mobilityways

Scoping Smart Mobility

Report for

Gloucester City Council

September 2022

Postcodes analysed: 225

Set destination: 92 Westgate St, Gloucester GL1, UK

Arrival: Tuesday by 08:30

view interactive map

Scoping Smart Mobility Report

Contents

Introduction

This Scoping Smart Mobility Report presents the immediate potential of the various travel options your employees can use for their commute.

The aim of the report is to provide meaningful information to:

Support changes to your parking management strategy and **encourage more sustainable modes of travel**

Provide data-driven **evidence to share with local transport providers** and improve accessibility

Assist in the allocation of parking permits to **help prioritise the parking spaces you have available**

Help establish whether **incentivising particular modes of sustainable travel** may work to encourage employee uptake

Understand which **employees to target to try an alternative mode of travel**, depending on the most viable option for them.

Our experienced team will support you with follow up recommendations to help you achieve your business objectives around employee commuting.

We understand that your objectives are unique to you, but our success stories have included:

- Reducing the demand for parking
- Reducing congestion
- Improving health and wellbeing
- Financial cost savings
- Supporting sustainability
- Increased Recruitment
- Increased Employee Retention

Overview

Your average commuter lives 12 miles from work. If everyone drove alone to work* the total emissions would be 271 tonnes per year. 94% of your commuters have a viable sustainable travel option.

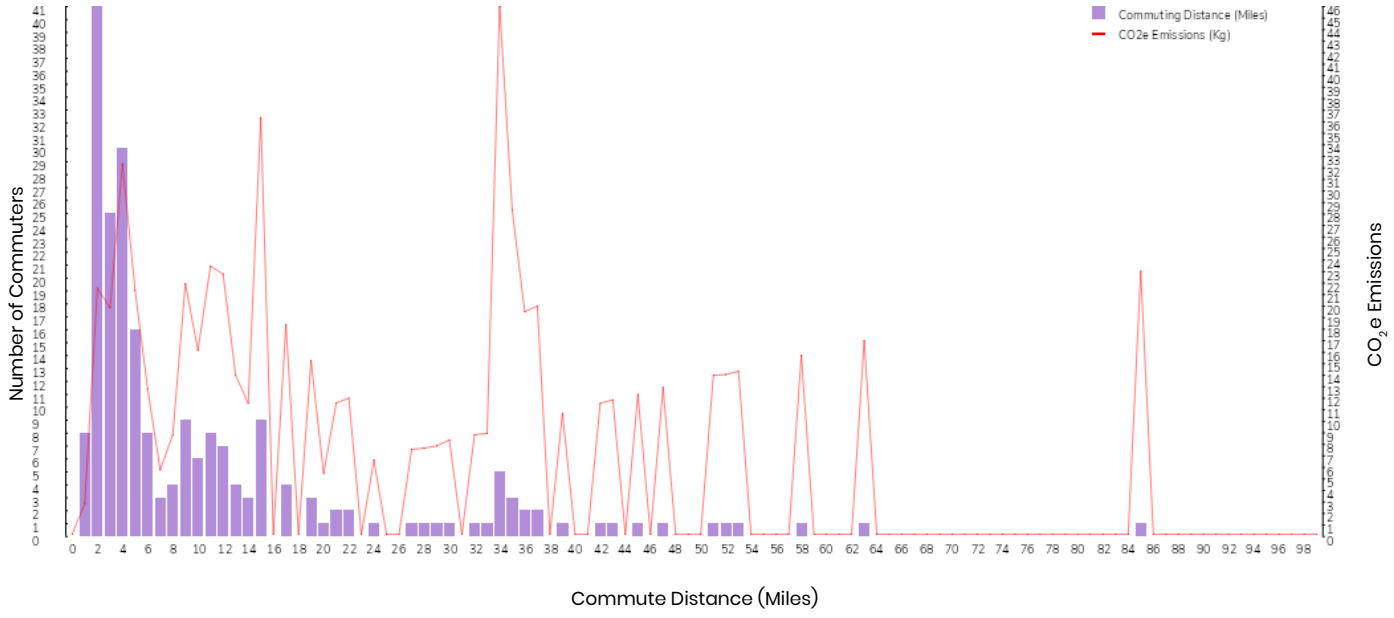
Headline Statistics

Viable option	Employees	Percentage	Max CO2e Savings (Tonnes/year)
Walking	39	17%	7
Cycling	129	57%	42
Bus	119	53%	35
Train	19	8%	52
Liftshare	164	73%	42
Park & Ride	66	29%	0

Commuting distance (One way)

Total	Average	Median (middle value)	Mode (most common)
2,701	12	5	2

How far your commuters travel and their emissions if they travel alone by car



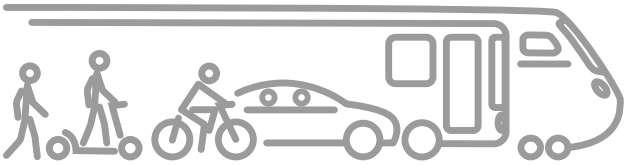
NB 1 x 100mile car journey emits the same CO2e as 100 x 1 mile car journeys.

