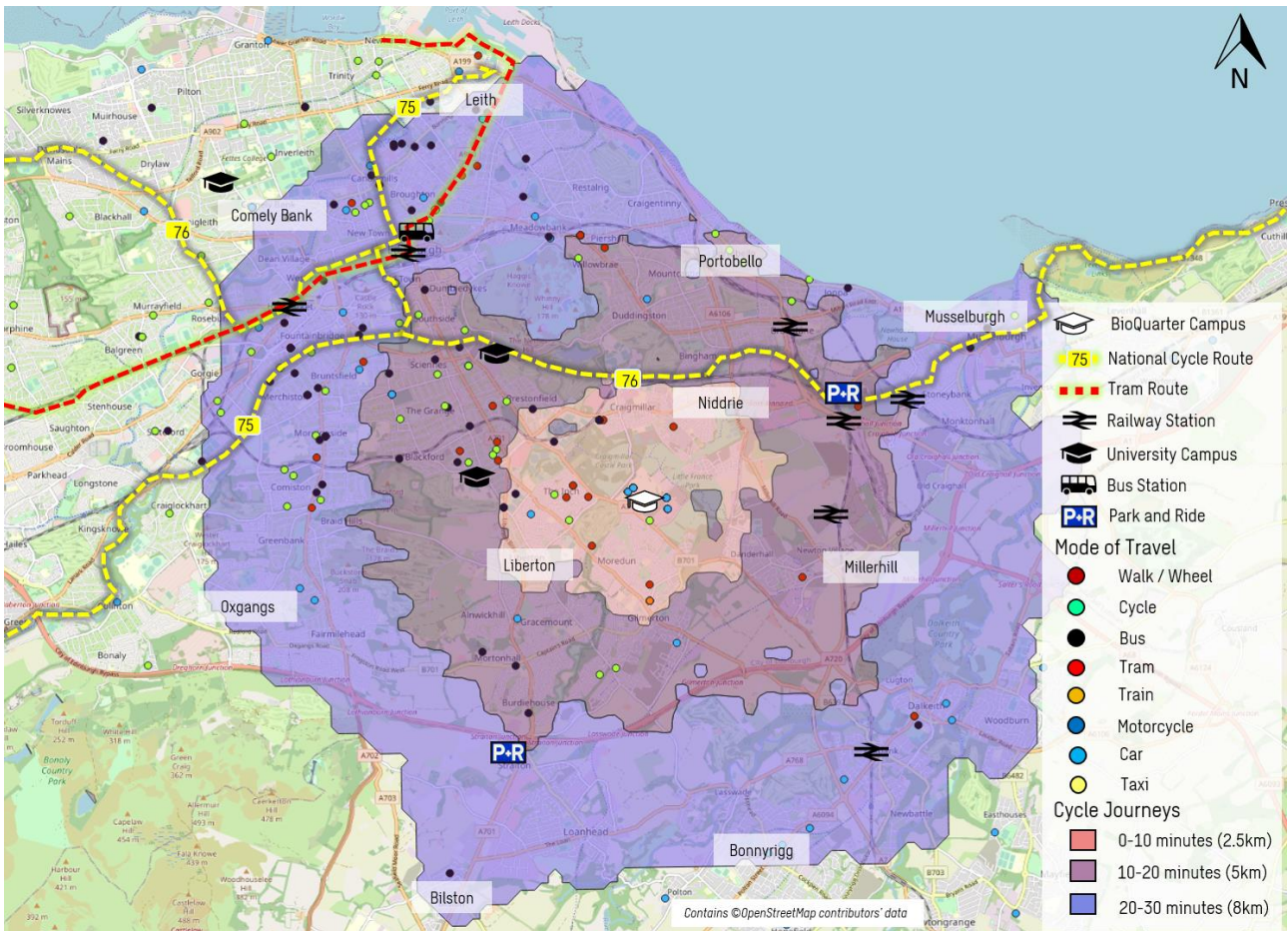


Figure 5-3: Staff 30-minute BioQuarter Cycling Catchment

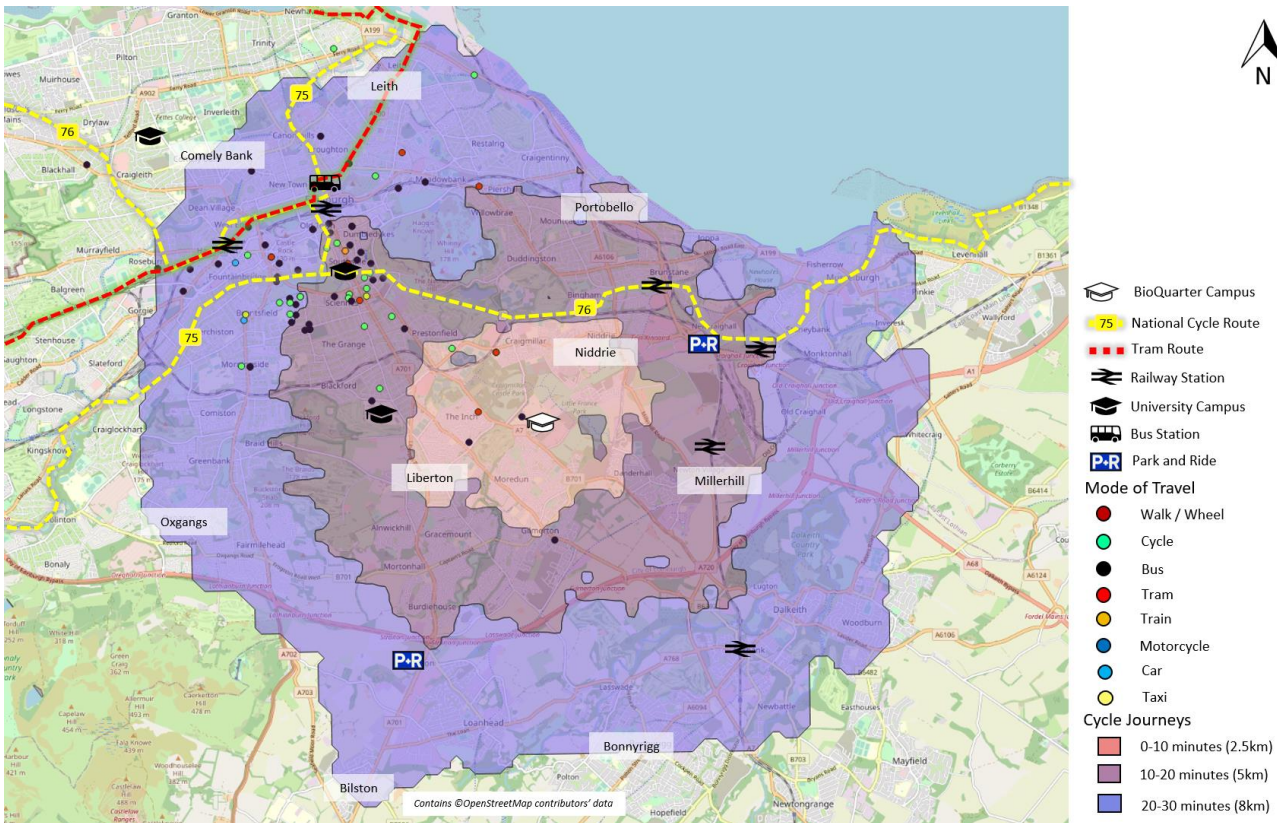


Figure 5-4: Student 30-minute BioQuarter Cycling Catchment

From the figures, East Edinburgh and parts of Midlothian and East Lothian are within a 30-minute cycle of BioQuarter with Leith, Musselburgh, Bonnyrigg, and Comely Bank all accessible. Edinburgh city centre, Portobello, Millerhill and Burdiehouse are within a 20-minute cycle.

A 10-minute cycle from BioQuarter will reach Niddrie and Liberton. National cycle routes of 75 and 76 provide safe cycling conditions for active modes users around the city of Edinburgh.

A variety of modes of travel can be observed for those living within the cycle catchment. Of those cycling, the majority are commuting from Central Edinburgh.

### 5.5.3 Public Transport Catchment

**Figures 5.5 and 5.6** highlight the public transport catchment from BioQuarter. The public transport catchment has isochrones of 20, 40 and 60-minute intervals.



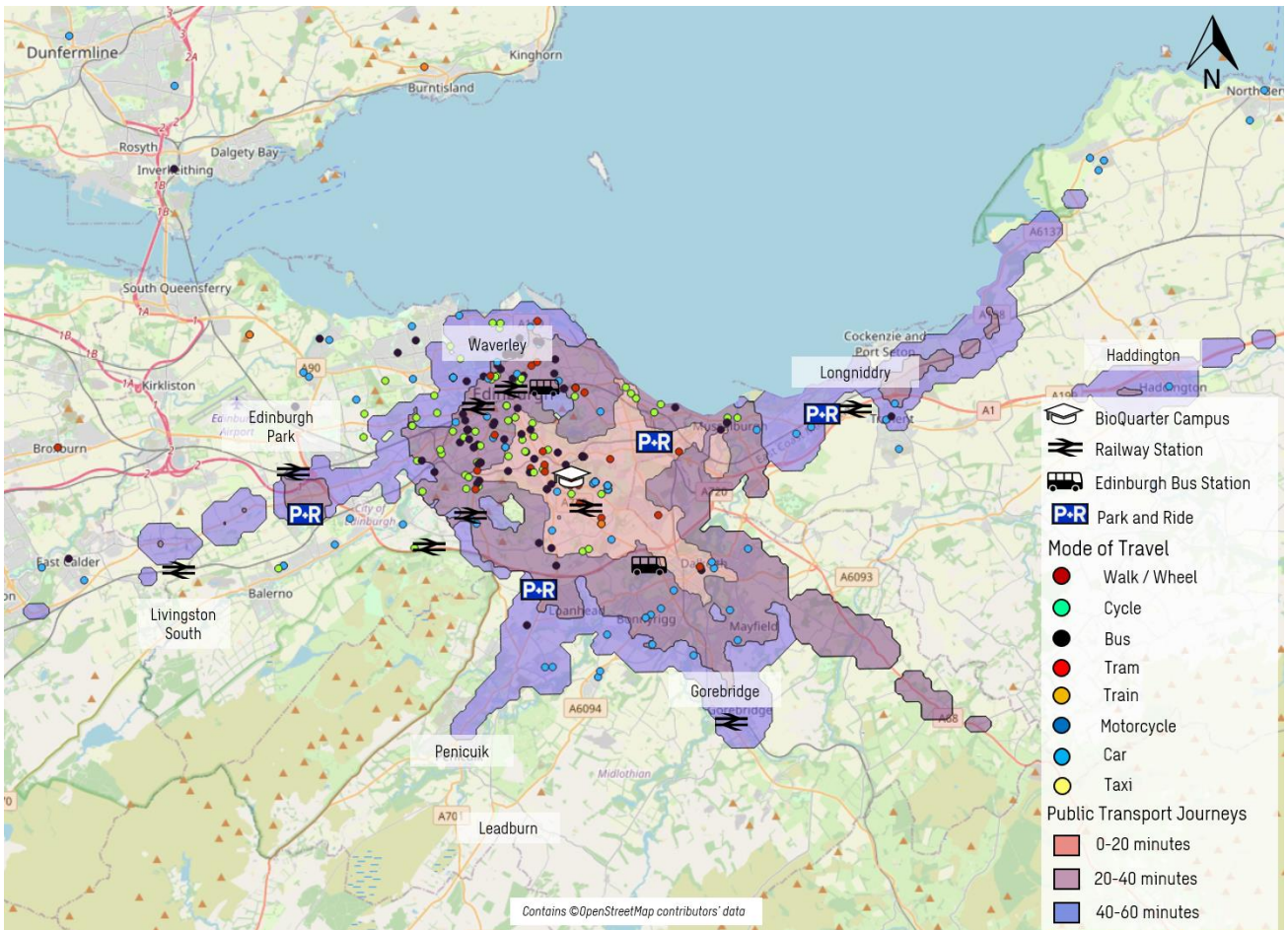


Figure 5-5: Staff 60-minute BioQuarter Public Transport Catchment

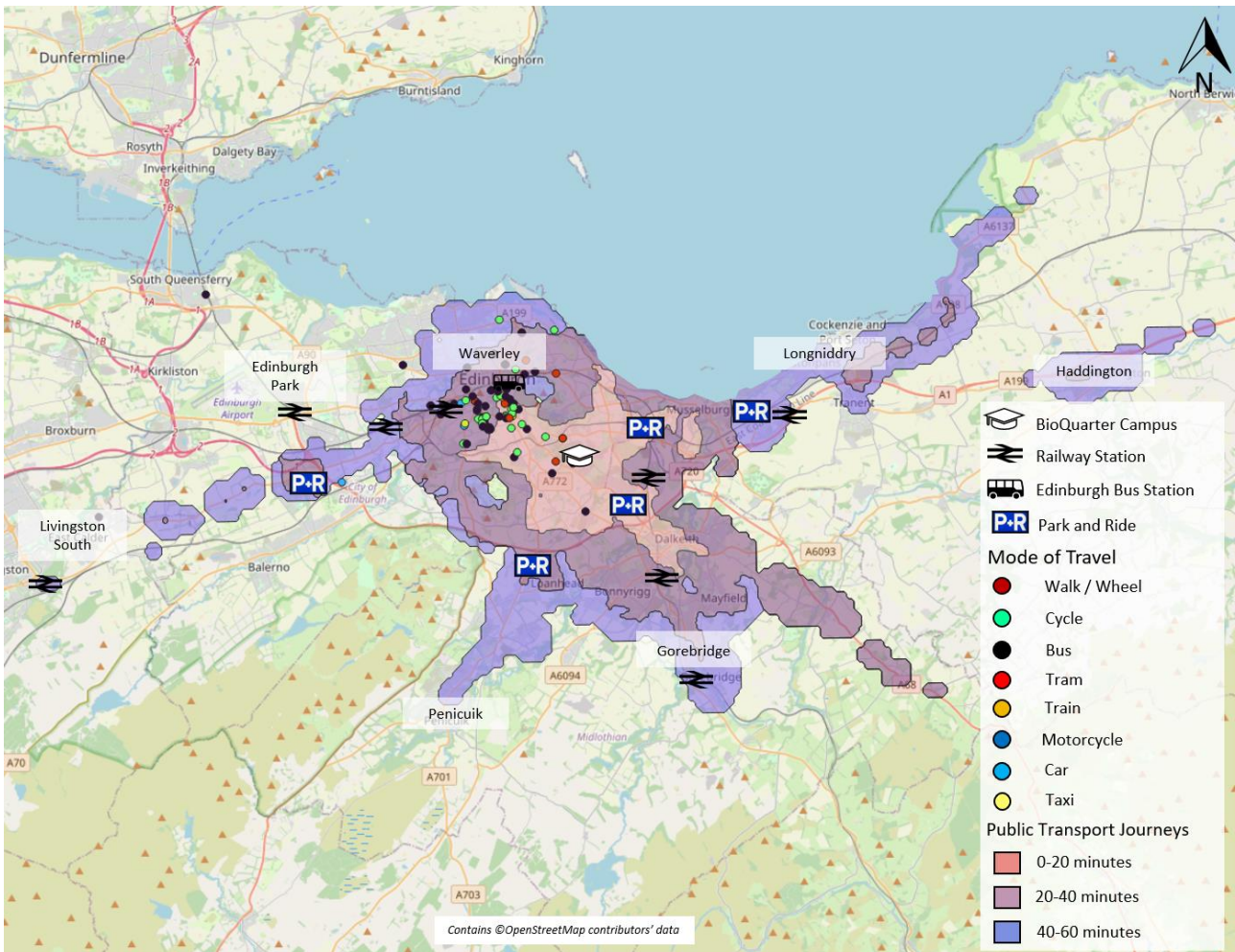


Figure 5-6: Student 60-minute BioQuarter Public Transport Catchment

From the figures, Newhaven, Longniddry, Penicuik, and Livingston South are all within a 60-minute public transport journey from BioQuarter. Areas of Leith, Musselburgh, Mayfield and Gogar can be reached within a 40-minute journey. Much of south Edinburgh is accessible within a 20-minute public transport journey.

Very few staff or students living within the 60-minute public transport catchment commute by train, however bus use amongst students is high. Several staff who live within the catchment are observed as driving to campus.

### 5.5.4 Motorised Vehicle Catchment

Figures 5.7 and 5.8 highlight the motorised vehicle catchment from the BioQuarter, for staff and students respectively. The motorised vehicle catchment has isochrones of 20, 40 and 60-minute intervals.



