DRIVE GREEN - DRIVE SAFELY

The industry guide to responsible motoring

FOREWORD BY STEPHEN LADYMAN MP, TRANSPORT MINISTER

This booklet is a handy reminder that there are simple things we can all do to make for cleaner, safer journeys. Driving safely and smoothly and keeping your car in good shape helps reduce the risk of accidents, cuts down on harmful exhaust emissions, and saves you money. The more we get this message across, the better.

By following some of the hints and tips in this booklet, you can help protect yourself on the road and cut down on pollution. I know I will find it useful. I'm sure motorists across the country will too.

Stephen Ladyman MP
January 2006

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FOREWORD BY CHRISTOPHER MACGOWAN

Welcome to Drive Green, Drive Safely, the pocket guide to responsible motoring brought to you by SMMT.

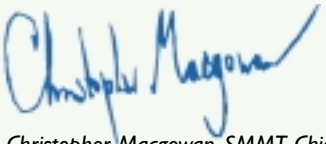
Climate change and road casualties - these are two of the biggest challenges for society. Across the globe, temperatures are rising and scientists blame man-made carbon dioxide. Meanwhile 1.2 million people are killed and another 50 million injured globally on the roads each year. Although figures are falling, deaths on UK roads still number more than 3,000 each year. Every death, be it at home or overseas, is a tragedy.

Yet it's a simple fact that no car emits carbon dioxide, or any other harmful gas, when it's not being driven. Nor do cars harm people, unless they are driven irresponsibly, without regard to the rules of the road or consideration of other road users.

Car makers are making excellent progress in bringing greener cars to market, fitted with the latest safety enhancing technologies. But we also think we have a part to play to encourage responsible motoring. That means helping you, the motorist, understand your role - the steps you can take to limit emissions and ensure you take every precaution to prevent harm coming to you, your loved ones and other road users.

Armed with Drive Green, Drive Safely, you can make the right decisions. Some of the advice in the following pages may sound obvious, some of it you may have heard before but we think it's worth repeating.

Are you ready to help make a better future?



Christopher Macgowan, SMMT Chief Executive

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BUYING A CAR - TOP 10 TIPS

1. Do your research - whether it's a new or used car, manufacturers' web sites are a relaxed environment to decide exactly what you need.	**6.** Consider a diesel - modern diesel cars are smooth, fuel efficient and emit 20 to 30 per cent less CO_2 from the exhaust. They may save you money, too.
2. Consider your options carefully - how are you going to use the car? Will it be for commuting, long-distance driving or occasional use? How many seats do you need and what size of engine?	**7.** Read the owners' manual - you can best protect your family if you fully appreciate the safety features of your car. Ask your dealer for advice.
3. Could you go lower? - choose a lower emitting car, whether new or second-hand, and you will save money and cut down on emissions. Alternatively-fuelled cars exist to suit most budgets.	**8.** Check the service history - a properly maintained used car will last longer, protect its value and minimise environmental impact.
4. Use the new car green label - carbon dioxide emissions and average running costs for specific models can now be compared easily in new car showrooms.	**9.** Take an expert - if you don't know what to look for when buying a used car, take someone who does. It could save you money - and your life.
5. Buy a newer car - as a rule of thumb, the newer the greener. On carbon dioxide and air quality emissions, newer cars will be cleaner.	**10.** To ensure you do not pay over the odds for your next car, use price guides to benchmark what you can expect to pay for a specific model.

