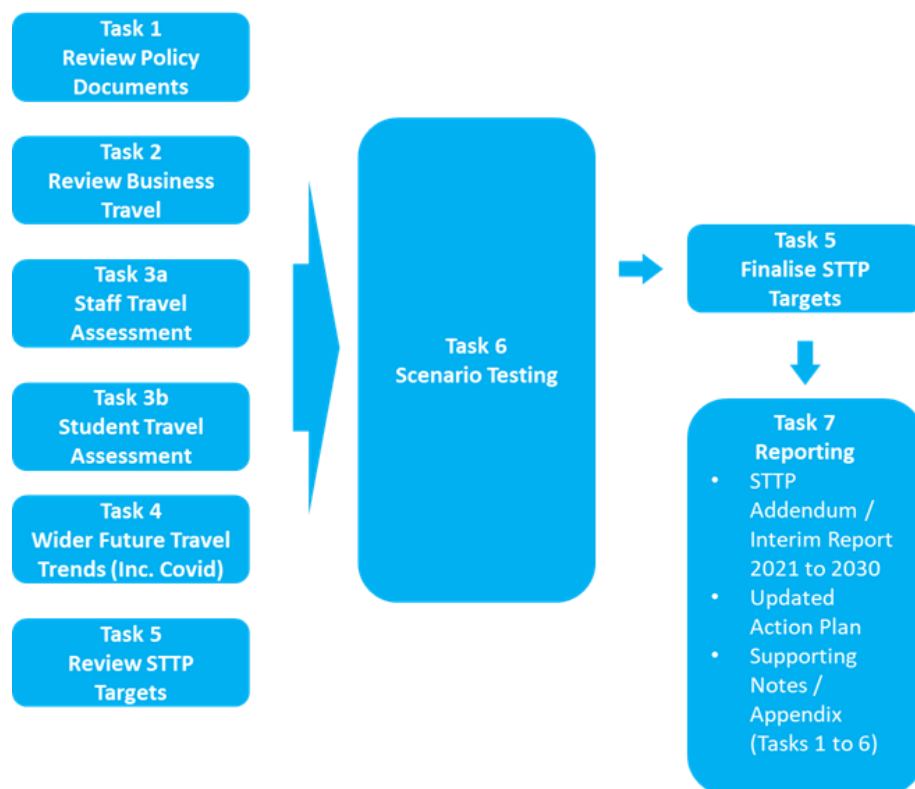


TECHNICAL NOTE

Job Name: University of Glasgow Strategic Transport and Travel Planning – Emissions Targets
Job No: 330610531
Note No: T4
Date: 12/10/2021
Prepared By: G Scott
Subject: Wider Future Travel Trends (including Covid 19)

1 Background

On behalf of the University, Stantec is undertaking a defined set of tasks to provide considered and robust advice on how the University can reduce its carbon emissions associated with Transport related issues and to contribute to meeting the ambition to achieve carbon neutrality by 2030. This note covers Task 4: Wider Future Travel Trends (including Covid 19) as shown in the diagram below.



There are three main focusses of this note:

- Understand what impact wider trends in travel might have on future travel patterns amongst staff and students that will feed into the scenario testing;
- Set the parameters of the scenario testing; and

TECHNICAL NOTE

- Outline what actions the University must take to meet policy aspirations for travel by staff and students (to help identify actions for the Action Plan).

2 Key Trends

2.1 Increased Working from Home / Reduced Office Capacity / Reduced Office Space

The University undertook a Working from Home and Wellbeing Staff Survey in early 2021 and one of the questions asked; “once lockdown restrictions are lifted, how many days (if any) would you wish to work from home each week, if given the choice?”. The results are presented in Table 2-1, along with the number of days staff and students said they travel to the University from the 2019 staff travel survey.

Table 2-1 Working from Home Summary

	Staff		Students
	Preferred No. of Days WfH	Actual No. Days at University	Actual No. Days at University
No. of Days	Working from Home and Wellbeing Staff Survey (2021)	Staff Travel Survey (2019)	Staff Travel Survey (2019)
0	10%	0%	0%
1	10%	7%	13%
2	28%	2%	3%
3	30%	5%	6%
4	12%	8%	13%
5	10%	70%	49%
6	0%	4%	8%
7	0%	4%	8%
Average Days	2.5	4.6	4.4

From the table, it can be seen that in 2019 staff, on average, staff travelled to the University 4.6 days per week. The results of the 2021 Home and Wellbeing Staff Survey suggests that on average, staff would choose to travel to the University 2.5 days per week: equivalent to a 45% reduction in trips. These figures are backed up by other research¹.

In the 2019 Staff Travel Survey, 55% of respondents said their role allowed them scope to work from home. Respondents were asked why they do not work from home and 25% said they had a lack of suitable equipment at home, 19% said they did not know about the relating HR policy and 15% said their line manager had not given approval (the rest said they did not want to or give other reasons).

¹ <https://voxeu.org/article/working-home-revolutionising-uk-labour-market>

TECHNICAL NOTE

Table 2-1 also shows that students travelled to the University, on average, 4.4 days per week in 2019. With an increase in blend learning / remote learning, the scenario testing assumes that students will, on average, travel to the University 3.4 days per week (one day per week less, on average).

The *COVID-19, travel behaviours and business recovery in Scotland: a survey of employers to understand their attitudes*², by climatexchange³, seeks to provide a snapshot of employers' experience of their staff working from home / flexible working, business travel and commuting before the COVID-19 pandemic, during the lockdown in March-June 2020, and in the longer term as we recover from the pandemic. The work seeks to develop an understanding of employers' long-term travel plans and intentions; identify what barriers and enablers currently exist to delivering more home working and sustainable travel; and what measures would support employers in facilitating this shift.

While not strictly a transport matter, the following issues were identified including better broadband, improved IT systems, local shared workplace hubs, and support and help with managing childcare. The University may be able to help accommodate some of these in order to become a more flexible employer.

Table 2-2 is a summary of the relevant recommendations from the climatexchange report and outlines potentially approaches for the University (some recommendations are omitted if not relevant).

