

Transport

For many of us, travel may pose the biggest challenge of all in the transition to sustainable living. For others it may require few or even no changes in our lives. Unfortunately, the latter are in a small minority.

But then every problem can be viewed as an opportunity. This may be your opportunity to make a real difference. The cost of discipleship was never cheap.

You are probably aware of the range of environmental problems arising from motorised transport, and some of the basic steps that you can take to minimise these. In this programme we suggest a very targeted approach to minimising your impacts and emissions.

Transport is an ideal area for personal action on stewardship. Not only can our decisions, cumulatively, over time, make a difference – they can make a very visible difference. Following a church Lenten carbon challenge programme in Streatham, south London, the vicar decided to give up her car. Now all of Streatham can see Rev Mandy Hodgson on her bike!

Suggested reading: 'Mobility and Pilgrimage', Chapter 7 of *A Moral Climate* by Michael Northcott (2007), Orbis Books, London. This is a very thoughtful critique of 'fast travel', not just ecologically, but socially, ethically, spiritually and on our general wellbeing. He contrasts the dysfunctionality of so much of modern travel with the pilgrimage as portrayed in Russian literature. In the pilgrimage the love of the pilgrim for Creator, creation and fellow man increases as he gradually shapes the breath prayer to the rhythm of his breathing and walking. 'Be still and know that I am God'.

The main environmental problems that we need to address

Climate Change

As indicated in *Introducing ecocell*, the 'average' UK citizen now produces about 15 tonnes CO₂e (carbon dioxide equivalent) per year. Transport (including flying) accounts for about 20% of this or about three tonnes per person¹. The graph in Appendix 1 (page 7) shows the transport share of carbon emissions in the UK.

But 20% of 15 tonnes CO₂e is three tonnes – at the upper end of the sustainable per person 'ration' of two to three tonnes carbon dioxide emissions per year that we all need to get down to. So 'average' citizen now uses up all their 'ration' on motorised transport alone!



Transport Module

¹ The Dept for Transport give a figure of 10 tonnes per person per year CO₂ emissions and 2.8 tonnes for within UK transport (- i.e. only including domestic flights). Visit <http://www.dft.gov.uk/pgr/statistics/datatablespublications/tsgb/> 2006 edition, PDF, Table 3.8 p 59. But *The Ecologist* (Sept 08, using Office of National Statistics 2007 data) estimates the figure of about 17 tonnes when you include international 'shipping, aviation and tourism' and emissions from imported goods (in excess of emissions from exports).

But beware of averages. In the Streatham churches Carbon Challenge in 2008, people were asked to calculate their carbon footprints. The level of variation was startling, especially in transport-generated emissions: figures ranged from 0.2 tonnes CO₂e per person per year to over 20 tonnes CO₂e with figures varying over this whole range – that is, more than a hundred-fold variation between the highest and the lowest. Factors that made a difference seemed to be: frequency of flying (related to visiting family overseas), car ownership, and income. All participants were south London residents; in a wider survey, urban versus rural living would probably also be significant.

Carbon Dioxide Emissions for Different Modes (in grams CO₂e)

- Car: from 100 to 350gm per kilometre, depending on the car
- Plane: about 510gm per kilometre
- Public transport: about 70gm per kilometre
- Bike and walk: negligible

For a fairly simple explanation of why air travel produces such high emissions, please refer to the website <http://chooseclimate.org/flying/>. The website enables you to calculate the emissions from any proposed air trip, and it explains that the total warming effect of CO₂ (carbon dioxide) + H₂O (water) + NOX (nitrogen oxides) is about 3 times greater than CO₂ alone.

Other environmental problems

Transport gives rise to problems in the area of:

- Localised pollution and health
- Road danger - to humans and animals
- Community effects
- Soil sealing and landscape availability

See Appendix 3 for references on research relevant to some of these issues. These problems will also be reduced by action to reduce the carbon emissions from transport, so we concentrate on the latter in 'A Strategy for Action' below.

Car Dependency

The 'car-dependent lifestyle' has been identified by Philip Goodwin and his research team². Once people own cars, they make decisions about where they live, where they work, where they send their children to school, where they shop and where they pursue their leisure activities, based on the fact they use a car. Then once the car is outside the front door it tends to become the 'default position' for almost every journey, no matter how short or how congested the traffic. Car-owners tend to make more and longer journeys than non-car owners. There is also evidence that most car owners are unaware of the bus services that they might use, and they pay little or no attention to bus service marketing material.

