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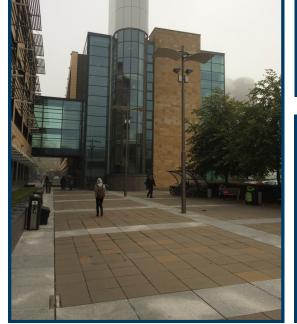


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1. Introduction



Background

In 2006, as part of its environmental commitment to reducing the impact of travel and transport associated with its operations, the University of Glasgow (UoG) published its first Travel Plan covering the period 2006 - 2008. The overall aim was to 'encourage staff, students and visitors to make travel choices other than single occupancy car modes for travelling to the University premises'.

This was updated when the University of Glasgow Strategic Travel Plan 2010 - 2015 was published in March 2010. It was set in the context of relevant University policies and best practice at the time, drawing on the findings of a staff and student travel survey undertaken in May 2008.

The 2010—2015 Travel Plan identified aims, objectives and targets for travel behaviour change and defined a series of interventions which would assist in delivering these.

This Strategic Transport and Travel Plan (STTP)

In the period since the 2010-2015 Travel Plan was developed, the needs of the University have changed significantly. The University's Strategic Plan 'Inspiring People, Changing the World – University Strategy 2015-2020' sets out the vision of the University to enhance its position in the global higher education and research sector. To support the Strategic Plan the University has agreed a new Estate Strategy which seeks to develop a campus that is "...fit for today and the future, is innovative and courageous in design, and is reflective of the University's history and of its ambition, inspiring current and future generations" (Campus Estate Strategy Vision, 2012).

Within the context of these strategic documents, the University has updated and developed the 2010-2015 Travel Plan to include wider issues of campus transport management, henceforth to be the Strategic Transport and Travel Plan (STTP).

In developing the STTP, cognisance has been taken of the University's Development Frameworks, its Carbon Management Plan and the expanding and changing use of the Estate.

The STTP sets the context for considering transport matters across the University including providing overarching policy guidance for the development of specific campus masterplans and future building specific BREEAM compliant Travel Plans.

The STTP covers the full Estate with particular consideration given to the University's three main campuses: Gilmorehill, Garscube and Dumfries.

Stakeholder Engagement

The STTP has been informed by extensive engagement with a range of stakeholders from within and outwith the University. This included various departments within the University, such as Estates and Buildings, Central Services, Transport Services, Residential Services, HR and the Student Representative Council, as well as Glasgow City Council, East Dunbartonshire Council and SWESTRANS (Dumfries and Galloway).

It has also drawn on case studies from other leading universities to identify best practice from similar institutions and ensure that the targets and measures adopted are both contemporary and consistent with similar establishments.

Supporting Documents

In preparing this STTP a wide range of transport issues has been considered. While the STTP covers each of these, the underlying detail is included in a set of supporting documents as follows:

- Travel Survey Report which provides an overview of staff and student travel patterns from October / November 2015, awareness of University initiatives and the measures that would encourage more sustainable travel choices;
- Car Parking Baseline Review which provides robust evidence on parking supply and demand across the University to inform the rationale for changing the strategy for car parking and the way it is managed and enforced;
- Gilmorehill and Garscube Site Audit Reports which consider the layout and infrastructure provided within these campuses and how they link to the wider network; and
- **Deliveries & Servicing Baseline Report** which provides the evidence that currently exists on the complex issue of deliveries and servicing across the University.

Action Plan

The STTP includes a section on Travel Plan measures which presents a high level summary of the measures the University will take to achieve its travel objectives across different themes. An accompanying Action Plan sets out the detailed actions to be taken forward.

While this STTP covers the period 2016 to 2025, the Action Plan focuses on the period to 2020.

1. Introduction



Purpose of a Travel Plan

A Travel Plan is:

"a general term for a package of measures tailored to the needs of individual sites and aimed at promoting more sustainable travel choices and reducing reliance on the car. Travel Plans help reduce the impact of travel on the environment; they also make good business sense. They can cut congestion around a site and save money on business travel. They can help to attract staff to sites which would otherwise be difficult to access. They can also help to make your workforce healthier." Scottish Government

The purpose of a Travel Plan is therefore to define a package of practical measures designed to influence transport to an individual site or within an organisation.

Benefits of a Travel Plan

A Travel Plan can bring a number of benefits to the organisation responsible for its implementation, and also to other organisations, the local community and the environment as a whole. The benefits can be summarised as follows:

- **staff** benefit from improved health, potential cost and time savings, reduced stress related to travelling and a general improvement in quality of life;
- organisational benefits from increased production and attainment generated by a healthier, more motivated workforce and student population, potential cost savings, reduced congestion, reduced demand for car parking and improved access for building users and deliveries;
- **improved access** to sites for employees, students, emergency vehicles, visitors and contractors;
- local community benefit from reduced congestion, lower journey times and free flow
 of traffic, reduced likelihood of accidents, improved public transport services, reduced
 overspill parking in residential areas, whilst also addressing issues of nuisance and noise;
- the environment a general benefit from improved air quality, less noise, dirt and fumes, and reduced impact on other national and global environmental problems such as global warming, due to lower carbon-based emissions; and
- health promotion by encouraging physical exercise such as walking and cycling.

The aim of the Travel Plan is primarily based on identifying the existence of 'win-win' scenarios and the ability of well informed groups of employees to detect the advantages of making a modal shift towards more sustainable travel modes. A shift away from a single occupancy vehicle (SOV) is frequently the core objective of a Travel Plan.

Approaches to Travel Plans

The approach to Travel Plans, and changing peoples' travel patterns in general, has been mixed over the past 50 years. It has only been in relatively recent years that the importance of Travel Planning, to deliver transport sustainability and preserving the environment and natural resources, has been fully on the agenda. This can be, in part, attributed to greater environmental awareness, the cost of fuel and transport as well as planning requirements.

There are generally four approaches to Travel Plans, all of which are adopted as part of this STTP, these are:

- incentives and disincentives ('carrots and sticks');
- hard and soft measures;
- travel blending; and
- flexibility.

Aims

The aims of the STTP are to:

- Identify and eliminate unnecessary travel and reduce the impact of transport generated by the University on the rest of the community, the local and wider environment;
- Widen the choice of means by which staff, students and visitors may travel to and from the University in a safe, comfortable and sustainable way, simultaneously improving the working environment for staff and students;
- Identify, support and promote alternatives to single occupancy car travel to and from the University for staff, students and visitors;
- Improve the active travel routes to and around University premises for users of sustainable modes of travel;
- Positively influence the health and fitness of staff and students by encouraging more walking and cycling as a means of travel; and
- Develop and implement strategies that support future applications for planning permission.





The STTP has been prepared in the context of a range of University policies and documents as well as national, regional and local policies. These are outlined in this section.

University Strategy 2015 - 2020

The University Strategy 2015 – 2020 reveals an aspiration to connect with other prestigious institutions and expand their reach and reputation worldwide. It specifically states an aim to steadily grow the international student population to 5,000 FTE by 2020.

It includes a target to reduce carbon emissions associated with the University to less than 39kT by 2020.

The STTP seeks to minimise the transport impact associated with the University against the backdrop of aspirations for an increasing global reach and a likely increase in staff and students numbers.

Estate Strategy

The University's Estate Strategy was produced in January 2012 and is currently being reviewed. It explains that the University is at an important point in its developmental history. The growth of the Gilmorehill Campus beyond the original 21-acre site has been considerable and further expansion and development is envisaged over the coming decades, in particular, with the coming expansion of facilities on the former Western Infirmary site. The project to develop this site is a long-term vision, which will take place over the coming decades. There is the potential to relocate functions from existing buildings to new purpose-built buildings on this site.

This will mean changes to the existing building stock: buildings may be repaired, redeveloped or disposed of by the University, within certain constraints. The Estate Conservation Strategy will assist Estates & Buildings in managing these changes on a campus which has considerable historic importance.

Key messages from the Estate Strategy that affect overarching transport policy have fed into this STTP.

Travel Policy

The University's Travel Policy recognises the University's impact on the environment, amenity and community arising from travel by staff, students, visitors and the transport movements generated through deliveries and other business activities.

The objectives of the Travel Policy are the adopted Aims of this STTP as stated on the previous page.

In line with its Sustainable Development Policy the University will endeavour to minimise its impacts associated with travel.

Its Policy on Travel will complement the University's mission and its Environmental Policy; help foster good community relationships and support government policies and local strategies.

The objectives of the Travel Policy are addressed through a range of initiatives and measures set out in this STTP.

Carbon Management Plan

The University began its Carbon Management Programme in 2009. A Carbon Management Plan details the University's strategy for reducing carbon emissions over a five year period and it set out a clear timetable as well as identifying the responsibilities and internal resources required to deliver the programme. The previous Travel Plan was a supporting document for the Carbon Management Plan, and its targets were incorporated into the CHP.

Scotland's universities and colleges have publicly declared their intention to address the challenges of climate change and reduce their carbon footprints by signing the Universities and Colleges Climate Commitment for Scotland (UCCCfS).

"The Universities and Colleges Climate Commitment for Scotland (UCCCfS) is an initiative by Scotland's universities and colleges to tackle climate change. Delivering these commitments will lead to positive benefits, as well as raising Scotland's profile as a leading, learning nation, determined to make a positive contribution to one of the greatest global challenges". Fiona Hyslop MSP, Cabinet Secretary of Education and Lifelong Learning.

To date, 60 universities and colleges in Scotland have signed the commitment. Signatories are committed to producing and publishing a 5-year Climate Change Action Plan (CCAP) which will be incorporated into established improvement processes, with the aim to achieve a significant reduction in emissions from all business operations and activities.