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CHOOSING THE RIGHT CAR

CAR PURCHASE CHECKLIST

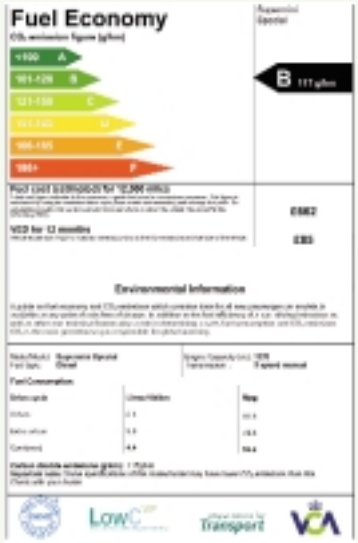
- ✔ Visit manufacturers' web sites. They are full of useful information and advice.
- ✔ Think about engine size. A smaller engine may be ideal for shorter journeys and urban driving.
- ✔ Large vehicles provide flexibility but consume more fuel. You may need the extra space but think carefully about your needs.
- ✔ A five-door vehicle will be more convenient than a three-door if you have a family.
- ✔ Automatics may be easier and more practical to drive, and many modern ones match the fuel consumption of manual equivalents.
- ✔ A modern diesel car is highly fuel efficient and delivers smooth performance with lower CO_2 emissions.
- ✔ Have you considered buying a hybrid or alternative-fuelled car? More of these models are becoming available.
- ✔ Ask about safety features. Remember, it's not just things like airbags and seatbelts that protect you and your family. Systems like ESP (electronic stability programme) are helping to prevent accidents happening in the first place.
- ✔ Do you need options like air-conditioning? These can reduce your car's fuel efficiency if used excessively.
- ✔ Most manufacturers offer a three-year warranty with a new car - some can be longer. Whether the car is new or used, make sure you understand what's covered by the policy.
- ✔ Buy from a reputable source - if you're importing a car, make sure it is fit for UK roads. Replacement parts can be expensive.
- ✔ Check the service history - a properly maintained used car will last longer, protect its value and minimise environmental impact.
- ✔ A car sold under a manufacturer's used car scheme will ensure quality and customer service.
- ✔ Take an expert - if you do not know what to look for, take someone who does. It could save you money or your life.
- ✔ To ensure you do not pay over the odds for your next car, use price guides to benchmark what you can expect to pay for a specific model.

LOW CARBON MEANS LOW COST MOTORING

Customer demands are changing. Twenty years ago safety was low on the list of buying priorities, now it's one of the first things owners look for in a new car. A safe car protects passengers inside the vehicle - and more absorbent front end design means they are safer in impacts with vulnerable road users like pedestrians and cyclists too.

Today climate change is a key concern, for politicians and consumers alike. Environmental performance is therefore likely to follow safety and move up the buying agenda in the years to come.

The motor industry has worked hard to deliver environmental improvements, bringing new, alternative-fuelled cars and trucks to market, as well as in-car technologies that limit carbon dioxide and other emissions and dramatically improve fuel efficiency of new car models. But consumers want to know more.



New colour-coded label

Since September 2005, consumers have been given more information about the environmental impact of their choice of a new car. Showrooms display a clear, colour-coded label in a format similar to that found on white goods like fridges and washing machines. The system is familiar and makes model-by-model comparisons on car CO_2 output easy.

Basically, a car with a green rating emits less carbon dioxide, while cars that display a label in the yellow and red bands will emit more. The level of CO_2 in each colour-coded band is identical to the bands used to levy road tax (vehicle excise duty).

Low carbon = low cost motoring

But as well as information about carbon emissions, the label also includes clear advice about annual fuel costs and road tax. That means buyers will soon start to realise that a low carbon choice also means lower cost motoring. The Vehicle Certification Agency (VCA) web site offers one of the most comprehensive sources of data for the environmental performance of vehicles. Visit **www.vca.gov.uk**

Choosing a 'greener' car will benefit your pocket, as well as the environment.

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ALL POWER TO DIESEL

Why would you consider a diesel car? After all, aren't diesels dirty and more polluting? Don't they sound like tractors and offer similar levels of performance? Not any more!

Carbon dioxide

The latest generation of diesel models are refined and sophisticated: you may not even know it's not a petrol model! Noise, vibration and emissions are all lower and, on CO_2, modern diesels emit 20-30 per cent less than petrol equivalents. Comfortable and strong performers, diesels can hold their value better on the used car market.

Air quality emissions

Modern diesel cars are clean operators on other emissions too - and the rule of thumb is 'the newer the better'. Since 1992, ever-stricter engine standards have applied to new cars. These regulate the amount of emissions that are crucial to improving air quality.

The list includes particulates (soot), carbon monoxide and oxides of nitrogen. The industry is currently taking forward new technologies for diesel vehicles including diesel particulate filters (DPFs), which virtually eliminate soot emissions.

Take soot from new diesels cars, for example. The modern diesel, complying with Euro 4 engine standards, can only be sold if it emits just seven per cent of that of a car on the market in 1990. And the limits will get even tighter in years to come.