Jillian Anable and her colleagues³ suggest we may now also be developing 'air travel dependency'. As people fly more, they develop family, close friendship, work and leisure links in other countries, and a perceived need for frequent travel.



²Goodwin, P. and colleagues (1995). *Car Dependence, A Report for the RAC Foundation for Motoring and the Environment*. Transport Studies Unit, University of Oxford.

³Anable, J., Lane, B. and Kelay, T. *An Evidence-Base Review of Public Attitudes to Climate Change and Transport Behaviour: Final report*, UK Department for Transport, 2006, Contract No PPRO 004/006/006. Available from the UK government web site

Transport, Freedom and Community

The claim is often made that motorised transport enhances our freedom, our range of choices, our opportunities. At face value this claim is very convincing. However, every parent in a built-up area faces a terrible choice: let your children 'play out' or go to school on their own, and risk the police knocking on the door, with the very bad news ...; or keep them cooped up at home; or add to the stress in your life by taking them everywhere. It seems that the freedom of the motorist can be the constraint on the young family.

So private car ownership can be seen as increasing freedom for the car-owner but decreasing freedom for everyone else, not just children but all non-car-owners, who have to put up with worsening noise, danger and road severance in their daily lives.

Freedom to travel can also be at odds with communal wellbeing. A few years ago, a group of CAB workers in a shire county reported that they now have a major problem recruiting the volunteer professional. The lawyers, accountants etc who used to work with them now seem to spend their free time in second homes in France, or on other frequent breaks away. How many other voluntary organisations (including church communities) face similar problems?

A strategy for action

Here we suggest a set of activities for members to consider. Discuss them in your *ecocell* group, and use the group to support and challenge each other in implementing them. This group's support and challenge process may be especially valuable in this module. When we reach the 'destination' of our *ecocell* journey we want to be living within a total carbon footprint target of about three tonnes per year. A sensible (and realistic) ration for transport would perhaps be about half a tonne a year per person – certainly no more than one tonne. Therefore we need to make very specific commitments, not just express vague intentions to drive less or fly less.

Action 1: Measure your travel footprint

See the travel sheet on the electronic *ecocell* footprint measurement spreadsheet, which does your calculations for you. If you have not got one it can be downloaded from <http://www.greenchristian.org.uk/ecocell/ecocell-documents>

You need to keep records of your journeys over the duration of the *ecocell* programme – perhaps three to four years from the introduction of this module. In the first year, you identify the journeys that put your emissions up; in subsequent years you can monitor the effectiveness of your actions to get your emissions down.

Car travel is perhaps the simplest to record: you can read off your mileage at the beginning and the end of each measurement period. You will need to record in a diary all train and bus journeys above about 25km. Just make a guesstimate of all the short public transport trips you do. Suggestions for the measurement of air travel (of which there should not be much on this programme) are made on the calculator.

Note that this includes all journeys by all members of your household who are on the *ecocell* programme. You add up all the emission figures and divide by the number of people in the house to get the household average.

Action 2: A pledge to live within rations

I/we pledge to living with a carbon emission ration for transport of ____ tonnes CO₂e per year immediately reducing to ____ tonnes CO₂e over five years (fill in the figures that you can commit to).



There are two key features to this pledge. Firstly, it is specific – not a vague good intention like 'driving less', 'flying less', 'use... less'.

Secondly, in line with research on car dependency, you may have to wait for opportunities for major changes in your life to get your transport figures down to sustainable levels. If commuting is an issue, can you move house to be nearer your job – or change your job to work nearer home? It is estimated that such opportunities arise every seven years or so, for most people. Or if your child is coming up to secondary transfer or to sixth form, can you find a school nearer home?

In relation to air travel, even a trip from any UK airport to Dublin or Lyon or Cologne uses up virtually your full annual transport 'ration'. If one or more of your group has close relatives abroad, you may need to consider some form of 'ration sharing' to enable even infrequent visits.



As a commitment, 'use... less' = 'useless'!

