

Sustainable Transport for Wales

Time for Change



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1. Straight ahead or handbrake turn?

Sustrans' analysis of a transport strategy for Wales demands that it achieves an environmentally sustainable and socially equitable transport system. The present transport system in Wales is neither of these. In fact, our transport system is becoming even more environmentally destructive, unfair, and damaging to our health. Fundamental policy change is both necessary and *urgent* – our policy-makers need to execute a handbrake turn and head for a positive future for transport in Wales.

The new legislation on transport in Wales has now provided a vital and welcome opportunity for change. In this paper, we explain why urgent change is needed and set out how the Assembly Government can rise to this challenge.

1.1 Why change is urgent

There is broad intellectual consensus amongst policymakers that the present rapid growth in road traffic and air travel is severely undermining stated policy objectives to reduce carbon dioxide emissions and thereby tackle climate change.

A few figures show the extent to which our current travel patterns must change in order to avert catastrophic climate change. The UK Government believes that emissions of carbon dioxide will have to be cut by 60% by 2050, although others now argue that this is an underestimate and that cuts in carbon emissions of the order of 80% or even 90% will be needed. Such cuts will be necessary across all sectors of the economy, including transport – there are no 'easy targets' elsewhere which will allow us to carry on with current travel patterns. Yet carbon emissions from transport are currently growing faster than emissions from any other sector. Emissions from transport (mainly cars and lorries, and not counting international flights) already account for 27% of total UK carbon dioxide emissions. Air travel is especial cause for concern – according to the government's Climate Change Programme review¹, air travel is growing so fast that by 2030 it could account for a quarter of the UK's *total* contribution to global warming.

Politicians – including ours here in Wales – have yet to respond to this massive challenge. But there are signs that the political framework for the transport debate may soon be shaken into a completely different shape through a series of shocks as world oil demand increasingly outstrips supply. The consequences of our unsustainable lifestyles will become acutely felt not in 2050, but very much sooner.

Debate has raged for years around the exact timing of so-called 'peak oil', the moment at which the rate of oil production is forced to fall away from its peak, but the rapid price hike to \$70 per barrel in the course of the last year, during a period when OPEC were producing flat-out, could be a strong indicator that peak oil is either with us now or just a few years away². Even if the present tightness of supply abates, it would be rashly optimistic to assume peak oil will be beyond the 2030 'horizon date' of the Wales Transport Strategy.

Strategic transport policy has not yet grasped the implications of the disjuncture between the oil price curve and the oil production curve. It is predicted that oil production will fall away only gradually. Oil prices, however, are liable to rise upwards very sharply, through a series of upward kicks precipitated by climatic or geopolitical events, because many users have little option but to pay more for oil, at least in the short term. Countries who fail to develop a transport strategy that holds

good during an oil-short future will fall behind economically, and Wales is no exception.

Economic growth and traffic growth have plotted out as parallel curves over decades, to such an extent that it is assumed that they are inextricably linked, and that economic growth must entail more traffic growth. If the Welsh economy is to thrive during forthcoming oil price hikes, the Wales Transport Strategy must seek ways to de-couple economic growth from traffic growth. The Strategy should be centred on policies to give companies and the public options to go about their business with less dependence on cars and lorries.

If these options are not developed now, then when there are oil price hikes the political back-lash will be all the stronger. Of course, the back-lash will not call for better alternatives to cars, but for cuts in fuel taxes, a policy direction that would be anti-environmental, that would necessitate that the lost revenue be recouped by unpopular measures elsewhere, and that anyway would only be a temporary sop because it ultimately would not address the underlying problem of insufficient fuel.

The necessity to decouple traffic growth from economic growth requires the Wales Transport Strategy to be radical and visionary, setting a wholly new direction. If the Assembly Government rises to this challenge, it will set a lead for the whole of the United Kingdom, and beyond, and put Wales in a strong position to face the challenges of the twenty-first century.

1.2 Why change is desirable

In urging radical action to reduce our dependence on cars so as to live within our environmental means, we are *not* advocating that we should all tighten our belts, put on our hair-shirts, and accept a much lower standard of living.

In fact, our argument is quite the reverse. We want to have a less car-dependent society, with people given better choices as to how they travel. The reforms that we advocate in this paper would give us a better quality of life and a more vibrant, twenty-first century economy. The benefits of our policy prescription include:

- *A healthier, fitter population.* Physical activity levels in Wales, as in many developed countries, are currently at an all-time low. Only 28% of adults get enough physical exercise³. This has led to an epidemic of obesity, which could lead to today's children having a lower life expectancy than their parents, through diseases related to lack of exercise, including diabetes, coronary heart disease and cancer. Yet the public health advice that we should all take 30 minutes of moderate exercise on five days a week could be achieved at one stroke, simply by creating the opportunities for people to walk and cycle more. The policies we advocate would give more people the opportunity to walk and cycle for short trips, offering tremendous benefits for public health.
- *A socially inclusive society.* A quarter of households in Wales do not have a car. Others on low incomes in rural areas may be forced to buy a car that they can ill afford, because it is the only way to get access to jobs and services, and evidence from Citizens' Advice suggests that this causes some people to get into debt⁴. Our current transport system is especially difficult for the old, the young and disabled people, both in terms of access difficulties and in terms of safety. For example, children from families on low incomes face five times the risk of being killed by a car, compared to those from well-off families. The better

public transport, safe walking and cycling routes, and more local services that we advocate would help massively in reducing these social inequalities.