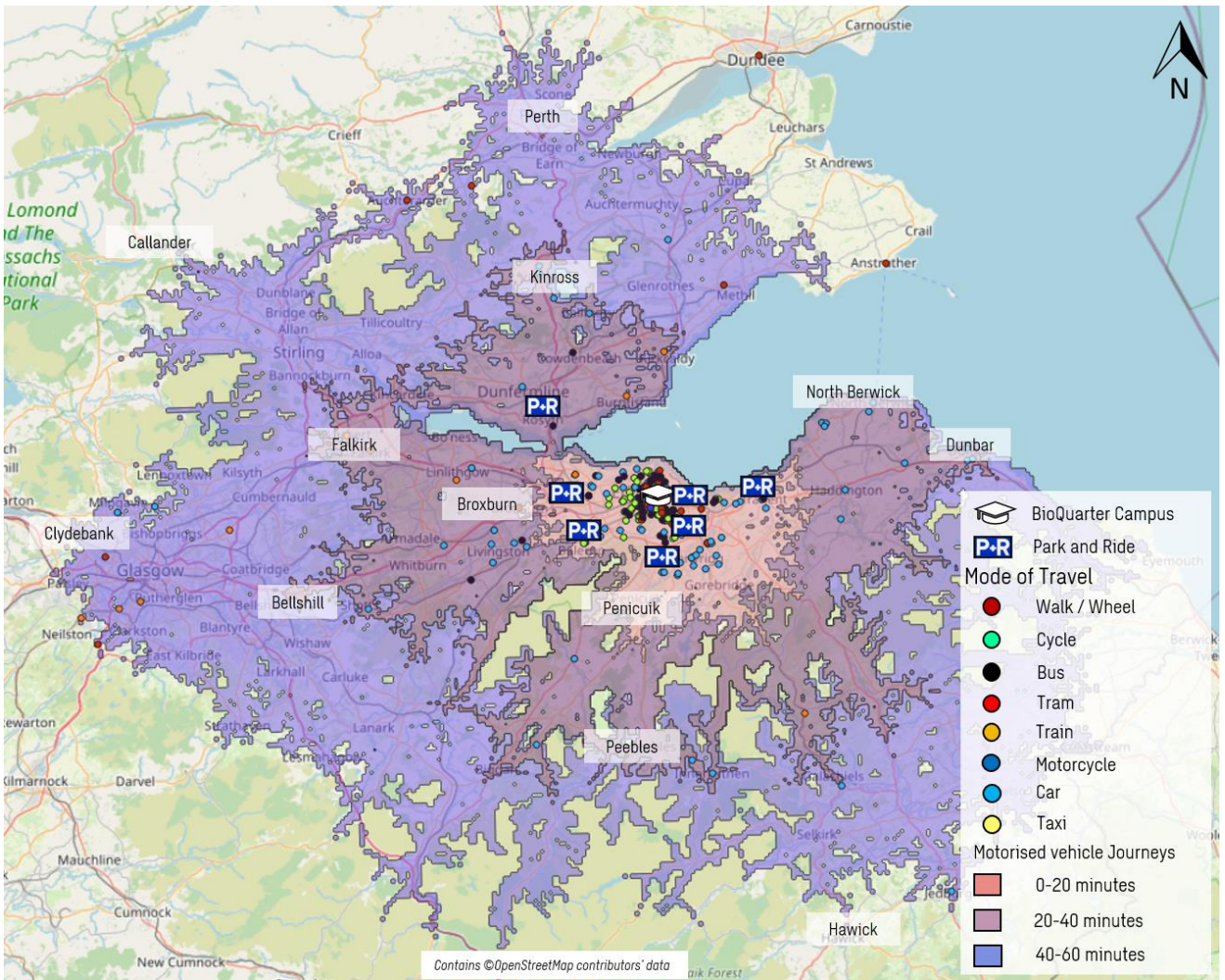


Figure 5-7: Staff 60-minute BioQuarter Motorised Vehicle Catchment



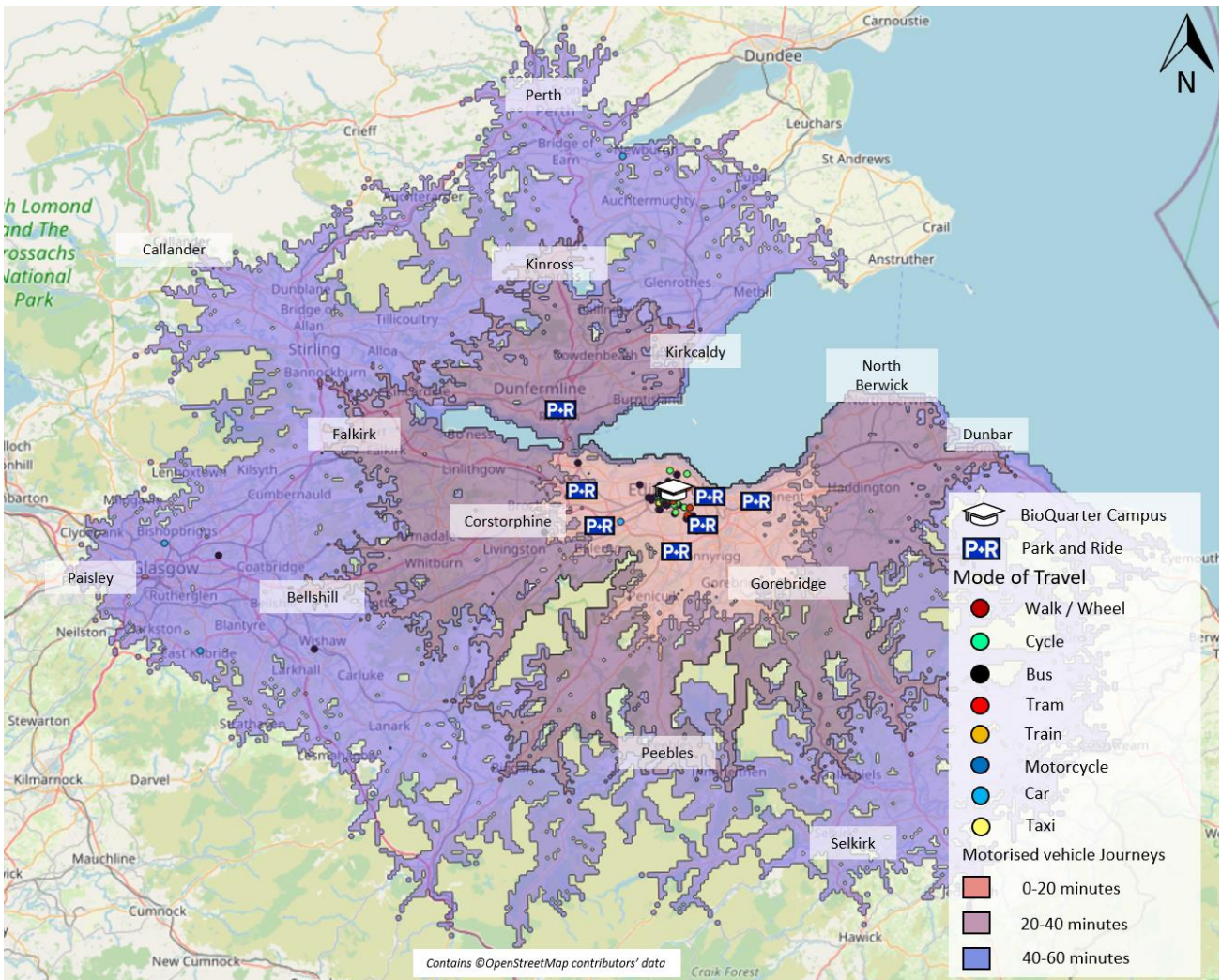


Figure 5-8: Staff 60-minute BioQuarter Motorised Vehicle Catchment

From the figures, large areas of East Lothian, Midlothian, West Lothian, Fife, Glasgow, Perth & Kinross and Stirlingshire are all within the 60-minute driving catchment.

The Park & Rides surrounding Edinburgh city bypass are less than a 20-minute drive of BioQuarter along with Leith, Prestonpans, Penicuik and Kirkliston.

Very few students commuting to BioQuarter live out with the City Centre, however staff are observed as commuting from the edge of and beyond the motorised vehicle catchment.

### 5.5.5 20-minute Neighbourhood Analysis

**Figure 5.9** reviews the number of 20-minute neighbourhood criteria within a 20-minute round-trip of BioQuarter. The catchment has isochrones of 2, 4, 6, 8 and 10-minute intervals.

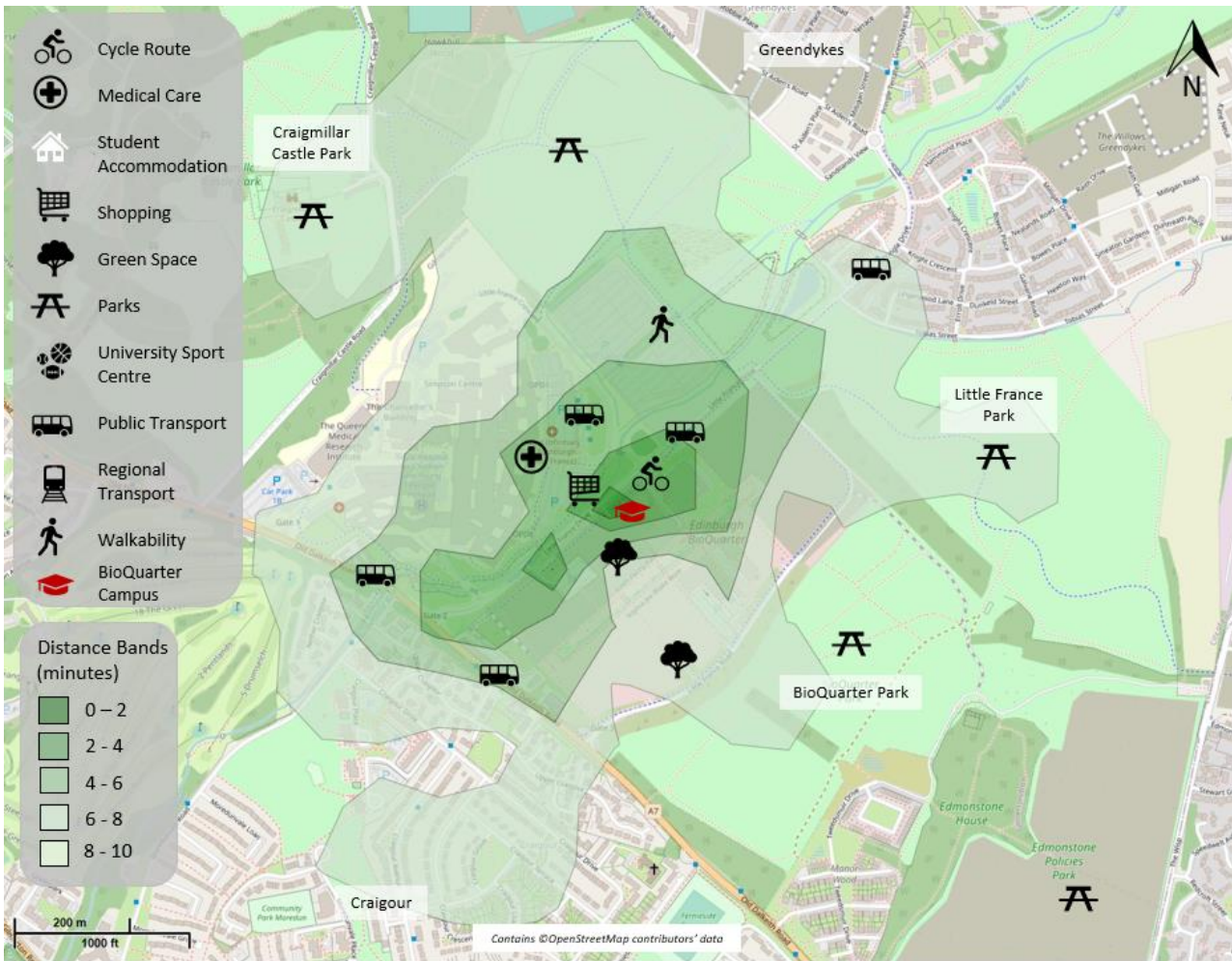


Figure 5-9: 20-minute Neighbourhood Analysis BioQuarter

From **Figure 5.9**, Little France Park, BioQuarter Park and Craigour is within a 10-minute walk of BioQuarter. Amenities such as a shop, green space and a medical centre are less than a 6-minute walk.

Several bus stops are very accessible from BioQuarter at the BioQuarter bus bays and along Old Dalkeith Road.

## 6 Site Specific: Easter Bush

A total of 232 staff (academic and non-academic combined) based at Easter Bush responded to the survey, which represents 23% of all staff based at Easter Bush. A total of 190 students based at Easter Bush also responded, this represents 0.5% of all students at the University of Edinburgh.

Easter Bush respondents' findings are summarised in this section.

### 6.1 Mode Share

**Table 6.1** shows the overall, student and staff mode share for the Easter Bush.

Table 6-1: Easter Bush Mode Share 2023

Mode	Staff	Student	Overall
Walking / Wheeling	3.0%	1.5%	2.3%
Cycle	9.9%	1.5%	6.1%
Mobility Scooter	0%	0%	0%
Public Bus	21.1%	65.0%	41.2%
Shuttle Bus	0%	0%	0%
Tram	0%	0%	0%
Train	1.3%	0%	0.9%
Taxi	0%	0%	0%
Motorcycle	0.4%	0%	0.2%
Car Driver with Passenger(s)	2.6%	8.6%	5.4%
Car Passenger	2.6%	8.6%	5.4%
Car Driver Alone	57.8%	12.7%	37.1%

### 6.2 Staff

The most common mode of travel amongst staff at Easter Bush is driving alone, accounting for 58%. However, this is an 8% reduction on the rates observed in 2022. The percentage of staff travelling by bus (+7%) and cycling (+1%) have increased in the past year

### 6.3 Students

After a considerable decrease in the percentage of students travelling to Easter Bush by bus in the 2022 Travel Survey, the rate has increased by 7% in the last year. The number of students driving alone has also reduced to the levels observed in 2019 (13%).

The rate of those walking and cycling has fallen by 5.5 percentage points and 3.5 percentage points respectively, again returning to similar levels observed in 2019.

## 6.4 Encouraging Alternative Modes

### 6.4.1 Active Travel

Staff and students based at Easter Bush most frequently identified the following as improving their journey by walking, running or wheelchair or encouraging them to use this mode of travel on a regular basis:

- Improved footway / pavement / footpath surfaces (9%);
- Improved lighting on footways (8%); and
- More safe pedestrian crossings (6%).

Staff and students based at Easter Bush most frequently identified the following as improving their journey by bicycle or encouraging them to use this mode of travel on a regular basis:

- More cycle tracks, segregated from traffic and pedestrians (20%); and
- Opportunity to purchase a discounted cycle (8%)

## 6.5 Catchment Mapping

The following section demonstrates the accessibility of key services and locations within a 20-minute walk, 30-minute cycle, 60-minute drive and 60-minute journey by public transport from Easter Bush.

### 6.5.1 Walking Catchment

**Figures 6.1** and **6.2** make clear the walking catchment from Easter Bush, for staff and students respectively. The walking catchment has isochrones of 5, 10 and 20-minute intervals.