Action 3: A commitment to living local

This follows on from Action 2. You commit to supporting local schools and a local church/faith group. You commit to shopping locally, to joining local clubs or societies. If trips to a leisure activity like golf or a water sport are travel generators, can you develop a new interest? And what about the frequency with which you visit relatives or close friends who live far away? For some of us some very tough decisions may arise.

Not from A to B -

But make A a good place to B:

Work together to make our Heaven on Earth in Streatham or Scarborough or Swansea or Stirling or Sligo – or wherever you live.

Action 4: Consider living car free – or plan to do so within a few years.

Many members will already live without a car. If you are a car driver you may be in a position to consider going carfree – for instance you may be about to change your job or where you live (as discussed under 'Car dependency'.) In addition to making yourself familiar with public transport services, taxi services, and with the best local cycling and walking routes, you may find that you have a car club operating in your area. Members of car clubs can usually hire a car by the hour or by the day.

If you do not have a car outside the door, you will travel a lot less in a year, and therefore significantly reduce your emissions. You could also save around £2,000 to £3,000 a year.

Action 5: If a car driver, commit to never exceeding the speed limit – and to never driving more than 20mph in a built up area.

Firstly, of course this quite considerably reduces the risk of you killing or maiming someone. But secondly, speeding traffic scares cyclists and children off the road. So the driver does not just produce their own emissions – they may be keeping other people in cars who otherwise might be travelling by low emission and healthy modes. Help create a culture where speeding is not considered a joke, but a cowardly form of aggression. Ask the police to enforce speed limits.



Action 6: If a car driver, when you need to replace your car, go for the most fuel-efficient model, with the lowest pollution rating.

That should be a car with a CO₂e emission rate of about 100 grams per km. But motorists tend to drive more when they buy more fuel-efficient cars – what economists call the ‘rebound effect’. So ensure that you are reducing journey distances – and perhaps car sharing – as well as using less fuel per mile. Remember, your objective is to live within a sustainable carbon emission ‘ration’.



Other actions:

Members of your group will probably have lots of ideas for reducing travel and the emissions from travel. They may include proposals like car sharing for particular journeys, or setting up family walk-to-school groups. But don't forget the more challenging and longer-term questions. For instance do any members have holiday homes in far away places? These may lead to extra journeys – for maintenance purposes or simply ‘because it's there’ – as well as taking you away from contributing more to the social capital of your area.

Suggested group discussion activities (in addition to time to supporting each other on our individual actions)

Group activity 1:

Are there decisions that we can influence in the political arena (as individual or as a group)?

As we ‘put our own houses in order’ we feel more confident in lobbying political leaders at all levels. Some policy demands are obvious: ‘no’ to any expansion of the road network or of the air industry infrastructure; support for local bus and train services and for better and safer routes for cyclists and pedestrians. Information is available through organisations such as:

Campaign for Better Transport <http://www.bettertransport.org.uk/>

CTC (cyclists) <http://www.ctc.org.uk/>

Living Streets (pedestrians) <http://www.livingstreets.org.uk/>

Sustrans <http://www.sustrans.org.uk/>. (see in particular their campaign - <http://www.quality-streets.org.uk/>)

But even more important is the localisation agenda – support for local schools, health care facilities, shops, post offices, leisure facilities, etc. Which means, does it not, challenging the ‘choice agenda’ in public service provision? Because encouraging choice means encouraging us to think of ourselves as ‘consumers’ of schools, GP surgeries, libraries etc, rather than supporting our local services, and contributing to improving them, if there are problems.

Group activity 2:

"You shall not covet your neighbour's house. You shall not covet your neighbour's wife, or his manservant or maidservant, his ox or donkey, or anything that belongs to your neighbour". Exodus 20:17

The word covet is hardly used today but it means to wish for longingly, to desire. Moses Was told to tell his people that it was wrong for anyone to desire everything their neighbour had. They were to be content with what they had and not be jealous about their neighbour's latest possessions.



Both the motor industry and the travel industry spend millions of pounds each year creating desire for their products. One of the reasons we wish to spend our holidays abroad is because we have been wooed by the adverts, and attracted by what we see as an affordable price tag. We are presented with an image that a car is something desirable, to help us win girlfriends, get jobs, be on a par with all our friends, to enable us to do things that would not otherwise be possible. That image has been built up over a number of years not only by the motor industry but also by

the media. A recent random check on the Independent newspaper revealed no less than 27 adverts for cars in a single edition, plus one full page feature. Not one of the featured cars had CO₂ emissions of below 150 gm/km.