- *A vibrant economy.* The key transport issue for businesses is reliability. The current transport system, especially in south-east Wales, is often congested and this can cause problems and delays. The conventional answer – building more road capacity – simply does not work, as new road space quickly fills up with new traffic. Ironically, much of that congestion is the result of people making very short trips by car. The most effective way to get our roads flowing freely, and to increase reliability for businesses, would be through a combination of demand management, good alternatives to the car, and support for people to make smarter travel choices. This is exactly the policy package that we set out in the following pages. Our policy prescription also includes support for businesses to save money by operating more efficiently – for example, through state-of-the-art communications, including tele-conferencing, which can dramatically reduce business costs; and through teleworking and workplace travel planning which can make it easier and less stressful for employees to get to work. Tourism is also an important earner for Wales, and tourism using sustainable travel offers major opportunities. It is especially beneficial to local economies because people travelling by non-car modes purchase more goods locally.

1.3 Why change is possible

The vast majority of journeys in Wales are short, with 63% being less than five miles. Yet even on these short journeys, cars are the dominant mode.

All too often, transport policy makers assume that ‘strategic’ interventions should focus on infrastructure for long-distance travel. However, we believe that actions focussed on short journeys offer the greatest opportunity to tackle the environmental, social and economic issues identified here, and that these should therefore be a main focus of the Wales Transport Strategy. There is now abundant evidence to show that these types of interventions are highly effective and excellent value for money.

For example, one of the major causes of peak-hour congestion is the school-run. Safe routes to schools and school travel plans offer a cost-effective way of tackling this problem, typically reducing car use by 8-15%, at a cost per car kilometre taken off the road of 2-10 pence⁵. At the same time, schemes that enable children to walk or cycle to school can help achieve health and educational objectives, making our children healthier and fitter, and making it easier for them to concentrate once they get to school⁶.

Helping people to reduce their car use for *local* journeys – for example through smart choice programmes and active travel action plans, which we discuss in Section 2 – would be a highly efficient way to improve the efficiency and reliability of *long* journeys. Many long-distance road routes suffer due to congestion at key nodes, congestion which statistically comprises a great deal of local traffic. For example, this would apply in the vicinity of many of the central Wales towns lying on key north-south trunk road routes.

We are optimistic that the solutions now exist to solve our transport crisis. The challenge is to put them into practice.

2. What would a truly sustainable and fair transport strategy look like?

We believe that the Wales Transport Strategy should be founded on principles of environmental sustainability and social justice. Here, we set out the actions that the Strategy must include in order to achieve this vision. The actions are grouped under the following themes:

- Helping people make smarter travel choices
- Shifting short car trips to walking and cycling
- Making public transport more attractive
- Evaporating traffic – using information and communications technologies instead of travelling
- Making efficient use of limited road space
- Reducing carbon emissions from the vehicles on our roads
- Saving lives
- Enabling access to daily facilities

2.1 Helping people make smarter travel choices

There is now good evidence that ‘smart’ measures are highly effective at reducing travel by car, increasing use of sustainable travel modes, and improving transport efficiency. Smart interventions encourage people to re-assess their travel options, by combining targeted capital investment in sustainable transport (for example, new bus services, bus priority, cycle links to schools and workplaces and so on) with marketing, information and incentives for people to change their travel behaviour.

Research published by the Department for Transport concluded that if these measures were implemented intensively over a period of about ten years, they could reduce car traffic by 11 per cent overall, and 21 per cent in urban areas at peak times⁷. This would make a major contribution to environmental objectives, in particular to cutting greenhouse gas emissions from transport. It would help meet social objectives, especially by stimulating more walking and cycling and thereby improving health. Finally, its effect on traffic volumes at peak times would mean less congestion, which would increase business efficiency. Smart measures are also excellent value for money, on average costing about 1.5 pence per car kilometre taken off the road. Purely in terms of congestion-relief, this represents a benefit-cost ratio of 10:1, far higher than most other transport schemes⁸.

In England, the Government is funding three Sustainable Travel Town demonstration projects, in Darlington, Worcester and Peterborough, which are implementing a range of smart measures, including personalised travel planning and workplace and school travel plans. Some other towns, including Lancaster and Brighton, are beginning to roll out large-scale personalised travel planning programmes, in which residents are offered personalised information about public transport, walking and cycling options that match their individual journey needs. Sustrans’ personalised travel planning programme, TravelSmart, has achieved reductions in car use of 9 – 14%⁹. In towns such as Cambridge, Nottingham, Birmingham and York, around a third of the workforce is already being targeted through workplace travel plans. In Buckinghamshire, more than two-thirds of schools have already been engaged in school travel planning. London has recently committed funding to a large-scale smart choice programme (or TDM – travel demand management – programme) of £24 million per year, equivalent to £3 per citizen per year.

To date, support for smart measures in Wales has been limited. There has been funding for travel plan coordinators in each of the regional consortia, and for some specific initiatives, such as car-sharing schemes.

The new programme would represent a step change from this. It would enable much more intensive application of smart measures, and on a larger scale than has so far been possible. A Smart Choices Programme for each region of Wales might encompass the following:

- Ensuring that the planning system is used consistently across the region to require travel plans as part of all new developments (including offices, retail, hospitals and residential), and that these travel plans are monitored and enforced.
- Offering support, grants and a range of products and services to organisations that are developing travel plans. Services might include existing ones, such as access to a car-sharing network, plus new products such as public transport discount cards.
- Developing travel plan benchmarking and accreditation, to help organisations learn from each other and adopt best practice.
- Through a team of regional school travel plan advisers, working with many more schools to deliver effective safe routes to school and school travel plans.
- Commissioning large-scale rolling personalised travel planning programmes, and over time building internal expertise to manage and deliver these.
- Establishing a 'kick start' funding programme to market bus services to the point where they become commercially viable.
- Establishing kick start funding for the development of car clubs.
- Continuing to promote car-sharing schemes.
- Piloting home delivery services and shopping drop-off points, especially in rural areas where these are not seen as a commercial proposition by supermarkets.
- A capital budget to fund small-scale measures that would overcome infrastructural deficiencies identified as key blockages to sustainable travel to schools, workplaces, hospitals and other destinations targeted by the Smart Choice Programme.