This Carbon Management Plan commits the organisation to a target of reducing CO2 by 20% by 2015/16 and underpins potential financial savings to the organisation of around £3.845 million .

The STTP sets out how carbon emissions associated with transport can be minimised to contribute towards meeting the targets set out in the Carbon Management Plan and UCCCFS.



University's Campus Development Frameworks

Gilmorehill

The University's Gilmorehill Campus Development Framework, produced in June 2014, provides a blueprint for the University's expansion onto, and redevelopment of, the Western Infirmary site, and the reconfiguration of areas within the existing campus. It is a principle of the Campus Development Framework that vehicle parking within areas of the Campus should be reduced, or eliminated.

The Campus Development Framework has been approved by Glasgow City Council (GCC) and will be a 'material consideration' in the consideration of all future development proposals. It is therefore intended to inform and guide development proposals around a holistic and unified set of urban design principles.

The STTP is grounded in the four key Vision Principles of the CDF and the associated key principles for transport:

Key Principle: TM1 Through physical measures and University policy, actively promote modal shift to increase travel by foot, bicycle and public transport.

Key Principle: TM2 In implementing a sustainable movement hierarchy, work in partnership with GCC to transform and enhance the setting and street design on key routes - notably University Avenue and University Place - to the benefit of pedestrian and cyclists.

Key Principle: TM3 Create a permeable, legible, attractive and welcoming campus that encourages and supports free pedestrian movement.

Key Principle: TM4 Enhance connectivity between surrounding sustainable transport infrastructure and the campus.

Key Principle: TM5 Develop a safe environment for ease of movement by all transport users.

Key Principle: TM6 Ensure the safe coexistence of all transport users through the prioritisation and careful management of space to minimise pedestrian, cycle and vehicular conflict.

Garscube

The Garscube Campus Development Framework sets out the vision for the Campus to its present and future users to give guidance and direction on strategic campus wide issues which will influence future investment decisions.

The document does not set out a detailed masterplan, or identify proposals for specific

development, but provides the University, the many stakeholders related to the site, and those tasked with implementing positive development and improvement works, with clear guiding principles, strategic themes and objectives which combine to form the Vision for the campus.

The key principles of the Campus Development Frameworks are embedded in the STTP.

Gilmorehill Development Masterplan

To deliver the ambitions of the Gilmorehill Campus Development Framework, the University is currently developing a Masterplan for an exemplar mixed-use higher education campus and commercial development.

The Masterplan will consider transport and travel (vehicle, cycle and pedestrian) both to and within the campus within a high quality public realm.

The STTP is a parent strategic policy document that covers the full University Estate. It will help to inform and support the Masterplan development.

Building Specific BREEAM Compliant Travel Plans

In the past the University has commissioned BREEAM compliant Travel Plans for individual buildings. These have varied considerably in terms of content and the level of detail they include and typically involve repetition / duplication of previous work undertaken given that buildings are often in close proximity to each other.

The STTP provides a distinct framework within which future Travel Plans for individual buildings can be prepared in a standard way without this duplication of effort.



Travel Plans are not only an integral element of the Government's transport policy, but also play an important role within the Government's wider sustainability agenda. Therefore, the STTP has been prepared in the context of relevant national, regional and local policies which are outlined below.

National Policy

A New Deal for Transport: Better for Everyone

In July 1998, the Government's integrated transport policies for Great Britain were set out in the White Paper: "A New Deal for Transport: Better for Everyone." In Scotland this was supplemented by a separate policy statement: "Travel Choices for Scotland."

The White Paper set a framework for the future of transportation in the UK and the embodiment of this framework can be found in a Travel Plan, with each of the objectives of the White Paper being achievable through the development and successful implementation of it.

The STTP contributes to the key aims of this policy.

Scotland's Transport Future: The Transport White Paper

"Scotland's Transport Future: The Transport White Paper" (June 2004), (Paragraphs 4.55 and 4.56 respectively) provide a broad overview of the potential benefits of using Travel Plans, stating:

"Green Transport Plans (GTPs) have the potential to make a difference in the way that we commute and carry on our business. Public bodies, the health service, universities and colleges, cultural venues, heritage sites and businesses all have an impact on the local environment, local transport networks and their neighbours caused by the travel patterns of employees, suppliers, customers and visitors."

The STTP can be used to demonstrate to planning authorities how the potential traffic impact of any future expansion premises can be minimised.

Scottish Planning Policy

Scottish Planning Policy is a statement of Scottish Government policy on land use planning. It notes that:

"A Travel Plan is a package of measures aimed at promoting more sustainable travel choices and reducing reliance on the car, and should be encouraged for all significant travel generating developments."

"Opportunities for personal travel should be prioritised by mode in the following order – walking, cycling, public transport, car and other motorised vehicles. Buildings and facilities should be accessible on foot and by cycle. Improvements to active transport networks, such as

paths and cycle routes, in urban and rural areas will support more sustainable travel choices. The aim is for urban areas to be made more attractive and safer for pedestrians and cyclists, including people with mobility difficulties. Cycle routes and, where relevant, cycle parking and storage should be safeguarded and enhanced wherever possible."

The STTP prioritises opportunities for personal travel in line with national planning policy.

Disability and Equality Act 2010

From 1 October 2010, the Disability and the Equality Act 2010 replaced most of the Disability Discrimination Act (DDA). However, the Disability Equality Duty in the DDA continues to apply.

Equality Act 2010 and Inclusive Mobility

"The Equality Act 2010 aims to protect disabled people and prevent disability discrimination". It provides legal rights for disabled people, including in the area of access to goods, services and facilities including larger private clubs and land based transport services.

Inclusive Mobility guidance, by the DfT, states that:

"The Government is committed to comprehensive civil rights for disabled people. An integrated transport policy, which encompasses accessible public transport, public transport infrastructure and a barrier-free pedestrian environment is fundamentally important to delivering that commitment."

Since 1996, it has been unlawful for service providers to treat disabled people less favourably than other people for a reason related to their disability.

The STTP seeks to ensure that the University provides equal access opportunities for all.

<u>Designing Streets</u> and the <u>National Roads Development Guidance</u>

Designing Streets is the first policy document in Scotland for street design which should meet the six qualities of successful places, as set out in Designing Places. Both documents apply a user hierarchy to the design process with pedestrians at the top.

The National Roads Development Guidance states that:

"Travel Plans for staff, patients and visitors play an important role in traffic reduction and especially encourage modal shift for staff."

During development of the STTP, consideration has been given to the guidance set out in these documents to encourage campus environments which are successful places.



Cycling Action Plan for Scotland and Cycling by Design

The Cycling Action Plan for Scotland (CAPS) is the key policy document for cycling in Scotland. It provides the vision for the development and delivery of cycling across the country and set a target that by 2020 10% of all journeys will be undertaken by bike.

It sets 19 actions to achieve these, including:

"Encourage all employers across all sectors to become Cycle Friendly (e.g., by offering support for workplace cycling facilities and promotional resources, active travel champions, Travel Planning)"

Development of the STTP has considered the guidance set out in these documents to encourage campus cycling and meet the target of 10% of all journeys by bike by 2020.

Regional and Local Policy

Glasgow and Clyde Valley Strategic Development Plan and Glasgow City Plan 2

The Glasgow and the Clyde Valley Strategic Development Plan is one of two key statutory documents, along with Local Development Plans (LDPs), in Scotland's Development Plan system when dealing with the long-term future of Scotland's four city-regions.

The City Plan 2 forms part of the city's development plan. It is used to guide the location, scale and quality of developments and, also, to inform decisions on planning applications.

It outlines that the City Council will normally require Travel Plans for developments which require a Transport Assessment.

The STTP fulfils the requirements for significant trip generators to have Travel Plans.

Keeping Glasgow Moving, Glasgow's Local Transport Strategy 2007-2009

For Glasgow, the current Local Transport Strategy is entitled 'Keep Glasgow Moving' (2007-2009) which "sets out Glasgow City Council's aspirations for taking forward transport policy and infrastructure within Glasgow". Although somewhat dated, this is the current relevant transport strategy and it may be updated in the future.

The policies and associated actions fall into five high-level objectives which have been set:

- **LTS1** Support the continuing physical, social, economic, cultural and environmental regeneration of the City by maintaining and promoting efficient and effective transportation services and infrastructure within Glasgow.
- LTS2 Promote social inclusion and tackle poverty by seeking to ensure that transport is
 accessible to all sections of the community and provides good links to employment,
 health care, education and leisure.
- LTS3 Promote healthy and environmentally sustainable methods of transport that minimise harmful emissions and energy consumption including those that involve physical activity.
- LTS4 Improve the safety and the actual and perceived security of travelling within the
 City by reducing accidents and enhancing the personal security of all users of the
 transport network.
- **LTS5** Promote integration of the transport system and provision of travel information within Glasgow.

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The LTS makes reference to how a Travel Plan should sit within current policy and what policy changes will happen in the future.

The STTP contributes to each of the objectives set out in the LTS.

A Catalyst for Change, The Regional Transport Strategy for the West of Scotland 2008-2021

Strathclyde Partnership for Transport (SPT) Regional Transport Strategy (RTS) "A Catalyst for Change, The Regional Transport Strategy for the west of Scotland 2008-2021" (2008) sets out the vision for transport, the goals shared with partner organisations, transport objectives, the strategic priorities for transport and the indicators which will be used to measure delivery for the first five years of the Strategy's implementation.

One of their key priorities is: "promoting 'smarter choices', Travel Planning and active travel".