The market for diesel

UK buyers have woken up to the benefits of diesel. The market for diesel cars has risen from six per cent of sales in 1990 to nearly one in three new cars leaving showrooms last year. And this is expected to continue to rise.

The rapid replacement of older cars with these modern diesels will make an important contribution to achieving clean air goals, even at locations with heavy traffic.

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OPTIONS FOR ALL

Disabled citizens and those with restricted mobility have a right to benefit from access to transport. That means public transport, as well as the increased personal mobility that can come from owning a car.

MAVIS

The Mobility Advice and Vehicle Information Service (MAVIS) helps disabled and older motorists make informed decisions about their own mobility needs. Funded by DfT, MAVIS provides free, practical advice on driving, vehicle adaptation and suitable vehicle types for both drivers and passengers.
For more information telephone **01344 661000.**

Motability

Motability is a not-for-profit organisation which provides mobility solutions for disabled and elderly people, including grants towards specially adapted vehicles, wheelchairs or scooters. Further information is available from **0845 456 4566** and **www.motability.co.uk**

Tripscope

Tripscope is a charity offering disabled and elderly people advice and information on travel in the UK. Call **08457 58 56 41** or visit **www.tripscope.org.uk**

Help the Aged

Help the Aged have produced Keeping Mobile, a guidance booklet for elderly travellers. To request a copy contact Help the Aged on **0207 278 1114** or visit **www.helptheaged.org.uk**

Blue Badge Scheme

Those who have difficulty walking may be eligible for a disabled parking badge. The blue badge means that any car you travel in (whether you are the driver or a passenger) can be parked close to shops, your doctor's surgery or other places that you want or need to visit.

For more information or to apply for a blue badge, contact the blue badge unit of your local authority.

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SIZE AWARE

4x4s and SUVs are the latest industry hot topic. Owners love their versatility, their off-road ability, towing capability and the high driving position.

As with all vehicles, drivers can help minimise their impact on other road users if they follow our five point guide to urban motoring.

1. Drive considerately and park safely, particularly near schools.
2. Never double park, don't leave your vehicle on the pavement and keep off double yellow lines.
3. Always let the bus go first - it's in the Highway Code.
4. If your 4x4 has seven seats, use them. Offer to give friends a lift, for example.
5. Drive responsibly and legally wherever you are – on and off-road.

If you do own a 4x4, the following facts might help in a debate about safety, emissions and size.

1. On size - the UK's three best selling 4x4s are no longer or wider than a family saloon.
2. On emissions - an average 4x4 emits less CO_2 than an average luxury saloon and similar amounts to an average sports car. And their environmental performance has improved by 15 per cent in the last seven years compared to around 10 per cent for all other market segments.
3. On passenger safety - a 4x4 drivetrain offers better stability because it drives all wheels of the vehicle. The higher driving position provides good visibility, and a wide range of modern cars are fitted with stability control and anti-rollover technologies.
4. On pedestrian safety - 4x4s are subject to the same safety and crash tests as other passenger cars. And like other passenger cars, some perform better than others. For example, in independent crash tests a British-built 4x4 performed better than almost all small cars. *(Source: EuroNCAP).*
5. Bad driving is bad driving. But it makes no difference if the driver making a U-turn or parked on double yellow lines is in a small city car or larger 4x4.

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DRIVING YOUR CAR - TOP 10 TIPS

1. Consider alternatives - if public transport is available, reliable and reasonably priced then use it. Is there a Walking Bus scheme for school children in your area?
2. Avoid unnecessary journeys - combine trips like bottle recycling and shopping. Could you walk or cycle to the paper shop rather than take the car?
3. Plan your route - traffic jams are often avoidable so use route planners to plot the best journey. Avoid peak congestion on busy roads and accident black spots for smoother journeys.
4. Re-read the Highway Code - speed limits, mobile phone restrictions and traffic signs are in place for a reason.
5. Give the road ahead and all around your vehicle your full attention. Be especially aware of vulnerable road users, such as children.
6. Be a smooth driver - your pocket and the environment benefit from gentle acceleration, braking and lower speeds. Using a higher gear can help too.
7. Keep calm - never respond to abuse or retaliate if others drive poorly. Why risk turning an unpleasant situation into a confrontation or an accident?
8. Never stop learning - take an advanced driving course. If you have been driving for many years you may need refresher training.
9. Read your owners' manual - understanding basic safety checks and how safety systems work could save your life.
10. Enjoy your car but consider others - your car stereo may be your pride and joy but your neighbour's worst nightmare.