As an approximate indicator, it was estimated by the research team that carried out the Smarter Choices research that revenue funding at the level of about £5 per citizen per year would be required to achieve an effective smart choices programme that could make a significant impact on traffic levels. This suggests that revenue funding of the order of £15 million per year would be needed to deliver a large scale Smart Choices Programme for the whole of Wales. In addition to this, capital funding would be needed for measures such as traffic calming and cycle routes as part of safe routes to school schemes, hospital and workplace travel plans, and so on.

2.2 Shifting short car trips to walking and cycling

As car ownership has increased over the last fifty years, and as the location and design of new housing, shops and offices has increasingly been designed to cater for travel by car, the distance we each walk and cycle has fallen dramatically. This is probably the single biggest reason for the current epidemic of obesity. To call it an epidemic is no exaggeration: nearly one in five adults in Wales (18%) is clinically obese and another 36% are overweight¹⁰. Sedentary habits not only make us fat but

also have wider effects on health. People who are physically inactive are more likely to die early. They face almost twice the risk of dying from coronary heart disease, compared to more active people, and they have a greater risk of contracting cancer and diabetes. According to the government's Chief Medical Officer, physical inactivity is as significant a cause of chronic disease as smoking cigarettes¹¹. The costs of physical inactivity – in terms of lost output, sickness absence, and health care for avoidable illness – amount to at least £500 million per year, equivalent to £200 for each person in Wales¹²

Nevertheless, many car trips are still short enough that they could easily be made on foot or by bicycle, if the conditions were right. More than half (56%) of car trips are less than five miles¹³. Even in rural areas a high proportion of car trips are short. And many longer car trips could be replaced by a short walk or cycle if we made sure that everyday facilities, such as shops, schools and health centres were close to people's homes.

There are four key policy areas where action is needed to get more people cycling and walking:

- All new developments – but especially housing estates, shops, offices and other workplaces, leisure facilities and health centres – should be located and designed so as to facilitate access on foot and by bike. This has long been an aspiration in policy documents and planning guidance, but the reality is that many buildings – including some funded and used by public sector bodies – are still being located and designed with an unquestioned assumption that users will arrive by car.
- The newly-established methodology of accessibility planning should be used to identify communities which have poor access to local services by foot and cycle (as well as by public transport), and action should be taken to remedy this.
- Higher priority should be given to creating attractive streets and public spaces in existing towns and suburbs, and safe walking and cycling routes between villages and market towns in the countryside.
- Because the culture of cycling has so nearly been lost, a special effort should be given to targeted training, promotional campaigns and high quality infrastructure to get people cycling again.

In principle, the Assembly Government and local authorities are supportive of action in these areas. However, in practice, local authority funding for walking and cycling schemes is very limited. This is the result of a 'triple whammy' – first, heavy pressure on local authorities' revenue budgets from social services, education and other priorities makes it difficult to obtain funding for revenue measures to encourage walking and cycling, or indeed for officer posts to deliver walking and cycling schemes. Second, walking and cycling are perceived to be a low priority within local authority transport capital budgets. And finally, the ring-fenced funding from the Assembly Government specifically for walking and cycling schemes is very small indeed – although the ring-fencing of funding for safe routes to schools schemes has shown the benefits of this approach.

The regional transport consortia could in the future play an important role in redressing this mismatch between the Assembly Government's stated aspirations to support walking and cycling and the harsh reality. They should be funded to implement regional Active Travel Action Plans to increase the proportion of short trips made by foot or cycle. These should bring together a range of agencies – including health bodies – in a concerted effort to get more people walking and

cycling more often. Ring-fenced funding should be set at a level which is sufficient to achieve real change.

The Active Travel Action Plans should encompass:

- Comprehensive cycling and walking networks: within every town and city; linking towns together; and radiating from small market towns to link them to their surrounding villages.
- A programme of concentrated funding and support for Cycling Demonstration Towns, similar to the Cycling Demonstration Town programme currently funded by Cycling England. This might start with, say, two towns in each region receiving European levels of funding for cycling (equivalent to about £5-10 per citizen per year over a period of at least a decade), with further towns being added to the programme in subsequent years. The programme would be tailored specifically to priorities and needs in Wales. For example it should include some small towns, together with their rural hinterlands, to test the potential for increased cycling in rural areas.
- Behaviour change campaigns to encourage active travel, such as Walking the Way to Health and Cycle to Your Heart's Content. The Walking the Way to Health initiative in England has set up over 350 walking schemes, trained more than 18,000 volunteer walk leaders, and encouraged over a million people to walk more¹⁴. Sustrans is developing an Active Travel Programme in Wales which would provide a blueprint for further work – for example, a new project in the Upper Rhymney Valley is providing opportunities for walking and cycling in an area of high unemployment, low incomes and poor health. TravelSmart personalised travel planning campaigns are also effective at increasing active travel.
- A scheme to sort out all the barriers that prevent children from walking and cycling to school, along the lines of the very successful Bike It scheme which Sustrans manages in England. Bike It schools have achieved dramatic increases in cycling, through a combination of cycle training, cycle parking, cycling events, cycling at after school clubs, and incentives. Cycling levels amongst pupils at Bike It schools have quadrupled from 2% to 8% of all school journeys, with some schools achieving figures as high as 29% cycling mode share¹⁵.