The STTP contributes to many of the objectives set out in the RTS.

Glasgow's Strategic Plan for Cycling 2010-2020

The Strategic Plan for Cycling in Glasgow seeks to place cycling more holistically within the national and local policy matrix; demonstrating cycling's importance and the role it can play in successfully delivering across policy fields, as well as how it can be embedded within the legacy of Glasgow 2014 Commonwealth Games. It is informed by national and local priorities and seeks to build on previous successes and to deliver the overriding vision: Cycling will be the biggest participation activity in the City by 2020.

The STTP is closely aligned with the Strategic Plan for Cycling to encourage cycling.

Core Paths Plan for Glasgow

The aim of Glasgow City Council's Core Paths Plan is to ensure that important paths and routes are recorded and promoted, helping to achieve a "connected Glasgow" where residents and visitors can move easily around the path network on foot, by bike, by horse or any other non-motorised means - including 'water paths' for rowers, canoeists and other non-motorised water users.

The STTP is closely aligned with the Core Path Plan to encourage active travel choices.

Transport Assessment Guidance

This document, prepared by Transport Scotland, provides an outline of the framework for delivering integration of transport and land use planning, including the requirement for a Transport Assessment for developments involving significant travel generating uses. It sets out

requirements according to the scale of development being proposed and covers the requirements of any Travel Plan.

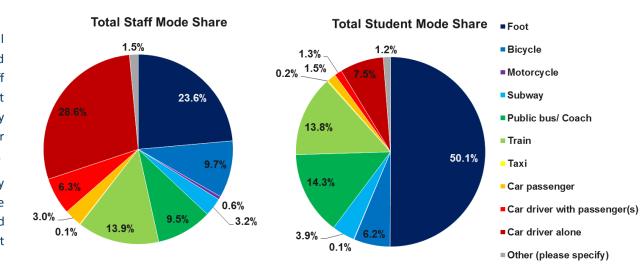
The STTP has been prepared in line with Transport Assessment Guidance.



Current Travel Patterns

To inform the STTP an online travel survey was hosted with a link circulated to all University staff and students. It was launched on 20th October 2015 and remained open for 17 days. Varied forms of advertisement were employed to engage staff and students and encourage them to complete the survey with the result that 6,674 (20%) staff and students undertook the survey. Of these, there were only 6,062 returns where respondents identified whether they were a staff member or a student; equating to an overall return rate of 31% for staff and 15% for students.

The survey focussed on current travel patterns, awareness of existing University initiatives and what would encourage staff and students to make more sustainable travel choices. It covers staff and students daily commute, inter-campus travel and students travel home to non-term time addresses. Business travel was not included.



Daily Commute

The graphs below show the current mode split by staff and students across the University.

It is encouraging to note that for both staff and students, if active modes of travel (walking and cycling) are combined they represent the preferred mode of travel; 34% for members of staff and 56% for students.

	Foot	Bicycle	Motor- cycle	Subway	Public bus / Coach	Train	Taxi	Car pas- senger	Car driver with pas- senger(s)	Car driv- er alone	Other
Gilmorehill Staff	26.9%	9.2%	0.6%	3.7%	9.0%	12.4%	0.1%	3.1%	6.7%	26.7%	1.5%
Gilmorehill Students	53.9%	5.4%	0.1%	4.4%	12.0%	14.6%	0.2%	1.1%	0.7%	6.5%	1.1%
Tay House Staff	11.9%	6.9%	-	2.0%	18.8%	26.7%	-	1.0%	5.9%	26.7%	-
Garscube Staff	10.1%	15.0%	-	0.5%	7.2%	11.6%	-	1.9%	5.8%	46.4%	1.4%
Garscube Students	35.9%	10.6%	-	1.2%	20.0%	8.2%	0.4%	5.7%	3.3%	11.4%	3.3%
Crichton Staff	21.4%	7.1%	-	-	-	-	-	-	7.1%	64.3%	-
Crichton Students	25.0%	7.7%	-	-	15.4%	7.7%	-	-	11.5%	32.7%	-
Total Staff	23.6%	9.7%	0.6%	3.2%	9.5%	13.9%	0.1%	3.0%	6.3%	28.6%	1.5%
Total Students	50.1%	6.2%	0.1%	3.9%	14.3%	13.8%	0.2%	1.5%	1.3%	7.5%	1.2%



Daily Commute Travel Trends

The Figure opposite provides a comparison of the modal split data with that obtained through the 2013 University travel survey. There have been some changes in the modal split for students, with cycling and bus use increasing, although disappointingly there has been a 2% increase in 'car driver alone'.

Better results are demonstrated when comparing the data for staff with increases in those travelling by train and active modes. There has also been a 3% reduction in those travelling by car since 2013.

Overall, the Figure shows:

- An increase in the overall number of staff walking, cycling and using the train with a decrease in the number driving alone; and
- An increase in the number of students cycling, taking the bus and driving alone with a decrease in the number walking and using the subway.

Driving and Parking

Other than choosing this mode due to a disability, both staff and students responded to say that it is the most convenient and that it is the quickest mode of travel for both groups.

Parking is a particularly contentious issue evoking strong feeling, mostly amongst staff. The majority of staff and students at the Gilmorehill (54%) and Garscube (77%) Campuses said that as much parking as space allows possible should be provided, however, a proportion felt it should not be provided at all or be limited and allocated with conditions; 44% at Gilmorehill and 21% at Garscube. Of those in favour of conditions to be applied, most agreed that the issuing of car parking permits should be based on a set of pre-defined criteria.

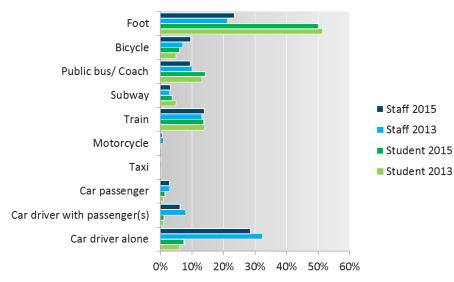
Home Locations

The Figures on the following pages present an overview of the main mode choices at each of the main University campuses for staff grouped by home postcode area. They show the total number of respondents from each area with a pie chart grouping their normal mode of travel as follows:

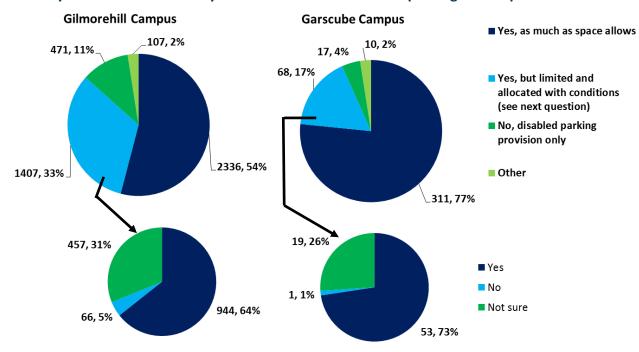
- Active Travel walk or cycle;
- Public Transport public bus, train or subway; and
- Car car driver alone or car driver with passenger(s).
- Car driver alone car driver alone only.

We have not included maps for the Crichton campus due the relatively low number of respondents.

Mode Share Comparison



Do you think the University should continue to offer car parking on campus?



Do you think parking permits should be issued based on a set of pre-defined criteria?



Gilmorehill Staff Home Locations and Normal Mode of Travel to University

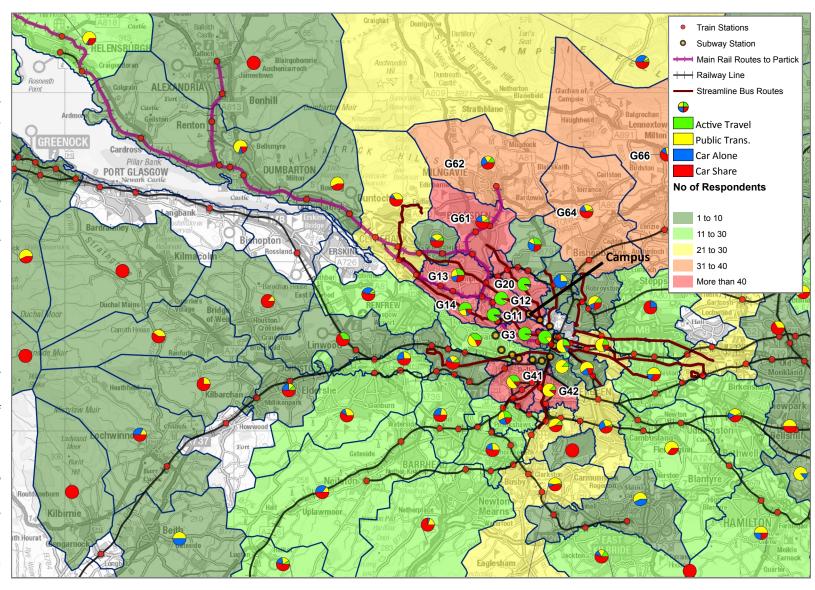
There is a high proportion of active travel by staff in the areas immediately surrounding the campus in G11 (85% - Broomhill, Partick, Partickhill) and G12 (87% - Cleveden, Dowanhill, Hillhead, Hyndland, Kelvindale, Botanic Gardens) as well as G3 (93% - Anderston, Finnieston, Garnethill, Park, Woodlands (part), Yorkhill) and G20 (84% - Maryhill, North Kelvinside, Ruchill);

Despite the relative close proximity there is a fairly high proportion of staff driving alone from G13 (29% - Anniesland, Knightswood, Yoker);

To the north, areas such as G61 (50% - Bearsden) G62 (40% - Baldernock, Milngavie, Mugdock) have a high proportion of staff driving alone to the campus.