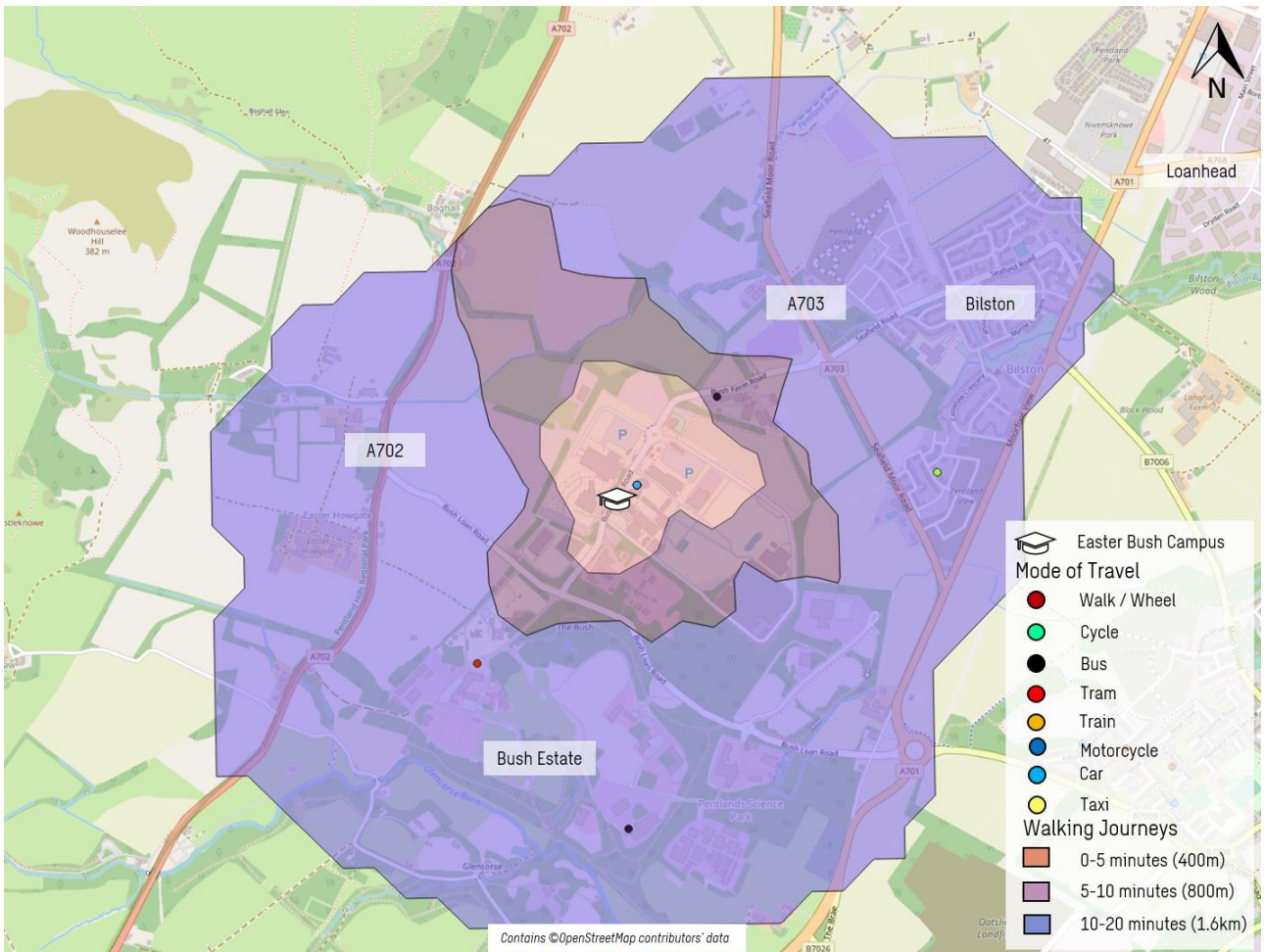


Figure 6-1: Staff 20-minute Easter Bush Walking Catchment

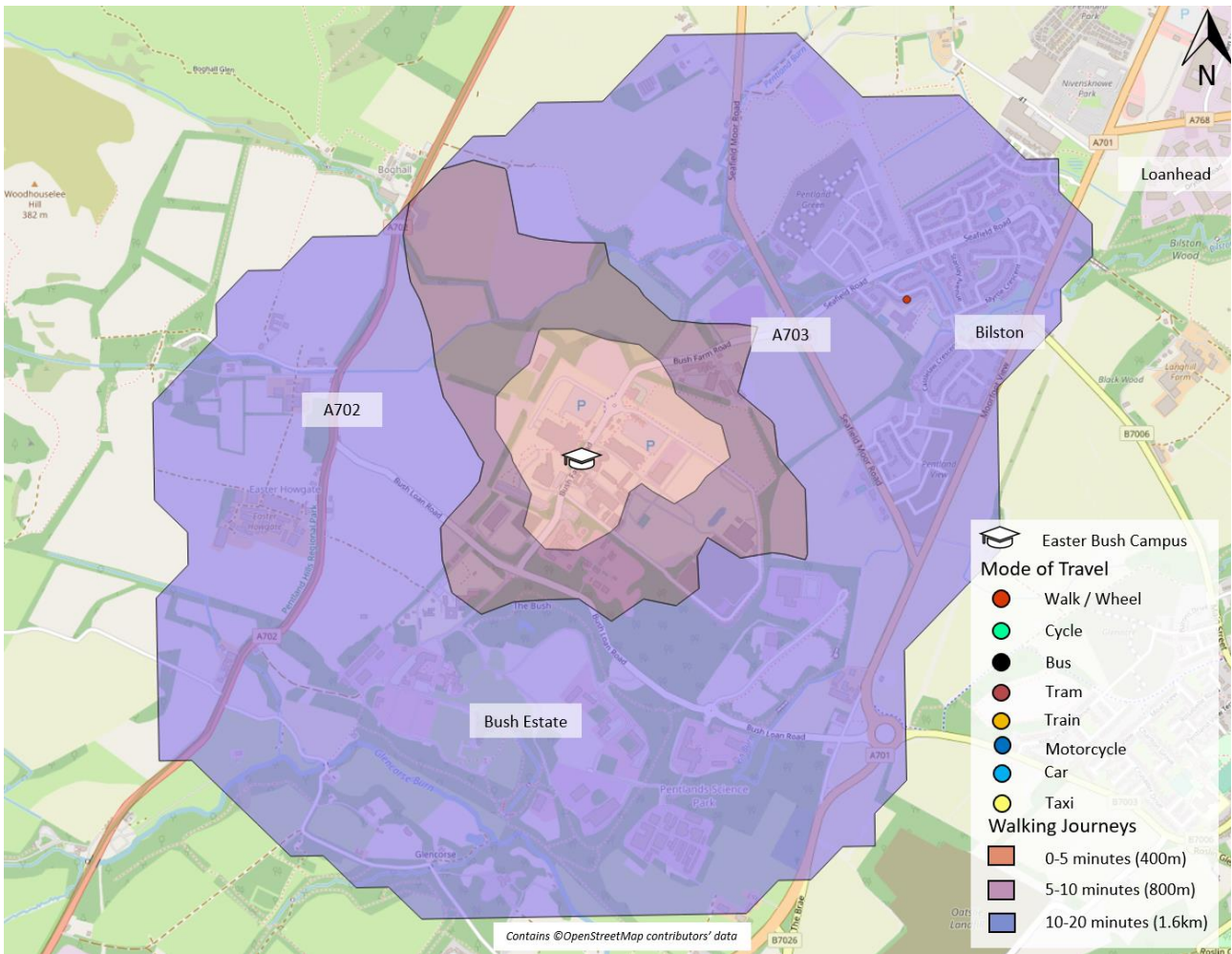


Figure 6-2: Student 20-minute Easter Bush Walking Catchment

From **Figure 6.1** and **6.2**, Bilston, South Bush Estate and Easter Howgate are less than a 20-minute walk from the Easter Bush site.

Very few staff or students live within the walking catchment of Easter Bush.

### 6.5.2 Cycling Catchment

**Figures 6.23** and **6.4** highlight the cycling catchment from Easter Bush. The cycling catchment has isochrones of 10, 20 and 30-minute intervals.



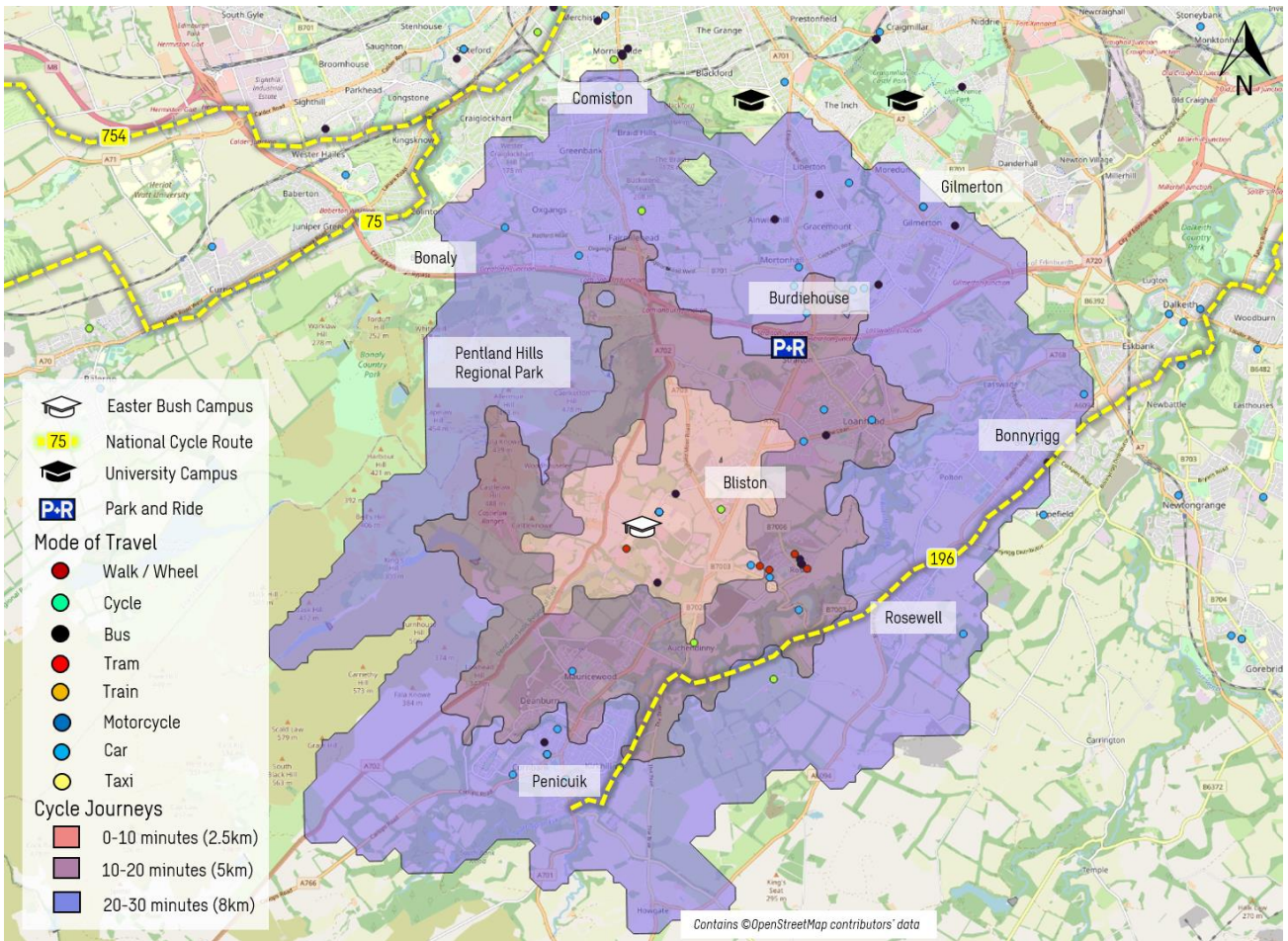


Figure 6-3: Staff 30-minute Easter Bush Cycling Catchment



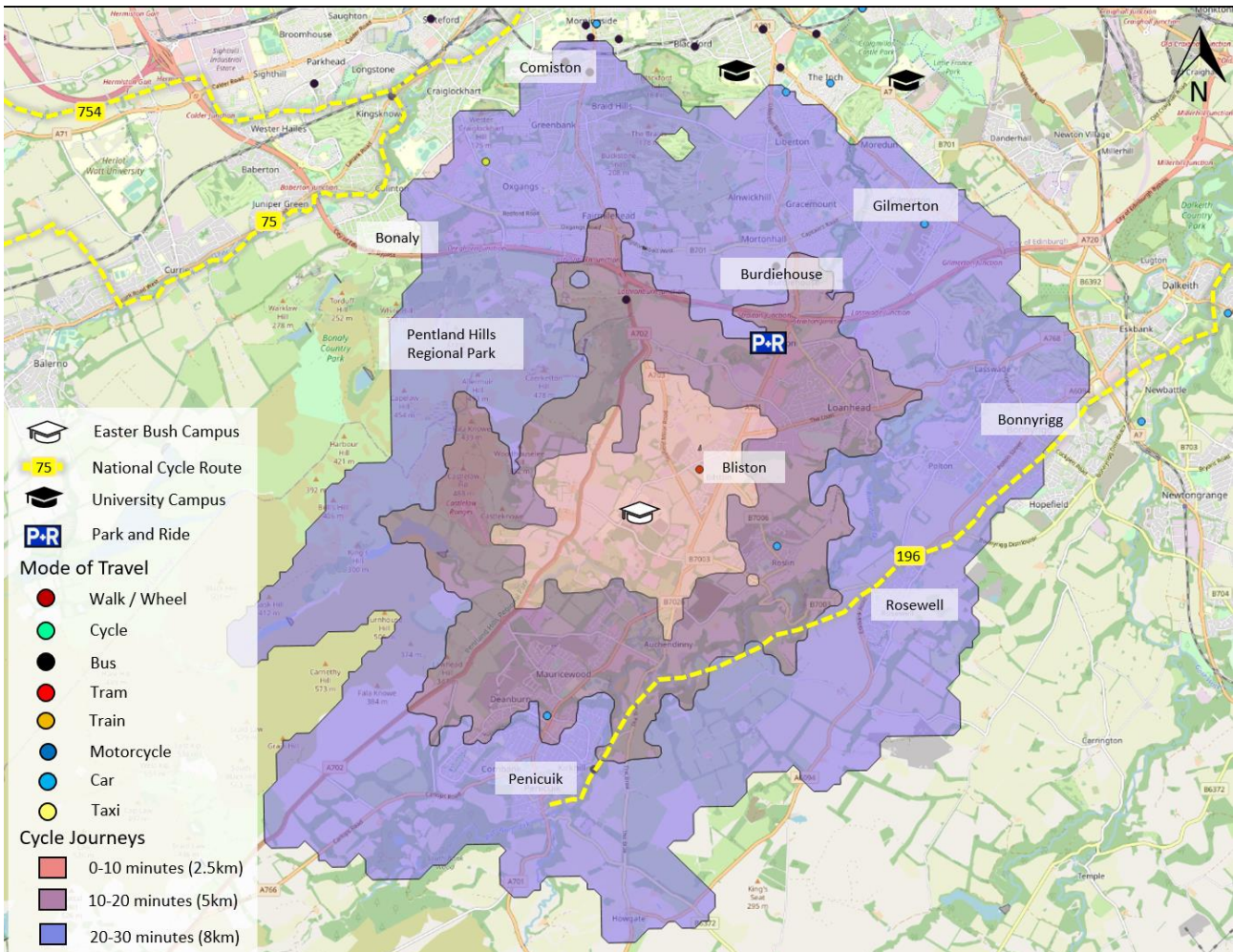


Figure 6-4: Staff 30-minute Easter Bush Cycling Catchment

From **Figures 6.3** and **6.4**, Comiston, Bonnyrigg, Penicuik and Bonaly are within a 30-minute cycle of BioQuarter. A 20-minute cycle will reach Fairmilehead, Loanhead, Deanburn and the Pentland Hills.

National cycle route 196 provides safe cycling conditions for active modes users between Penicuik and Haddington.

The majority of those living within the cycling catchment commute to Easter Bush by bus, with cycling only representing 1% of student postcode within the catchment.

### 6.5.3 Public Transport Catchment

**Figures 6.5** and **6.6** highlight the public transport catchment from Easter Bush, for staff and students respectively. The public transport catchment has isochrones of 20, 40 and 60-minute intervals.