2.3 Making public transport more attractive

Good bus and train services are vital to enable people to use their cars less, and to provide access to shops, jobs, education and services for people who do not have a car. Unfortunately, the poor quality of public transport services in many parts of Wales means that they are often perceived as an option of last resort, rather than what they should be – a high quality option of first choice for everybody.

A good public transport service should have the following characteristics:

- Buses which you can rely on to turn up at the advertised time. In urban areas, this requires investment in bus lanes and bus priority at traffic lights, so that buses are not held up by traffic congestion.
- Frequent bus and rail services on main routes, from early in the morning until late at night. For some single-track railways in Wales, this requires investment in passing loops and new technology.
- Timetables that are synchronised so that buses and trains connect with each other.

- Services that reflect when and where people wish to travel, rather than simply the convenience of public transport operators – for example, services that are convenient for people getting to and from work, to the shops, to education and to health services.
- Demand-responsive taxibuses in rural areas, offering an on-demand shared taxi along main bus routes on an hourly basis at times when conventional scheduled bus services would be lightly used, such as evenings and weekends.
- A bus network that is easy to understand, for example with buses colour-coded according to their route, and a ‘tube-style’ network map.
- Clear, accurate, easily understood and readily available timetables and personalised travel information.
- Bus and train fares that are competitive with the cost of car travel.
- All buses having low floors, working ramps, plenty of space on board and good internal design, so that they can be easily used by disabled people and anyone travelling with young children or heavy shopping or luggage.
- Trains which are modern and well-maintained, with working toilets, no graffiti, and clean windows.
- Investment in facilities that make it easy to travel by bike + public transport – for example, sheltered bike parking at bus stops and train stations; flexible space to carry bicycles on buses at off-peak times; and plenty of space to carry bicycles on trains, especially in areas where cycle tourism is significant.

Some areas of the UK have shown the ambition and commitment to provide this type of high quality service. Where they have done so, the result has been dramatic. For example, investment in better services, good information and a simple fare structure in London has delivered nearly a 40% increase in bus patronage across the whole city over five years¹⁶. In Buckinghamshire, patronage on some bus routes has risen by over 60% as a result of bus lanes, frequent services and strong marketing¹⁷. In rural Norfolk, the Bittern Line community rail partnership successfully reversed the historic decline of patronage on the rail line between Norwich and Sheringham, tripling passenger numbers from 200,000 to 585,000 per year over the eight years to 2005¹⁸. This is felt to have brought significant economic benefits in terms of increased green tourism¹⁹. Elsewhere in Europe, rural on-demand shared taxi services operate on a large scale²⁰.

There are also good examples in Wales. For example, in rural Gwynedd the concentration of settlements in valley corridors has helped to sustain relatively high levels of bus use, and the local authority and bus operators have worked together to develop this market. In Pembrokeshire, the Pembrokeshire Greenways consortium has developed five new bus routes along the coast, in an area which previously had no public transport service at all. In 2005, these buses carried over 45,000 people, avoiding an estimated 20,000 car trips²¹. There has been significant investment in the Valleys Lines, and around 30% of commuter journeys into Cardiff from the Valleys now take place by rail²². The introduction of free bus travel for older and disabled people has led to overall increases in bus usage.²³

However, these are individual examples of good practice rather than the norm. Current policies and administrative arrangements have failed to deliver the across-the-board good quality public transport service that the people of Wales are entitled to expect. The deregulated framework for bus services has made it difficult to provide a synchronised, integrated public transport network and until recently, the Assembly Government has also lacked powers to shape rail services. This last obstacle has recently changed for the better as a result of the Railways Act 2005,

which gave the Welsh Assembly powers to specify services and set fares for Arriva Trains Wales services.

The regional transport consortia are the logical bodies to co-ordinate the overall shape and quality of bus and rail services. In the Netherlands, Germany and Denmark, regional authorities already have this role²⁴. The quality of their public transport is generally higher than in Wales. They are able to create real synergy in routeing and timetabling, and they have access to the funding to enable services to operate effectively. Bus service levels are laid down in regional transport plans; bus and rail services are synchronised; there is through-ticketing between buses and trains; and there is a region-wide information service.

Moreover, recent discussion in England has focussed attention on the need for city-regions to have greater powers to shape and control public transport. This debate has in part been prompted by the success of the Mayor and Transport for London in improving public transport in the capital city. Research for the Local Government Association argues that Passenger Transport Authorities / Executives in the English conurbations should be given both bus franchising powers, so that they can determine bus routes, service levels and quality; and responsibility for the contract specifications for local rail franchises²⁵. The LGA argues that in order for the PTAs/PTEs to be given these enhanced powers, stronger governance arrangements would also be required.

There is a strong case for the regional transport consortia, working in partnership with local authorities, to play a similar role here in Wales. The regional transport consortia should have overall responsibility for determining the shape and quality of the public transport network, and for co-ordinating it so that it functions as an integrated whole. They should be given bus franchising powers so that they can determine bus routes, service levels and quality. The consortia should also have a major influence on the contract specifications for rail franchises.

This level of public transport co-ordination is not achievable under the present deregulated regime here in Wales, and legislative changes would be required. As a first step towards demonstrating the benefits of this approach, the Assembly Government should work with the regional consortia and local authorities to develop region-wide demonstration projects, using Quality Contract-type powers for buses and the Assembly Government's newly acquired powers to specify rail services. The demonstration projects should cover all bus and local rail services in a particular area, offering synchronised bus and rail timetables, regular (easy to understand and remember) departure times, integrated information, and integrated fares and tickets.