Meanwhile to the south in areas such as G41 (47% - Pollokshields, Shawlands) and G42 (74% - Battlefield, Govanhill, Mount Florida, Strathbungo (part), Toryglen) there is a greater use of public transport.

In more remote areas to the north where a relatively high number of staff respondents live, such as G64 (50% - Bishopbriggs, Torrance) and G66 (57% - Clachan of Campsie, Haughhead, Kirkintilloch, Lennoxtown, Lenzie, Milton of Campsie), there is a high proportion of them driving alone to the campus.

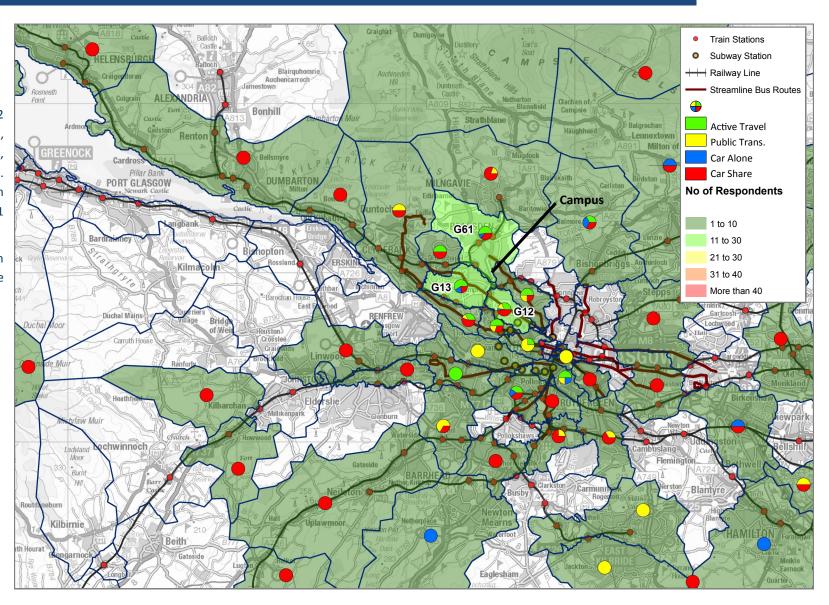




Garscube Staff Home Locations and Normal Mode of Travel to University

The highest numbers of staff live in G12 (Cleveden, Dowanhill, Hillhead, Hyndland, Kelvindale, Botanic Gardens), G13 (Anniesland, Knightswood, Yoker) and G61 (Bearsden). Despite these being close to the campus, high proportions of staff drive to the site from G61 (35%) and G12 (47%).

There are few other areas where high concentrations of staff live, they tend to be relatively spread out.

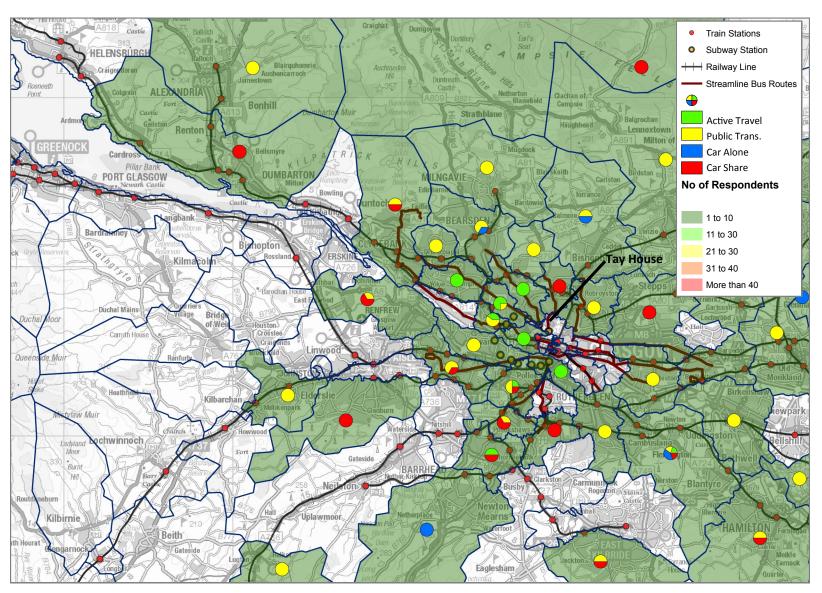




Tay House Staff Home Locations and Normal Mode of Travel to University

There are no areas with high concentrations of staff.

Generally, staff living close to Tay House rely on active travel or public transport to access the site, with those living further away split between car and public transport.





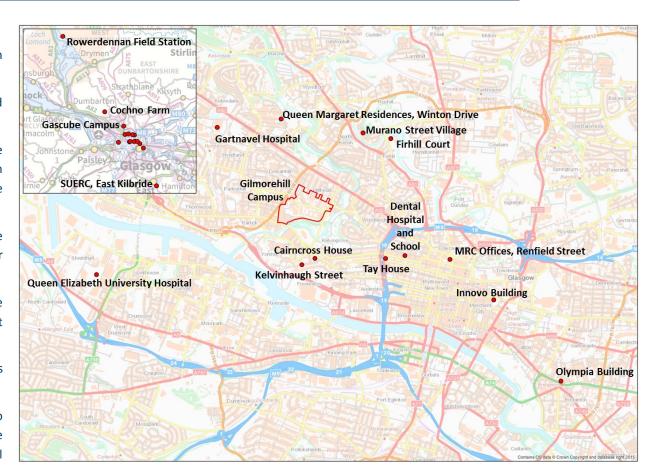
Inter Campus Travel

Overall, only 19% of respondents stated that they have to travel between campuses.

- The majority of staff and students based at Gilmorehill are not required to travel to other campuses;
- The majority of staff based at Tay House are required to travel to the Gilmorehill campus (83%). Staff based at the Garscube and Crichton campuses, as well as hospital sites, are also required to travel to the Gilmorehill campus relatively frequently;
- Staff and Students based at hospital sites are also required to undertake
 a fair amount of inter-campus travel, most frequently to Gilmorehill or
 other hospital sites;
- Apart from those based at hospital sites, students based at the Garscube campus are required to travel between sites the next most frequently.

The following observations can be made about the main inter-campus journeys:

- Gilmorehill to Tay House: Around 11% of staff (n=16) who have to travel from Gilmorehill to Tay House typically get a taxi, despite the presence of public transport options. Most staff walk from Gilmorehill to Tay House.
- **Gilmorehill to Garscube:** The largest proportion, over a third of staff (36%, n=67) who have to travel from Gilmorehill to Garscube, typically get a taxi. In comparison, the largest group of students walk (27%, n=36), followed by getting a public bus (21%, n=28).
- Garscube to Gilmorehill: A high proportion, around a quarter (24% n=31) of staff typically required to travel from Garscube to Gilmorehill get a taxi. However, the highest proportion (29%, n=37), choose to drive in their own car as a lone driver. In comparison, very few students do, with most opting to walk or use the public bus.





Students Travel to Non-term Time Address

All students were asked if their home / non-term time address was the same as their term time address. If not, they were asked how often they have travelled home in the last 12 months and how many miles they travel as part of that journey by different modes. A total of 3,930 students provided details, with 2,011 having a different term time address, 47% of which (940) require to take a flight home. The data covered 2,159 flights meaning that, on average students with a home address abroad return there 2.3 times per year.

Transport Carbon Emissions

The vast majority of transport carbon emission associated with the University relate to students travel home to non-term time addresses and, within that, the greatest proportion of emissions is from flights (94%).

Inter-campus travel makes up only a very small proportion of the total transport carbon emissions, if student travel home is considered.

The carbon calculations are based on the sample of data available and a number of assumptions; they are also reliant, to some degree, on the accuracy of the responses received (i.e. travel distances). They present a high level overview of estimated transport carbon emissions rather than a detailed calculation.

It is hoped that this process can be repeated as part of future surveys and will be particularly useful for tracking how emissions change over time.

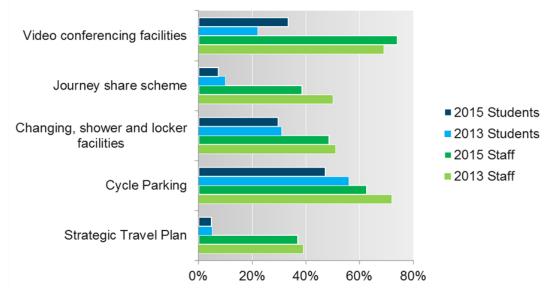
Awareness of Current Initiatives

In order to gain an understanding of the level of awareness amongst staff and students' of the existing University Strategic Travel Plan and its measures, respondents were asked a number of questions regarding schemes and initiatives at the University.

Overall, as shown in the Figure opposite:

- More staff and students are now aware of the University's video conferencing facilities than in 2013;
- Fewer staff and students are now aware of the University's journey share scheme than in 2013;
- Fewer staff and students are now aware of the University's changing, shower and locker facilities than in 2013;
- Fewer staff and students are now aware of the University's cycle parking than in 2013; and
- Fewer staff and students are now aware of the University's Strategic Travel Plan than in 2013.

Element	kg CO2e	Percentage of Total Emissions
Commuting (staff and students)	10,328,919	25%
Students Travel Home	32,848,778	74%
Inter Campus Travel	349,455	1%
Total	43,527,152	





Summaries of Site Audits

To inform the STTP, transport infrastructure audits of the Gilmorehill and Garscube Campuses were undertaken. These cover pedestrian and cycling provision within each campus, connections to the wider network, public realm, accessibility (including for the mobility impaired), parking provision, servicing and deliveries and accommodation of fleet vehicles.