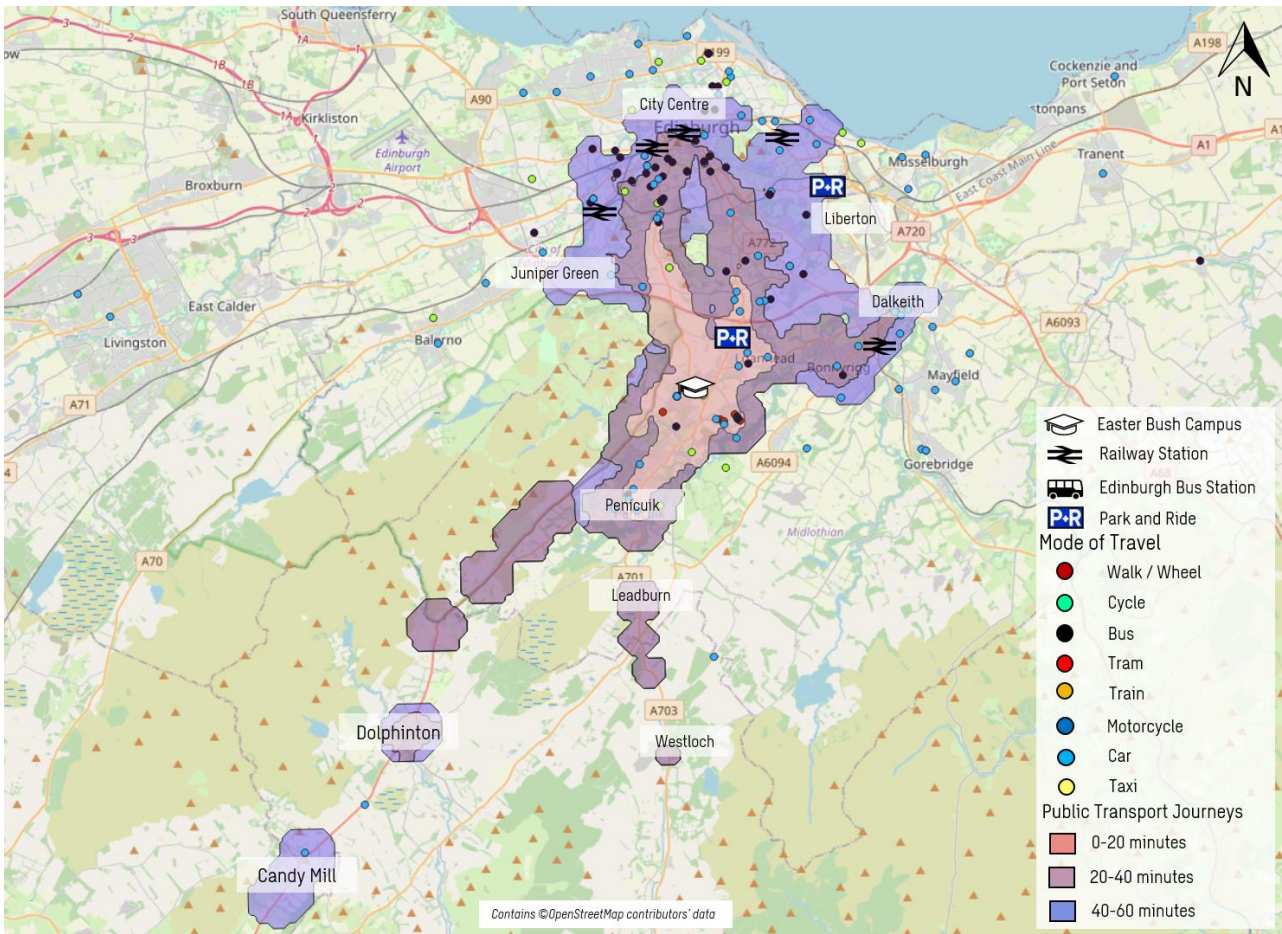


Figure 6-5: Staff 60-minute Easter Bush Public Transport Catchment



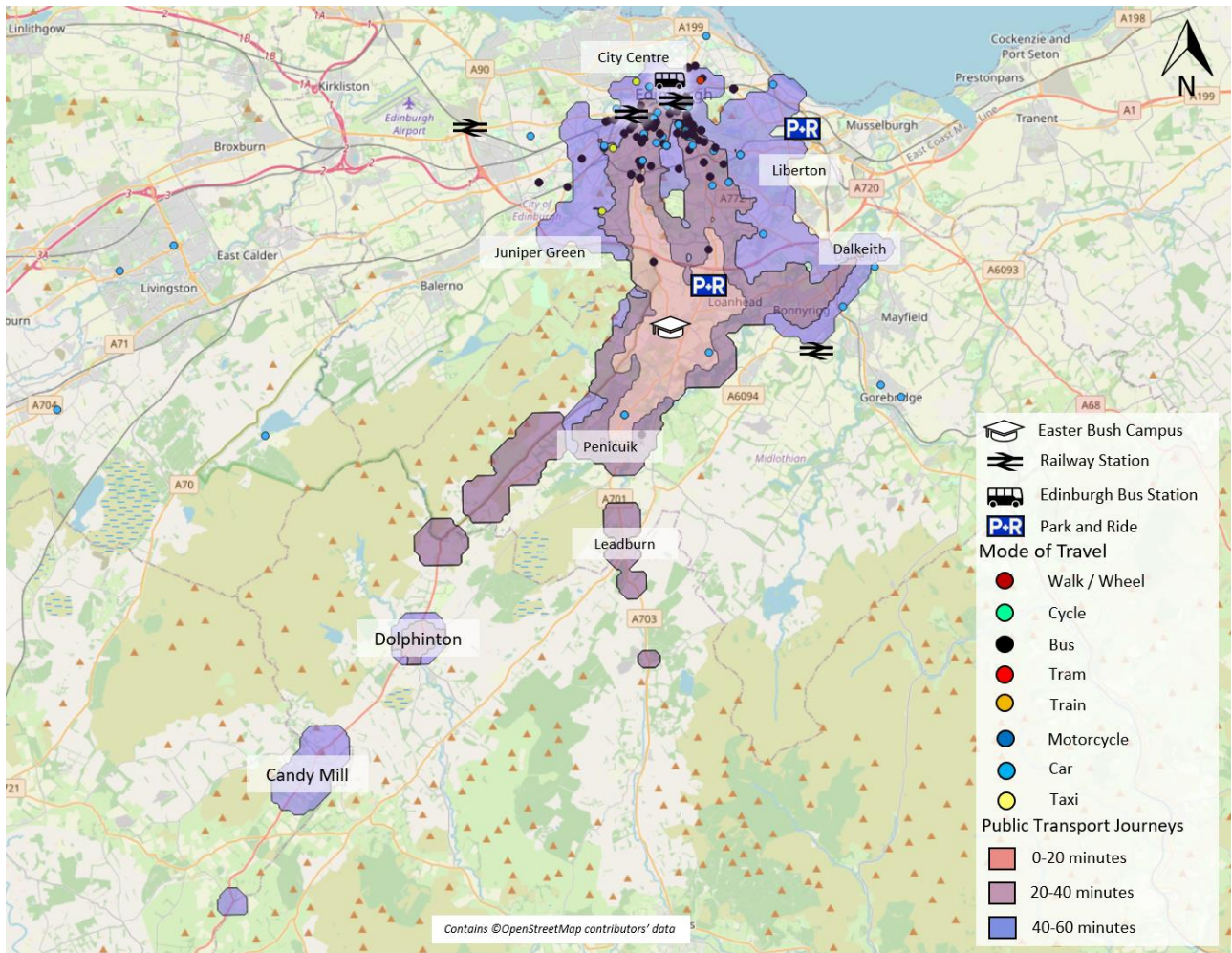


Figure 6-6: Staff 60-minute Easter Bush Public Transport Catchment

From **Figure 6.5** and **6.6**, the City Centre, Dalkeith, Candy Mill and Juniper Green are all within a 60-minute public transport journey from Easter Bush.

North-west Edinburgh, East Lothian and West Lothian all fall out with the 60-minute catchment by public transport.

There is a high concentration of staff and students commuting to Easter Bush from the City Centre, with the most common mode of travel being car and bus.

#### 6.5.4 Motorised Vehicle Catchment

**Figures 6.7** and **6.8** highlights the motorised vehicle catchment from the Easter Bush, for staff and students respectively. The motorised vehicle catchment has isochrones of 20, 40 and 60-minute intervals.

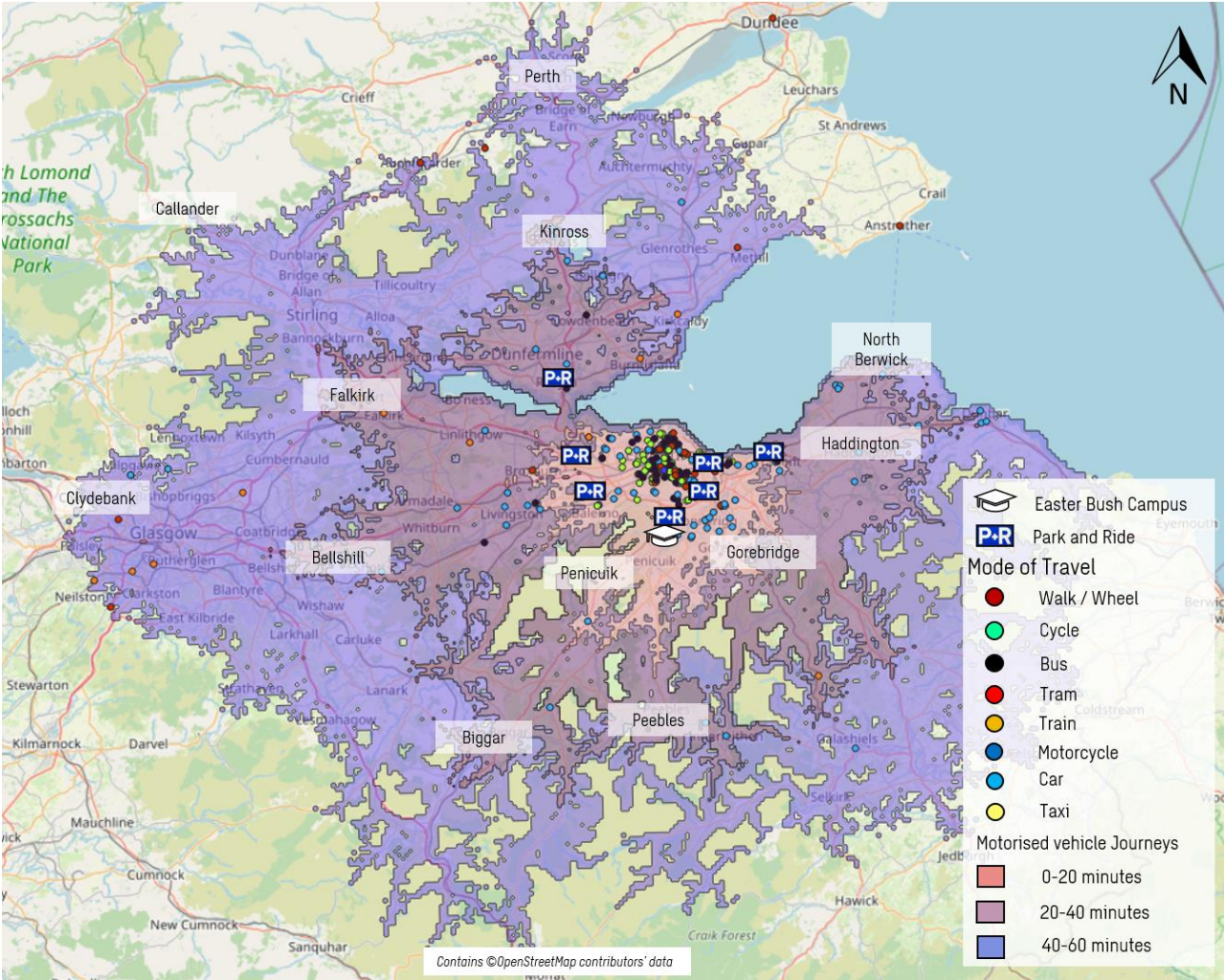


Figure 6-7: Staff 60-minute Easter Bush Motorised Vehicle Catchment



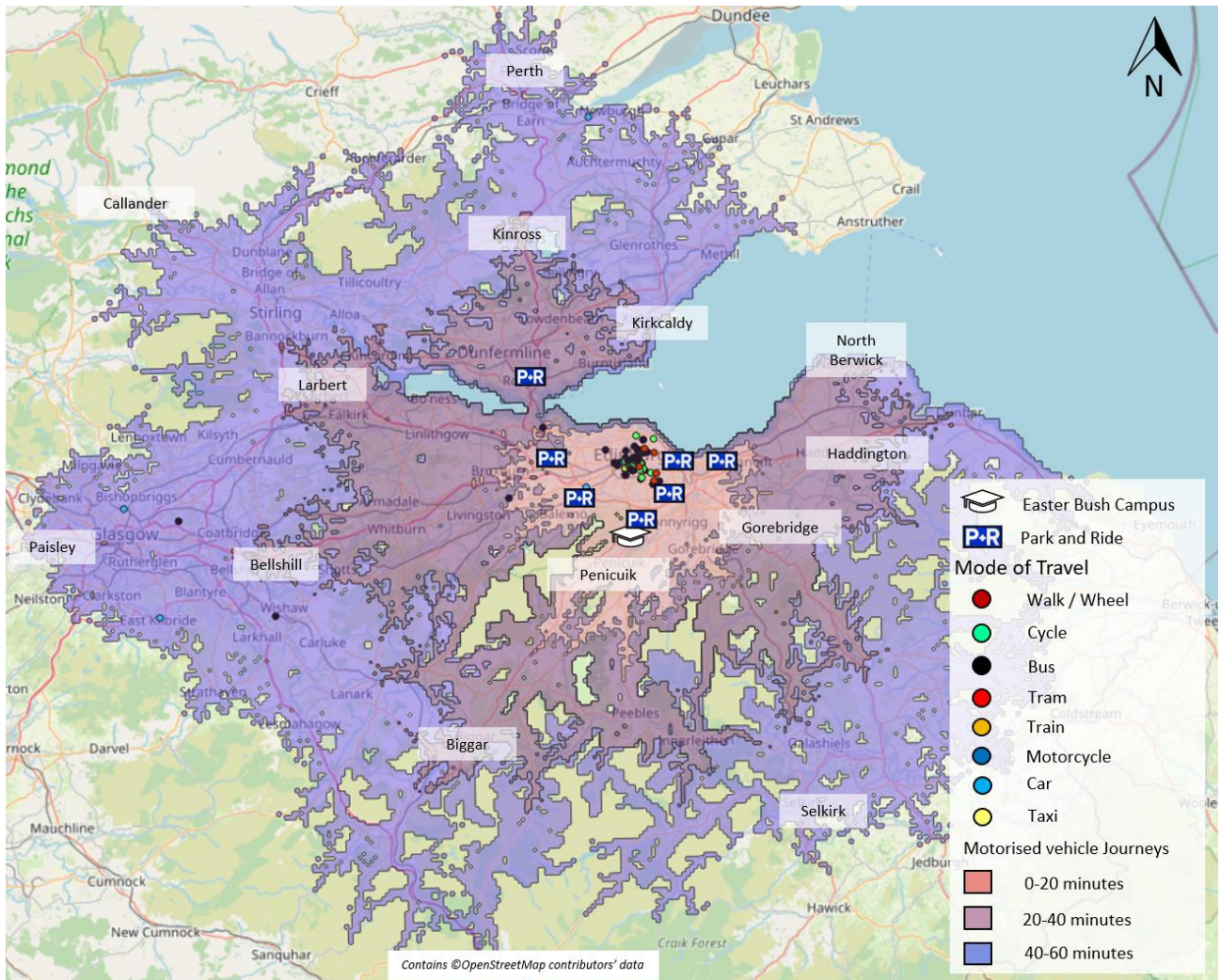


Figure 6-8: Student 60-minute Easter Bush Motorised Vehicle Catchment

From **Figure 6.7** and **6.8**, large areas of East Lothian, Midlothian, West Lothian, Strathclyde, Stirlingshire, Perth & Kinross and Fife are all within the 60-minute driving catchment.

The Straiton Park & Ride is less than a 10-minute drive from BioQuarter.

The figures highlight the disparity between accessibility from Easter Bush when driving, compared to using public transport. In order for public transport to be an appealing and convenient transport option for staff and students based at Easter Bush an increase in service provision, coverage and journey time is required.

The postcode mapping highlights the concentration of staff, and particularly students, living within the city centre, a high proportion of who travel to campus by motorised vehicle.

### 6.5.5 20-minute Neighbourhood Analysis

**Figure 6.9** reviews the number of 20-minute neighbourhood criteria within a 20-minute round-trip of Easter Bush. The catchment has isochrones of 2, 4, 6, 8 and 10-minute intervals.



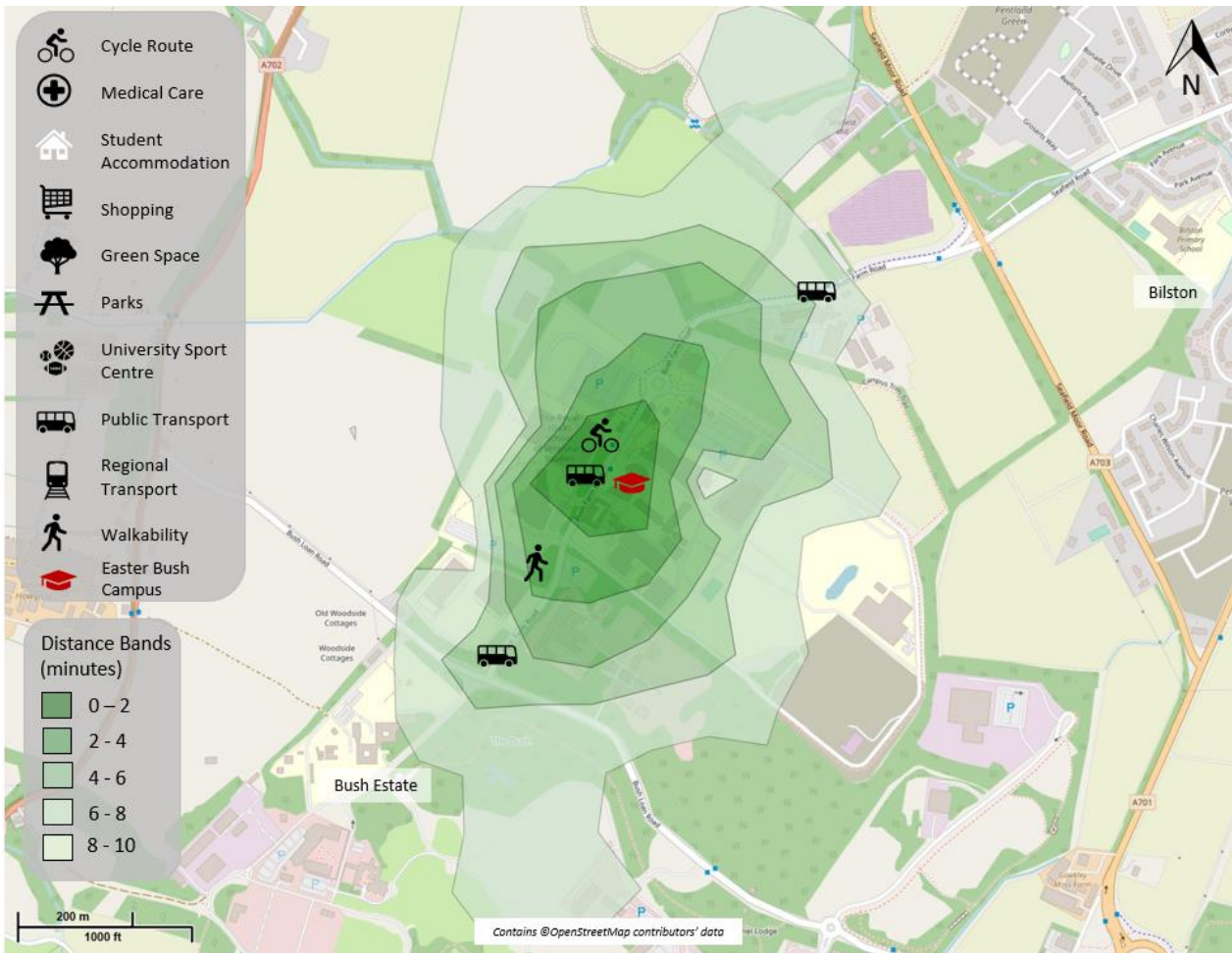


Figure 6-9: 20-minute Neighbourhood Analysis, Bush Estate

From **Figure 6.9**, the campus facilities, such as a gym and café, and south Bush Estate are within a 10-minute walk of the centre of Easter Bush. Bus stops from Bush Loan Road and Seafield Road provide routes to Penicuik and Edinburgh.

The remote nature of the campus means there are limited facilities within walking distance of the campus.

## 7 Site Specific: Western General

A total of 105 staff (academic and non-academic combined) based at Western General responded to the survey, which represents 22% of all staff based at Western General. A total of 40 students based at Western General also responded, this represents 0.1% of all students at the University of Edinburgh.

Western General respondents' findings are summarised in this section.

### 7.1 Mode Share

**Table 7.1** shows the overall, student and staff mode share for the Western General.

Table 7-1: Western General Mode Share 2023

Mode	Staff	Student	Overall
Walking / Wheeling	15.2%	24.4%	17.8%
Cycle	30.5%	19.5%	27.4%
Mobility Scooter	0%	0%	0%
Public Bus	29.5%	46.3%	34.3%
Shuttle Bus	0%	0%	0%
Tram	0%	0%	0%
Train	1.9%	2.4%	2.1%
Taxi	0%	0%	0%
Motorcycle	0%	0%	0%
Car Driver with Passenger(s)	2.9%	0%	2.1%
Car Passenger	0%	0%	0%
Car Driver Alone	20.0%	4.9%	15.8%

### 7.2 Staff

The most common mode of travel for staff based at Western general is cycling (31%) followed by bus travel (30%). This marks a considerable shift in the 2022 Travel Survey results, where driving alone (25%) was the most common mode of travel, followed by cycling (24%).

### 7.3 Students

The significant increase in rates of walking observed amongst students in the 2022 Travel Survey (38%) has reduced to levels consistent with those observed in 2019, a reduction of 23.6%. Rates of students travelling by car alone also returned to similar levels observed in the 2019 Travel Survey, up 3% from 2022.

Rates of cycling fell slightly, decreasing from 24% in 2022 to 20% in 2023.

## 7.4 Encouraging Alternative Modes

### 7.4.1 Active Travel

Staff and students based at Western General most frequently identified the following as improving their journey by walking, running or wheelchair or encouraging them to use this mode of travel on a regular basis:

- Improved footway / pavement / footpath surfaces (12%);
- Improved lighting on footways (9%); and
- Improved air quality (7%).