Assuming they commute an average of 182x per year (3.5x per week)

Sustainable Travel Modes

94%

of employees have at least 1 sustainable travel mode available to them



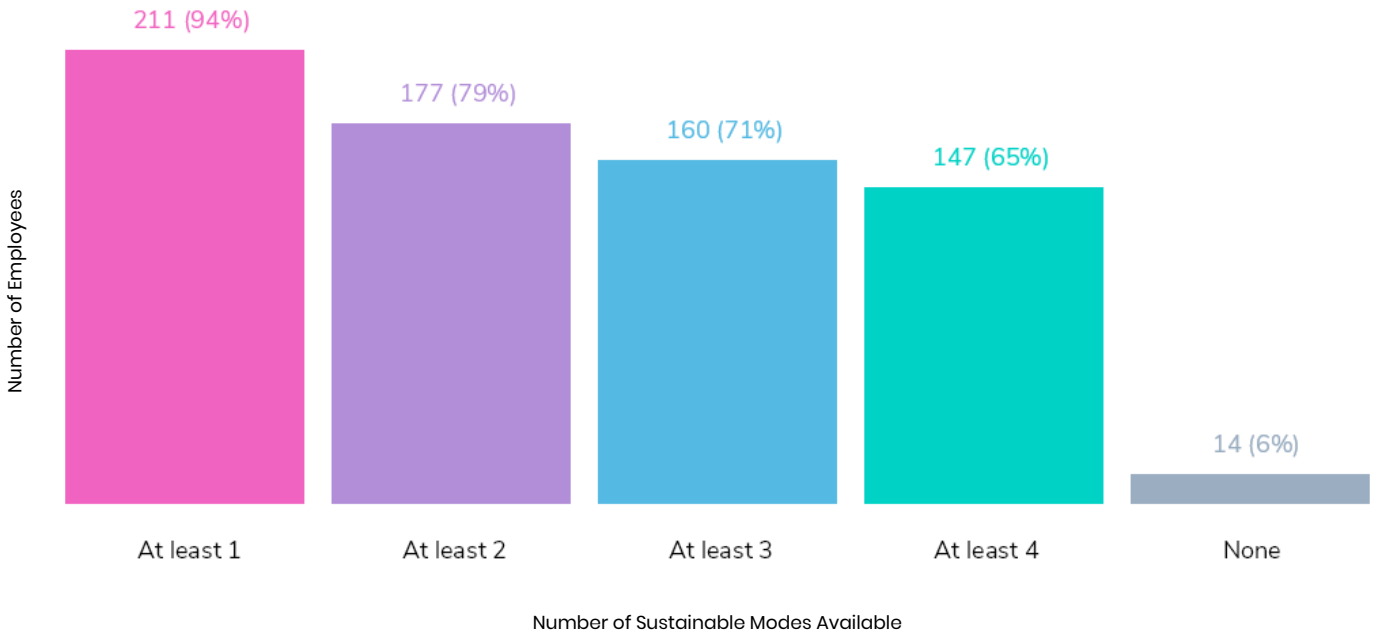
65%

of employees have at least 4 sustainable travel modes available to them

Number of Sustainable Travel Modes Available

The more sustainable travel modes available to employees, the easier it is to encourage them to move away from driving alone.
This figure shows that 211 employees (94%) have at least one sustainable travel mode, with 14 (6%) having no sustainable alternative to driving. Sustainable travel modes include walking, cycling, lift sharing and all public transport.