The Site Audit Reports contain the detailed reviews which are summarised here. The Deliveries and Servicing Baseline Report (also covering Fleet Vehicles) and the Parking Baseline Report also contain more details on these elements.

The baseline reviews also include information gathered from various stakeholders during the preparation of the STTP.

Gilmorehill Campus

Location

Located in the West End of Glasgow, the Gilmorehill Campus can be accessed using the extensive public transport network serving the city and the West of Scotland.

The Gilmorehill Campus is of considerable significance to the economic and social fabric of the City, as well as to the West End of Glasgow. This significance includes its impact on the built environment and sense of community in the West End.

Over the course of time the built environment within the campus has changed with the growth in car use leading to the provision of an increasing number of parking spaces. Similarly, as the number of staff and students based at the campus increases, the requirements for servicing (refuse), deliveries and accommodating fleet vehicles has also grown. To varying extents within different parts of the campus, these have been provided for to the detriment of the pedestrian environment and sense of place.

The purchase of the Western Infirmary site directly adjacent to the existing main campus presents an opportunity to consider a third phase of evolution of the University, equivalent in significance to the move out to the West End from its original city centre High Street location.

Pedestrian Infrastructure

The areas surrounding the campus benefit from an extensive pedestrian network, though provision varies and in places can be insufficient for the high footfall, particularly at peak

times. The surrounding area is heavily trafficked and there are some locations where the car dominates over pedestrians and the infrastructure provided does not match the main desire lines.

Generally, however, key destinations are within short walking distance and can be easily accessed from the campus, for example, Hillhead Subway Station, local bus stops on University Avenue and University Avenue in general, Dumbarton Road and Byres Road, Kelvingrove Park, Kelvin Way and the range of amenities on nearby streets (for example, Byres Road).

While the University does not have direct control over infrastructure outwith the campus, it can work with Glasgow City Council to identify opportunities for improvements and ensure the provision within the campus links appropriately.

Dedicated pedestrian provision within the campus varies, though the University has adopted an ethos that pedestrians have priority throughout.

The University is committed to improving the environment for pedestrians within the campus in conjunction with reducing the volume of car parking provided.

Cycling

The Gilmorehill Campus is well positioned for staff, students and visitors to make use of Glasgow's cycling network. National Route 7 is less than half a mile from the southern boundary of the Gilmorehill campus and can be most directly accessed adjacent to the River Clyde via Bunhouse Road then Ferry Road. It also connects to National Route 75 at Bell's Bridge which provides an off-street link to the city centre at the Broomielaw and runs on to Edinburgh (Leith). To the west it stretches to provide access to Gourock and the ferry to Dunoon.

The Kelvin Walk Way provides a segregated traffic free route to the north, linking to the Garscube campus and the NCN 754 which runs along the Forth and Clyde Canal. There is also a recommended cycling route to Tay House, with a long section through Kelvingrove Park.

Cyclists within the campus are generally expected to share the road network and enjoy officially the same priority as pedestrians.

A high volume of cycle parking is provided throughout the campus, though the standard varies with some very good facilities, in the form of shelters, and some more basic provision



such as simple Sheffield style stands. A relatively high volume of cycles can be observed being parked at informal locations, such as railings. Some parking facilities are at the limit of their capacity.

In addition to cycle parking there are four bicycle repair stations on the campus and a bicycle inner tube vending machine in the Stevenson Building.

As with the pedestrian environment surrounding the campus, the University does not have direct control over infrastructure outwith the campus but it can work with Glasgow City Council to identify opportunities for improvements and ensure the provision within the campus links appropriately.

Signage

Signage within and around the Campus is currently "piecemeal" and, in particular, signage to cycle routes and parking is poor.

Public Transport

The Gilmorehill Campus is ideally situated to be accessed by a range of public transport options including bus, train and subway. Bus stops on Dumbarton Road, University Avenue, Byres Road and Great Western Road are all within a short walking distance, as is Hillhead subway station on Byres Road.

The campus lies within the high accessibility public transport zone as identified in the Glasgow City Plan 2 and both Great Western Road and Dumbarton Road are Streamline corridors which offer enhanced bus services.

Partick Interchange is located less than a mile from the southern edge of the campus (around a 10 to 15 minute walk); it is Scotland's fifth busiest public transport interchange and one of the best used hubs in the Strathclyde Passenger Transport network. It provides access to the rail network, the subway and a number of bus services.

As well as Hillhead, Kelvinhall and Kelvinbridge subway stations are within close proximity of the campus. The Subway provides excellent connections to Glasgow city centre and runs from 06:30 to 23:45 Monday to Saturday and 10:00 to 18:12 on Sunday. There are trains every four minutes at peak times and every six-to-eight minutes during off-peak times.

Smartcards have recently been introduced, these are free to register for. A single ticket cost £s1.40 with unlimited travel all day for £2.70; 7 day, 28 day, 6 month and 12 month passes are

also available and offer savings for regular travellers.

Parking

The exact number of parking spaces provided within the Gilmorehill Campus on any given day is difficult to quantify, partly because of ongoing construction works which mean that some parking areas are temporarily unavailable. In addition, there are a number of areas within the campus where, over time, it has become acceptable to park vehicles rather than them being formally designated as parking bays.

The available parking stock at Gilmorehill is best summarised through analysis of a detailed parking survey undertaken in March 2014 and is as follows:

- Around 614 spaces in formal car parks;
- Around 196 other bays marked for parking (including disabled); and
- Around 136 informal (unclassified) spaces where parking is generally allowed to occur.
- This is a total of 810 designated parking spaces and an additional 136 informal spaces.

Significantly, the majority of the parking provision, almost 250 spaces, is around the historic and iconic centre of the University at the main Gilbert Scott building, Professor Square and surrounding buildings.

The survey data found that the maximum number of vehicles parked on the campus during the day was 772; equivalent to around 60% of the parking permits issued for the campus.

Analysis of survey data from 2014 found that while demand never actually reaches the level of supply, up to six of the car parks in the campus are at over 90% of capacity at some point during the day.

The analysis found that people not only want to park close to their building, they do not want to drive around too long to search for a space.

Parking on Gilmorehill and Garscube campuses requires the user to display a parking permit on the windscreen of the vehicle. Permits for the Gilmorehill campus can also be used at Garscube but not vice-versa.

The University has a policy whereby staff who pay permits by monthly payroll deductions are issued with a "lifelong" permit which is no longer renewed each session. The permit issued



remains with the holder until such times as they no longer require it. The payment of parking permits is set-up as a salary sacrifice scheme, which offers further benefits.

Individuals who are required to pay annually, or are exempt from payment for various reasons, receive a different style parking permit. This style is required to be renewed each session.

The annual cost of a permit for staff is currently £200 for a car at Gilmorehill and £140 at Garscube.

Applicants must include on the application form particulars of each vehicle they may wish to bring onto campus (only one vehicle will be permitted at any one time) in order that these may be covered by the permit. Only one permit will be issued regardless of the number of vehicles and this must be displayed on whichever is being parked.

As there is a substantial waiting list to get a permit, the allocation system is currently closed to further applications. No new permits (except blue badges) have been issued since the permit list was suspended in January 2014 via the Secretary of Court.

Currently there are 1,267 permits issued by the University for the Gilmorehill campus, representing around 24% of the staff mainly based there. These were issued on a first-come-first-served basis with no criteria requiring to be met to receive a permit. In addition, 30 permits have been issued to students.

At the Garscube campus 492 permits have been issued which equates to over half (59%) of the staff who are mainly based there.

The current permit system does not offer any flexibility such as day permits.

It is evident from all of the information currently available that parking provision and management at the University is under intense pressure. Changes to parking on public roads adjacent to the University, pressure on real estate space within the University and the demands of the Travel Plan and Carbon Management Plan all add to the pressure.

Servicing

With growing numbers of staff and students, the requirements for servicing (refuse vehicles) and deliveries has increased. Generally, most of the buildings have dedicated provision to accommodate larger types of vehicle which access the site relatively infrequently.

However, the number of smaller delivery vehicles accessing the site is on the rise, perhaps exasperated by the trend for online shopping, with many of them using informal locations to

serve individual buildings or departments. There is no real management of this process with limited control of what parts of the campus they can enter or where they can stop for loading.

The University has a contract with Viridor to collect refuse which they do every evening. At some locations University staff take refuse to central points for Viridor to pick-up. The University also has considerable specialist waste and confidential waste which needs disposed of.

Fleet Vehicles

The University has a significant fleet of over 100 vehicles, which require to be stored within or close to the campus when not in use. Most of these vehicles are kept at the depot at Thurso Street, in car parks to the rear of the Fraser Building or temporarily outside the Round Reading Room. Others are stored at various locations throughout the campus and there are increasing difficulties for them negotiating the campus due to the current level of inappropriate parking which, in turn, creates concerns about pedestrian safety.

Transport Services currently has overall responsibility for purchasing fleet vehicles and maintaining them on behalf of individual departments. They have an overarching responsibility for understanding how they are used, monitoring accidents and efficiency, providing driver training and dealing with insurance issues.

Thirty-four of the University's fleet vehicles are monitored using Ctrack and the Estates Department is currently reviewing operations to see if they can be streamlined.

When replacing fleet vehicles, or purchasing new ones, suitable electric vehicle options are sought, however, it is not always possible to identify electric vehicles which are suitable for their required use.

