



# Reducing our Transport Impact

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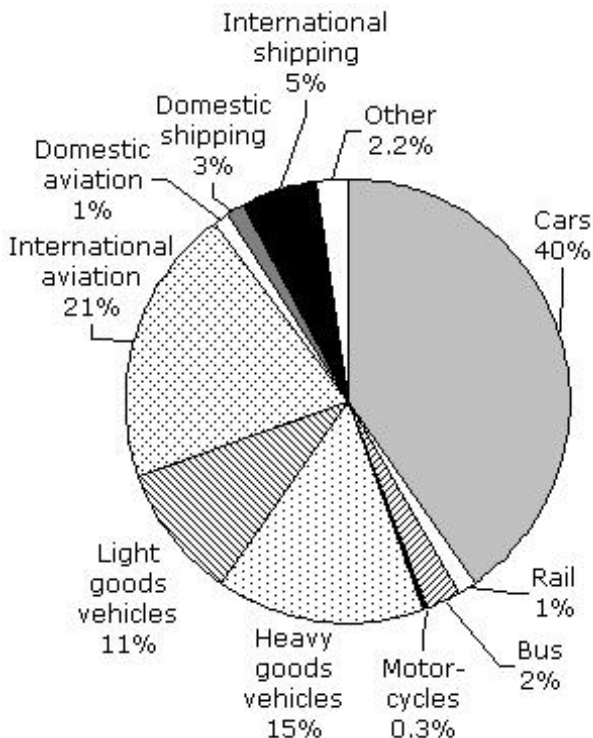
## Introduction

The need to take action on climate change is more pressing than ever. Transport is one of the main causes of the problem: making up a quarter of the UK's greenhouse gas emissions. Yet there are easy ways to reduce emissions and have a positive impact on our health and on the wider environment.

The UK's carbon emissions have dropped a little since 1990, but gains made in some areas have been undermined by the impact of transport, as emissions from cars, lorries and aeroplanes continue to rise. It's not just climate change: tens of thousands of early deaths are due to traffic pollution, and thousands more are killed in road accidents.

This sheet draws on the findings of CAT's Zero Carbon Britain (ZCB) project, and gives advice on the transport choices that can move us to a zero carbon future. See [www.zerocarbonbritain.org](http://www.zerocarbonbritain.org) for further details and recommendations.

## UK Transport carbon dioxide emissions:



## Cars

About 40% of the UK's transport emissions come from private cars. An astonishing 6 out of every 10 cars on our roads contain just one person; for commuting or business journeys, about 85% carry only the driver.

To reduce your impact, you can switch to two wheels or two legs, share lifts with colleagues & friends, set up a local car club, or make more use of buses and trains.

## Cycling and Walking

About one-fifth of all car emissions come from journeys of less than 5 miles. Cycling and walking more (and encouraging others to do so) will help to reduce these journeys, so is a good first step to reducing carbon emissions. You'll also feel much healthier!

If your regular journey is too far to cycle, then an electric bike would give a longer range, and be more efficient than a car.

Cycling and walking also combine well with public transport; for example, in the UK, half of us can walk to a train station in under 30 minutes or cycle in under 10 minutes.

## Public transport

Switching to public transport or sharing journeys will reduce carbon emissions by a half or more. It's an efficient way to use both fuel and space: per passenger, coaches take up less than thirteen times the space of cars on motorways. If local buses or trains are unsatisfactory, lobby your local council and MP to improve things – you can find contact details via [www.writetothem.com](http://www.writetothem.com)

Trams & light rail improve city travel. After the Tyne & Wear Metro opened, congestion in Newcastle reduced, and traffic could move more freely. One-fifth of all Manchester Metrolink journeys would previously have been by car, and in some areas of the city car levels have dropped by half. Fewer vehicles sitting in jams means less smelly, unhealthy exhaust fumes.

## **Car sharing**

Car clubs offer an alternative to owning a car, and reduce car use while still providing the convenience of private transport. They offer both carbon and financial savings, as people only make use of the vehicle when they really need to. Research has shown that a car club car replaces between four and five privately owned vehicles, and travel patterns change considerably. In Berlin, car club members reduced the miles they drove by 53%, walked or cycled 28% more and used public transport 35% more than private car owners.

## **In the workplace**

A workplace travel plan can reduce car use by encouraging cycling, car share schemes and the use of public transport. The plan is likely to include some sort of parking charge to discourage car use, but should then also include incentives for people to switch to more sustainable methods of commuting. These could include subsidised bus tickets (or even dedicated shuttle buses), facilities for cyclists - such as secure bike storage and showering - and a car-share system.