DISCUSSION

The deliberate and wilful creation of desire by the advertising industry is gnawing away at us all the time. The Tempter is always there. If only we can push him to one side we can begin to see that there are better ways of doing things. In pairs discuss the implications of Exodus 20:17 on your life, using the wider meaning of the word covet. How can you alert yourself to it? How can you keep it in check?

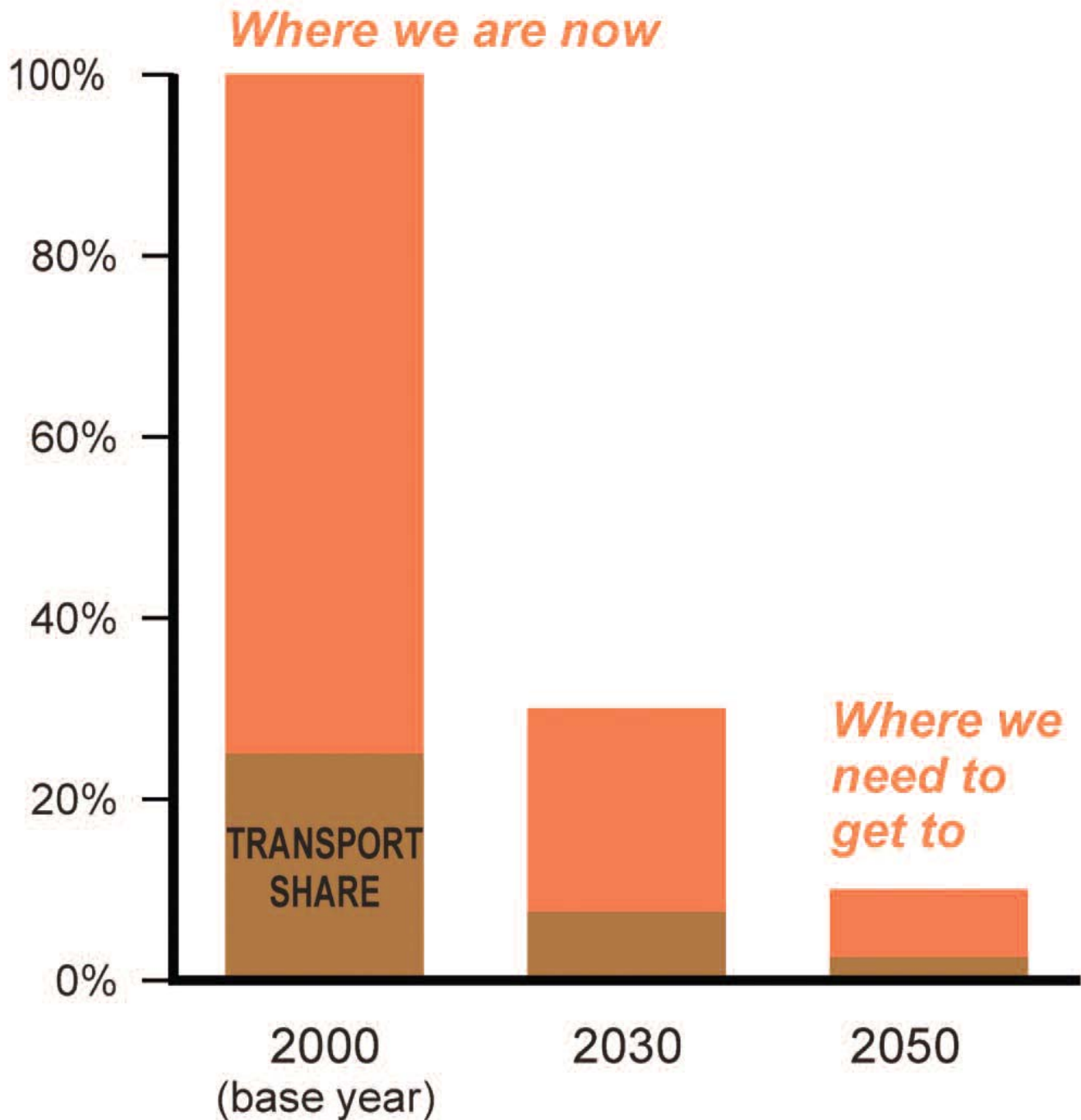
Exercise designed by Pete Redwood

Conclusion

Transport policy and practice, at both government and personal levels, badly needs systemic 'outside the box' thinking. Forget for a moment about things with wheels or wings, forget about roads, tracks, airports, forget about the 'carrots and sticks'. We need to think about what creates the (excess) transport demand in the first place. The changes needed may require action on where we live, work, play, study – or pray – as much as on how we travel. And the changes may of take a number of years to bring about.