2.4 Evaporating traffic – using information and communications technologies instead of travelling

Computers, email, the internet and telephone-conference and video-conference facilities offer huge opportunities to replace travel by car, especially for businesses. In rural areas of Wales in particular, so-called ICT (information and communications technologies) could reduce unnecessary traffic, while at the same time offering substantial cost-savings to business. Greater emphasis on ICT would also boost rural economies by making it attractive for businesses to locate their staff there.

There are many areas where ICT can reduce car travel, but the two most significant are teleconferencing (a term which encompasses telephone-conferencing and video-conferencing) and telework.

Some organisations are already starting to realize the benefits of these technologies, or considering how they might do so. For example, the Countryside Council for Wales has vigorously promoted teleconferencing between its seven offices. In the nine months from January to September 2004, the CCW headquarters office avoided nearly 82,000 miles travel, reducing business mileage claims by £32,800. This was equivalent to a saving of £160 per annum per employee²⁶.

Teleworking (i.e. working from home or a satellite office close to home some of the time) is also highly effective in cutting car use. For example, over 7500 BT employees are registered with the company's 'Workabout' scheme. Some work mainly at home, while others split their work between home and BT offices. BT staff surveys suggest that each employee has cut their car travel by about 193 miles a week on average, even after allowing for some new non-work trips²⁷. Teleworking has enabled BT to reorganize its offices, saving about £180 million a year.

In Wales, the Assembly Government and the regional transport consortia should set out to increase the take-up of teleworking and teleconferencing. This could be achieved by:

- Establishing a Wales centre of advice and expertise on telework and teleconferencing. This would promote the benefits to businesses and public bodies, and provide detailed guidance on the policies and practices needed in order to develop telework and teleconferencing. It would cover not just the technical issues but also the 'cultural' ones – for example, what human resources policies are needed; how to tackle perverse incentives to drive such as excessive business mileage allowances; what are the property / site management issues; what training is needed for both managers and staff in order for remote working to be effective; what are the likely costs and financial savings.
- Offering grants for facilities for telephone- and video-conferencing, including desk-top facilities.
- Leading by example. Thousands of public sector workers travel many miles by car in Wales every day, to reach their offices or on travel for business. Telework and teleconferencing would reduce the amount of office space and car parking space required at public buildings, saving public money as well as reducing traffic. The Assembly Government should increase its own use of these practices, and should also encourage local authorities and other public sector bodies to lead by example.
- Regional transport consortia and local authorities should set up local satellite offices that can be booked by their own employees and those of other organisations (including small and medium enterprises) to reduce their commuting distances.
- Policies which have the unintended effect of discouraging work from home should be reviewed, to stimulate growth in home-based businesses. For example, planning restrictions on live/work units often only permit use as offices and do not allow use for retail purposes, cafes and other reasonable purposes; social housing landlords often forbid working from home; and unclear tax rules mean people may be concerned that they will incur business rates if they work from home. The Assembly Government should work with the Westminster Government to tackle these barriers.

- Pressure should be maintained on telecommunications providers to ensure not only that all telephone exchanges are broadband-enabled, but that available bandwidths are capable of applications such as desk-top conferencing.

The Assembly Government is seeking to improve access to affordable high bandwidth broadband, and already has a business support programme to encourage investment in ICT. However, this is focussed on technical support. At present there is no effort to tackle the other issues that limit the take-up of telework and teleconferencing, such as managers' uncertainty about how to monitor employees who are working away from the office, or property and facilities managers not knowing what resources are needed.

2.5 Making efficient use of limited road space

Substantial reductions in car traffic could be delivered by a combination of better public transport, good conditions for walking and cycling, encouragement to people to make smarter travel choices, and teleworking and teleconferencing.

However, to be effective, these measures must be accompanied by demand management. If this is not done, the road space freed will simply fill up with more traffic. Another way of putting this is to say that the traffic-reducing effect of these measures must be 'locked in' by other actions to control induced traffic. This is a particular issue in congested urban areas.

The types of demand management actions which will be necessary to lock in the benefits of the measures described in previous sections include:

- Re-allocation of excess road capacity to more productive use. This might include creating more space for pedestrians and cyclists; installing bus lanes; re-phasing traffic lights to allow more time for pedestrians and buses; replacing pedestrian subways with surface-level crossings; and increasing the amount of green space in towns.
- Reducing the total number of parking spaces in urban areas. For example, the West Midlands local authorities have a policy of reducing the amount of long stay car parking in city centres by 3% per year.
- Re-allocating parking space for other uses which are more productive and / or help create a high quality public realm – for example, wider pavements; bus lanes; city centre housing, office or retail development; and green space.
- Keeping to a minimum the amount of car parking permitted as part of new residential, office, leisure and retail development.
- Introducing a levy on workplace car parking, with the income being invested in measures to make green modes of travel to the workplace more attractive.
- Charging for road use, with the income being invested in better public transport and better facilities for walking and cycling. Road user charging schemes will need to be carefully designed so as to reduce traffic and cut carbon dioxide emissions from transport as well as tackling congestion, and so that they do not divert traffic out of urban areas onto less congested rural roads.

The effectiveness of these types of actions will depend upon the intensity with which they are applied. To date, demand management measures have been applied in a fairly limited way in Wales – for example, there is nothing to compare with the

congestion charge in London, or with the very strict maximum parking standards applied by many English local authorities.