Table 2-2 Climatexchange Covid Recovery Recommendations

Recommendation	University Potential Approach
Recommendation 1: Make public transport attractive, safe, convenient and affordable, particularly for journeys to work that cannot be made by active travel modes.	Engage with train operating companies to ensure the needs of staff and students are considered in respect of ticketing options, fare setting and timetabling.
Recommendation 2: Ensure that public transport provision reflects the requirements of more flexible, or variable working patterns / hours.	
Recommendation 3: Explore ways to address the perceived and actual costs of public transport relative to other modes of transport.	As above. Continue to provide interest free transport loan for staff. Potential for interest free loans for students Promote student discounts for travel Bring the cost of car parking permit in line with cost of average public transport to ensure car is not perceived as the cheapest mode
Recommendation 4: Improve walking and cycling infrastructure to address issues of safety and quality.	Identify projects to be taken forward Identify opportunities for external funding Engage with local authorities to ensure needs of staff and students are considered

² [COVID-19, travel behaviours and business recovery in Scotland: a survey of employers to understand their attitudes \(climatexchange.org.uk\)](https://www.climatexchange.org.uk/)

³ <https://www.climatexchange.org.uk/>

TECHNICAL NOTE

Recommendation	University Potential Approach
	Ensure safe and attractive campus environments for walking and cycling Ensure high level of secure cycle parking (and associated facilities) on campus Review and improve level of cycle parking provision as University student accommodation
Recommendation 6: Promote 'car restraint' - Make journeys to work and for business by private vehicles less attractive.	Review and refine Vehicle Management and Enforcement Scheme
Recommendation 7: Further develop measures to encourage mixed mode journeys including park and ride, park and stride, ride and stride.	Promote park and ride via Subway (e.g. Shields Road)
Recommendation 8: Act to support and encourage employers' preparation of Workplace Travel Plans.	Review and refine current Strategic Transport and Travel Plan and supporting Action Plan Update travel targets to reflect commitment to carbon neutrality by 2030
Recommendation 9: Research changes in organisation carbon footprints taking account of employees' year-round domestic heating, lighting and power consumption, energy demands of online working / video conferencing, changes in office use and changes in travel patterns.	Continue to monitor and report on carbon emissions associated with the daily commute and business travel
Recommendation 10: Prioritise further upgrades to broadband infrastructure across Scotland.	Support staff to gain access to quality broadband to allow them to work from home
Recommendation 13: Develop and share best practice on identifying and supporting employees with specific needs or vulnerabilities relating to home working and /or online working.	Consider the needs of all employees, including those with specific needs
Recommendation 17: Develop national and local planning policy responses to address length of people's journeys to work which is universally identified as the key barrier to sustainable travel.	Ensure new University developments are in highly accessible locations and provide appropriate measures to encourage staff and students to access by sustainable travel

It is clear that working from home and flexible working patterns will likely continue to increase in the future and the University need to consider how they accommodate this and to adapt their home working policy accordingly. There may be a requirement to support staff to give them access to high quality broadband and other hardware to allow them to do this. While there is a cost associated with this, it could be offset with a reduction in the volume of office space provided over time.

Key Points:

- Scenario Testing 1: The results of the Home and Wellbeing Staff Survey (early 2021) suggests there could be a 45% reduction in staff travel as a result of increased working from home (4.6 days, on average to 2.5 days, on average). However, this is based on staff

TECHNICAL NOTE

preference and may not always be achievable. The scenario testing will assume up to a 35% reduction in staff travel for the daily commute. This reduction is assumed to be effective from 2021 and retained as a fixed percentage over time, to 2030. For students the reduction is 4.4 days per week travelling to the University, on average, to 3.4 days per week, on average.

- UofG Action 1: In order to achieve this, the University will require to focus on providing staff suitable equipment to work from home, ensuring they understand the University policy and encouraging Line Managers to permit home working.
- UofG Action 2: Explore how to provide staff and students with better broadband, improved IT systems, local shared workplace hubs, and support and help with managing childcare to encourage more home working and sustainable travel.

2.2 Virtual and Online Working

The 2019 Staff and Student Travel Survey revealed that 43% of staff and 36% of students were aware of the University's video and telephone conferencing facilities (including Skype for Business on personal workstations and centrally bookable facilities). The STTP has a target to increase the staff usage percentage to 50% by 2020 and 60% by 2025.

The impact of Covid will likely significantly increase the uptake in the use of virtual and online working, both for staff meetings and online teaching as well as having a positive impact on how conferences/seminars/training can be delivered to further reduce need to travel for core business requirements.

Key Points:

- Scenario Testing 2: Increased video conferencing amongst staff is expected to allow more staff to work from home as well as impact on the need to travel for meetings during work hours (business travel). Any savings for the daily commute are covered by the 35% reduction applied for staff working from home.
- Scenario Testing 3: A separate task on business travel (Task 2) is being undertaken and this will also consider the likely impacts of increased video conferencing on business travel.

2.3 Public Transport Uptake and Ticketing

It is likely that public transport uptake will be impacted by Covid in the short-to-medium term due to the requirement for physical distancing and concerns about being in close proximity to others.

The most recent research by Transport Scotland (COVID-19 Public Attitudes Survey Data: Wave 16⁴) found that:

- Concerns about using public transport remain high: 72% of people are very or fairly concerned about contracting or spreading the virus while using public transport; and 61% are very or fairly concerned about having enough space to observe physical distancing on public transport. This has been fairly consistent across the previous 15 waves of the survey.
- 45% agree with the statement "I will avoid public transport and use my car or other vehicle more than I did before when restrictions on transport are lifted". The main reasons for avoiding public transport in rank order are the risk that others are still carrying the disease;

⁴ <https://www.transport.gov.scot/coronavirus-covid-19/analysis/>

TECHNICAL NOTE

convenience; unable to stay 1m apart; and cleanliness or hygiene on-board public transport.

It should be noted that some sources are suggesting that car use is on the increase due to lower public transport patronage. People who normally would not use their own car to travel to work are doing so now as they may feel unsure and uncomfortable about using public transport. There are also reduced public transport services and capacity as well as the suspended University car parking permit scheme. The You Gov-Cambridge Globalism Project revealed that in Great Britain, 23% of people expected to use their car more after the pandemic.⁵⁶

There are also sources which show that car ownership amongst younger people is falling. One study, commissioned by the Department for Transport⁷, found that

“changes in living circumstances meant that most young people no longer gained a driving licence or regularly drove a car. It said that a rise in lower-paid and less-secure jobs, a decline in home ownership and an increase in university participation had an impact on how people used transport”.

At the time of writing Transport Scotland was also reporting⁸:

- Concessionary bus journeys down by 55% (no information on non-concessionary travel); and
- Rail journeys down by 80%.

The 2015 Travel Survey asks respondents questions about what ticket type they use for public transport and the results are summarised in Table 2-3 for bus and rail.

⁵ [Over 100 cities have made public transport free – others should follow | New Scientist](#)

⁶ [Globalism2020 Guardian Climate and Lifestyle after COVID.pdf \(yougov.com\)](#)

⁷ <https://www.driving.co.uk/news/britain-may-hit-peak-car-young-driver-numbers-fall-sharply/>

⁸ <https://www.transport.gov.scot/publication/covid-19-transport-trend-data-19-25-april-2021/>

TECHNICAL NOTE

Table 2-3 Bus and Rail Ticket Types

Bus			Rail		
	Staff	Student		Staff	Student
Monthly ticket or 28-day ticket	34%	24%	SPT Zone Card	38%	68%
Annual ticket	1%	3%	Monthly ticket	30%	21%
Day ticket	2%	9%	Weekly ticket	14%	3%
Weekly ticket	12%	9%	Annual ticket	4%	2%
Single ticket	10%	12%	Single ticket	3%	1%
SPT Zone Card	9%	11%	Flexible ticket	5%	1%
Other	24%	19%	Other (please specify)	3%	2%
Return ticket	4%	9%	Day ticket	2%	2%
Flexible ticket such as Flexi-10 tickets	4%	4%			

Table 2-3 shows that the majority of staff and students get a monthly or 28 day ticket for the bus and a Zone Card for rail travel. These, and some of the other ticket types, may not present good value if staff and students are traveling to the university on fewer days. It is likely however that flexi ticket options might become more attractive if a move to blended learning becomes a more permanent arrangement.