Garscube Campus

Location

Located four miles north of the Gilmorehill Campus, the Garscube Campus is split along the boundary of Glasgow City Council and East Dunbartonshire Council and is bounded by varied natural features, land and water habitats, complex road and travel networks.

It is home to:

Garscube Sports Complex



- Wolfson Hall and Kelvin Conference Centre
- the School of Veterinary Medicine in the College of Medical, Veterinary and Life Sciences (MVLS), including: the Small Animal Hospital, the Weipers Centre for Equine Welfare and the Scottish Centre for Production Animal Health and Food Safety
- the Beatson Institute for Cancer Research
- Wolfson Wohl Cancer Research Centre

The following research institutes in MVLS also have a significant presence on Garscube campus, in addition to Gilmorehill:

- the Institute of Biodiversity, Animal Health and Comparative Medicine
- the Institute of Cancer Sciences
- the Institute of Infection, Immunity and Inflammation
- the Institute of Neuroscience and Psychology.

Travel to the Campus

The outlying nature of the site, and limited public transport options, has led to a relatively high reliance on the car. However, Anniesland and Westerton Train Stations are both within walkable distance and there is access to a Streamline bus corridor on Maryhill Road, and a limited bus service on Switchback Road.

Walking and Cycling to the Campus

There are a number of dedicated walking and cycle routes which can be used to access the campus including local networks of routes towards the City Centre, Bearsden and the Forth and Clyde Canal. Maryhill Road has a shared bus / cycle lane providing a direct route to the city centre while a link to the Kelvin Walkway offers a longer but segregated route to NCN 756 which follows the River Kelvin to Glasgow via the Gilmorehill Campus.

Travel Within the Campus

The routes which form the current desire lines are generally aligned with the vehicular routes and the pedestrian linkages are in places ill-defined, or broken, particularly at key activity nodes. This lack of clarity in the primary routes can create conflict between vehicles and pedestrians.

The river also acts as a major barrier to movement and it cuts potential desire lines which could ease connections with shared facilities and major transport routes such as Maryhill Road

bus corridor and the cycle routes through Kelvin Campus.

In particular, there is only one crossing point of the River Kelvin via the Lady Campbell Bridge, which means extended walking times for those based at Wolfson Hall to the Veterinary School. The walking route is not lit and perceived as unsafe at night time.

Parking

The baseline review has demonstrated that the Garscube campus has plenty of parking supply in relation to demand. However, some parts of the campus, such as around the School of Veterinary Medicine are under more pressure than others.

There is evidence from parking surveys of some overspill parking from businesses in the Kelvin Campus into the Garscube Sports Pavilion car park and anecdotal reports suggest this is increasing.

Finally, there appears to be a degree of overspill parking into surrounding residential streets to the west and east of the campus by students and potentially staff without permits. East Dunbartonshire Council has confirmed that complaints have been received from residents and officials are monitoring the situation.

Crichton Campus

The Dumfries Campus is home to the School of Interdisciplinary Studies and surrounded by 85 acres of parkland and gardens in the south west of Scotland.

Walking and Cycling

There are dedicated cycle routes and footpaths from the centre of Dumfries to the campus. Cycle parking is available and a Hour Bike cycle hire facility.

Public Transport

A bus service runs roughly every 20 minutes from Dumfries town centre and there are direct daily buses from London to Dumfries and a regular bus link to Glasgow. Coach services from other parts of Scotland (Edinburgh, Borders), England, Wales and Northern Ireland are also available.

Dumfries has direct rail links to Glasgow and Carlisle. From these stations you can access routes across the rest of the UK. The journey time from Dumfries to Glasgow is less than 2 hours.

4. Travel Plan Targets



Scottish Government Guidance

Transport Assessment Guidance states that:

"A Travel Plan without targets is of limited value. The plan should encourage change in a manageable way for those it is targeting. It should be practical and realistic in its aims. Most people are already multimodal in their travel behaviour therefore this will often mean small incremental changes for which the Travel Plan should have mechanisms in place to ensure the change is sustained in the long term."

STTP Targets

Modal shift targets are set with the intention of increasing or decreasing the proportion of staff and students travelling by a particular mode of transport. The targets below are based

on the data gathered through the 2015 staff and student travel survey.

The STTP includes Modal Shift Targets as well as Business Travel Targets which the University has adopted and which are not directly measured via mode share.

The table below includes targets which are SMART: Specific, Measurable, Achievable, Realistic and Time-bound. They have been set in the context of a projected increase in student and staff numbers and an aspiration for a wider global reach. In this respect, reductions in the total volume of some elements are unlikely to be achieved and, instead, targets relate to a proportional change.

To support the achievement of these targets a series of themes has been identified as set out in Section 4. More detailed measures are included in the Action Plan.

	Element	2015	2020	2025	Measured Through
	Modal Shift Targets				
1	Reduce the proportion of staff travelling by car alone to the Gilmorehill Campus	26.7%	20%	15%	Travel Survey
2	Reduce the proportion of students travelling by car alone to University premises on all campuses	7.5%	5%	5%	Travel Survey
3	Increase the proportion of staff travelling to University by bike across the University	9.7%	12%	15%	Travel Survey
4	Increase the proportion of students travelling to University by bike across the University	6.2%	10%	15%	Travel Survey
	Business Travel Targets				
5	Increase the proportion of staff using video conferencing facilities as an alternative to travelling	34%	50%	60%	Travel Survey
6	Reduce the proportion of staff typically using taxis for travel between Gilmorehill and Garscube	31%	20%	10%	Travel Survey
7	A 10% reduction in business car miles (private cars) from the 2014/15 figure by 2020	360,547 miles	324,492 miles	292,043 miles	Measured through Agresso and Core HR expense claims
8	A 10% reduction in domestic business air passenger km from the 2014/15 figure by 2020	1,843,449 passenger km	1,659,104 passenger km	1,493,194 passenger km	Travel agent data
9	Reduce CO2 emissions associated with fleet vehicles by 10% from the 2014/15 figure by 2020	137,780 kg CO2 e	124,002 kg CO2 e	111,602 kg CO2 e	Transport Services
10	No increase in the carbon emissions from international business air travel per employee compared to the 2014/15 figure by 2020	898 kg CO2 e	898 kg CO2 e or less	898 kg CO2 e or less	Travel agent data



Introduction

The success of a Travel Plan is dependent upon the implementation of a number of measures aimed at changing individual travel behaviour and therefore the University has identified a range of measures intended to encourage more sustainable travel choices.

As previously mentioned, a more detailed Action Plan sets out specific and timed measures to achieve the Travel Plan targets set in the STTP. This section sets out a high-level summary of the key themes.

Management and Co-ordination

A key component of the STTP is to make those it affects aware of its existence and highlight their role in helping to achieve its objectives and gain their buy-in.

A group comprising representatives of Estates & Buildings (including the Travel and Transport Co-ordinator), Central Services, Transport Services, Residential Services, HR & Finance and the Student Representative Council / GUEST and others as suitable will act as the Travel Plan Steering Group and will meet at least twice per year. Other representatives and specialists will be brought in to assist in the process as required.

The Travel Plan Steering Group will establish relevant working groups as necessary to help the implementation and ongoing development of the STTP.

A Stakeholder Group comprising invited representatives from the University, Glasgow City Council and Strathclyde Passenger Transport (SPT) will also be formed and will aim to support the development of the STTP at a strategic level and agree on future measures.

A series of Working Groups will be established as necessary to consider specific issues and to ensure the Action Plan is fully supported, developed and reviewed thoroughly.

Theme 1: Information and Awareness Raising Measures

The University already make a wide range of information available through the Travel Planning section of the website (http://www.gla.ac.uk/services/estates/sustainability/travel/).

The following is currently included:

- Gilmorehill Active Travel Map
- The University's Cycle to Work scheme Cycle Plus
- Glasgow University Bicycle User Group (GUBUG)
- Mileage expenses claims when cycling for business purposes
- Bicycle parking (Gilmorehill and Garscube) and showers (Gilmorehill)

- Services for cyclists (bike repair stations, HourBike on Dumfries campus, Glasgow cycle map and bike security marking)
- Umbrella Pool
- University Journeyshare scheme
- Use of University Vehicles
- Information on public transport
- Maps and travel to three main campuses
- Video conferencing
- 'Green' driving

We will continue to promote these and add others as appropriate.

The University will prepare Travel Information which can be distributed to freshers and new staff members before they start at the University. Encouraging people to make informed choices about using sustainable travel choices at an early stage can be particularly beneficial to shaping their behaviour.

Consideration will also be given to the preparation of similar information for contractors, servicing companies and other visitors, especially for use during campus development works.

In addition we will:

- Prepare Travel Information Packs for freshers and new staff members including general sustainability information.
- Personalised Travel Planning service for new staff / all other staff on request
- Extended use of social media (Facebook and Twitter) to promote sustainable travel events and information
- Continue to promote information via the Travel planning section of website including information on carbon emissions originating from the University transport carbon emissions
- Develop / update a series of print products, for example, walking leaflets from University residencies, Active Travel for Garscube, travel option leaflet for students who use the Teaching and Learning Centre at the QEUH.
- Produce material to promote the alternatives to taxis for inter-campus travel, or taxi sharing (i.e. electronic leaflets). This could include highlighting how much the University spends on taxis.
- Review and enhance information on the University's 'Maps and Travel' webpage.



Theme 2: Public Realm, Accessibility and Mobility

The Action Plan includes measures to improve public realm, accessibility and mobility with a key focus on addressing access for the mobility impaired. The key reference document will be *Inclusive mobility – a guide to best practice on access to pedestrian and transport infrastructure* produced by the Department for Transport in 2002. Actions will focus on the following areas which the University can influence within the campuses:

- Footways, footpaths and pedestrian areas;
- Tactile paving surfaces;
- Car parking;
- Bus stops and taxi ranks;
- Signage and information; and
- Lighting.