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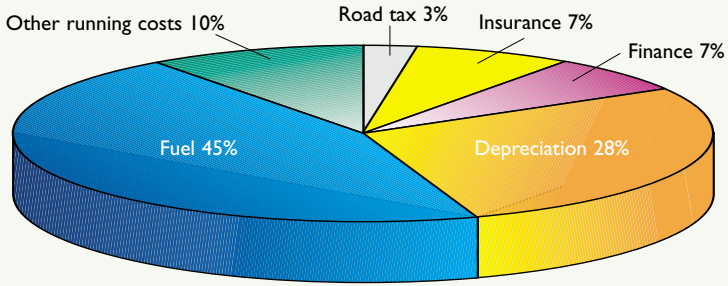
ECO-DRIVING

Eco-driving is not just about saving the environment. As fuel costs rise and motoring taxes soar, it's about making motoring as cost effective as possible for owners.

BREAKDOWN OF ANNUAL MOTORING COSTS



Source: The AA Motoring Trust **(www.aatrust.com)**

As fuel is the biggest single motoring cost, the number of journeys you make and the way in which you drive could make a huge difference. Think about it. Do you really need to take the car to the paper shop? Could you walk the kids to school? Reducing your speed on the motorway could save hundreds of pounds each year for regular drivers.

Top tips to save you up to 15-20 per cent in fuel cost and emissions and help reduce your impact on the environment.

1. Drive smoothly, accelerate gently and brake sensibly - use the natural momentum of the car.
2. Monitor your fuel consumption. Make it your aim to get more from the tank every time you fill up.
3. Change into a higher gear at the most economical point, this means at around 2,500 rpm in petrol cars and 2,000 rpm in diesel cars.
4. Anticipate conditions and plan your journey. Avoid peak times and areas of known congestion.
5. Check your tyre pressures (and condition) regularly. Incorrectly inflated tyres can increase fuel consumption by up to 10 per cent - and can endanger lives.
6. In stationary traffic or in temporary parking, always switch off your engine.
7. Remove unnecessary weight from your car. An unused roof box could increase fuel consumption by up to 10 per cent.
8. Use optional equipment sparingly. Turn the air conditioning off if you don't need it.
9. Service the car regularly. Missing a service is a false economy.
10. Think about alternatives to the car. Public transport can be relaxing, clean and reasonably priced. And walking may even improve your health.

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STEPS TO A SAFE JOURNEY

When did you last read the Highway Code? For the vast majority of the driving population the answer is probably 'not since my driving test'. Yet, it is full of information that each and every person on the road needs to drive green and drive safely.

Here is a selection of industry tips, some taken from the latest code, available from book shops and on the web at **www.highwaycode.gov.uk**

- ✔ Correctly inflated tyres improve their performance and life - check the owners' manual for recommended pressures.
- ✔ Check and clean your headlights and indicators before departing on a long journey. You need to see - and be seen.
- ✔ Mobile phone use without a hands-free kit while driving is illegal. Missing that call won't kill you, but an accident in your car might.
- ✔ By undergoing an annual MOT check, your motor will be in the best possible condition and will hold its resale value.
- ✔ Ensure your washer bottle is full of screen wash. Don't run out on a dirty, wet motorway.
- ✔ Low coolant levels in your radiator could result in your car over-heating and cause damage to the engine. So check it regularly.
- ✔ Make sure your child car seat is fitted properly every time it is used. Always keep a copy of the fitting instructions in your car.
- ✔ When safe to do so, check the effectiveness of your brakes, particularly after travelling through standing water. You never know when you might need to perform an emergency stop.
- ✔ Check that your front and rear windscreens are clear and your wipers work - poor visibility could mean you miss potential hazards.
- ✔ Optimum oil, coolant, brake fluid and battery electrolytes will ensure your car has the energy it needs to run smoothly.
- ✔ Always carry warm clothes and supplies in your car in case of breakdown. Consider a roadside recovery policy, particularly if you have children.
- ✔ If buying a used car, make sure it's checked by a qualified engineer, for example from the AA or the RAC.
- ✔ Distractions can be fatal. Ensure any children, pets and luggage are seated and secured.
- ✔ Always tell family, friends or colleagues about your journey in case of emergency.