It is known that ScotRail are reviewing ticketing to try to encourage people back to trains following the impact of Covid. It is understood they are looking at potential radical changes if mass commuting (at traditional times) is replaced by many people continuing to work from home. The issue of affordable and equitable ticketing is an area the University have long been aware of and raised as part of their response to the Williams Review in 2019.

2.3.1 While train ticketing is outside the University's control, they can continue to represent the needs of staff and students to ScotRail.

Key Points:

- Scenario Testing 4: The scenario testing will assume public transport patronage returns to pre-covid levels by 2023. Staff and students who previously used public transport to access the University, will return to using public transport, although they will travel to the University on fewer days).
- UofG Action 3: Work with the University of Strathclyde and Glasgow Caledonian University to champion affordable and equitable ticketing for staff and students to ScotRail. The University can also continue to promote the availability of tickets to staff and students and advise on the most cost-effective ways to travel.

TECHNICAL NOTE

2.4 Rise in Cycling

It has been well documented that the Covid pandemic has led to a rise in bike sales and the number of trips by bicycle as reported by Cycling Scotland⁹ and the Glasgow Centre for Population Health¹⁰. There are various factors which effect the trends in cycling, and it is difficult to forecast with any certainty what medium to long-term impact Covid will have on the number of university staff and students cycling. However, the trends do demonstrate that more people now have access to a bicycle and have re-engaged with cycling and, when considered alongside cycling infrastructure projects, wider policy aspirations and the University's commitment to encouraging cycling, there should be scope for a modest to high increase in cycle trips amongst staff and students.

The latest public attitude survey by Transport Scotland¹¹ reveals that 61% of people agree that they will walk and cycle more. The key issue is whether the additional trips will transfer from leisure-based to commuting trips.

Glasgow's Strategic Plan for Cycling 2016 - 2025¹² demonstrates a strong commitment to increasing cycling levels in and around Glasgow. There are no specific targets for increasing cycling volumes other than: "increase in cycling to/from the City Centre from 7,636 per day (2012-2014 average) to 15,000 per day by 2025". There are no firm targets on the percentage of journeys to be undertaken by bike.

*National Travel Attitudes Study: Wave 5*¹³ centres around attitudes towards cycling with a special focus on electric bicycles (e-bikes) and cycle training courses. Wave 5 refers the fifth wave of the survey and the main findings are:

- Off-road and segregated cycle paths (55%), safer roads (53%) and well-maintained road surfaces for cycling (49%) were chosen most often when Wave 5 respondents (who didn't state that cycling is impossible for them due to their disability) were asked about things that would encourage them to cycle more.
- Nearly two-thirds (64%) of the sample support the creation of dedicated cycle lanes in their local area, even if this means less road space for cars.
- 58% of Wave 5 respondents reported to feel confident when riding a bicycle. Men (74%) felt more often confident than women (43%).
- Of those respondents who didn't feel confident about their cycling skills, 14% displayed interest in attending a cycle training course. Interest was highest in the age group 35-44 (29%).
- 51% of Wave 5 respondents agreed that e-bikes are too expensive, with only 4% disagreeing with the statement. Nearly two in three indicated that they know very little about e-bikes. Similar to the trends displayed in Wave 4, Wave 5 of the survey, respondents reported substantially decreased usage of all travel modes compared to before the pandemic with the exception of the active travel modes - walking and cycling. This matches the weekly Transport Scotland briefings and their core message. The pandemic-driven change in travel habits towards more active travel is a chance for the University and other organisations to make progress on active travel and carbon emission

⁹ <https://www.transportxtra.com/publications/local-transport-today/news/68544/sharp-rise-in-cycling-in-scotland/>

¹⁰ https://www.gcph.co.uk/latest/news/942_cycling_through_a_pandemic

¹¹ <https://www.transport.gov.scot/publication/covid-19-public-attitudes-survey-data-wave-17/>

¹² <https://www.glasgow.gov.uk/CHttpHandler.ashx?id=33403&p=0>

¹³ [National Travel Attitudes Study: Wave 5 - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/news/national-travel-attitudes-study-wave-5)

TECHNICAL NOTE

reduction targets. The University should aim to maintain and anticipate the higher uptake of walking and cycling.

The University has a Cycling Strategy which sets out how they will promote cycling, including the provision of significant levels of cycle parking to facilitate more cycle use.

The University offers the Cycle Plus salary sacrifice scheme which provides an Income tax and National Insurance efficient way to pay towards the hire of a bicycle (and associated safety equipment) for 12 months. The scheme allows £1,500 for pedal bikes and £2,500 for e-bikes. The scheme is a government salary sacrifice scheme specifically to enable employees the opportunity to commute to work via bike. Students do not have employee status and are therefore ineligible.

nextbike provides access to push and electric bicycles with greater flexibility than traditional ownership models through bike sharing with hire stations in Glasgow and near the Gilmorehill campus. The University offers nextbike memberships for staff and students for free providing an accessible alternative mode of transport for short journeys. If students or staff wish to opt for bike ownership, Bike for Good, a local cycling charity, provides options to trial bikes for two weeks before purchasing the refurbished bike at a more affordable cost than traditional bike shops.

The city-wide cycle hire scheme is of benefit to those living in flatted/shared accommodation where secure bicycle storage can be a possible reason for not cycling. The University has aspirations to work with nextBike and GCC to expand and deliver hire stations serving Garscube, Gilmorehill and student accommodation.

Key Points:

- Scenario Testing 4: The scenario will assume a rise in cycling amongst staff and students based on the findings of the postcode analysis (Task 3a and 3b). This will also inform a new STTP target for cycling amongst staff and students.
- UofG Action 4: The University should consider reviewing / refreshing their Cycling Strategy and potentially extending this to become an Active Travel Strategy, given the importance of encouraging active travel to meeting future carbon emissions targets.
- UofG Action 5: The University should look to extend its offering on cycle training with a focus on groups that are underrepresented in cycling.
- UofG Action 6: The spend limit associated with the University's Cycle Plus scheme is considered to be appropriate to allow staff to obtain e-bikes. The University should explore options to provide support for those not eligible for participation in CyclePlus, to obtain a bicycle.
- Scenario Testing 5: An increase in e-bike ownership is expected, partly due to the increased loan value in CyclePlus but also due to increased sales of e-bikes. E-bikes offer a real opportunity for those who are looking to improve fitness levels, travel longer distances or take on more challenging (hilly conditions in Glasgow) journeys.
- UofG Action 7: The University is deficient in the number and type of required support facilities including secure bike lockers or e-bike charging points and will seek to close this gap.