A travel plan also saves money, by reducing the expense of maintaining parking spaces. When the telecommunications company Orange moved 400 staff from the outskirts of Bristol to the city centre, far less parking was available. The limited parking was allocated using permits, with priority given to those with child care responsibilities, shared cars, or for whom public transport, cycling or walking would be difficult. Others got a monthly payment similar to the price of a public transport season ticket. Showers, lockers, pool bikes and secure storage were provided to encourage cycling, and an intranet car-share database was set up.

## **Electric Vehicles**

In our Zero Carbon Britain report we see electricity as the key fuel of the future. Electric vehicles are already less polluting, and this will improve as the UK electricity grid makes more use of renewable energy. Developments in battery technology will also improve performance and reduce costs.

Several manufacturers are now launching new electric cars and bikes.

## **Hydrogen fuel**

Making hydrogen fuel uses lots of electricity. It is better to use this electricity to directly power electric vehicles, and limit the use of hydrogen to cases where battery use is difficult - such as buses & goods vehicles.

## **Biodiesel & Bioethanol fuel**

Bioethanol made from sugar or starch can replace petrol, while biodiesel made from vegetable oil can be used in place of diesel.

However, carbon emissions from biofuels can be high, due to land use changes such as deforestation and from the fuel and fertiliser needed to grow and process the crops. When all factors are included, it is unclear if biofuels have lower greenhouse gas emissions than the fuels they replace. There are also concerns about impacts on biodiversity and water availability, and competition for land needed to grow food.

Making 'second generation' biofuels from wood or grasses causes fewer problems, but there will still be limits on the land available. If some biofuel can be produced sustainably, it's best used where electricity cannot be - such as shipping, some heavy goods vehicles and farm machinery, and aviation.

## **Aviation**

UK Greenhouse gas emissions attributable to air travel doubled between 1990 and 2005, and have since levelled out. As shown on the previous page, aviation accounts for 22% of carbon emissions from UK transport. A key problem is that it is difficult to decarbonise air travel. There is only limited scope for efficiency savings and using biofuels in aircraft (as the impacts mentioned above limit this), and so a big reduction in air travel is inevitable if we are to reduce our carbon emissions. In our Zero Carbon Britain scenario we calculate that the total amount of flying will need to fall to a third of the current level if we are to meet a 'zero carbon' target.

Cutting down the number of flights you take will cut tonnes from your carbon emissions. There are alternatives: short-haul air flights give off 4½ times as much carbon dioxide as the same journey by train, and the channel tunnel leads to high-speed rail links all over Europe, so why not take advantage?

## WALKING AND CYCLING

### Sustrans

☎ 0300 303 2604 or 0117 926 8893;

[www.sustrans.org.uk](http://www.sustrans.org.uk)

Charity promoting schemes to enable people to travel by foot, bike or public transport.

### Living Streets

☎ 020 7377 4900; [www.livingstreets.org.uk](http://www.livingstreets.org.uk)

Charity that campaigns to create better streets and public spaces for people on foot.

### Cyclist Touring Club

☎ 01483 238 301; [www.cyclinguk.org](http://www.cyclinguk.org)

Membership organisation promoting cycling and protecting the interests of cyclists.

### Cyclenation [www.cyclenation.org.uk](http://www.cyclenation.org.uk)

Federation of UK cycling campaigns.

### Get Cycling

☎ 01904 636 812; [www.getcycling.org.uk](http://www.getcycling.org.uk)

Events & programmes to promote cycling, including roadshows, training & consultancy.

### Life Cycle UK

☎ 0117 353 4580; [www.lifecycleuk.org.uk](http://www.lifecycleuk.org.uk)

Charity promoting cycling. Provides training in bike maintenance, maps, events, etc.

### Why Cycle? [www.whycycle.co.uk](http://www.whycycle.co.uk)

Advice on buying a bicycle.

The **A to B Magazine** web site has a useful guide to electric bikes: [www.atob.org.uk](http://www.atob.org.uk)

## PUBLIC TRANSPORT

### Traveline: Public Transport Information

☎ 0871 200 2233; [www.traveline.org.uk](http://www.traveline.org.uk)

Plan travel by bus, train, coach & ferry.

### Campaign for Better Transport

☎ 020 7566 6480; [www.bettertransport.org.uk](http://www.bettertransport.org.uk)

Campaigns to improve public transport, reduce traffic and tackle climate change.