DRIVER TYPES



There are many different types of drivers and many different types of journey. So it's a little unscientific to specify 'driver types' and to give advice that is pertinent to all. However, it may be that most of your driving is commuting, maybe you need your car for business, or you could be a low mileage driver using your car simply for leisure activities. If so, consider the following advice:

Car used mainly for commuting

Tips to refine your driving style and increase road safety

- Plan ahead on motorways. They are convenient, but beware of trouble spots for congestion.
- Can you give a colleague a lift to work? Taking it in turns to drive will cut costs, limit congestion and give you a welcome rest from driving!
- Looking for car parking spaces can be frustrating, but don't lose your cool. The person in the next car is probably trying to get to work too.
- Disabled parking spaces are there for a reason - do not deny someone the space who really needs it.

Car used mainly for leisure trips

Tips to refine your driving style and increase road safety

- Unfamiliar roads can hold many hazards. Plan your route and concentrate.
- Don't give in to peer pressure. Speed limits are recommendations not targets. Don't be 'pushed' by an aggressive tailgater, simply pull over and let them go past when it is safe to do so.
- Young drivers - don't become a statistic. 12.3 per cent of all fatal car crashes involved drivers under 20 years-old in 2004. This was an increase from 8.7 per cent in 2000. It's cool to be safe.
- Avoid rush hour journeys and always carry a map - or consider an aftermarket satellite navigation.
- Don't add to noise pollution, be considerate when playing your music. If you've modified your car, make sure it's safe and legal, and attend only properly-run car enthusiast events.
- If you own a 4x4, drive responsibly and legally off-road.
- Young drivers should build up their experience and understand how their car handles before attempting to drive with a full load of passengers.
- Don't throw litter out of your vehicle - dispose of it responsibly when you complete your journey.

Car used mainly for business purposes

Tips to refine your driving style and increase road safety

- Only a fool breaks the two second rule - keep a safe distance behind the car you are following. Tailgating the car in front could result in fatal mistakes.
- Using a mobile phone - even with a hands-free kit - is a distraction that could be fatal. Stop or pull over when it is safe to do so, if you need to use the phone.
- Do not exceed the speed limit, pull over and contact the office if you're going to be late.
- Take a break every two hours - motorway driving can be very tiring.
- Never stop learning. Talk to your employer about advanced driver training. It will develop your skills and is inexpensive.

VEHICLE MAINTENANCE, SAFETY AND SECURITY - TOP 10 TIPS

1. Service your car regularly - proper servicing will cut emissions, keep your car on the road for longer and make it more valuable on re-sale.	**6.** Walk around your car before driving - is there a toy, pet - or even a child - in the way? Check your mirrors and signal before moving away.
2. Check the condition of your tyres weekly - change them well before they reach the minimum legal tread depth.	**7.** Read the owners' manual and do regular checks. Make sure water, washer fluid, oil and brake fluid are topped up, particularly before a long journey.
3. Take time to fit your child seat - read the instructions carefully. It may be the most important thing you do today.	**8.** All motorists have a legal responsibility to take out insurance cover for their car. Responsible driving can help reduce your insurance premium.
4. Your head restraint is not a 'head rest' - it's an integral part of driver and passenger safety. If you have an adjustable head restraint, set it properly. It will protect against neck injury in a crash.	**9.** Don't put things on airbags or allow children to rest against them. An airbag deploys quickly and with force. That pen on the dashboard could become a projectile in a collision.
5. Always wear seatbelts - this means drivers, passengers and particularly children. Also, check your seating position and ensure seats are correctly adjusted before you set off.	**10.** Remove it, shut it, lock it - removing all valuables from your car and shutting windows, doors and the sunroof will help reduce the chances of theft. Always park in a secure, well-lit area.