2.5 Uptake of Electric Vehicles

In recent years, many organisations have attempted to estimate the uptake of Electric Vehicles (EV) and a review of the different projections reveals that there has been a tendency to overestimate EV uptake. The Road to Zero Next steps towards cleaner road transport and

TECHNICAL NOTE

delivering our Industrial Strategy by the Department for Transport¹⁴ presents a projection which ranges from 30% to 70% of new vehicles sales being EV (see Figure 2.1).

Figure 1: Illustrative ultra low emission car uptake trajectory as a percentage of new car sales

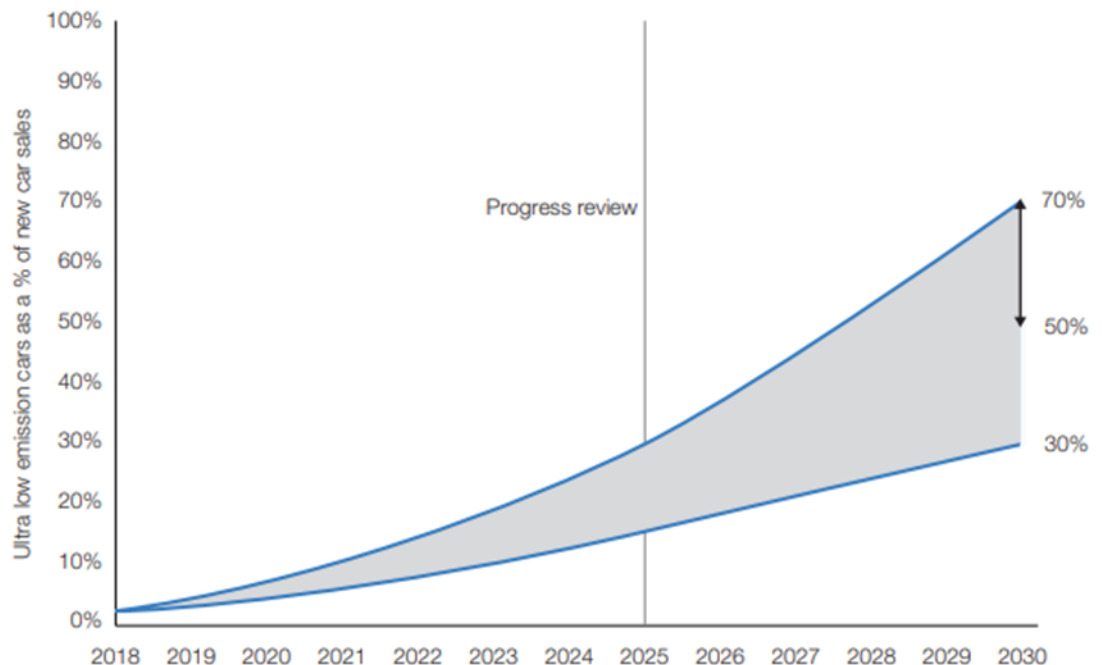


Figure 2.1 DfT Ultra Low Emission Car Uptake Trajectory

The University will need to carefully consider how it provides for the increased number of EVs. While transfer of trips from petrol / diesel vehicles to EV reduces carbon emissions, they still represent a vehicle which requires to be parked and contributes to traffic congestion on surrounding roads. There are also environmental concerns and impacts associated with car manufacture and sourcing key materials for car/battery components which in itself is not sustainable.

Measures to encourage EV uptake should also not encourage a shift away from more sustainable modes and the provision of a parking permit should still be subject to the same criteria as other applications. The University should make it clear that purchasing an EV will not result in any preferential parking privileges

Finally, the level of charging infrastructure needs to be carefully considered, along with a fee charging mechanism. While some charging infrastructure will likely be required, it is not expected that EVs will have to be plugged in constantly. Based on distance, the majority of journeys to the University for commuting could be undertaken by EVs without requiring to be charged. This is likely to increasingly be the case as the range for EVs increase with improving technology.

A sensible approach may be for the University to plan to accommodate any wider increase in EV uptake without specifically seeking to increase the number of staff and students using EVs. This should be through a mixture of bays with fast chargers (with an appropriate booking and pricing mechanism) and without charging facilities (i.e., simply bays for EV and other vehicles).

¹⁴ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/739460/road-to-zero.pdf

TECHNICAL NOTE

The National Atmospheric Emissions Inventory¹⁵ estimates that, in Scotland, 1.6% of vehicle kilometres on urban roads will be by electric cars in 2030.

The Department for Transport (as reported by the Electric Vehicle Paradigm Shift) estimates that 6.78% of the market will be hybrid vehicles by 2030. This is based on DfT Scenario 4 where EV sales carry on as 'business as usual', since EV sales have been so low relative to diesel and petrol car sales in the past 10 years, the same rates of sales are applied to other model whilst also assuming that there would be no Government intervention whatsoever. Therefore, this is a relatively conservative approach as the University should not be reliant on government intervention.

With some adjustments applied (i.e., to remove freight vehicles) it is assumed that 2% of commuter car trip will be by EV in 2030 and 8% are by hybrid. Overall, 10% of commuter trips will be by alternative fuel source vehicles.

Key Points:

Scenario Testing 6: The scenario testing will assume that 2% of commuter car trips to the University are by battery electric and 8% are by hybrid by 2030.

- UofG Action 8: The Action Plan will include measures to ensure the University has the infrastructure to accommodate EVs. Consideration will be given to the level of charging infrastructure provided, as not all EV spaces necessarily require having charging facilities, and charging up private EVs on campus should not be free.
- UofG Action 9: It is noted that there are a number of salary sacrifice schemes available which would offer a discount on EVs. The University should carefully consider the merits of these schemes as a staff benefit, before offering to staff. Whilst a reduction in reportable commuting carbon emissions could be achieved through offering these schemes, it may not be compatible with University policy to encourage driving in general. EV salary sacrifice schemes may also introduce equality issues, as lower paid staff may not be eligible.
- UofG Action 10: It is not envisaged the University will provide any parking spaces with charging points specifically for students on campus (except the small number who qualify for parking permits). Any parking spaces with charging points could be made available to the visitor and the local community outside University operating hours, if the University are happy to allow access.

2.6 Changes in Fuel Carbon Emissions

As technology improves and operators move towards less fuel consuming models, the emissions associated with different modes of travel will reduce. The scenario testing associated with this work will take this into consideration. The following are of particular importance:

First Bus Glasgow Zero Emissions Fleet¹⁶ - In 2020 First Bus announced its commitment to operating a zero-emission bus fleet by 2035, as well as pledging not to purchase any new diesel buses after December 2022. This commitment goes above and beyond current regulations, solidifying First Bus's position as a leader in the transition to a low-carbon future.