In order to encourage more intensive application of demand management actions, the Assembly Government should do the following:

- Publish guidance to local planning authorities on maximum parking standards for new development.
- Review the gamut of policies influencing the provision of car parking, with particular attention to the ways that these are actually being interpreted at local level.
- Develop strategies for reducing the supply of car parking year-on-year in urban areas – for example, through accelerated planning permission for developments on land which replaces car parking in towns.
- Work with the regional transport consortia to deliver increased parking charges in congested urban areas, set consistently in neighbouring towns.
- Promote the introduction of the workplace parking levy with the funds raised being recycled into green travel plans.
- Develop new methods of demand management on the busiest and most congested trunk roads and motorways, including tolling, high occupancy vehicle lanes, 50mph motorway speed limits, and ramp metering.
- Continue to support a road user charging pilot scheme in Cardiff, as a first step towards a national road user charging scheme.
- Develop a similar scheme to the Department for Transport's Transport Innovation Fund (TIF), with regional transport consortia bidding for funding to deliver packages comprising public transport, walking and cycling schemes alongside smarter choices and road user charging or workplace parking levies to reduce traffic. A Wales TIF could invest in innovative approaches to sustainable visitor and leisure travel in rural areas, as well as innovative approaches to demand management in congested urban areas.

2.6 Reducing carbon emissions from the vehicles on our roads

Changing our travel behaviour – that is, travelling less, and shifting away from cars towards walking, cycling and public transport – is essential if we are to reduce our impact on the climate.

However, we can also take action to reduce the amount of carbon emitted by each mile driven by car. The key ways of doing this are:

- Educating drivers to maximise fuel efficiency by their driving style (through smooth acceleration and braking, and lower speeds on motorways). This can reduce fuel usage by 5- 20% (but the difference between the *best* and *worst* drivers is probably much more than these averages).
- Enforcing existing speed limits (or, even better, reducing them) on motorways and trunk roads. New research shows that if the UK 70mph limit were properly enforced, we would cut carbon emissions from cars and lorries by 3%. If the 70mph limit was cut to 60mph, the carbon saved would be nearly 6% of car and lorry emissions. Most cars have the lowest fuel consumption at speeds of about 44 mph.

- Encouraging the uptake of more fuel-efficient vehicles, such as hybrid diesel-electric or petrol-electric vehicles, electric vehicles or, in the future, hydrogen fuel cell vehicles, and of smaller lighter vehicles instead of heavy ones.
- Encouraging greater use of bio-fuels from sustainable local sources. However, bio-fuels are not necessarily all good news. There is a danger that the European Union's aim that bio-fuels should comprise 5.75% of total fuel sales by 2010 will lead to destruction of globally important natural habitats in Indonesia and Brazil, and their replacement by vast plantations of palm oil, sugarcane and soy. And if forests are cut down and burned to make way for these plantations, carbon dioxide will be released into the atmosphere.

The Westminster government, rather than the Welsh Assembly Government, is responsible for action in some of these areas. However, there are important actions which could be taken here in Wales:

- Pilot an education and publicity campaign to encourage motorists to adopt a fuel-efficient driving style. A successful example of this is the Gas-saving ('Sprit sparen') campaign in Austria which includes popular events such as fuel-efficient driving competitions. There are similar initiatives in Germany, the Netherlands and elsewhere.
- Explore how Wales can best contribute to the provision of sustainably-sourced bio-fuels, for example from short-rotation coppice, oilseed rape, forestry thinnings and waste cooking oil; the most appropriate uses for fuels from these sources (heat, electricity or transport fuel); the economic benefits to Wales; and the potential adverse implications of greater use of bio-fuels, in terms of land use and biodiversity.

2.7 Saving lives

In 2004, over 200 people were killed on the roads in Wales, and over 13,000 were injured. This is an entirely unacceptable toll. It has serious consequences not only for those directly affected, but also for their families who have to cope with the loss or permanent serious disability of a loved one, the grief and psychological trauma, and the economic losses if the killed or injured person was a family breadwinner.

We ought to apply the same health and safety principles on our roads as we do for trains and aircraft, and in factories and workplaces. Health and safety at work professionals take the view that *no* death or injury at work is acceptable. They recognise that deaths and injuries are the one-in-a-hundred outcome of unsafe working practices, and that the only way to prevent death and injury is to eliminate those risky practices.

Other countries, notably Sweden, have adopted a 'Vision Zero' for road safety, based on this principle. Research by the Stockholm Environment Institute identifies actions to achieve such a vision in the UK, including the following³²:

- A media strategy focussing on ethics, values, and the harm done by deaths and injuries to those associated with a tragedy, especially friends and family.
- 20 mph speed limits in all urban areas (in an impact at 20mph, only 1 in 20 pedestrians are killed; if the vehicle speed is 30 mph about 8 in 20 pedestrians

will be killed and if the vehicle speed is 40 mph about 18 in 20 pedestrians will be killed³³).

- An accident investigation and reporting agency, to investigate all road deaths and serious injuries, and recommend actions to be taken to prevent a recurrence.
- A specific focus on road safety on rural roads, including education, road design, speed limits and speed enforcement.
- Random breath tests.

Only some of these measures lie within the remit of the Assembly Government. There is already a road safety strategy for Wales in place, but more urgent action, and more funding, is needed. The new actions the Assembly Government should take are:

- Invite proposals from local authorities and regional transport consortia for funding for town-wide 20mph demonstration projects. The lower speed limit could be enforced through road design, speed limiters, cameras or other means. For example, Transport for London is seeking Home Office approval to enforce 20mph zones with a time-distance camera. It estimates that all of London's residential streets could be 20mph zones within 10 years if such cameras were introduced, whereas introduction of London-wide traffic calming would take over 35 years³⁴.
- Establish an accident and investigation reporting agency for all road crashes in Wales.
- Review road safety policy for rural roads, as currently set out in the Rural Town and Village Trunk Road Initiative and change the current guidance on speed limits, which rules out the use of 30mph speed limits in many villages and hamlets on trunk roads.