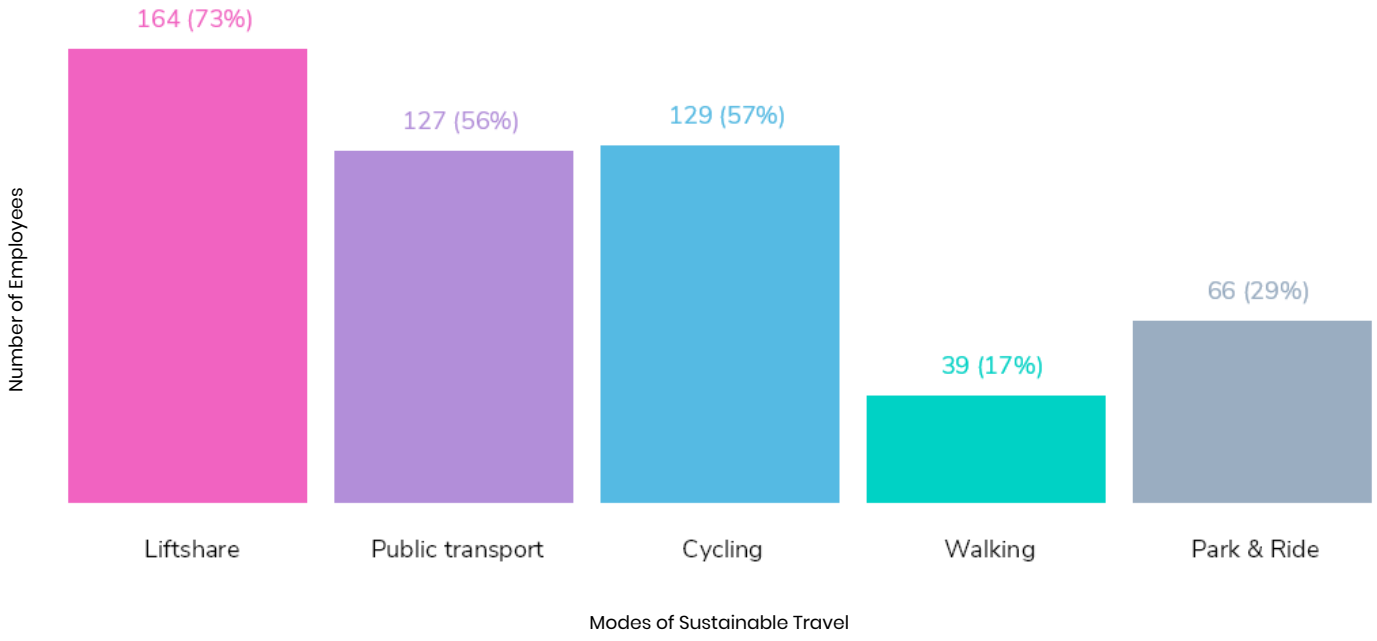
Employees' Sustainable Travel Modes



Modes of Sustainable Travel

This figure shows that 164 employees (73%) have at least one colleague living within walking distance of their home that they could share a lift to work with, while 129 (57%) have an active travel option and 127 (56%) have a viable mode of public transport available to them.

Sustainable Travel Modes



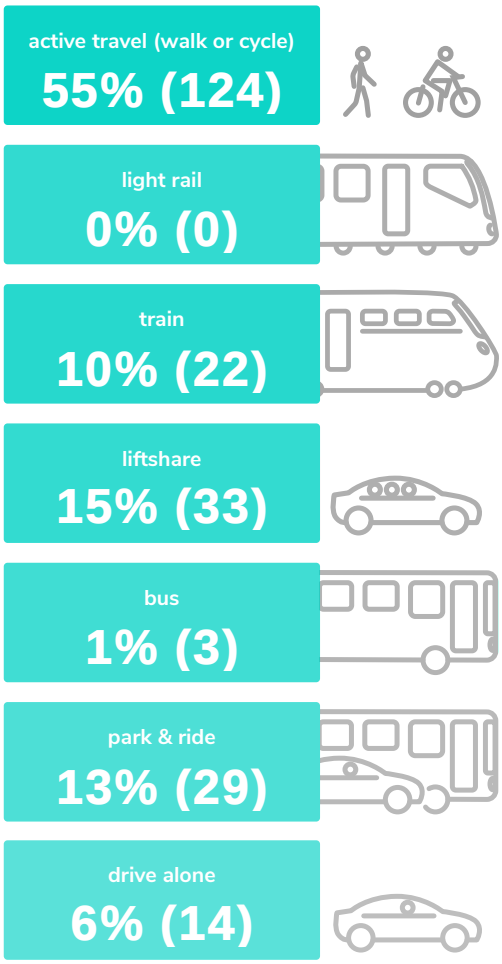
ACELO: Average Commuter Emissions Level Opportunity

Your ACELO is

311

kgCO2e/employee

Your ACELO (Average Commuter Emissions Level Opportunity) assumes that all commuters travel to work using the lowest CO2e option currently available to them.



The ACELO does not include 'Working from home' as we do not have the data on how much might be possible.

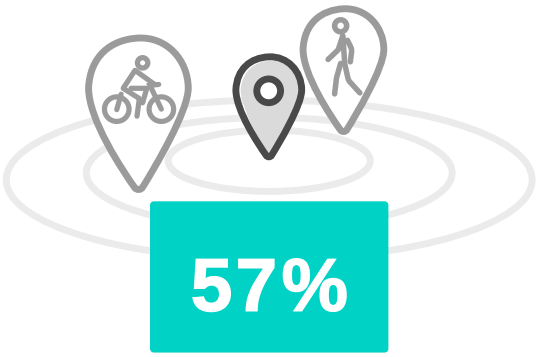
The National Average ACELO is

281

kgCO2e/employee

This is the metric used to determine the current level of opportunity for commuters to travel sustainably. The key assumption is that all commuters travel in the lowest CO2e option available to them. To achieve this we use government data to decide the most feasible mode for each employee, before accumulating their individual emission level to calculate your ACELO score.