ScotRail services¹⁷ - One of the big factors in making Scotland's railway more energy efficient is the electrification of the lines between Edinburgh and Glasgow, and Stirling, Dunblane and Alloa

¹⁵ https://naei.beis.gov.uk/resources/rtp_fleet_projection_NAEI_2015_Base_2016_v4.0_Final.xlsx

¹⁶ <https://www.firstgroupplc.com/news-and-media/latest-news/2021/22-03-21a.aspx#:~:text=Last%20year%20First%20Bus%20announced,to%20a%20low%2Dcarbon%20future.>

¹⁷ <https://www.scotrail.co.uk/blog/creating-%E2%80%98greener%E2%80%99-railway-scotland>

TECHNICAL NOTE

(all complete in May 2019). The new Class 385 trains that run on these routes are far more energy efficient than the trains they replaced. On the Edinburgh to Glasgow route, the Express 385s are 60% more carbon efficient than the Class 170s that previously operated that route.

Glasgow Subway Modernisation¹⁸ - The Subway is undergoing its first full-scale upgrade in more than 30 years. New trains are due to be operational in 2022.

Reductions in carbon emissions associated with public transport are considered in the scenario testing as set out in Figure 2.2.

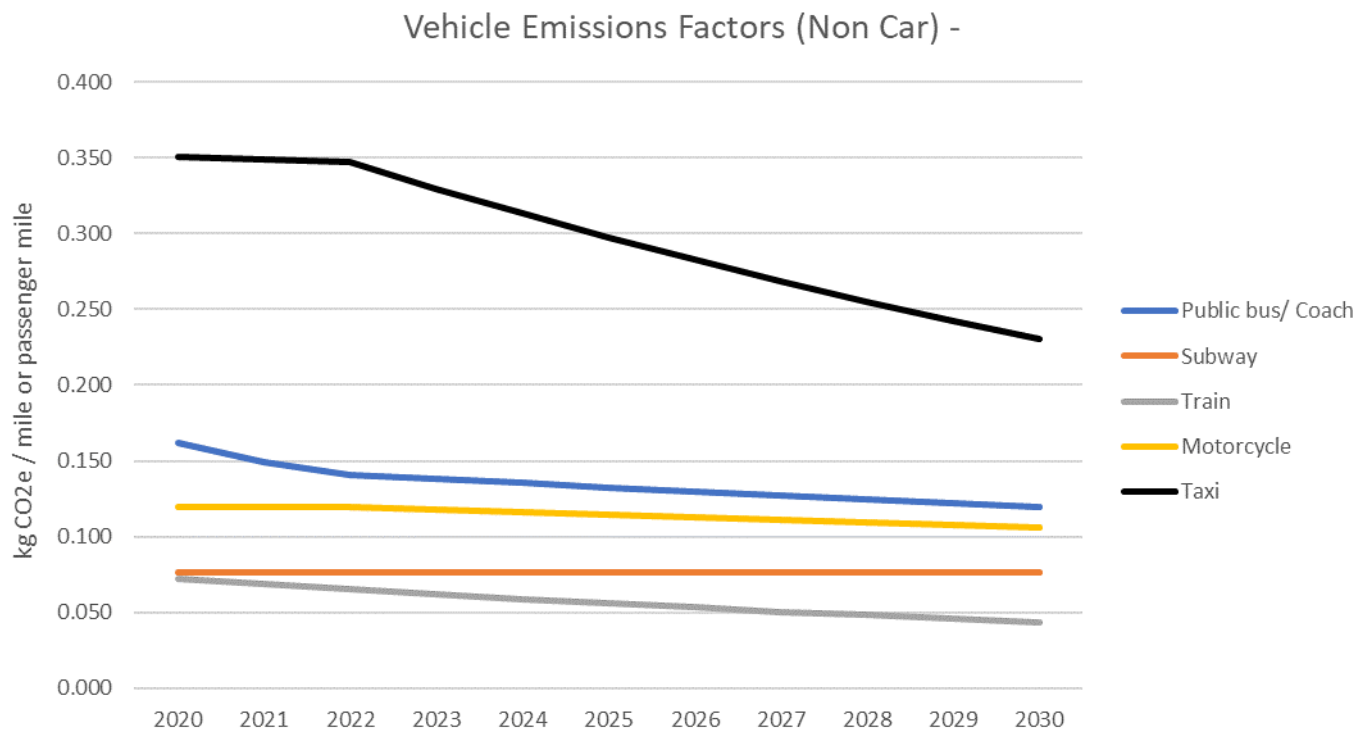


Figure 2.2 Non Car Vehicle Emissions Forecast

The values in Figure 2.2 are primarily based on an analysis of historical emissions levels from the UK Government GHG Conversion Factors for Company Reporting¹⁹.

2.7 Car Share

While Covid-19, and the requirement to physically distance, will make any increase in car share unlikely in the short term, this could be a viable longer-term option which allows the University to reduce their transport carbon emissions. It is known that other universities and organisations have had success in this respect, for example The University of Newcastle²⁰ and Durham University²¹.

The University of Newcastle has seen its modal share of car sharing increase 8.7% (including car passengers) to 10.4% between 2008 and 2014. Although the survey question posed varied between these years this increase is part of the University's promotion of car sharing which

¹⁸ <http://www.spt.co.uk/subway/modernisation/>

¹⁹ <https://www.gov.uk/government/collections/government-conversion-factors-for-company-reporting>

²⁰ <https://www.ncl.ac.uk/media/wwwnclacuk/sustainablecampus/files/nu-travel-plan-update-2015.pdf>

²¹ https://www.dur.ac.uk/resources/greenspace/greentravel/DurhamUniversityIntegratedSustainableTravelPlan2020_25_Final.pdf

TECHNICAL NOTE

includes half price car sharers permits. (See Note T5; *Task 5 - Review STTP Targets* for more information).

Durham University has a high proportion of their staff population that car share at 13.9% with the University promoting its University Car Share website, as well as a Car Share Durham²² scheme, which provides more potential matches for car sharing schemes.

Key Points:

- UofG Action 11: The University could seek to encourage car share in the medium to longer term (subject to guidance on physical distancing) but only if those sharing were previously driving alone to campus, to achieve a reduction on vehicles accessing the campuses.

3 Wider Interventions

There is a host of relevant wider interventions, across the city and region, being taken which are intended to influence how people travel with a view to encouraging sustainable travel choices or reducing carbon emissions. Many are a result of, or contribute to, the policies which are covered as part of Task 1 – Policy Review. The interventions described below are examples of the type and scale of improvements being introduced and it is acknowledged that there are others at various stages of delivery.

3.1 The Avenues Programme²³

As part of the Glasgow City Region City Deal funding, approximately £115 million is being invested in Glasgow city centre to deliver the "Avenues" and "Avenues Plus" programme, which will result in a transformation of the city centre's streetscape and public realm - making it more "people-friendly", more attractive, greener, more sustainable and more economically competitive.

The Avenues programme will provide a series of high-quality active travel routes which can be used by staff and students to access Tay House, or safely and conveniently walk or cycle through the city centre. It also helps to strengthen the city centre as an attractive and healthy place to live which is relevant for staff and students who may look to stay within a short distance from the west end.