Staff and students based at Western General most frequently identified the following as improving their journey by bicycle or encouraging them to use this mode of travel on a regular basis:

- More cycle tracks, segregated from traffic and pedestrians (17%);
- Availability of secure sheltered cycle parking (10%)
- Availability of shower and locker facilities (7%).

## 7.5 Catchment Mapping

The following section demonstrates the accessibility of key services and locations within a 20-minute walk, 30-minute cycle, 60-minute drive and 60-minute journey by public transport from Western General.

### 7.5.1 Walking Catchment

**Figures 7.1** and **7.2** make clear the walking catchment from Western General, for staff and students respectively. The walking catchment has isochrones of 5, 10 and 20-minute intervals.

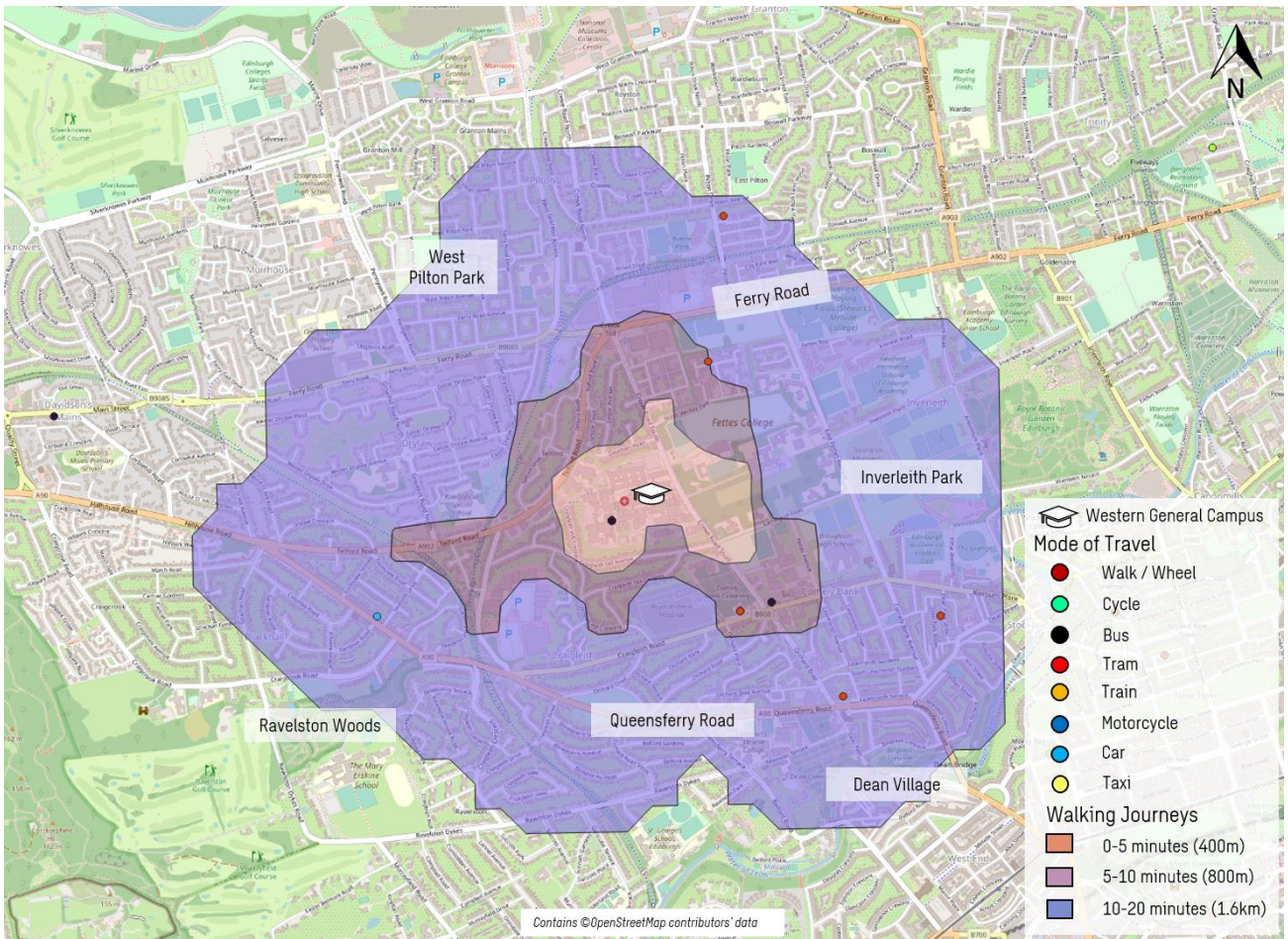


Figure 7-1: Staff 20-minute Western General Walking Catchment



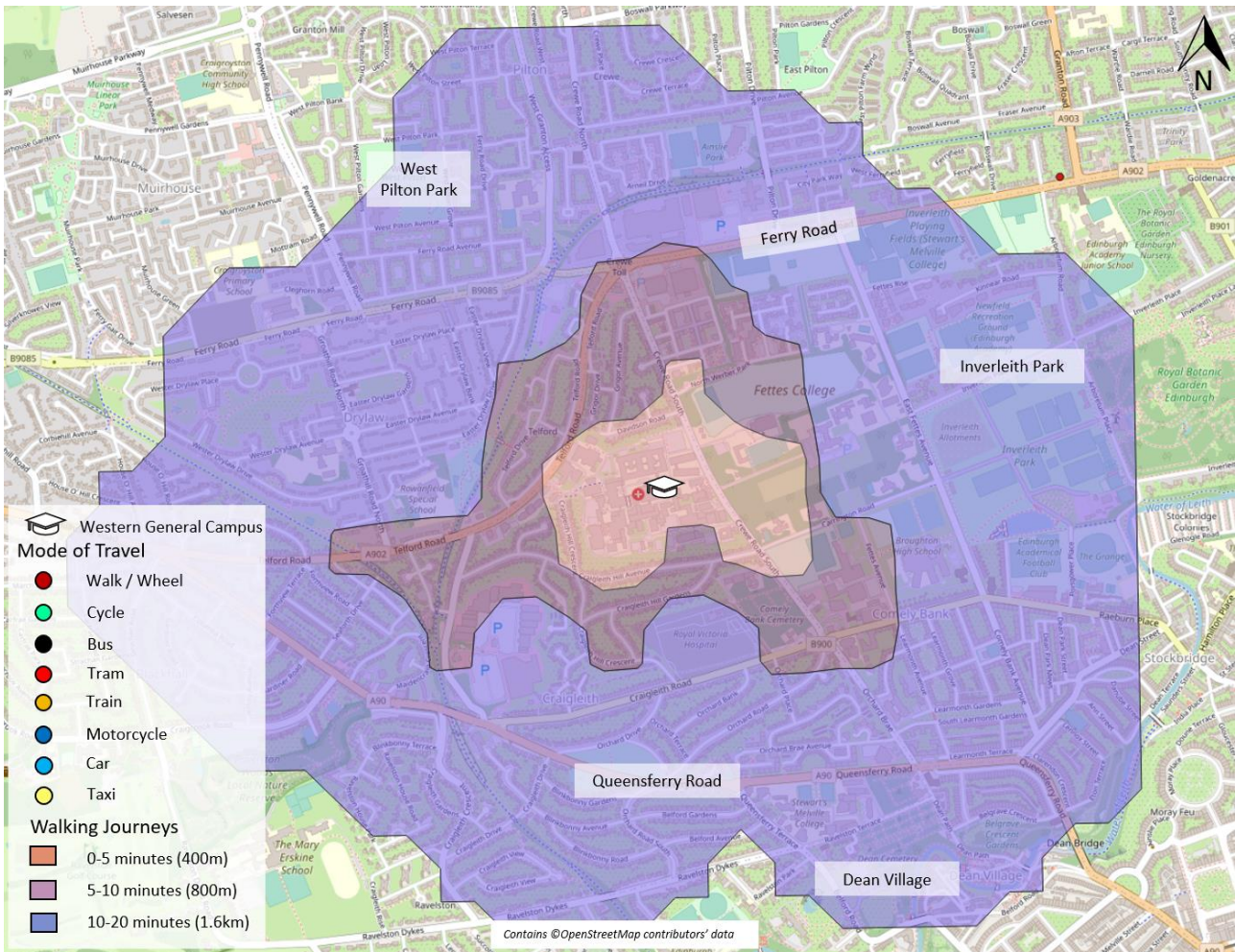


Figure 7-2: Student 20-minute Western General Walking Catchment

From **Figures 7.1** and **7.2**, Pilton, Inverleith, Dean Village and Blackhall can be accessed within a 20-minute walk. Crewe Toll and Comely Bank are within a 10-minute walk of Western General.

Few staff and no students who entered a valid postcode live within the walking catchment. Of the staff that do live within the catchment, the majority walk.

### 7.5.2 Cycling Catchment

**Figures 7.3** and **7.4** highlight the cycling catchment from Western General, for staff and students respectively. The cycling catchment has isochrones of 10, 20 and 30-minute intervals.



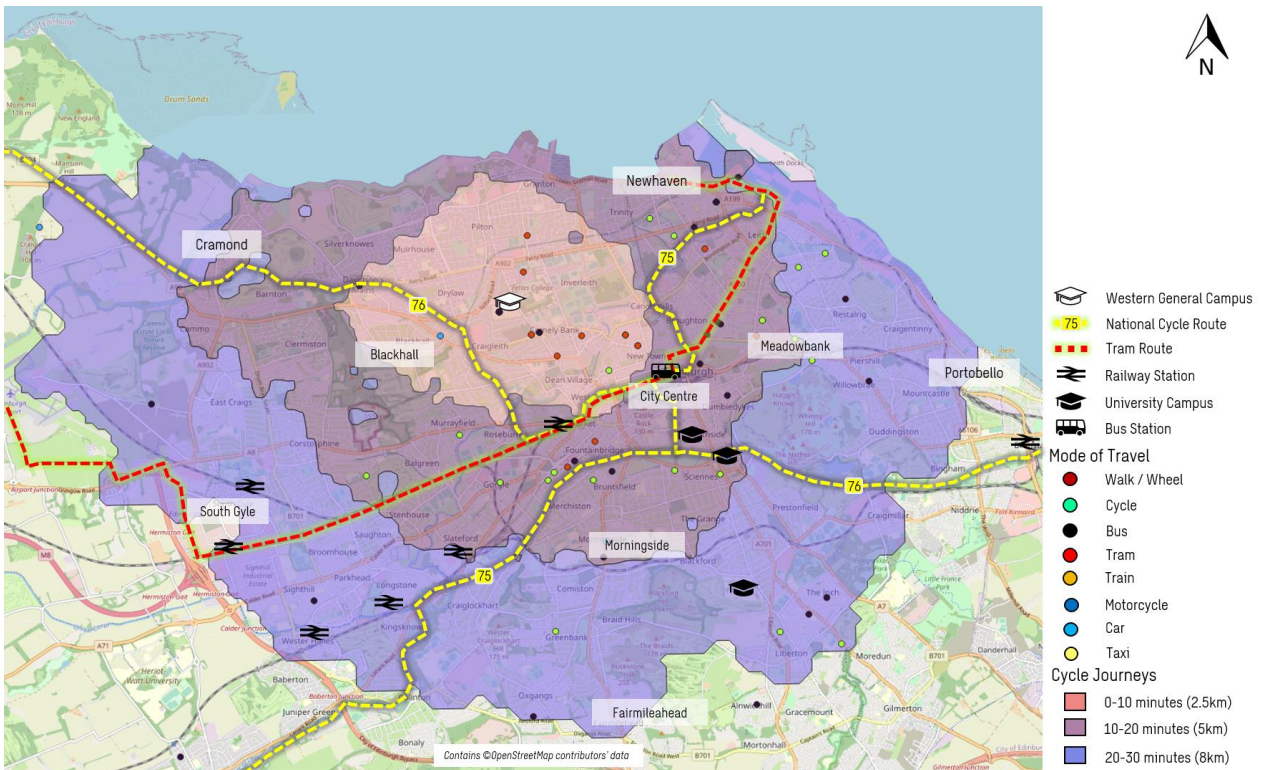


Figure 7-3: Staff 30-minute Western General Cycling Catchment

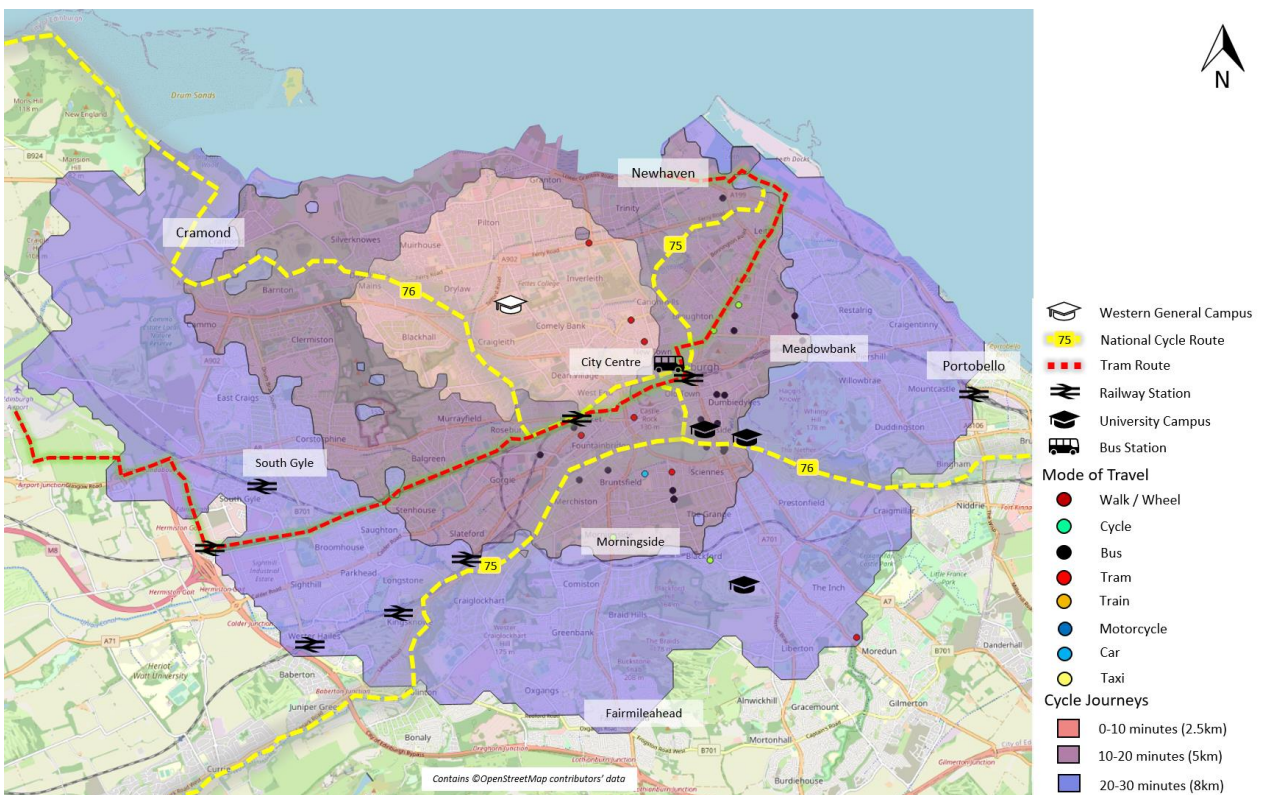


Figure 7-4: Student 30-minute Western General Cycling Catchment



From the figures, the vast majority of Edinburgh is within a 30-minute cycle of Western General with Portobello, Fairmilehead, South Gyle and Edinburgh Airport are all accessible. Leith, Meadowbank, Morningside, and Cramond are within a 20-minute cycle. Newhaven, Blackhall, and Edinburgh New Town can be reached in 10 minutes.

National cycle routes of 75 and 76 provide safe cycling conditions for active modes users around the city of Edinburgh and NCR 76 is a 2-minute cycle from Western General.

The postcode mapping 27% of staff and 19% students who live within the catchment cycling to campus, with the majority of those cycling living within the 10-20 minute catchment.

### 7.5.3 Public Transport Catchment

**Figures 7.5 and 7.6** highlights the public transport catchment from Western General, for staff and students respectively. The public transport catchment has isochrones of 20, 40 and 60-minute intervals.