Active Travel Benefits



57%

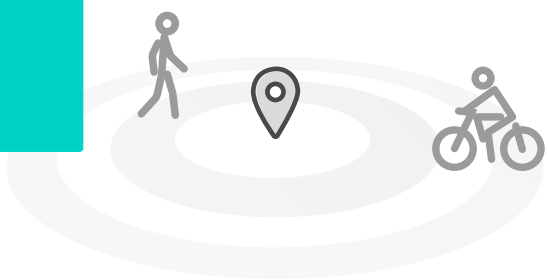
of employees could either walk or cycle to work

Those that are within cycling range could also consider an e-bike or e-scooter, instead of the pedal version. Whilst the individual CO_2e and calorie savings are likely to be lower, you may find a higher take up with this broader definition of cycling.

Average Calories Burned by Activity

The below figure shows the average calories burned over the period of one day, by an employee who could walk or cycle their commute.

Walking
198
kcal

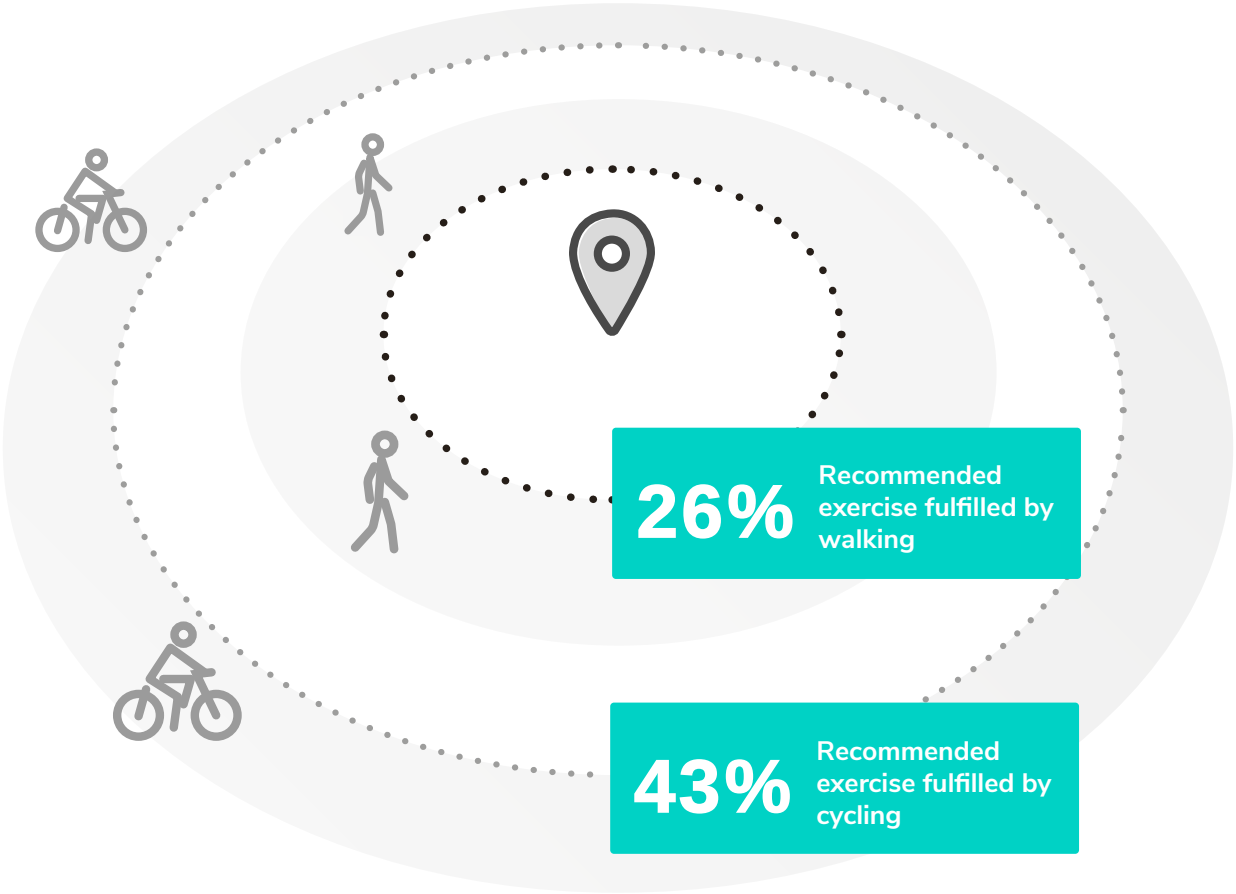


Cycling
203
kcal

Employees Fulfilling NHS Recommended Exercise Per Day

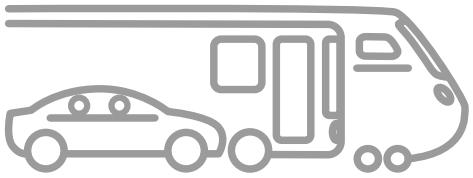
This figure below shows the proportion of employees who could fulfil their recommended exercise through an active commute. The NHS guidelines advise exercising for at least 30 minutes a day.