3.2 Glasgow's Low Emission Zone (LEZ)²⁴

Glasgow introduced Scotland's first ever Low Emission Zone on 31 December 2018. Phase 1 of Glasgow's LEZ applies to local service buses only, however when Phase 2 is enforced from 1 June 2023 (subject to the relevant approvals) - all vehicles entering the zone will have to meet specified exhaust emission standards to avoid a penalty charge, unless exempt. Initial monitoring²⁵ suggest the LEZ suggests that air quality in Glasgow has improved since the introduction of the LEZ and it is expected to help to reduce levels of nitrogen dioxide and other internal combustion sourced pollutants, which will improve air quality and make Glasgow a cleaner, healthier and more pleasant place to be.

Glasgow's LEZ will result in public service buses with lower emissions, and these will be used by University staff and students (reducing their carbon footprint). Over time, all vehicles will be subject to reduced emissions, and this is most likely to impact staff based at Tay House, as the LEZ is confined to the city centre. The University stance should be that

²² <https://liftshare.com/uk/community/carsharedurham>

²³ <https://www.glasgow.gov.uk/avenues>

²⁴ <https://www.glasgow.gov.uk/LEZ>

²⁵ <https://www.glasgow.gov.uk/CHttpHandler.ashx?id=50447&p=0>

TECHNICAL NOTE

the LEZ should be extended to cover the west end and the Gilmorehill Campus is near to several Air Quality Management Areas, including Byres Road.

3.3 Partick to Govan Footbridge²⁶

The bridge will span between Water Row in Govan and Pointhouse Quay at the Riverside Museum. Once complete, the bridge will form part of a high-quality active travel route between communities, academic institutions, businesses and visitor attractions on both banks of the river.

The Partick to Govan Footbridge will greatly improve access between the Gilmorehill Campus and Govan. It will open up opportunities for staff and students who live on the south side of the river to walk or cycle to the University as well as making the area more appealing as a place for staff and students to live. It also provides a key intercampus active travel route, opening up an opportunity to use this footbridge to/from Queen Elizabeth University Hospital and the future Glasgow Riverside Innovation District. The footbridge will provide a more direct and attractive connection which will likely replace the current active travel route through the Clyde Tunnel which is perceived to be unwelcoming and is not ideal.

3.4 The Glasgow City Region City Deal²⁷

Over the next 20 years, City Deal Glasgow will seek to re-energise the city, citizens and communities. The programme of projects includes new transport infrastructure, much of which will encourage sustainable travel. Projects include the Govan-Partick Pedestrian Bridge (above), the Living Lab at the new Glasgow Riverside Innovation District and the Imaging Centre of Excellence (ICE) at the QEUH²⁸.

The projects being delivered as part of the City Deal will provide infrastructure for staff and students to travel using more sustainable modes.

3.5 Byres Road Public Realm Design²⁹

Design changes for the £9million public realm project on Byres Road - funded by Glasgow City Deal - were approved by Glasgow City Council in April 2019. This public realm project will complement other City Deal projects between the West End, the Clyde - and across the river into Govan - and the redevelopment of the University of Glasgow campus. The designs will result in the road space being reduced by approximately 30% with that space used to provide wider footways and protected cycle lanes.

Being in close proximity to the Gilmorehill Campus, the Byres Road Public Realm Design will create a much safer and more pleasant environment for staff and students who walk and cycle, including to and from Hillhead Subway Station. The reallocation of road space sends a clear message that pedestrians and cyclists should be prioritised over the car. Although the route is relatively limited in length, it forms the important start / end point for many trips by staff and students and it is hoped it will encourage them to walk and cycle to the University.

²⁶ <https://glasgowcityregion.co.uk/final-design-for-govan-partick-pedestrian-bridge-now-complete/>

²⁷ <https://www.glasgow.gov.uk/index.aspx?articleid=22753>

²⁸

<https://www.google.com/maps/d/viewer?mid=1wSnZ0kpg7FLzMKONKuZ4BP5vX5Gsi2gF&ll=55.87853371319329%2C-4.356582331391967&z=11>

²⁹ <https://www.glasgow.gov.uk/article/24266/Byres-Road-public-realm-design-changes-approved-by-Council>

TECHNICAL NOTE

3.6 Connecting Woodside³⁰

Formerly known as Woodside Mini-Holland this is an area wide active travel project which is a first of its kind in Scotland. The project bid navigated a 3-stage judging process with Glasgow being successful in achieving funding. The project will comprise a strategic segregated cycle route along Charing Cross, Garscube Road, Woodlands Road and St George's Road.

The Connecting Woodside project is an area wide active travel project which is a first of its kind in Scotland and includes an example of the type of quality segregated cycle route that Glasgow city Council are seeking to introduce to form a coherent cycle network. University staff and students will be able to use these routes and it is hoped it will encourage them to cycle more often.

3.7 Glasgow's City Network

Glasgow City Council are committed to building on the active travel infrastructure developed over the last decade to create a coherent cycle network across Glasgow. This City Network will provide people with high quality infrastructure that keeps them safe from motor traffic and provides a smooth, direct and comfortable journey. The Council will continue to improve on existing designs and learn lessons from the "Spaces for People" temporary lanes created during the pandemic to deliver high quality infrastructure quicker. This will enable the opportunity of the proposed network of segregated cycle infrastructure to be in place by 2030.