2.8 Enabling access to daily facilities

For people without a car, it is now more difficult to reach the places that we need to visit on a daily basis – shops, school, our workplaces, healthcare, post offices, banks – than at any time in the last fifty years. Small shops have closed down in their thousands – between 1961 and 1997 the number of grocery retailers in Britain fell by 80 per cent³⁵ – and in rural areas of Wales, it is now common to have to travel many miles to reach a supermarket. Many rural schools have closed, and healthcare has been and is still being centralised in large hospitals, which necessitate journeys of several hours. Offices built on out-of-town business parks may be impossible to access if you do not have a car, creating the vicious circle of no job – no money – no car – no job.

At the same time as these facilities have become further away and harder to reach, public transport services have been cut back, and heavy fast traffic makes it impossible to walk or cycle. For many people, but especially older people, families with young children, and disabled people, the combined effect of these changes is to maroon them in their homes.

In England, local authorities are required by the Department for Transport to carry out 'accessibility planning'. This is a process of analysing gaps in transport and service provision, identifying solutions to these, and making them happen – often in partnership with other agencies such as healthcare providers. English local

authorities were required to submit accessibility strategies with their final Local Transport Plans in March 2006, and to have drawn up a schedule for delivery of their action plans, covering the period from now until 2010/11.

In Wales, regional transport consortia should become fully involved in accessibility planning. This should include carrying out strategic assessment and local assessments, identifying and delivering solutions, and setting and achieving targets for better accessibility.

Done properly, with adequate funding to implement solutions, accessibility planning could be a powerful tool to create accessible, sustainable, equitable communities. But on its own, the accessibility planning process is just that – a *process* – and no amount of strategising and planning will improve the travel options for ‘Mrs Jones’ if the money is not there to provide the decent bus services, taxibuses in rural areas, safe cycle paths, shopping home delivery and so on.

Thus, although we recommend that regional transport consortia should be charged with the responsibility to draw up and deliver accessibility plans, we believe that this will only be effective if there is wholesale reform of the funding system for transport so that it becomes possible to provide the many new public transport services, taxibuses, cycle lanes, footpaths along main roads, car clubs and so on that any serious accessibility action plan would quickly identify as necessary in all our communities, rural and urban.

Many of these services require revenue funding rather than capital funding, yet the vast majority of funding available to local authorities for spending on transport schemes is capital. We discuss in section 4 below the urgent need for fundamental reform of the funding for transport in Wales.

3. What the Wales Transport Strategy should not do

3.1 No more subsidy for flying

Aviation is the least sustainable form of transport and the fastest growing source of carbon dioxide. Moreover, its effect on the climate (the ‘radiative forcing’ from CO₂ and water vapour emitted at altitude) is more than double that of the same amount of carbon dioxide emitted at ground level. The UK Government predicts that aviation could represent one quarter of the UK’s contribution to global warming by 2030³⁶.

The Assembly Government’s decision to subsidise air services will encourage a culture of flying. It is inconsistent with any commitment to environmental sustainability.

In addition, subsidy for air services represents poor value for money. A study for Friends of the Earth Cymru³⁷ has shown that time savings on journeys between north and south coast destinations are less than claimed once travel times to airports are taken into account. This study and a new report by an Assembly Committee³⁸ list a range of achievable and affordable improvements that would speed up the train journey between North and South Wales and lessen the disparity in journey times. This would be a far better use of public money than subsidy to encourage air travel.

The planned North-South air services are aimed at an exclusive market, mainly business travellers. Support for air travel will do nothing to tackle social exclusion and the difficulties experienced by disadvantaged groups who struggle to access basic facilities and work opportunities.

The Wales Transport Strategy should:

- State that air travel and air freight are in conflict with the Assembly Government’s stated priority of tackling greenhouse gas emissions.
- Set the objective to reduce air travel and air freight both within Wales and to and from Wales.
- Re-balance the £8bn 15 year investment programme to exclude subsidy to aviation, whether as ground transport links to airports, airport facilities or financial support to services.

3.2 No new M4

The official appraisal study³⁹ of options to relieve congestion on the M4 showed that the worst possible option is the Assembly Government’s plan to build a new M4 between Magor and Castleton. The new M4 came out of the appraisal as the worst option financially and environmentally and third out of four options in terms of relief to congestion. This wide-ranging appraisal showed that a package of enhanced public transport plus traffic restraint measures could easily achieve and exceed the congestion relief required, lessening traffic by 58% against the ‘do minimum’ case – more traffic reduction than by building a new M4! This package of measures would also help reduce carbon dioxide emissions, whereas the new M4 would increase them and also would severely damage nationally important wildlife sites (SSSIs) on the Gwent levels. The appraisal study showed that the new M4 project would return the worst value-for-money (net present value, NPV) of all of the options. Moreover, this appraisal study was, if anything, liable to be overly conservative in its

assessment of traffic restraint and public transport measures, given that it predated extensive work for the Department for Transport that has shown the scale of traffic reduction that can be achieved by programmes of smarter choices⁴⁰.

The Assembly Government's decision to pour money into a new M4 in the face of evidence showing the viability and value of forward-thinking alternatives is an unfortunate example of 1960s policymaking in the twenty-first century. This predict-and-provide approach just leads to a larger amount of tarmac under a larger amount of stationary or slow-moving traffic. The solution lies in transfer to sustainable modes of travel, not in more motorways doomed to fill up with the traffic they inevitably attract.

The Wales Transport Strategy should cancel the new M4 and instead spend the money on packages of public transport and traffic restraint measures to control M4 congestion.

3.3 No more road-building

The Assembly Government's Supplement to the Trunk Road Forward Programme (published in 2004) lists a total of 47 road schemes. This does not include road construction funded under the 'Repair and Upgrade' line of the trunk road maintenance budget.