Given this time threshold we find that 88 (68%) of those who could commute actively would achieve their recommended exercise, with 55 (43%) able to do it by cycling and 33 (26%) through walking.



Active Travel Alternatives

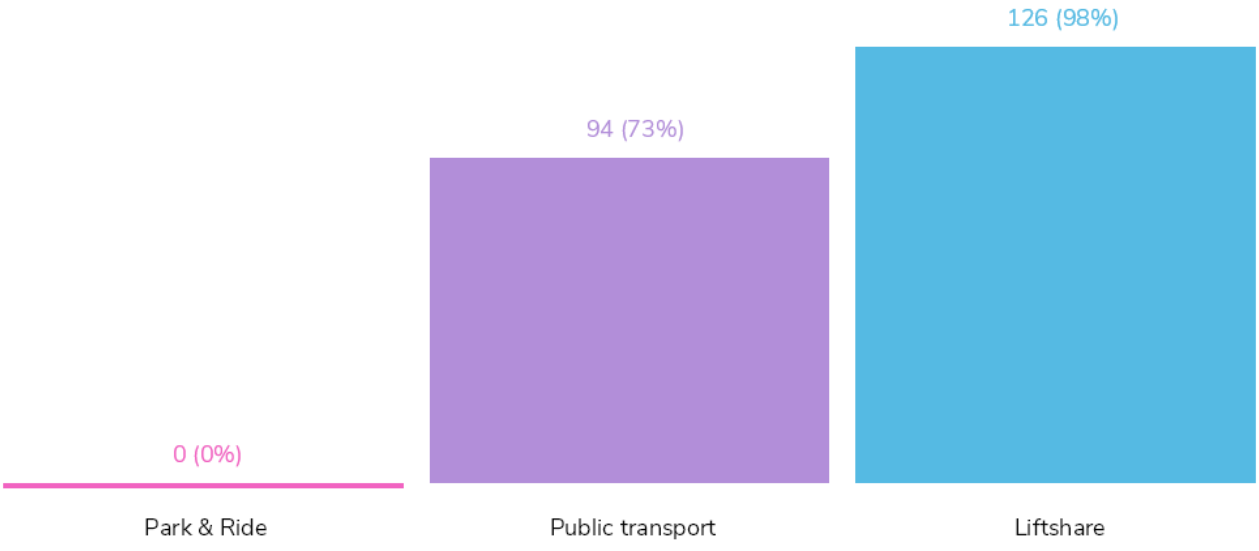
We understand that life can be unpredictable, especially the weather! So it is important that your active commuters have sustainable alternatives available to them, allowing them to continue with a sustainable commute year-round.



98%

of employees who have an active travel option also have a sustainable alternative available to them

This figure gives an indication of which alternative modes are available to your active commuters.
It shows that 126 employees (98%) who have an active travel option also have a Liftshare alternative available to them. Similarly 94 (73%) could take public transport instead, while 0 (0%) have a Park and Ride alternative.