The Action Plan will also identify potential improvements in each of these areas that fall outwith campus boundaries. We will work in partnership with local authorities and other relevant bodies to implement change.

A Public Realm Working Group including Disability Services and others will be formed to agree on actions. To be taken forward.

Theme 3: Active Travel

The University is committed to encouraging staff, students and visitors to walk or cycle whenever possible.

The University offers free membership to the Nextbike cycle hire scheme and will continue to promote this to staff and students. The University is committed to providing additional secure cycle parking at appropriate locations, particularly at the Gilmorehill campus.

The University will seek to create Cycle Hubs; central areas where larger number of bicycles can be stored and where security is a key consideration, and further facilities for cyclists can be situated.

The University will enhance promotion of the existing ethos that pedestrians have priority throughout the Gilmorehill campus. We will establish a Walking and Cycling Group. They should focus on improving safety and security, identifying appropriate facilities for Active Travel, and ensuring that these are maintained and accessible, within each campus

The University will continue to provide showers, lockers and changing facilities wherever it can and promote the availability of these. We will also seek to include these facilities in all new, or

refurbished, buildings.

The University will continue to maintain and further promote the umbrella pool and bicycle emergency repair kit. We will monitor demand to determine if there is demand for extending either.

The University will continue to promote and manage CyclePlus as a salary sacrifice scheme, as long as it is offered by HMRC, to support staff to obtain bicycles and associated safety equipment.

The University will continue to work towards achieving Cycling Scotland's 'Cycle Friendly Employer Award'.

The University will continue to promote one-to-one cycle training and Dr Bike services on campus.

The University will give a high level of priority to walking and cycling infrastructure provided as part of every capital / refurbishment project. We will also work with local authorities to improve Active Travel routes to and from each campus.

The University will continue to make available a business cycle mileage rate.

The University will continue to promote events in relation to active travel.

Theme 4: Directional Signage Strategy

The University will introduce consistent directional signage within each campus with a view to more clearly showing routes to key destinations (subway stations, bus stops etc.). We will also work with local authorities to identify where signage to campuses could be provided.

Improvements to signage will be particularly beneficial to assist visitors and delivery drivers but should benefit all users including walking, cycling and vehicular traffic. Specific actions for signage will be developed through the Action Plan; the general principles to be adopted include:

- Minimise clutter Designers should start from a position of having no signs, and introduce them only where they serve a clear need and function. Signs should be sensitively sited and be kept to a minimum to reduce street clutter, with the use of bollard signing and surface markings as far as possible or by using multiple signs mounted on one pole or existing poles/ buildings could be used and information combined on one panel.
- Ambiguity Signs must give users their message clearly and at the correct time. The message must be unambiguous and speedily understood.
- Minimise sign size Plate sizes should be minimised on direction signs and the smallest



permitted x-height (text size) should normally be used.

• Coherence – Consistent high standards of signing shall enhance the ease of navigation along routes.

The masterplan for Gilmorehill will produce a detailed proposal for a wayfinding strategy at Gilmorehill consistent with a wider University strategy.

Any proposals will take account of the high number of listed buildings, the conservation area designation and variations in the quality of public realm across the estate. The historic campus requires a sensitive and consistent approach to signage and public realm improvements which enhances the important setting of the heritage of the University and wider city.

Theme 5: Public Transport

For many, public transport will be the only realistic option for travelling to, and between, campuses. It is therefore important that measures to promote public transport use are in place before any to discourage car use (reduced parking provision).

With this in mind, the University will seek to make interest free loans for public transport season tickets available to staff.

The University will ensure public transport information is available via the University website and that it is kept up to date. We will also explore the potential to display real time information on display screens around the campuses.

The University will seek to encourage public transport providers, Regional Transport Partnerships and Local Authorities to ensure bus shelters around each campus are equipped with timetable, fare and route information.

The University will seek to encourage public transport providers to improve services, relevant for staff and student, in regards to routes, frequency and reliability, specifically using information obtained from the travel and parking surveys which show where new or improved services might be appropriate.

A Public Transport Working Group will be formed to agree on actions.

Theme 6: Fleet Vehicles

Where possible, and as the opportunity arises, the University will seek to replace the current fleet stock with electric vehicles or more fuel efficient vehicles.

The University will continue to install on-board cameras to the fleet as appropriate. These allow Transport Services to monitor how vehicles are being driven and provide evidence for insurance claims.

The University will continue the policy that staff and students are not being permitted to drive University Vehicles without first being assessed by Transport Services. Fuel efficient driver training courses will be offered and promoted.

The University will continue to add vehicles to the Ctrack system to monitor how they are being used and look to improve overall fleet efficiency.

The University will explore whether journeys made by fleet vehicles could be combined, perhaps through a module tagged onto the University's journey share website.

As part of the wider review of parking, we will consider the locations where fleet vehicles are stored and seek to provide dedicated facilities appropriate for the volume and type of vehicle.

The University will investigate the option of having Car Club cars on campuses for business use.

Theme 7: Inter-Campus Travel

The University will establish a joint Inter-Campus Travel and Business Travel Working Group.

The University will continue to promote the use of University video and telephone conferencing facilities to reduce the need to travel between campuses.

The University will produce a formal policy on Inter Campus Travel providing guidance on how staff and students should travel between campuses.

Measures could include:

- Measures to encourage taxi-sharing, particularly between Gilmorehill and Tay House.
- Exploring having short term bookable parking spaces which could be beneficial for staff travelling between campuses, particularly for people required to travel to or between hospital sites that are difficult to access without car travel.
- Exploring the option of a corporate Car Club membership.

Theme 8: Servicing and Deliveries

The University will prepare a Delivery and Servicing Plan (DSP) which will include a thorough understanding of the requirements and issues associated with deliveries and servicing (including how specialist and confidential waste disposal is organised).

We will explore the opportunities to revise or consolidate delivery and servicing needs and how these are influenced through procurement practices.

The University will develop or enhance formal policy on on-line deliveries, the need for certain vehicles to have a banks person, discouraging vehicle idling and the speed and priority rules of the road on campus.



The DSP will advise on how deliveries can be accommodated in a "safe, controlled way" whilst acknowledging that every building needs serviced. It will show where there is a need to remove physical obstacles and provide designated loading bays and set a framework for what the University should aim to provide, in terms of servicing, for new buildings.

For construction traffic, the University will develop a 'cooperation strategy' for partners / 3rd party businesses on University Campuses and provide a framework for Construction Management Parking Plans which would be prepared for individual construction projects. These will cover reactive maintenance as well as large construction projects.

A Deliveries and Servicing Working Group will be formed to agree on actions.

Theme 9: Business Travel

The University already has a well-defined Policy on Travel which outlines details about insurance, health & safety, car hire, visas, field trips, etc. Staff have two options for booking travel, via a travel agent (Clarity Travel Management for travel within the UK and Selective Travel Management for international travel). It is a mandatory requirement that all business travel should be booked through the appointed provider, although there are exceptions.

The University will establish a joint Inter-Campus and Business Travel Working Group.

The University will produce a Business Travel Policy which could include provision of the use of central travel agents or limiting the use of flights for domestic travel.

Theme 10: Car Parking

Like many large multi-use sites, each of the University's main campus sites is space constrained and the scope to accommodate car parking is limited and, in some cases, contrary to wider ambitions to improve the public realm and pedestrian environment across the University estate. There is therefore a need to manage the limited space and the high demand effectively to ensure the most appropriate users have access to the parking spaces available.

The University is committed to developing a new **Car Parking Management** regime to improve the current situation. There will be various elements to this new system but overall the number of car parking spaces on campus at Gilmorehill will be reduced while providing dedicated spaces for car sharers, maintaining disabled bays and introducing dedicated bays for those who need their car for inter-site travel.

The University will develop a new Parking Permit Allocation System which is likely to involve:

• Introducing or enhancing permit controlled parking at Gilmorehill, Garscube and the St Andrew's Building

- Restricting permits to staff only, plus student blue badge holders and some student sports centre passes
- Issuing permits based on pre-defined criteria
- Issuing permits to a level of about 110% of supply (which will vary)
- Issuing permits annually to allow review of permit-holders' circumstances that define need
- Investigate the introduction of day parking permits and car sharing priority permits

These principles have been identified through close consultation with Central Services (who manage and enforce parking) and case studies from other Universities.

In order for the parking management scheme to operate successfully it will require to be enforced. The University is therefore committed to considering a new **Car Park Enforcement regime.**

A key aspect of any new parking control scheme will be engaging with staff and students to keep them up-to-date on any planned changes.

The University will continue to work closely with Glasgow City Council and East Dunbartonshire Council to ensure that any changes to the way parking is provided or managed do not adversely impact on the areas surrounding the Gilmorehill and Garscube Campuses. We will also continue to liaise with Scottish Enterprise to ensure any potential changes to parking provision implemented by either party at the Garscube Campus / West of Scotland Science Park are fully understood.

The University will prepare an Event Management Plan, or set of Plans, which can be 'rolled out' for particular events, such as open days. The Plan will ensure that all vehicles, particularly coaches and buses, are parked in locations which do not hinder the ability of pedestrians to move safely around, to and from each campus.

A Working Group will be formed, involving Central Services and chaired by a senior person to take forward parking proposals.

Theme 11: Smart Campus - Mobility as a Service

The incorporation of the Western Infirmary site into the Gilmorehill campus has the potential, over the longer term, to be an ideal platform for developing Mobility as a Service (MaaS) applications to encourage more sustainable patterns of travel.