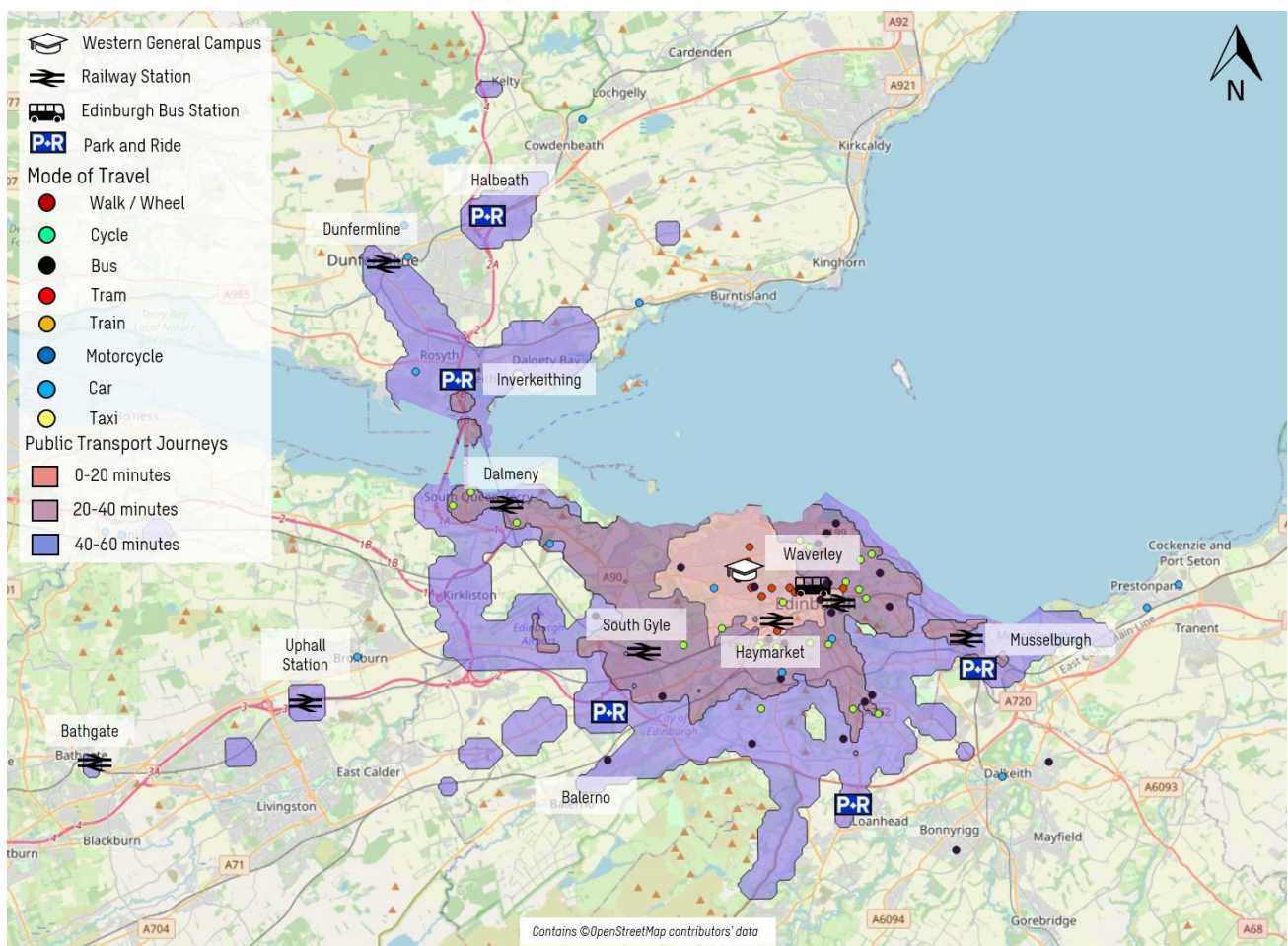


Figure 7-5: Staff 60-minute Western General Public Transport Catchment

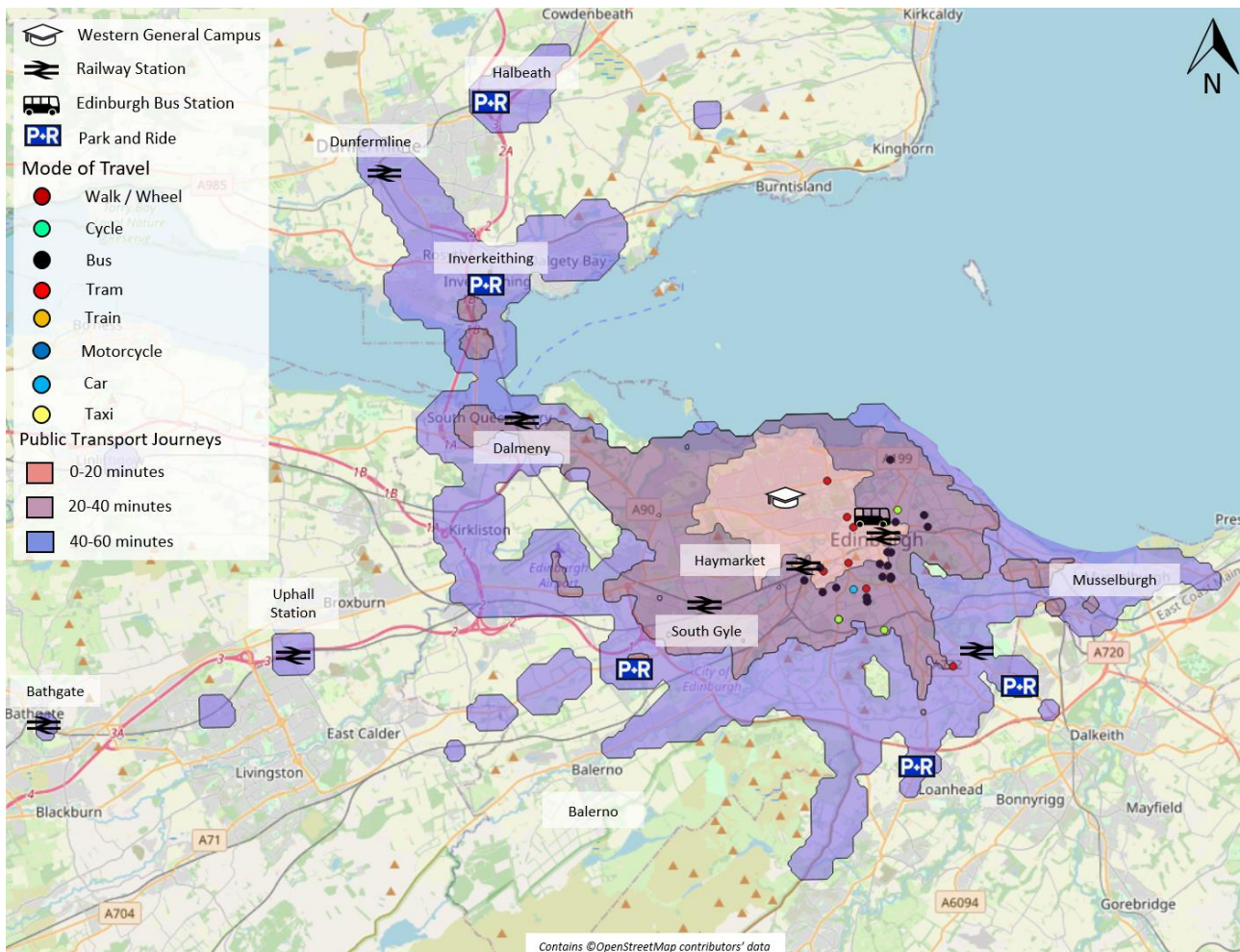


Figure 7-6: Student 60-minute Western General Public Transport Catchment

From the figures, Dunfermline, Tranent, Leadburn and Falkirk High are all within a 60-minute public transport journey from Western General. Areas of Newhaven, Musselburgh, Eskbank and Penicuik, South Gyle can be reached within a 40-minute journey.

Much of the Edinburgh City Centre is accessible within a 20-minute public transport journey, with connections to Edinburgh Tram also within this timeframe.

The postcode mapping highlights that no staff or students living within the catchment are commuting to campus by train.

### 7.5.4 Motorised Vehicle Catchment

**Figures 7.7 and 7.8** highlight the motorised vehicle catchment from the Western General, for staff and students respectively. The motorised vehicle catchment has isochrones of 20, 40 and 60-minute intervals.



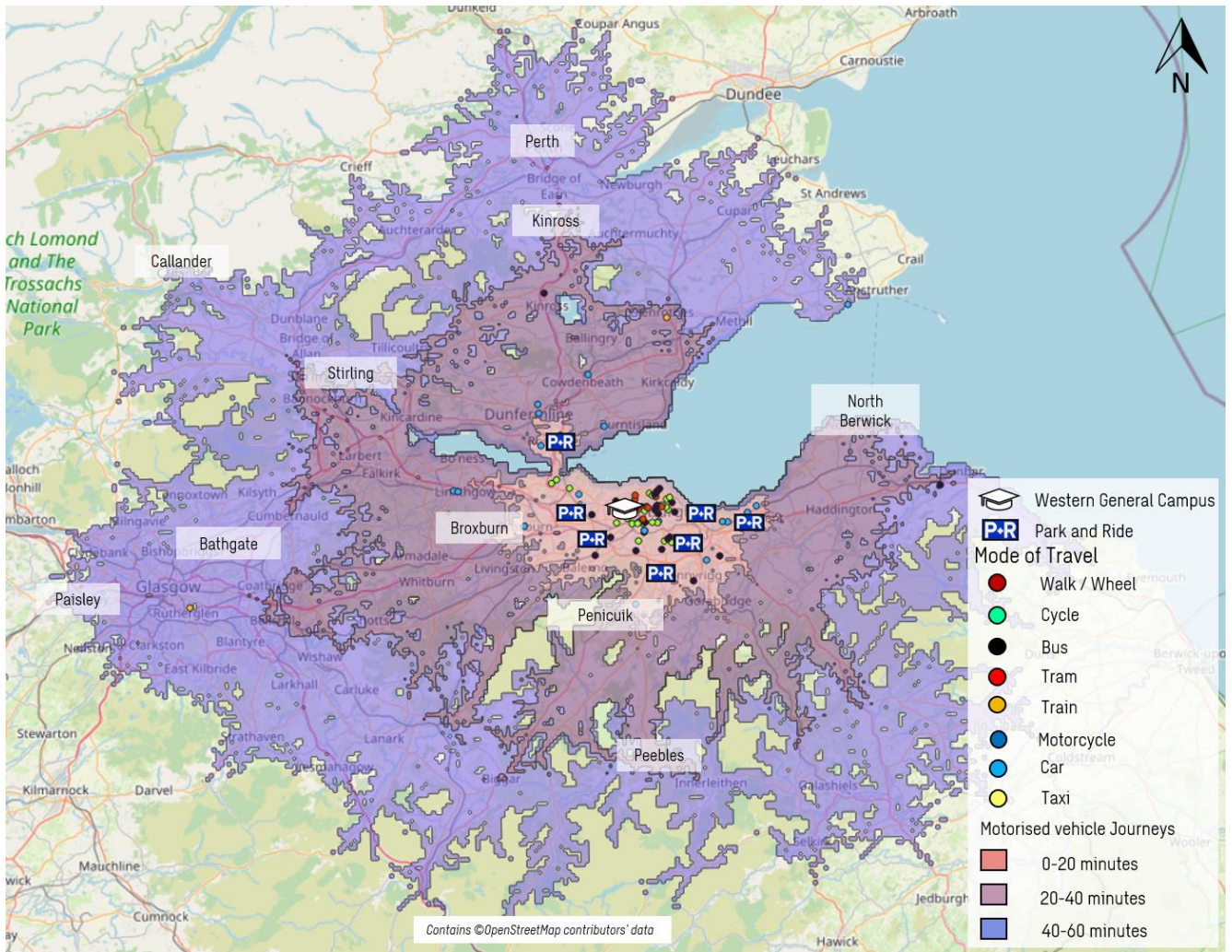


Figure 7-7: Staff 60-minute Western General Motorised Vehicle Catchment

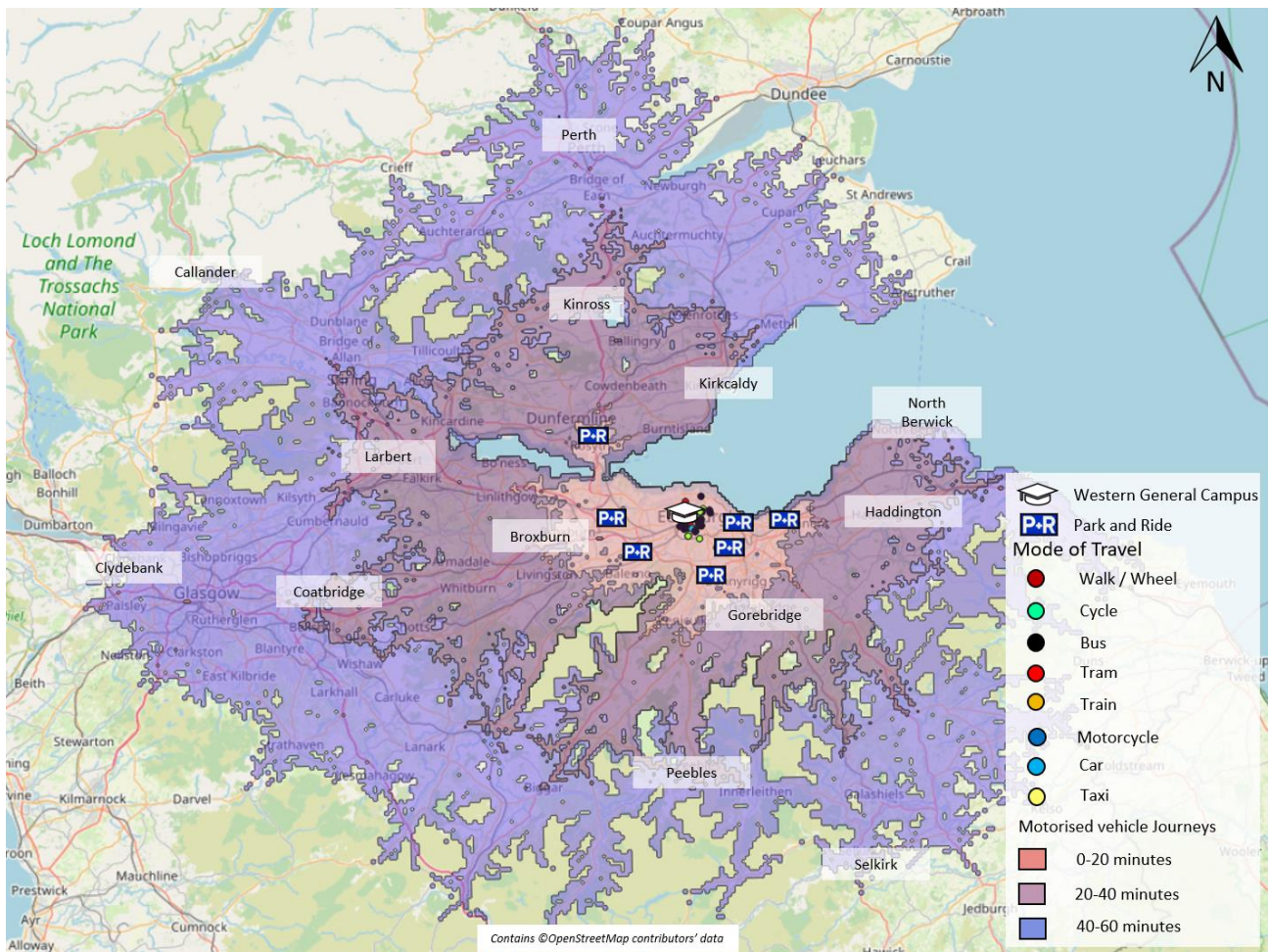


Figure 7-8: Student 60-Minute Western General Motorised Vehicle Catchment

From the figures, large areas of East Lothian, Midlothian, West Lothian, Fife, Perth and Kinross are all within the 60-minute driving catchment.

The park and rides surrounding Edinburgh city bypass are within a 20-minute drive of Western General along with Leith, Prestonpans, Penicuik and Kirkliston.

The postcode mapping highlights a cluster of both staff and students living within the City Centre. The majority of staff living out with the 20-minute catchment, commute to campus by motorised vehicle.

### 7.5.5 20-minute Neighbourhood Analysis

**Figure 7.9** reviews the number of 20-minute neighbourhood criteria within a 20-minute round-trip of the Western General. The catchment has isochrones of 2, 4, 6, 8 and 10-minute intervals.



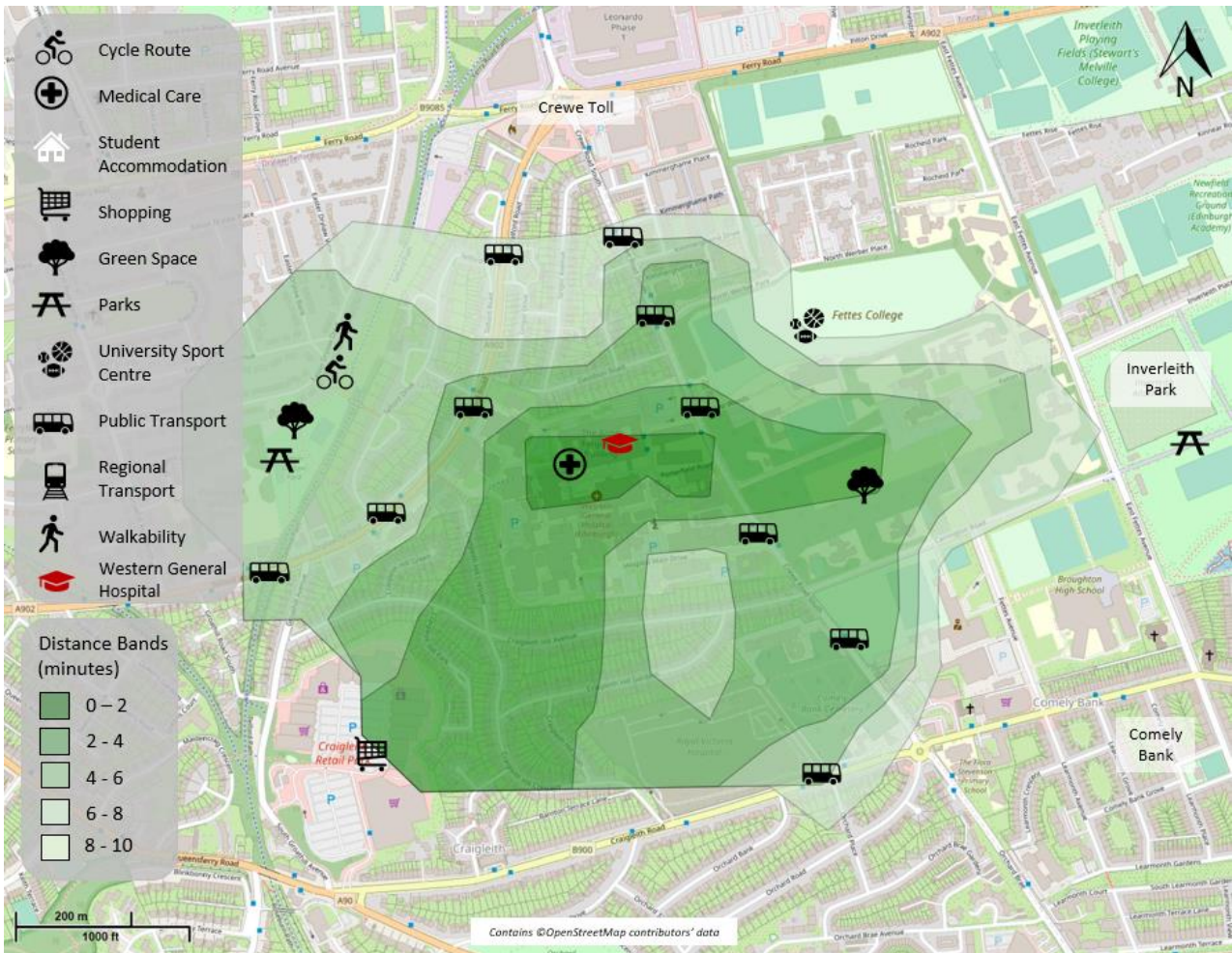


Figure 7-9: 20-minute Neighbourhood Analysis, Western General

From **Figure 7.9**, there is active travel routes within a 10-minute walk of Western General at the Telford Path. Amenities such as a shop, green space and a university sports centre are also within this timeframe.