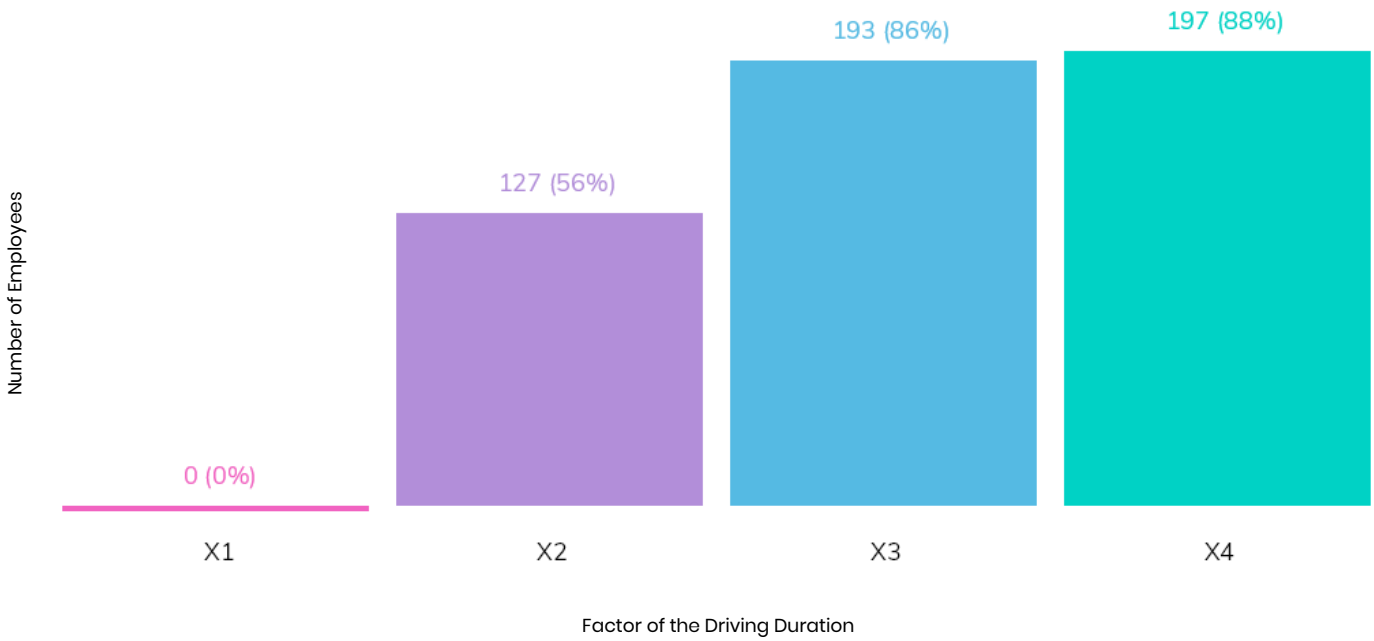


Public Transport

Travel durations of public transport options when compared with the driving duration

When trying to encourage people to use public transport it is important to consider how long their journey would take compared to driving. Our research shows that if a public transport journey takes more than double the driving duration then people are very unlikely to change behaviour. This figure shows that 127 employees (56%) have a public transport option that is less than twice their driving duration, while 0 (0%) have a public transport option that is quicker than driving that same journey.

Public Transport Journey Durations



Public Transport Modes

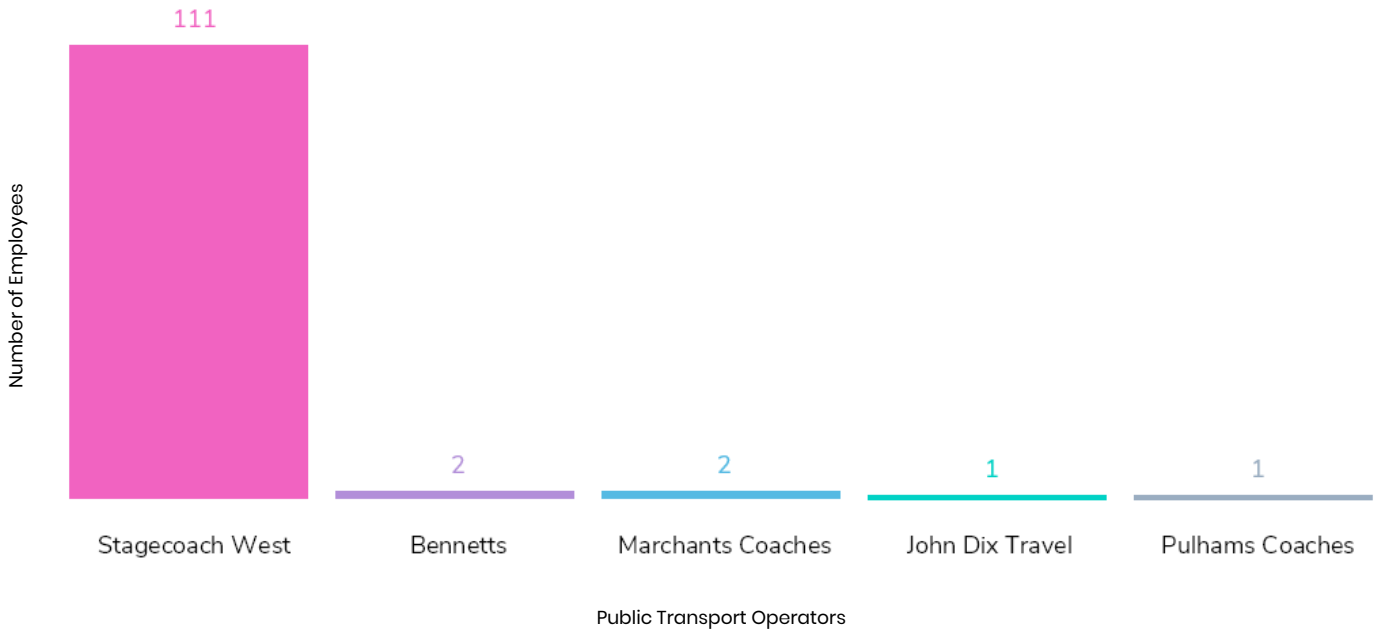
Mode	Number of Employees	Percentage of Employees
Bus	119	53%
Train	19	8%
Tram	0	0%
Underground	1	0%