### Bus Users UK

☎ 0300 111 0001; [www.bususers.org](http://www.bususers.org)

Promotes the interests of bus passengers.

### Railfuture [www.railfuture.org.uk](http://www.railfuture.org.uk)

Campaign to improve the UK rail system.

### Community Transport Association

☎ 0161 351 1475; [www.ctauk.org](http://www.ctauk.org)

Promote & support community transport.

## GREENER DRIVING

Car clubs and car & lift sharing:

### Car Plus

☎ 0113 410 5260; [www.carplus.org.uk](http://www.carplus.org.uk)

### Liftshare

☎ 01603 389131; [www.liftshare.com/uk](http://www.liftshare.com/uk)

**Carpooling** [www.blablacar.co.uk/](http://www.blablacar.co.uk/)

### Car Fuel Data (fuel use & emissions)

<http://carfueldata.direct.gov.uk>

Information about the fuel consumption and exhaust emissions of new cars.

### Environmental Transport Association

☎ 0333 000 1234; web: [www.eta.co.uk](http://www.eta.co.uk)

Provide vehicle breakdown, bicycle and travel insurance. Members of CAT (see overleaf) can get a discount.

### Low Carbon Vehicle Partnership

[www.lowcvp.org.uk/resource-library.htm](http://www.lowcvp.org.uk/resource-library.htm)

Partnership of government, academia, environment NGOs & industry. Online library of research into low carbon vehicles & fuels.

### Transport & Environment

[www.transportenvironment.org](http://www.transportenvironment.org)

Campaign about transport impacts.

The website contains detailed research.

## ELECTRIC CARS

### Energy Saving Trust: Travel

[www.est.org.uk/travel](http://www.est.org.uk/travel)

Advice on more efficient driving & buying vehicles, including grants for electric cars.

### Go Ultra Low [www.goultralow.com](http://www.goultralow.com)

Information about buying electric cars, grants, charging points, etc.

### Next Green Car [www.nextgreencar.com](http://www.nextgreencar.com)

Website comparing & testing cars, with coverage of electric and hybrid vehicles.

### Battery Vehicle Society

[www.batteryvehiclesociety.org.uk](http://www.batteryvehiclesociety.org.uk)

Network for exchanging information & ideas on current & historic electric vehicles.

## AVIATION ALTERNATIVES

### The Man in Seat 61 [www.seat61.co.uk](http://www.seat61.co.uk)

Information about travelling on trains and boats, for journeys all over the world.



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## Zero Carbon Britain

[www.zerocarbonbritain.org](http://www.zerocarbonbritain.org)



### Zero Carbon Britain: Making it Happen

The latest report explores the barriers to getting to net zero greenhouse gas emissions and how these can be overcome. Brings together thinking from researchers working in psychology, sociology, political science, economics and other social sciences, as well as faith and spiritual practice, arts and culture. Drawing on a wide range of peer-reviewed journals, books, reports and articles, as well as stories from real-life projects, it explores ways that we can overcome barriers in innovative ways.

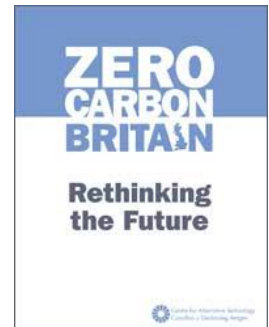
Free PDF download from <http://www.zerocarbonbritain.org>

### Zero Carbon Britain: Rethinking the Future

Draws on the Centre for Alternative Technology's 40 years of experience to create technically viable future scenarios. We bring together the latest knowledge from a wide range of disciplines to explore synergies that create employment, increase wellbeing, have a positive impact on the economy, and future-proof us for the challenge of the 21st century.

203 pages, £14.95 from <http://store.cat.org.uk>

Free PDF download from: [www.zerocarbonbritain.org](http://www.zerocarbonbritain.org)



## CAT Eco Store

<http://store.cat.org.uk/> ☎ 01654 705959

As well as the paperback version of the Zero Carbon Britain report, CAT's eco store (both online and onsite here at CAT) also sell other books on green transport options and low impact living.

## CAT Visitor Centre

<http://visit.cat.org.uk/> ☎ 01654 705950

Sustrans cycle route 8, Lôn Las Cymru, skirts right by CAT on its way from Cardiff up to Holyhead. It is also possible to cycle a loop around the coast and back to Machynlleth.

## CAT Charity

<http://support.cat.org.uk/> ☎ 01654 705988

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