Several bus stops on Crewe Road South are very accessible from Western General and such services offer access to much of the city of Edinburgh.



## 8 Site Specific: Pollock Halls

A total of 89 staff (academic and non-academic combined) based at Pollock Halls responded to the survey, which represents 17% of all staff based at Pollock Halls. 141 students responding to the survey reside in the accommodation at Pollock Halls. Their mode of travel to study has been included in **Table 8.1** for comparison.

Pollock Halls respondents' findings are summarised in this section.

### 8.1 Mode Share

**Table 8.1** shows the staff and student mode share for Pollock Halls.

Table 8-1: Pollock Halls Mode Share 2023

Mode	Staff	Student (Living in Pollock Halls Accommodation)
Walking / Wheeling	12.4%	47.1%
Cycle	4.5%	7.9%
Mobility Scooter	0%	0.0%
Public Bus	28.1%	24.3%
Shuttle Bus	0%	17.1%
Tram	0%	0.0%
Train	6.7%	0.7%
Taxi	0%	2.9%
Motorcycle	0%	0.0%
Car Driver with Passenger(s)	6.7%	0.0%
Car Passenger	3.4%	0.0%
Car Driver Alone	36.0%	0.0%

### 8.2 Staff

The most common mode of travel for staff based at Pollock Halls is driving alone, however over the last year there has been a 10-percentage point reduction in the rate. Rates of walking fell by 3.6 percentage points while rates of cycling rose by 2.5 percentage points, on the 2022 Travel Survey results.

The percentage of staff using public transport increased by 6.1 percentage points for bus and 1.7 percentage points for rail.

## 8.3 Encouraging Alternative Modes

### 8.3.1 Active Travel

Staff based at Pollock Halls most frequently identified the following as improving their journey by walking, running or wheelchair or encouraging them to use this mode of travel on a regular basis:

- Improved footway / pavement / footpath surfaces (11%);
- Improved lighting on footways (8%); and
- Less traffic / parking along routes (7%).

Staff based at Pollock Halls most frequently identified the following as improving their journey by bicycle or encouraging them to use this mode of travel on a regular basis:

- More cycle tracks, segregated from traffic and pedestrians (12%) and
- Availability of secure cycle parking (8%).

## 8.4 Catchment Mapping

The following section demonstrates the accessibility of key services and locations within a 20-minute walk, 30-minute cycle, 60-minute drive and 60-minute journey by public transport from Pollock Halls. Only staff postcodes are plotted in the Pollock Halls mapping.

### 8.4.1 Walking Catchment

**Figure 8.1** makes clear the walking catchment from Pollock Halls. The walking catchment has isochrones of 5, 10 and 20-minute intervals.

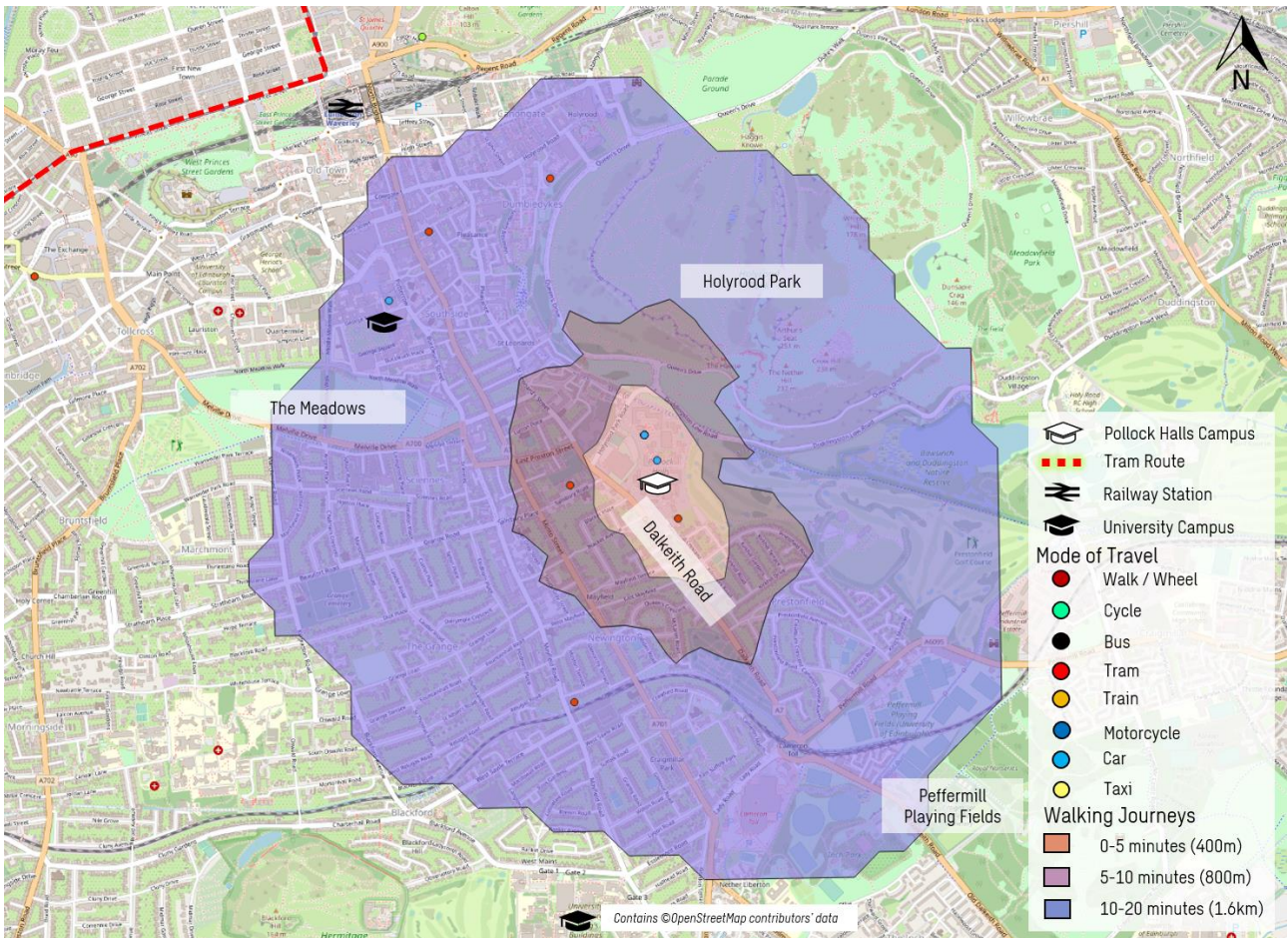


Figure 8-1: 20-minute Pollock Halls Walking Catchment

From **Figure 8.1**, most of Old Town, Edinburgh and the Central Area campus can be accessed within a 20-minute walk.

Of those living within the walking catchment, all either walk or drive to Pollock Halls.

### 8.4.2 Cycling Catchment

**Figure 8.2** highlights the cycling catchment from Pollock Halls. The cycling catchment has isochrones of 10, 20 and 30-minute intervals.



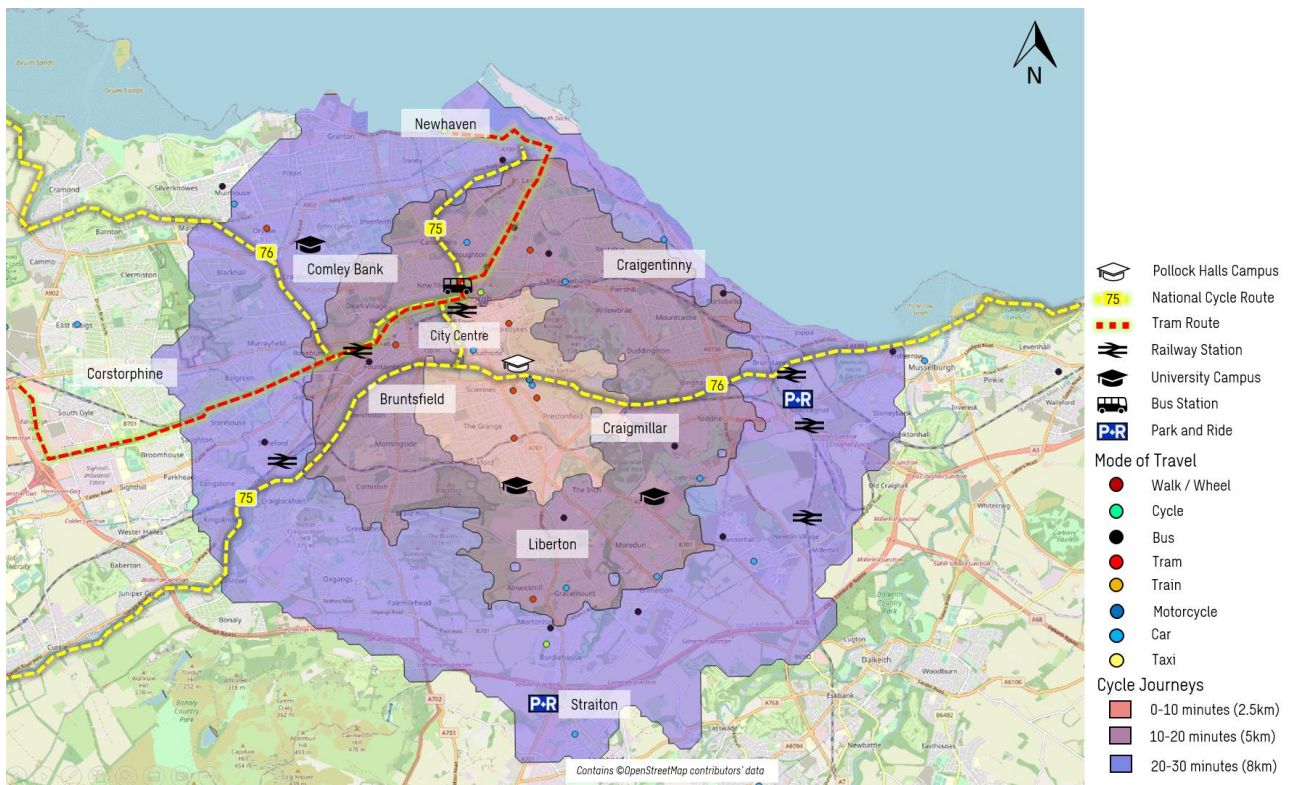


Figure 8-2: 30-minute Pollock Halls Cycling Catchment

From **Figure 8.2**, the vast majority of Edinburgh is within a 30-minute cycle of Pollock Halls with Leith, Musselburgh, Straiton and Corstorphine all accessible. Edinburgh city centre, Craigmillar, The Inch and Bruntsfield are within a 10-minute cycle.

National cycle routes of 75 and 76 provide safe cycling conditions for active modes users around the city of Edinburgh and NCR 76 passes Pollock Halls.

Few staff living within the catchment cycle to Pollock Halls (4%), instead travelling by foot, bus or motorised vehicle.

### 8.4.3 Public Transport Catchment

**Figure 8.3** highlights the public transport catchment from Pollock Halls. The public transport catchment has isochrones of 20, 40 and 60-minute intervals.

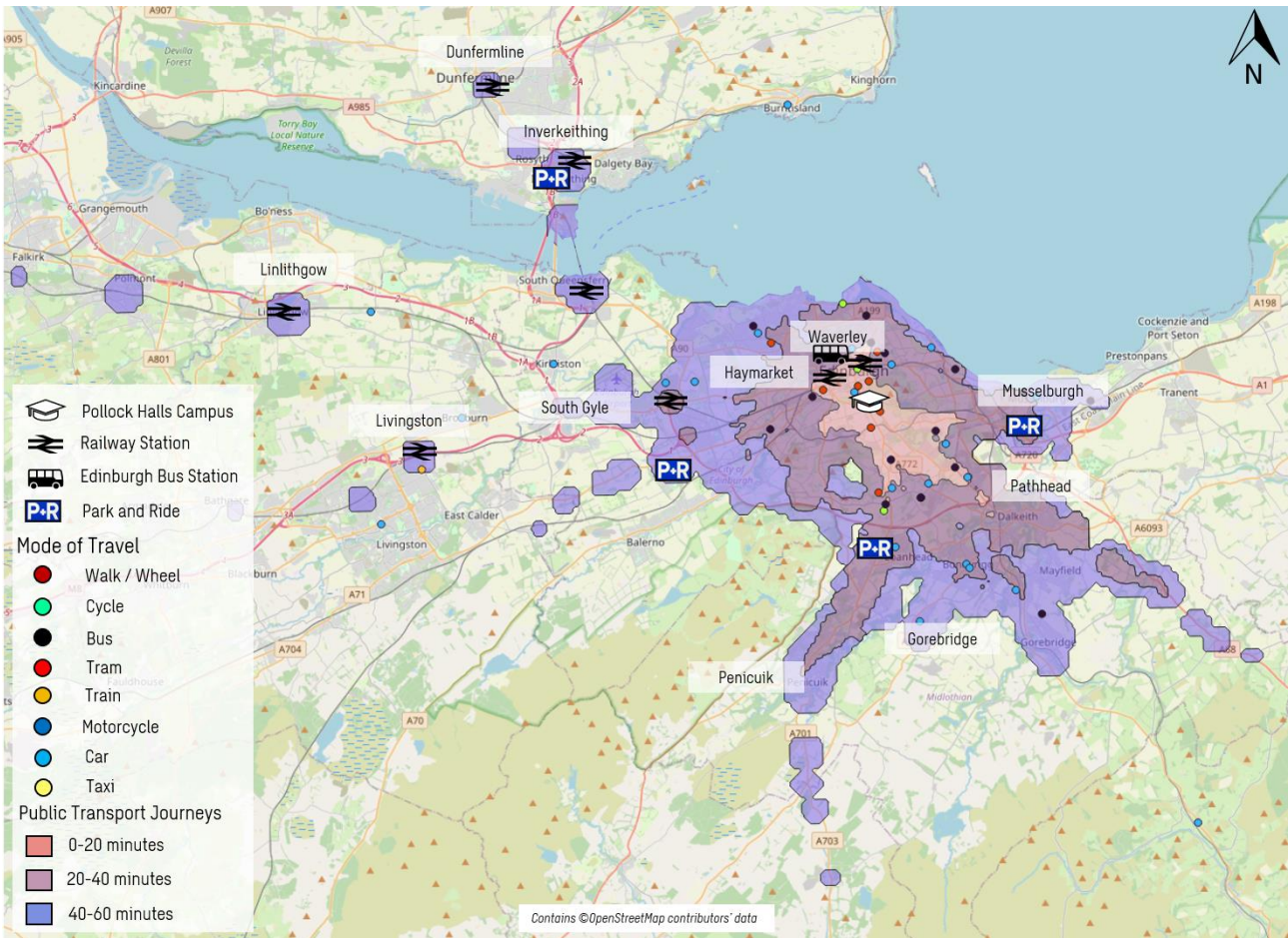


Figure 8-3: 60-minute Pollock Halls Public Transport Catchment

From **Figure 8.3**, Dunfermline, Musselburgh, Penicuik, and Falkirk High are all within a 60-minute public transport journey from Pollock Halls. Areas of Newhaven, Bingham, Liberton and Gorgie can be reached within a 60-minute journey.

Much of the Edinburgh City Centre is accessible within a 20-minute public transport journey, with connections to Edinburgh Waverley Train Station and Edinburgh Tram also within this timeframe.

The majority of staff live within the public transport catchment (75%). With all of those out with the catchment commuting by motorised vehicle.

#### 8.4.4 Motorised Vehicle Catchment

**Figure 8.4** highlights the motorised vehicle catchment from the Pollock Halls. The motorised vehicle catchment has isochrones of 20, 40 and 60-minute intervals.