Public Transport Operators

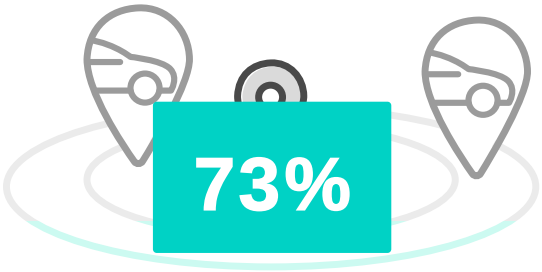
Public Transport Operators

Of the 127 employees (56%) that have a viable public transport option available to them, this figure shows that Stagecoach West provides 111 employees (87%) a viable commuting option. Since this operator has the greatest reach among your employees it could be worth discussing travel incentives with them to encourage a modal shift toward public transport.

Public Transport Options by Operator



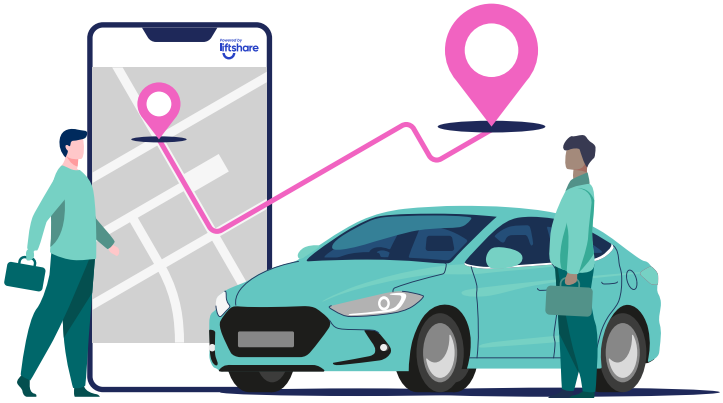
Liftshare for work



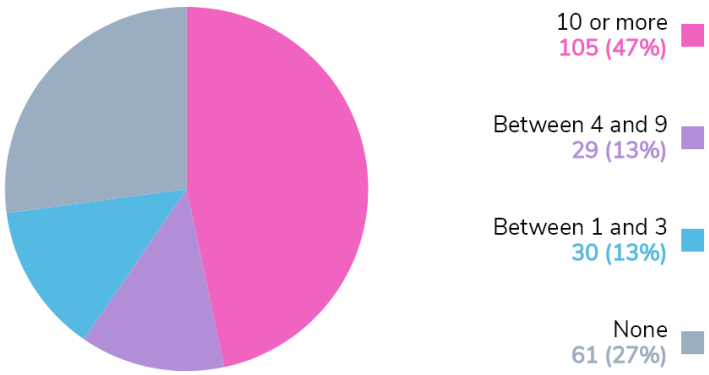
of employees have a Liftshare match within 1 mile of their home

Liftshare Matches Available

The figure shows that 105 employees (47%) have at least 10 lift sharing opportunities within 1 mile of their home.
29 employees (13%) have between 4 and 9 lift sharing opportunities.
30 (13%) have between 1 and 3, and 61 (27%) have no lift sharing opportunity within 1 mile of their home.



Breakdown of multiple sharing options



Working From Home

It may be beneficial to your business to encourage a proportion of your employees to work from home, where possible. Through this you could see CO_2e savings, financial savings, and improved employee wellbeing. If the farthest 20% of your workforce worked from home 2 days per week, then you could see the following annual savings:

88 tonnes

of CO_2e

and 87,159 kg CO_2, which would otherwise require one year and 3,486 trees to absorb.

45

parking spaces

which could relieve parking and congestion issues, and lead to a potential saving of £45,000 per year.

214

hours

on average for each of those 20% of employees, the equivalent to saving 28 working days through not commuting!

£2,615

on average in commuting costs, for each of those 20% working from home.