The University will pursue opportunities to create a service which will deliver individually tailored mobility packages (much like a mobile phone package with monthly rental costs)



which will combine car, bus, rail, cycle, taxi, car share, etc services into a single package, removing the need for car ownership for a large proportion of the population and maximising the potential for sustainable travel.

MaaS is built on a number of building blocks which are already in place or emerging, including high quality bus and rail services, car share schemes, demand responsive transit, cycle hire and electric-cycle hire, car rental services and rental packages. Services such as Uber as an alternative to taxis is becoming well established globally and car hire concepts where you can rent a neighbours car are being demonstrated. Underpinning the effective delivery of these tailored services to the individual is a connected environment with mobile apps taking the next steps from existing real time information services to mobility management services.

The University will investigate the potential for funding from Scottish Enterprise through its Seek and Solve initiative both to address their transport challenges, but also to provide a platform for research.







6. BREEAM Compliant Building Specific Travel Plans



BREEAM

BREEAM is a design and assessment method for sustainable buildings. It sets the standard for best practice in sustainable building design, construction and operation and has become one of the most comprehensive and widely recognised measures of a building's environmental performance.

In the past the University has commissioned BREEAM compliant Travel Plans for individual buildings. These have varied considerably in terms of content and the level of detail they include and typically involve repetition / duplication of previous work undertaken given that buildings are often in close proximity to each other.

The University will produce a template for a BREEAM compliant Travel Plan which provides a distinct framework within which future Travel Plans for individual buildings can be prepared in a standard way without this duplication of effort. It will clearly outline a less onerous process for preparing building specific Travel Plans, with only enough information to address specific issues not covered by the STTP and Action Plan which already contain the detail.

Requirements

BREEAM requires that Travel Plans are structured to meet the needs of the particular site and take into consideration the findings of a site-specific transport survey and assessment that covers the following (as a minimum):

- a) Where relevant, existing travel patterns and opinions of existing building or site users towards cycling and walking so that constraints and opportunities can be identified
- b) Travel patterns and transport impact of future building users
- c) Current local environment for walkers and cyclists (accounting for visitors who may be accompanied by young children)
- d) Disabled access (accounting for varying levels of disability and visual impairment)
- e) Public transport links serving the site
- f) Current facilities for cyclists

It specifies that Travel Plans should include a package of measures that have been used to steer the design of the development in order to meet the Travel Plan objectives and minimise car-based travel patterns.

This is demonstrated via specific examples such as:

- Providing parking priority spaces for car sharers
- Providing dedicated and convenient cycle storage and changing facilities
- Lighting, landscaping and shelter to make pedestrian and public transport waiting areas pleasant
- Negotiating improved bus services, i.e. altering bus routes or offering discounts
- Restricting and/or charging for car parking
- Requirements for lobby areas where information about public transport or car sharing can be made available
- Pedestrian and cycle friendly (for all types of user regardless of the level of mobility or visual impairment) via the provision of cycle lanes, safe crossing points, direct routes, appropriate tactile surfaces, well lit and signposted to other amenities, public transport nodes and adjoining offsite pedestrian and cycle routes
- Providing suitable taxi drop-off/waiting areas.

Where appropriate to the building type, size and intended operation, the Travel Plan includes measures tailored to minimise the impacts of operational-related transport e.g. deliveries of supplies, equipment and support services to and from the site.

Where the building's final occupier is known, they confirm that the Travel Plan will be implemented post construction and supported by the building's management during building operation.

STTP and Building Specific Travel Plans

The Table on the next page outlines where the BREEAM requirements will be covered by the STTP and what will be included in building specific Travel Plans.

6. BREEAM Compliant Building Specific Travel Plans



BREEAM Requirement	Covered by
a) Where relevant, existing travel patterns and opinions of existing building or site users towards	STTP and Travel Survey Report
cycling and walking so that constraints and opportunities can be identified	
b) Travel patterns and transport impact of future building users	Building specific Travel Plan, which could include targeted survey of building users, personalised Travel Planning, promotional material / information.
c) Current local environment for walkers and cyclists (accounting for visitors who may be accompanied by young children)	Primarily STTP and Site Audit Reports though building specific Travel Plans should reference these and include short additional commentary
d) Disabled access (accounting for varying levels of disability and visual impairment)	Primarily STTP and Site Audit Reports though building specific Travel Plans should reference these and include short additional commentary
e) Public transport links serving the site	Primarily STTP and Site Audit Reports though building specific Travel Plans should reference these and include short additional commentary
f) Current facilities for cyclists	Primarily STTP and Site Audit Reports though building specific Travel Plans should reference these and include short additional commentary
Package of measures that have been used to steer the design of the development in order to meet the Travel Plan objectives and minimise car-based travel patterns.	•

GIS Mapping

Information on issues such as the local environment, disabled access, public transport and facilities would be informed by the material produced for the STTP including a set of ArcGIS shapefile layers. These will be treated as a working resource and kept up-to-date such that they can be incorporated into the BREEAM specific Travel Plans and remove the need for duplication of effort.

7. Monitoring and Evaluation Plan



Monitoring and Evaluation

Travel Plans are living documents that need to be updated regularly. Monitoring the STTP is essential in gauging the success of the measures and as such the monitoring process for the STTP will involve a continuous process for improving, reviewing and adjusting the measures to reflect changing circumstances.

The monitoring of Travel Plans is an often overlooked process. However, the Scottish Government's Transport Assessment Guidance states that:

"It will be essential to monitor the performance of the development's transport effects to ensure that it is behaving in the manner predicted. This may involve measuring the modal share to assess if targets are being achieved and assessing parking demand and usage."

Indicators

A number of indicators can be used to inform progress towards the targets set, including the percentage of staff and student trips made by foot, cycle, bus, train and as a car passenger.

In addition, the monitoring measures outlined below incorporate both the collection of 'hard' analytical data and 'soft' data in the form of general feedback and correspondence:

- monitor the number of cars parked on campus
- monitor the usage of the cycle parking facilities
- monitor the uptake of the Cycle to Work Scheme, Cycle Plus
- monitor the registration on the University JourneyShare Scheme
- record comments received from staff and students relating to the operation and implications of the STTP.
- Uptake to future schemes and facilities

The monitoring of these indicators will offer greater understanding of the changing travel needs of staff and students, the success of the sustainable measures being implemented, and also where Travel Planning efforts could be focussed in the future in order to meet the targets set.

Recognising this, the University commits to undertaking travel surveys targeted at all staff and students every two years, or as deemed appropriate for reporting requirements and outlined in the Data Collection and Reporting Timeline on the next page.

Travel Survey

The next Travel Survey will be undertaken in autumn 2017 or March 2018; it will be less exhaustive than the 2015 survey but include some consistent questions to make it possible to review progress towards the Travel Plan targets. At this point the University will review the suitability of the Travel Plan measures and revise them accordingly.

In autumn 2019 or March 2020 a full travel survey, similar to the 2015 survey, will be undertaken. It will also be used to monitor progress towards Travel Plan targets and additionally to inform a refresh of the STTP to be undertaken in 2020.

The University will seek to increase student participation in the survey from 15% to 20% and staff from 31% to 35% through increased incentivisation and wider promotion through social media.

The University will monitor the effect of changes to parking management arrangements by undertaking parking surveys three months after they are introduced and drawing comparisons with the last baseline surveys.

Other Data Collection

Other than the Travel Survey, the following data collection activity will be undertaken to allow progress to be monitored:

- Agresso travel data and expense claims to monitor business travel by private car, rail and air
- Travel Agent Data to monitor business travel by rail and air

Element	Timescale
Travel Survey	Autumn 2017 and Autumn 2019
Travel Agent Data	Ongoing (reported on annually)
Agresso travel data and expense claims	Ongoing (reported on annually)
Ctrack data	Ongoing (reported on annually)
Fleet vehicles fuel use	Ongoing (reported on annually)
Parking surveys	Three months after implementation of changes
Uptake and participation in events and schemes	Ongoing (report on annually)

7. Monitoring and Evaluation Plan



Data Collection and Reporting Timeline

Year Quarte	r Travel Plan	Actio	on Plan	Travel Survey	Parking Surveys	Travel Agent Data	Agresso travel data and expense claims	Ctrack data	Fleet vehicles fuel use	Uptake and participation in
		Implementation	Review	Traver Survey						events and schemes
2016 1			•							
2	Agreement on and Publication of Strategic Transport and Travel Plan 2016 - 2025	Formation of Working Group					C	Ongoing Monitorir	ng	
3 4										
2017 1							Reported at 9	Steering Group sp	oring meeting	
2 3 4			[2017 Travel Survey or	Undertake Parking		C	Ingoing Monitorir	ng	
2018 1			Review Action Plan and update for next academic years	2018 Travel Survey	Surveys 3 months after implementation of changes to parking	Reported at Steering Group spring meeting				
2			ucudenne yeurs		provision / management					
3	Determine Progress towards Targets			Report Results	and report on findings	Ongoing Monitoring				
2019 1		Ongoing					Deposited at 6	Steering Group sp	wing manting	
2019 1		Implementation					keported at s	steering Group sp	ornig meeting	
3 4				2019 Travel Survey or			C	Ingoing Monitorin	ng	
2020 1			Review Action Plan and update for next academic years	2020 Travel Survey			Reported at S	Steering Group sp	oring meeting	
3	Review Travel Plan Suitability, including targets			Report Results						
4	Update Travel Plan (if / as required), including targets						C	Ingoing Monitorin	ng	

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