A roads programme on this scale is inconsistent with principles of sustainability and social justice. It is ineffective, even on its own terms; it has a severe global and local environmental impact; and it increases social exclusion, reduces accessibility and has negative consequences for public health.

Road schemes which are intended to relieve congestion rarely fulfil this aim, because they quickly fill up with additional traffic, caused by people making new or longer trips. A forthcoming report for the Countryside Agency and CPRE shows that traffic flows after a new road has been built are commonly higher than forecast. For example, in the case of the Newbury bypass, traffic flows on the bypass have already exceeded forecast flows by 46%, six years before the 2010 estimation date⁴¹. Congestion problems can be tackled more effectively and at lower cost through a package of better public transport, walking and cycling facilities; smart choice programmes and traffic restraint – but these packages are rarely assessed as part of the appraisal process for a proposed road.

New roads increase emissions of carbon dioxide, making it more difficult to achieve the large reductions in CO₂ from the transport sector that are needed in order to tackle climate change. Together with the new ribbon development which they can stimulate, they are often visually intrusive, sometimes severely so. The noise impact and light pollution are often worse than predicted, and affect an area greatly in excess of the actual land-take of the new road. Evidence from the Countryside Agency / CPRE study suggests that mitigation measures for these impacts are not in practice effective.

By stimulating development of out-of-town business parks and superstores, new roads cause the decline of town centres and force people into car-dependent lifestyles. This results in greater social exclusion for those without a car, and reduces the chance for people to walk and cycle to shops and to work – which in turn leads to poorer health.

Given these serious adverse consequences, the Wales Transport Strategy should announce a fundamental review of the Trunk Road Forward Programme and the Repair and Upgrade Programme. The trunk roads budget should be re-allocated to measures that will support sustainable travel choices.

4. Matching words with actions... and actions means money

The Wales Transport Strategy is likely to present sustainability as central to its agenda, in line with the Assembly Government's policies on sustainability. However, the current *actual* pattern of expenditure contradicts that representation.

- 76% - more than three quarters - of the Assembly Government 2005/6 budgeted expenditure for transport was directed at trunk roads or local roads⁴². The Assembly Government's 15 year £8 billion programme of transport expenditure, launched in December 2004, is set to continue this bias: all of the largest grants announced at its launch were for road schemes⁴³.
- The Assembly Government plans to subsidise air services and fund road projects to boost use of Cardiff airport as part of its 15 year programme of transport expenditure⁴⁴. The level of subsidy required to ensure commercial viability for the planned additional air services from Cardiff has been estimated at £1 million per year⁴⁵. This subsidy will promote the culture of flying and undermine investment in rail.
- Less than 2% of the Assembly Government's 2005/6 budget for transport was directed at walking and cycling⁴⁶.
- Less than 16% of the Assembly Government's 2005/6 transport budget went on buses and community transport⁴⁷.
- Under 2% of the Assembly Government's 2005/6 transport budget was allocated to road safety⁴⁸.
- Smart measures represented just 0.05% of the transport budget in 2005/6⁴⁹.

These figures demonstrate that fundamental change is called for. They reveal a significant mismatch between rhetoric and reality. Even after adding in the Assembly Government's anticipated net outgoings from its new powers to fund the rail franchise, roads still consume 65% of the budget⁵⁰. This is in stark contrast with the commitment of the Scottish Executive to spend 70% of its budget on public and other sustainable modes of transport over the ten years to 2012/13⁵¹.

4.1 The structure of spending

Spending on transport in Wales is about to undergo a fundamental shift with transfer of authority to the four regional transport consortia to develop regional transport plans. There is great sense in taking a regional approach to transport planning and funding, a model that has performed very well in various countries across Europe. In comparison the UK has tended to leave local authorities struggling to deal with the many transport issues that cross over county boundaries.

However, to emulate the success of the European model the regional-level funding must be extended to include revenue-based projects as well as capital-based projects. The presently envisaged funding process is that the regional transport plans will form the basis of bids to the Assembly Government for Transport Grant, monies which are entirely dedicated to capital schemes. There is a key role for regional-scale programmes of smart measures, active travel and other revenue-based projects to create alternatives to car-based travel if we are to succeed in developing more sustainable travel options and behaviour across Wales.

Sustainable Transport for Wales – Time for Change

An associated issue is how the forthcoming Welsh Transport Appraisal Guidance (WelTAG) will treat such measures. The WelTAG appraisal methodology must give fair consideration to packages of demand management, smart measures and small-scale public transport, walking and cycling improvements. In general, the excellent value for money of packages of this type means that they should be considered *before* road schemes. Road scheme promoters should be required to show that they have considered whether a smarter choices programme coupled with small scale capital investment might obviate the need for the major road scheme altogether.

5. Time for change

The new powers vested in the Assembly Government, and the shift to develop the role of the regional transport consortia, offer a welcome and hugely important opportunity to chart out a new course towards a sustainable transport policy for Wales. If we do this, we will improve our quality of life and strengthen our local economies, and show international leadership.

Our current travel patterns are grossly unsustainable. A radical change of course is required in order for us to reduce carbon emissions from transport to around a tenth of current levels. This poses a huge challenge for policy-makers, as it implies a change in policy direction and lifestyles on a scale for which Wales is completely unprepared.

The good news is that the policies that are needed to steer us towards a low-carbon society will also create a more healthy society – with more local journeys, and more walking and cycling. Less dependence on cars will also make Wales more resilient to oil-price shocks that will inevitably occur within the timescale of the Assembly Government's new transport strategy, and this will help the economy of Wales to survive what are likely to be difficult times ahead.

As the Assembly Government launches a consultation on the new Wales Transport Strategy, we call for radical shift away from the old, failed policies and towards a new set of policies based on respect for the environmental limits of our planet and social justice.

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