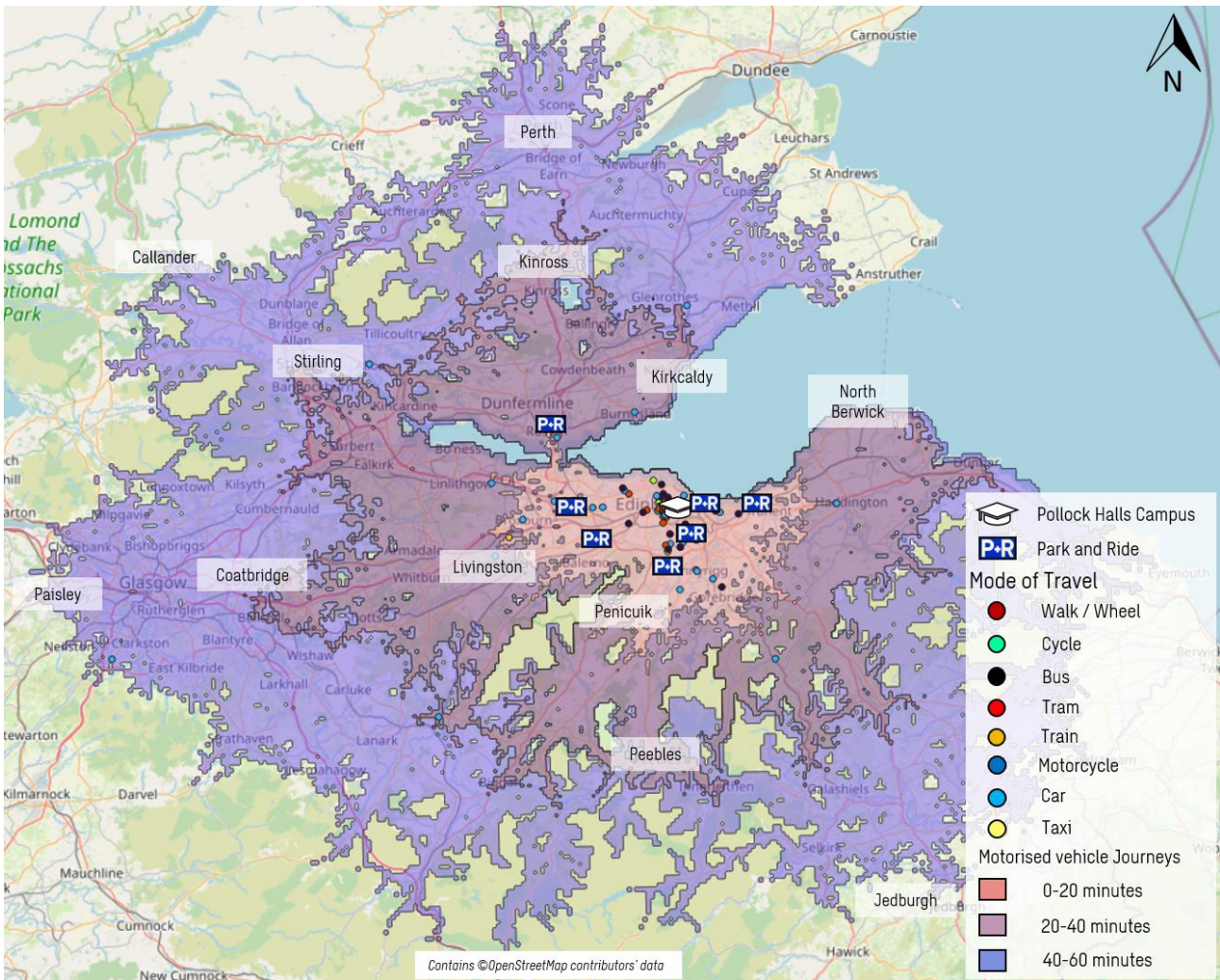


Figure 8-4: 60-minute Pollock Halls Motorised Vehicle Catchment

From **Figure 8.4**, large areas of East Lothian, Midlothian, West Lothian, Fife and Perth & Kinross are all within the 60-minute driving catchment.

The park and rides surrounding Edinburgh city bypass are within a 20-minute drive of Pollock Halls along with Leith, Prestonpans, Penicuik and Kirkliston.

Staff members can be observed commuting from out with the 40-minute catchment, however the majority live within the 20-minute catchment.

#### 8.4.5 20-minute Neighbourhood Analysis

**Figure 8.5** reviews the number of 20-minute neighbourhood criteria within a 20-minute round-trip of Pollock Halls. The catchment has isochrones of 2, 4, 6, 8 and 10-minute intervals.



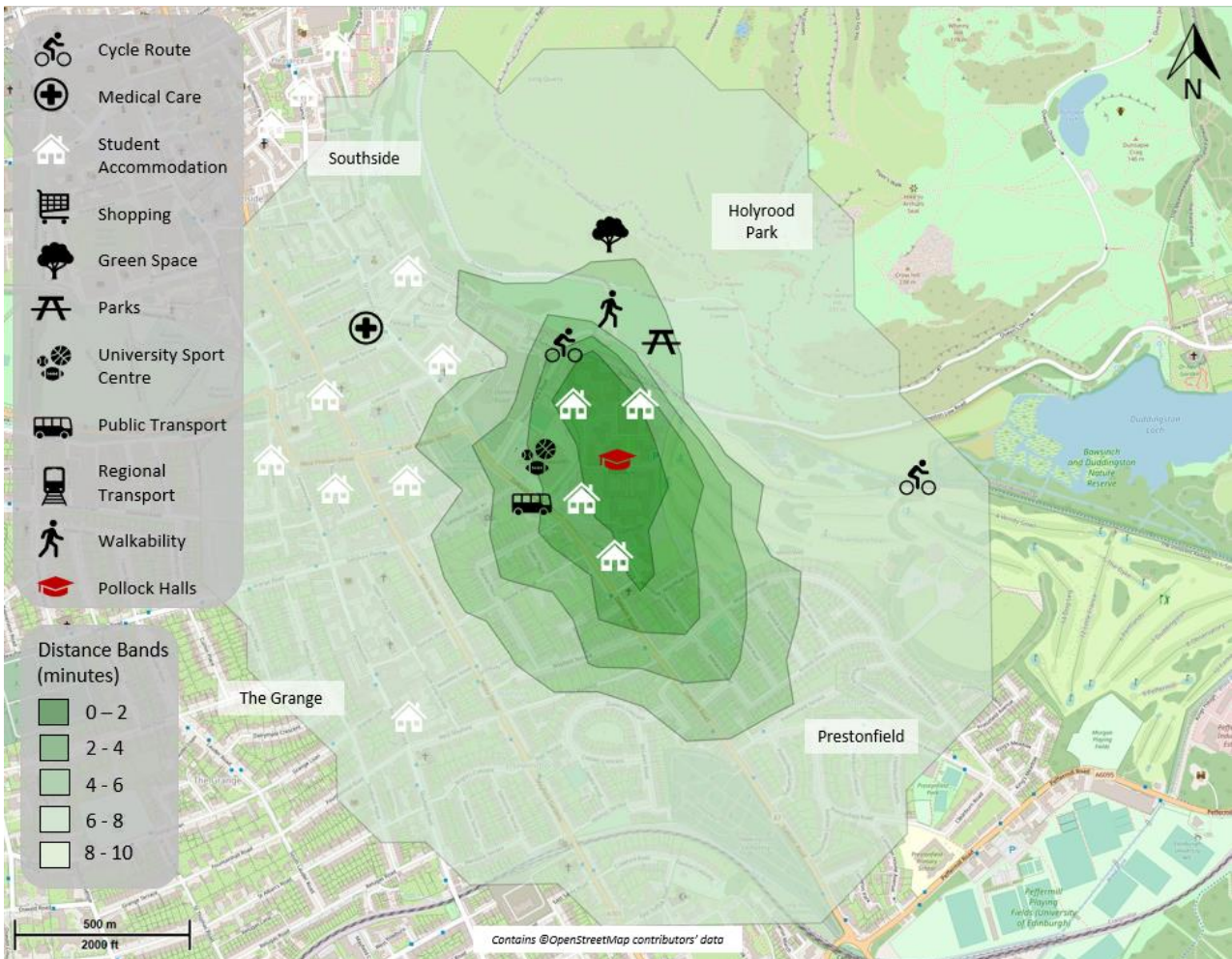


Figure 8-5: 20-minute Neighbourhood Analysis, Pollock Halls

From **Figure 8.5**, the Royal Commonwealth Pool and active travel routes through The Innocent Railway are less than a 6-minute walk from Pollock Halls. Amenities such as green space and a medical centre are less than a 10-minute walk.

Several bus stops are very accessible from Dalkeith Road and the number 14 bus provides routes north and south of Pollock Halls.

## 9 Summary

### 9.1 Conclusions

The results of the 2023 University of Edinburgh Travel Survey show a continued high uptake of sustainable modes of travel by staff and students across the 6 main campuses. 78% of staff and 94% of students travel actively or by public transport as their main mode.

The past year has seen an increase in the rate of both staff and students travelling by bus, helped in part by the introduction of free bus travel in Scotland for under 22's and the growing confidence in public transport post COVID. The same trend has been observed in train travel, which may be partly attributed to the removal of peak time fares on Scotrail trains between October 2023 and March 2024, and the move away from COVID restrictions and concerns.

Rates of students cycling to campus rose slightly (0.5%), however rates of staff cycling fell by 3%, when compared to 2022 Travel Survey results. Many of the barriers to cycling highlighted by respondents are out with the university's remit, however measures such as improving shower and changing facilities and continuing to offer behaviour change initiatives will be of benefit. Additionally, they have the opportunity to work with local councils to improve infrastructure connections to the campuses.

Central campus observed the highest rates of active travel amongst staff and students, likely due to the location within a short walk of numerous student accommodation sites and residential areas. Easter Bush had the lowest rates of active travel by staff and students, which is likely due to the remote nature of the campus and the lack of cycling infrastructure in the surrounding area.

### 9.2 Recommendations

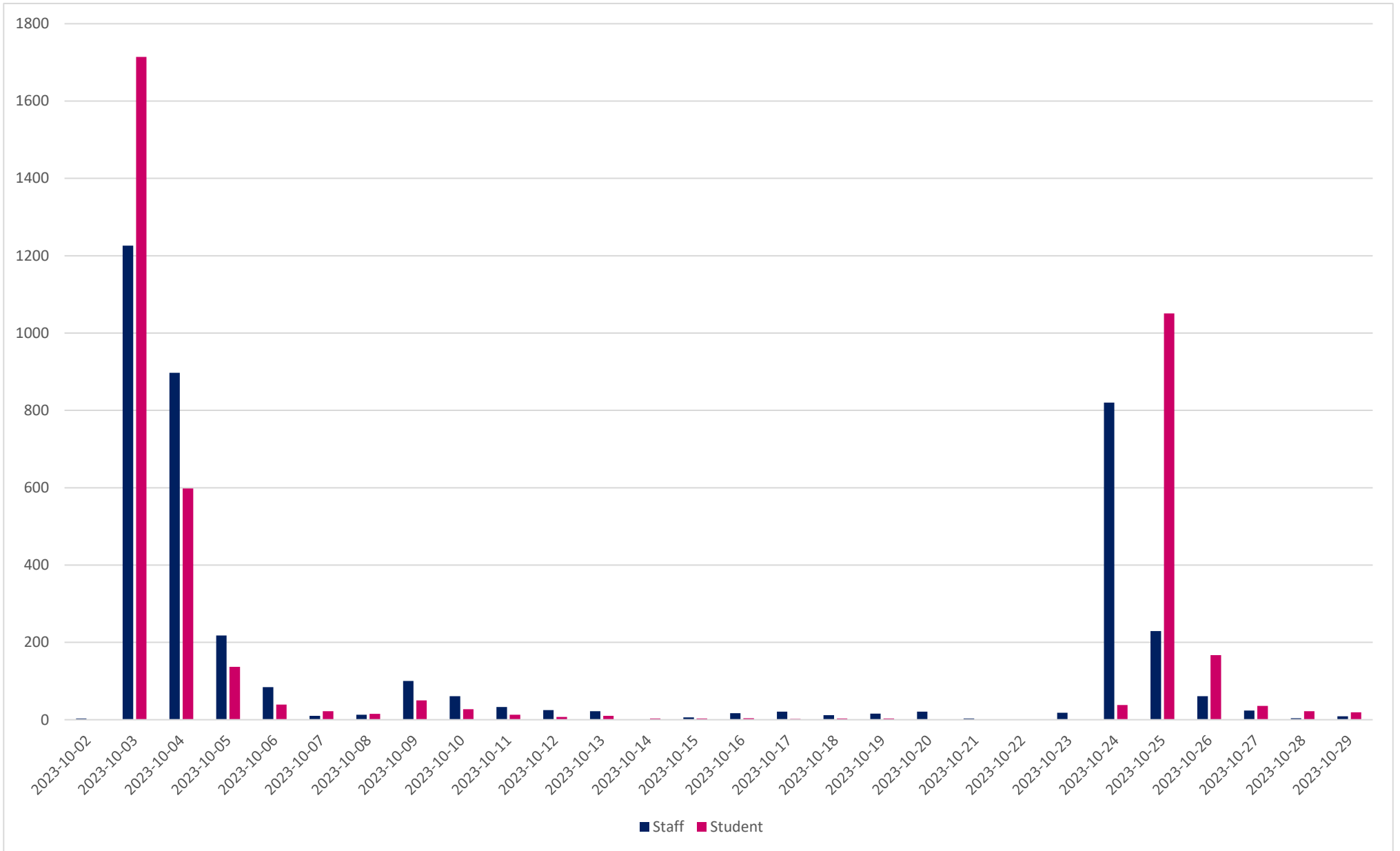
It is recommended that the Travel Survey continues to be undertaken annually in order to provide a clear insight to year-on-year trends and to allow the university to adapt quickly to changing travel habits and perceived barriers to sustainable travel by staff and students.

The provision of postcode mapping of staff and student postcodes, against the catchment maps for different modes of travel could be used in future decision making by the university when liaising with public transport service providers, discussing new active travel routes with councils, when reviewing car-sharing viability or when deciding where to locate future student accommodations.

It is recommended that for the next iteration of the Travel Survey the key questions are kept the same and the methodology repeated to allow direct comparisons with the results of the 2022 and 2023 surveys.

# Appendix A: Survey Response Rate





# Appendix B: Carbon Footprint Methodology

# Appendix B – Carbon Footprint Methodology

## 1.1 A.1 WEIGHTING BY LOCATION

Mode share calculations takes account of response rate per location for staff against the total number of staff at that location and response per student per school and the total number of students in that school. This ensures that no location / school is under or overrepresented.

## 1.2 A.2 WEIGHTING BY MODES

Respondents' modes are weighted based on where they make use of multiple modes of travel, for example, if a respondent travels nine miles by bus and one by walking then that is reflected in the mode share calculation, rather than attributing it all to bus travel as the mode where the greatest distance is covered. This allows the closest like-for-like comparison with previous years' data (although the survey questions were different, so they are not exactly comparable).

## 1.3 A.3 DATA CLEANING

There are a number of entries where the respondents had given a very large distance of travel to get to the University. All entries were reviewed and if the distance was deemed to be too large for the mode, the results were excluded from the Carbon Footprint Calculation. These cut off were 5 miles for Walking, 40 miles for Cycling and 60 miles for all other modes. Each staff member and student were asked about their usual modes of transport to the University. For each mode they were asked the distance that they travelled. Using this information and the DEFRA Carbon Conversion factors 2019 from the Gov.UK website, the carbon footprint for each mode was calculated and then summed to give an over all daily carbon footprint per respondent.

$$(\text{CCF of mode a} \times \text{distance} \times 2) + (\text{CCF of mode b} \times \text{distance} \times 2) + \dots = \text{Daily CF}$$

To annualise the carbon footprint for staff, the daily carbon footprint was multiplied by the number of days each staff member works and by 47 weeks. To annualise the student daily carbon footprint, it was multiplied by the number of days each student attends the University and then by 44 weeks for Postgraduates and 30 weeks for Undergraduates. This is the same method as applied to 2016 and 2017 and 2019 survey data.

$$\text{Daily CF} \times \text{number of days per week at work} \times (47) A^* \text{ or } (30) A^{**} \text{ or } (44) A^{***} = \text{Annual CF}$$

Where:

- Total number of weeks per year staff work, assuming 5 weeks annual leave
- Total number of weeks per year undergraduate study
- Total number of weeks per year postgraduate study

**Table 1** shows the DEFRA carbon emissions values by mode and compares them to those used in the 2017, 2019, 2022 and 2023 reporting.



Table 1 Carbon Emission Values by Mode (tracking 2017, 2019, 2022 and 2023)

Mode	Category	Kg CO2e/mile (2017)	Kg CO2e/mile (2019)	Kg CO2e/mile (2022)	Kg CO2e/mile (2023)
Car (petrol)	Small	0.252	0.236	0.236	0.226
	Medium	0.314	0.298	0.298	0.286
	Large	0.459	0.445	0.445	0.437
	Average	0.299	0.275	0.275	0.263
Car (diesel)	Small	0.234	0.226	0.226	0.221
	Medium	0.280	0.271	0.271	0.266
	Large	0.351	0.338	0.338	0.333
	Average	0.288	0.275	0.275	0.271
Electric Vehicle (battery)		0.129	0.097	0.117	0.120
Hybrid	Small	-	-	0.165	0.162
	Medium	0.181	0.175	0.175	0.174
	Large	0.210	0.247	0.247	0.243
Unknown Car		0.294	0.285	0.275	0.266
Motorcycle	Up to 125cc	0.136	0.134	0.134	0.130
	125cc to 500c	0.166	0.163	0.163	0.158
	Over 500cc	0.218	0.214	0.214	0.210
Public Bus		0.197	0.169	0.174	0.190
Shuttle Bus		0.197	0.170	0.174	0.190
Rail		0.075	0.066	0.057	0.056
Taxi		0.251	0.292	0.336	0.335
Tram		0.072	0.035	0.046	0.044
LPG		0.324	-	0.319	0.316
Motorcycle (Average)		-	-	0.183	0.179

Table 2 Estimated annual carbon footprint by individual (tracking 2016, 2017, 2019, 2022 and 2023)

Year	Estimated annual carbon footprint (tonnes of CO2e)					Estimated annual carbon footprint (tonnes of CO2e) per individual				
	2016	2017	2019	2022	2023	2016	2017	2019	2022	2023
Staff	8,157	7,223	7,859	5,950	6,249	0.4	0.5	0.6	0.4	0.4
Student	5,126	5,265	5,999	5,910	8,403	0.1	0.1	0.2	0.1	0.2
Overall	13,824	12,400	13,858	11,860	14,652	0.2	0.2	0.3	0.2	0.3

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