UK Carbon Emissions, Transport's Share and the Change Required for Sustainability



Limits assume the carbon 'budget' is shared equally among all countries by 2050, with transport share remaining at current UK value of 25%

Thank you to Chris Wright, Emeritus Professor of Transport Marketing at Middlesex University, for providing this graph.

Appendix 2: Traffic calming – a local action case study

Tony Emerson writes:

A traffic-calming programme involves implementing a range of measures – engineering, educational, legislative – with the aim of significantly reducing traffic speeds.

Traffic calming was traditionally justified on the grounds of pedestrian safety and the reduction of noise and local air pollution which are side effects of the traffic. However, streets have many social and recreational functions which are severely impaired by car traffic. The Livable Streets study in California by Donald Appleyard (circa 1977) found that residents of streets with light traffic had, on average, three more friends and twice as many acquaintances as the people on streets with heavy traffic which were otherwise similar in dimensions, income, etc.

Michael Northcott (in *A Moral Climate*) discusses some of the many unsavoury aspects of fast driving and road danger: the unequal distribution of the deaths and injuries caused – those who cannot afford to drive are much more likely to be road victims than those who do drive; the emotions associated with fast driving and with protests against speed cameras; the deceptive nature of phrases like ‘private’ vehicle and traffic ‘accident’, when used to describe (there is nothing accidental or private about someone being killed by a vehicle being driven at 50mph+ on the public street).

But slowing down traffic does not just reduce the number of injuries and deaths on the roads – important though this is. Fast and dangerous traffic puts people off walking and cycling – especially children and other more vulnerable road users. Whereas traffic calming means that more children walk to school and ‘play out’, so their parents come out too, and we get a greater sense of community. So we help create the virtuous circle of less traffic, less need to travel (to ‘get away from it all’), fewer carbon emissions.

In 1991, a few years after we had moved into our present home, and just before our oldest child started nursery in the local primary school (100 metres down the road), we realised that Leigham Vale (our road) needed traffic calming. Cars were shooting up and down the road at 40mph plus, screeches of brakes (and worse) were common and there was at least one serious accident outside the school.

But we also realised that we could not bring about traffic calming on our own. We contacted Transport 2000 (now Campaign for Better Transport), attended a seminar on traffic calming, and found out about another person, farther down the road, who had started a similar campaign a few years before. We also asked the advice of a traffic-calming expert who worked in the same college as I did. He was not very encouraging: ‘there are only houses on one side of Leigham Vale, and not enough accidents...’. We saw the families walking down both sides of the road each day and crossing over at the school or the shops – and the kids running across the road in September to collect the ‘conkers’ falling from the trees on the non-housing side.

So we persisted. We contacted our helpful local councillor. He arranged a meeting for us with two of the relevant council officers, and advised us to collect a petition to submit to the council. We collected some 100+ names – only very few refused to sign it – and we were given the opportunity to present it at a council meeting. We contacted the local school, and the Head and the Chair of governors supported us. We had a de facto working group now with the (Lib Dem) councillor, the school governor (an ex-Tory councillor) and three residents (including yours truly, then a green Labour Party member). Coalitions are not new!

Within a year or so we got some pavement widening at the junctions with the side roads. Another couple of years and a speed table was put down outside the school gates. And then in 1998 the full speed cushion works along the (kilometre long) Leigham Vale.

There is still too much traffic on Leigham Vale, and occasionally some of it is still too fast. But every morning as I look out now, I see not just the parents and children walking to school, but quite a few parents on bikes, with smaller children on child seats or trailers, or older children on their own bikes. Then I remember that sunny summer eve, seeing lots of children playing out. And then overhearing an Afro Caribbean couple watching them: “you know, it’s great to see this – it never happened before they put in those humps, did it?”