³⁰ <https://www.glasgow.gov.uk/article/21802/Connecting-Woodside>

TECHNICAL NOTE

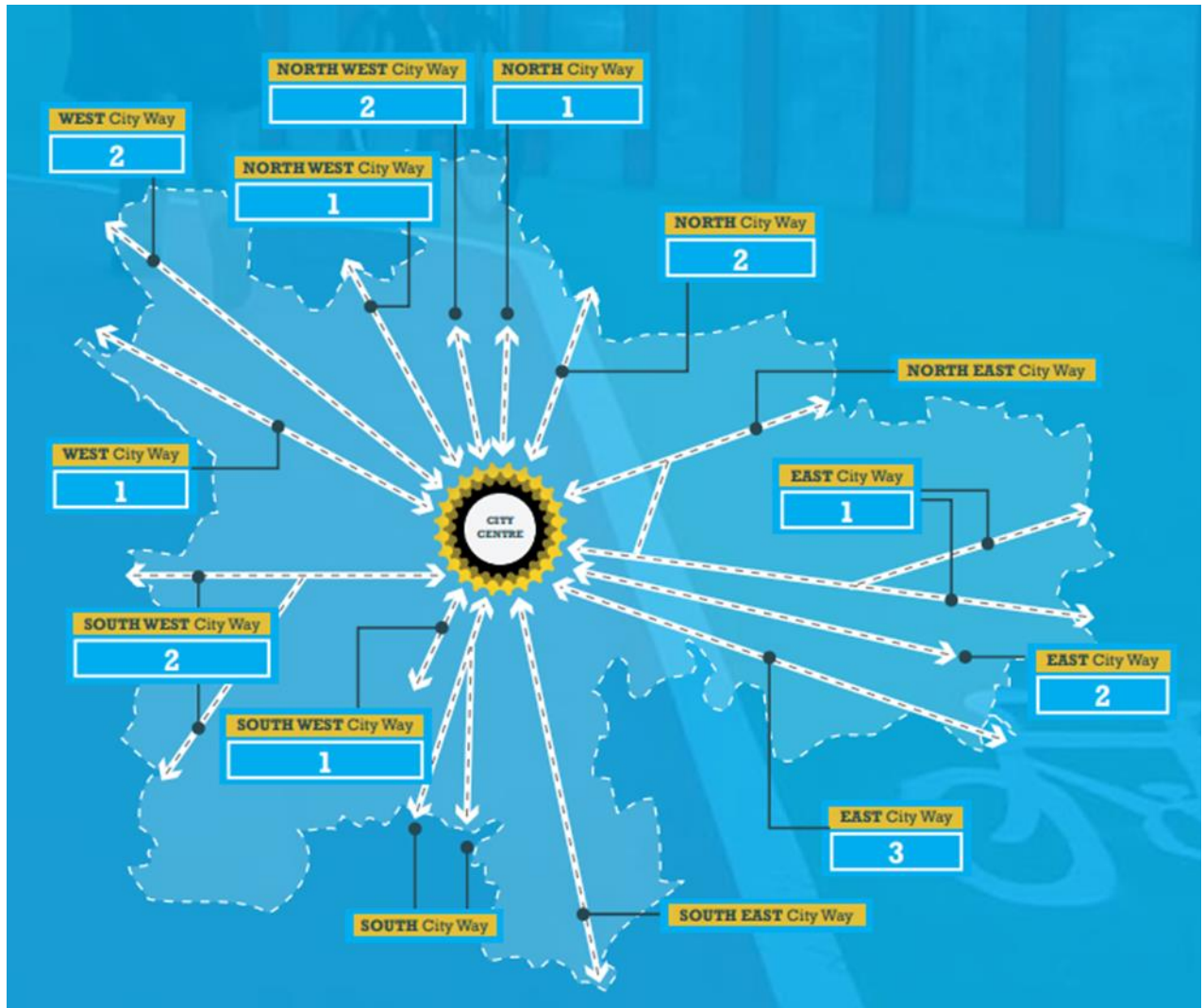


Figure 3.1 Glasgow City Council's Ways Programme

As above, Glasgow City Council's City Network project is an example of the type of quality segregated cycle route that Glasgow City Council are seeking to introduce to form a coherent and integrated cycle network. University staff and students will be able to use these routes and it is hoped it will encourage them to cycle more often. The provision of good quality, safe, continuous cycle routes will help to address one of the most significant barriers to cycling.

3.8 Spaces for People

Temporary travel infrastructure that provides additional public space for walking, wheeling and cycling was introduced during the pandemic with some of this infrastructure set to be retained after a 6-week consultation that finished in June. At time of writing consultation results have not been released but some key initiatives are found near the Gilmorehill Campus, including the pedestrianisation of Kelvin Way.

Spaces for People measures have been set out to provide increased space for physical distancing and encourage greater uptake in active travel with more ambitious schemes such as Kelvin Way pedestrianisation providing a traffic free link running through the Gilmorehill Campus. If such schemes are to be retained on a permanent basis, then they may contribute to an uptake in active travel.

TECHNICAL NOTE

Safe Active Travel Zone

- 3.8.1 As part of the University of Strathclyde's net Climate Change and Social Responsibility Plan, the University and College community in Glasgow is collaborating to understand and seek to improve active travel connectivity between the various institutions in the city centre and west end of Glasgow. The University of Strathclyde and the University of Glasgow have been discussing the creation of a 'safe active travel zone' for students, staff and the local community around their campuses and along routes connecting the campuses. The aim is to enable better active travel for students, staff and others including citizens and visitors to the city who wish to move to and from the HE and FE institutions in the city, along routes that pass other sites including arts and culture venues.

The vision for the area – in line with GCC's Active Travel Strategy – is a network of safe, accessible and clear routes for walking, wheeling and cycling. These routes should be easy to navigate, as seamless as possible, attractive, easy to access, logical, well defined, clearly signposted and/or way marked, and on routes that are useful to the local communities, providing the area with high quality pedestrian and active travel friendly routes into the learning quarter and between local areas.

The Safe Active Travel Zone would improve active connections to and from a range of destinations for staff and students. Stantec recommends the University should work closely with partners to explore delivering this project.

Parking Near Campus

Glasgow City Council has a number of restricted parking zones³¹ which now cover much of the city centre and west end and this is being extended into other areas³². This will reduce opportunities for staff and students to park on-street around the Gilmorehill Campus and Tay House.

The introduction of new restricted parking zones in Glasgow may discourage staff and students without University parking permits from driving to and from the University.

Yorkhill and Kelvingrove Cycling Village³³

The Yorkhill and Kelvingrove Cycling Village is an area-wide project that proposes the creation of a cycling village and improvements to public spaces for residents and visitors to the area. The project was initiated by the Community Council following a notable increase in visitors to the area after the completion of major new attractions, the construction of student accommodation and a recent increase in the number of local businesses. Through partnership working with Glasgow City Council and Sustrans, the Community Council has already seen enhancements to the area including improved road environments, better signage, installation of cycle parking racks and on-street cycle pumps, and new Nextbike stations.

A large number of students live in and around Yorkhill and Kelvingrove and will benefit from the proposals to create a Cycling Village, encouraging them to cycle to the Gilmorehill Campus.

Key Points:

- Impact: The above wider interventions demonstrate a clear commitment by external groups to encourage sustainable travel.

³¹ <https://glasgowgis.maps.arcgis.com/apps/webappviewer/index.html?id=c7573c30724645c7861698125682b78a>

³² <https://www.glasgow.gov.uk/index.aspx?articleid=16632>

³³ <https://www.glasgow.gov.uk/article/24174/Yorkhill-and-Kelvingrove-Cycling-Village>

TECHNICAL NOTE

- Scenario Testing 7: a staff and student home postcode plotting exercise has been undertaken to understand where clusters live in relation to the University and key active travel routes. This has been used to inform where future increases in active travel might be achieved.
- UofG Action 12: The University should continue to work closely with Glasgow City Council to ensure the travel and transport needs of staff and students are considered. The Action Plan should identify some ambitious projects / initiatives which would encourage active travel by staff and students. This may include a commitment from the University to apply for external funding (such as Sustrans Places for Everyone) for any projects identified.
- UofG Action 13: The Safe Active Travel Zone will be included as an action and the University will work with partners to deliver it to meet the needs of staff and students (including identifying external funding).
- UofG Action 14: The University should continue to review and provide appropriate level of secure cycle parking (and associated facilities with reference to the Cycling Strategy).
- UofG Action 15: The University should potentially prepare new active travel route information (apps / brochures / website) to publicise how staff and students can access the University. An interactive map on a website may be the best format as it would allow users to navigate, and new routes should be added as required. The Glasgow City Council webpage³⁴ is an example and the University should prepare similar with additional information, such as campus / University locations.

4 Summary

Taking into consideration the wider trends in travel outlined above, Table 4-1 summarises what the potential impacts on travel by staff and students might be to 2030. These assumptions will feed into the scenario testing, although it will be flexible to allow parameters to change and different scenarios will be presented.