Cost Savings

Potential Annual Car Parking Savings

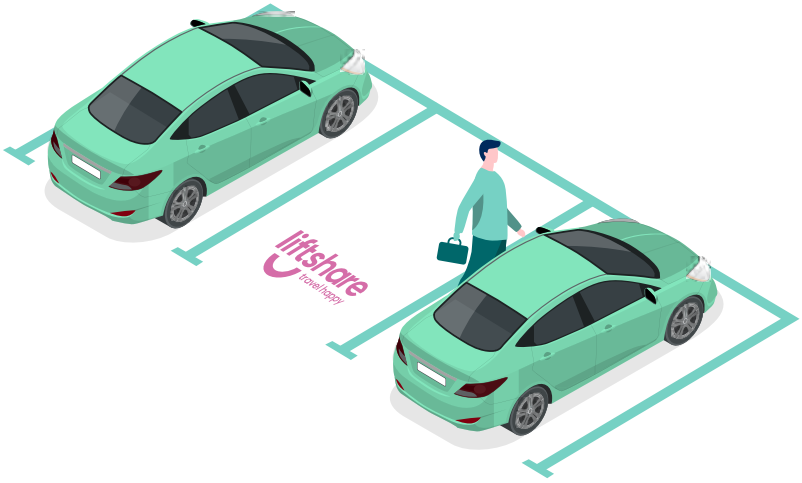
We know that car parks can cost you a lot of money! In our experience the annual cost of a parking bay ranges from £800 to £1,200, giving an estimated average of £1,000 per bay.

Through your lift sharing potential alone we estimate a reduction of

82 parking bays

Based on our experience this reduction could mean an annual saving of

£82,000



Potential Employee Savings

Given your lift sharing potential your employees could collectively save up to

£25,409

per year, just through sharing their commute and the cost of driving. This would result in an average saving of

£155

per employee, per year.

Environmental Savings

Supporting ISO 14001:2015 standard

"ISO 14001 is an internationally agreed standard that sets out the requirements for an environmental management system. It helps organisations improve their environmental performance through more efficient use of resources and reduction of waste, gaining a competitive advantage and the trust of stakeholders." – Introduction to ISO 14001:2015

CO_2e Savings

This table conveys the environmental impact your organisation could have,through an annual reduction in CO_2e.
If 164 of your employees shared a lift to work they would save 96,613 miles, and 27 tonnes of CO_2e.
If each of your employees that live close enough to work to be able to walk, cycle or scooter did so rather than driving, they would collectively save 22 tonnes of CO_2e.

Average Annual Emissions Reduction

Mode	CO_2e (kg)	CO_2 (kg)	CH_4 (kg)	N_2O (kg)
Liftshare	26650	26455	25	169
Cycling/Scooter	22278	22115	21	142
Walking	2676	2656	2	17

Appendix

Definitions

Sustainable:
A journey that involves, at least in part, a mode of transport other than single occupancy vehicle.

Public Transport:
All modes of public transport, not including Park & Ride or multi-modal options.

Liftshare:
Potential lift sharing opportunities between colleagues.

Calculations/Assumptions

Percentages:
All percentages are approximate, since all have been rounded to nearest whole number.

ACELO:
The ACELO calculation takes into consideration the fact that 4% of the UKs workforce have reported musculoskeletal conditions, and so are ineligible for active travel.

Walking:
The walking options are capped at a journey distance of 1.5 miles. This is derived from a maximum journey duration of 30 minutes, at an average speed of 3mph.

Cycling/Scooter:
The cycling/scooter options are capped at a journey distance of 6 miles. This is derived from a maximum journey duration of 30 minutes, at an average speed of 12mph.

PLEASE NOTE: The laws, regulations and guidance relating to e-scooters is a developing area and is subject to change. Liftshare does not provide any legal advice and we therefore recommend that you ascertain the current legal position before using e-scooters on UK roads. Any use of e-scooters is at your sole risk and Liftshare will not be liable under any circumstances.

Public Transport:
Public transport journeys are capped at twice the driving time.

Parking/Walking time:
We have added 4 minutes to the driving duration to account for parking and walking to the destination, which affects the number of viable x2 public transport journeys.

Appendix (continued)

Calculations/Assumptions (continued)

Liftshare:
An employee is considered to have a lift sharing opportunity if they live within a one mile radius of, at least, one other colleague postcode.

CO2e Savings:

Calculated by the average emissions of 171.4 g/km, taken from *UK Government GHG Conversion Factors for Company Reporting, 2020.* This is made up of 170.15 g/km CO_2, 0.16 g/km CH_4 and 1.09 g/km N_2O.

Calories:
Calorie calculations are based on a person weighing 77.45kg (NHS Average weight of men and women in the UK), not accounting for gender/age/conditions and 90kg for cycling based on a calculation combining the rider's weight with a bicycle.

Liftshare Savings:
Assumes that 2 people lift share daily to work and that there are 232 working days per year, using the journey mileage and our suggested contribution.

Working Days:
The average typical working day is considered to be 7.5 hours.

Please Note:
The information contained within this Scoping Report is sourced from third party data providers and has not been verified by the Liftshare Group. Consequently, whilst we have used reasonable efforts to ensure that the information is processed correctly, we cannot guarantee that the information is accurate and complete.