³⁴ <https://glasgowgis.maps.arcgis.com/apps/webappviewer/index.html?id=8eb9f600ed154ae58b09c2c5902ce7f0>

TECHNICAL NOTE

Table 4-1 Summary of Impacts to 2030

	Element	Impact	Staff	Students
2	Increased WfH etc.	Overall reduction in travel for daily commute	The scenario testing will assume up to a 35% reduction in staff travel for the daily commute. This reduction is assumed to be effective from 2021 and retained as a fixed percentage over time, to 2030.	Students travelled to the University, on average, 4.4 days per week in 2019. With an increase in blend learning / remote learning, the scenario testing assumes that students will, on average, travel to the University 3.4 days per week (one day per week less, on average).
2	Increased Video Conferencing	Overall reduction in business travel	Covered by above (although also reduce inter-campus travel)	
3	Public Transport Uptake and Ticketing	Change in bus travel	Return to pre-covid levels by 2023 Trends beyond this informed by postcode analysis and wider policy aspirations (see Task 1)	
4		Change in train travel		
5		Change in subway travel		
6	Rise in Cycling (linked to 9)	Increase in cycle trips for daily commute	Potential growth to around 13%, from 10.5% in 2019.	Potential growth to around 17%, from 6.9% in 2019.
7	Uptake of EV	Increase in EVs for daily commute	Steady growth in uptake such that 30% of staff trips by car to the University are EV by 2030.	Steady growth in uptake such that 10% of students trips by car to the University are EV by 2030.
8	Changes in Fuel Carbon Emissions	Carbon emissions fall across most modes with improved efficiency	Bus / coach: 20% reduction between 2019 and 2022 and then 5% annually (takes into consideration impact of LEZ and First Bus Glasgow Zero Emissions Fleet)	
			Rail: 5% reduction per year due to ongoing electrification (based on historic data)	
			Subway: to be confirmed (perhaps assume 1% per year)	
			Petrol car: 1.5% more efficient annually (based on historic data)	
			Diesel car: 1.5% more efficient annually (based on historic data)	
9	Wider Interventions	Reduction in car travel	Potential reduction to around 16%, from 32.7% in 2019.	Potential reduction to around 2%, from 10.3% in 2019.
		Increase in cycling	See row 6	See row 6

TECHNICAL NOTE

Key Points

The key points are summarised below.

4.1 Scenario Testing

	Scenario Testing
1	The results of the Home and Wellbeing Staff Survey (early 2021) suggests there could be a 45% reduction in staff travel as a result of increased working from home (4.6 days, on average to 2.5 days, on average). However, this is based on staff preference and may not always be achievable. The scenario testing will assume up to a 35% reduction in staff travel for the daily commute. This reduction is assumed to be effective from 2021 and retained as a fixed percentage over time, to 2030. For students the reduction is 4.4 days per week travelling to the University, on average, to 3.4 days per week, on average.
2	Increased virtual working amongst staff is expected to allow more staff to work from home as well as impact on the need to travel for meetings during work hours (business travel). Any savings for the daily commute are covered by the 35% reduction applied for staff working from home.
3	A separate task on business travel (Task 2) is being undertaken and this will also consider the likely impacts of increased video conferencing on business travel.
4	The scenario testing will assume public transport patronage returns to pre-covid levels by 2023.
5	The scenario will assume a rise in cycling amongst staff and students based on the findings of the postcode analysis (Task 3a and 3b). This will also inform a new STTP target for cycling amongst staff and students.
6	The scenario testing will assume that 10% of commuter trips to the University will be by alternative fuel source vehicles.
7	A staff and student home postcode plotting exercise has been undertaken to understand where clusters live in relation to the University and key active travel routes. This has been used to inform where future increases in active travel might be achieved.

4.2 UofG Actions

	Stantec Recommend UofG Actions
1	The University should focus on providing staff suitable equipment to work from home, ensuring they understand the University policy and encouraging Line Managers to permit home working.
2	Explore how to provide staff and students with better broadband, improved IT systems, local shared workplace hubs, and support and help with managing childcare to encourage more home working and sustainable travel.
3	Work with the University of Strathclyde and Glasgow Caledonian University to champion affordable and equitable ticketing for staff and students to ScotRail. The University can also continue to promote the availability of tickets to staff and students and advise on the most cost-effective ways to travel.
4	The University should review / refresh their Cycling Strategy and potentially extending this to become an Active Travel Strategy, given the importance of encouraging active travel to meeting future carbon emissions targets.

TECHNICAL NOTE

	Stantec Recommend UofG Actions
5	The University should look to extend its offering on cycle training with a particular target towards women and groups who are likely to be less confident cycling.
6	The limits associated with the University's Cycle Plus scheme are considered to be appropriate to allow staff to purchase e-bikes. The University should explore an interest free loan scheme for students but would need to consider the full financial and operational implications of this.
7	The Action Plan will include measures to ensure the University has the infrastructure to accommodate this volume of EVs. Consideration will be given to the level of charging infrastructure provided, as not all EV spaces necessarily require having charging facilities, and pricing.
8	It is noted that there are a number of salary sacrifice car schemes available but recommended that the University should not be providing any incentive to driving. However, such a scheme could help staff afford to purchase an electric vehicle, if it could be restricted to this type of 'greener' vehicle. The relative merits would need to be considered.
9	It is recommended that the University should not provide any EV parking for students on campus (except the small number who qualify for parking permits).
10	The University should seek to encourage car share in the medium to longer term (subject to guidance on physical distancing).
11	The University should continue to work closely with Glasgow City Council to ensure the travel and transport needs of staff and students are considered. The Action Plan should identify some ambitious projects / initiatives which would encourage active travel by staff and students. This may include a commitment from the University to apply for external funding (such as Sustrans <i>Places for Everyone</i>) for any projects identified.
12	The Safe Active Travel Zone will be included as an action and the University will work with partners to deliver it to meet the needs of staff and students (including identifying external funding).
13	The University should continue to review and provide appropriate level of secure cycle parking (and associated facilities with reference to their Cycling Strategy).
14	The University should prepare new active travel route information (leaflets / brochures / website) to publicise how staff and students can access the University. An interactive map on a website may be the best format as it would allow users to navigate and new routes should be added as required. The Glasgow City Council webpage ³⁵ is an example and the University should prepare similar with additional information, such as campus / University locations.
15	In addition to parking provided on the Gilmorehill and Garscube campus, the University has to consider its approach to parking provision at other locations, including rented spaces for Tay House.
16	The University needs to consider that any reduction in the provision of parking permits at Garscube may result in additional off-site parking and should pro-actively engage with East Dunbartonshire and Glasgow City Council.

³⁵ <https://www.glasgow.gov.uk/index.aspx?articleid=16632>

TECHNICAL NOTE

4.3 Impact of External Policy

	Impact of External Policy
1	The wider interventions planned around the city demonstrate a clear commitment by external groups to encourage sustainable travel.