REGULAR SERVICING

Regular servicing means six main benefits for drivers:

- Extends a vehicle's life.
- Uncovers defects before they become serious – and costly.
- Reduces the risk of a breakdown.
- Prevents accidents through routine safety checks.
- Ensures better fuel economy and minimises all types of emissions from the tailpipe.
- Boosts a car's value and makes it easier to sell.

You could carry out simple maintenance on your car yourself, referring to the owners' manual. However, unless you are a qualified technician, there are some checks that should always be carried out by your local garage or franchised dealer. Modern vehicles are complex machines and you may damage safety critical systems if work is not carried out by a professional.

As cars become more durable, service intervals increase. Some cars now only need a service every 24,000 miles or two years; cars more than three years old are legally required to have an annual MOT test. Check your handbook for further details. You may service outside the franchised network during the new car warranty period but make sure your garage knows what to do and gives you evidence that the work has been carried out to the manufacturer's standards using genuine or equivalent quality spare parts.

Your garage should explain the reasons for any additional work during a service. They should also give you a detailed breakdown of the costs involved for all the repairs carried out. And of course, if a warning light illuminates on the dashboard while driving, pull over and refer to your owners' manual. It will tell you what action to take.

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MODERN SAFETY

In the last 10 years, new car safety has improved significantly. The focus is no longer simply protecting the occupants in a crash, but increasingly it's about better front end design to limit injury to pedestrians and cyclists.

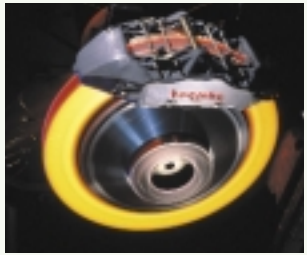
An accident prevented is the best form of crash protection. Technologies that prevent accidents, sometimes called active safety systems, are becoming more common. The latest technology can now be found in smaller models, not just luxury cars.

Yet, how many of us know about the advances in vehicle technology? And how many of us take time to read the owners' manual to gain maximum benefit from a car's safety systems? The answer is probably very few.

According to a recent industry survey, just four in 10 people were able to name a single active safety system in a modern car. Despite being fitted as standard to all new cars since 2004, anti-lock brakes were named by just 29 per cent as an example. Six per cent of those asked were unable to name any active or passive safety feature - even seatbelts!

So the motor industry is encouraging people to read their owners' manual, to ask their dealer about the safety systems and to ask questions about the latest technologies when buying a new car.

Anti-Lock Brakes



Passive Safety System

Child Seats

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Common Passive Safety Systems:

- Airbags - some are now multi-stage, limiting the force of deployment depending on the size of the occupant.
- Side protection beams - absorb the energy of a crash from the side.
- Pre-tensioned seat belts - take up the slack in an impact, keeping the driver or passenger firmly in place.
- Active head restraints - sensing a crash, these move into position to limit head movement and neck strain, reducing the chance of whiplash.
- ISOFIX mountings help to secure a child seat.
- Pedestrian protection - modern car design leaves more space between the engine and the bonnet to help cushion pedestrians in a crash.
- Under European regulations, windscreen wipers must be recessed into bonnet design to reduce the chances of pedestrian injury.

Common Active Safety Systems:

- ABS (anti-lock brakes) - voluntarily-fitted as standard to all volume production cars, these allow drivers to steer around an object during emergency braking.
- ESP (electronic stability programme) - a device that thinks and acts automatically to correct over- and understeer and skidding when cornering. It is now fitted to three in 10 new cars sold in the UK.
- Lane departure warnings - warn the driver when they are drifting across lanes.
- Active cruise control - monitoring distance between cars on a motorway, braking if something pulls out or traffic in front slows suddenly.
- Parking sensors and reverse cameras - ensuring small things and people are seen and therefore avoided when reversing.
- Adaptive headlights - swivel to illuminate more of the road while cornering. Infra-red headlights double the range of dipped-beam sight.

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SAFE CAR DESIGN

All new cars meet stringent European standards for vehicle safety. Manufacturers undertake many additional tests to improve the safety performance of new cars.

Safety is a priority for new car buyers and manufacturers have responded by raising the standards. Safety has also become synonymous with competitive advantage - a key driver in technological innovation and the design process.

Safety performance varies within each market segment. Some small cars perform very well, others less so. Equally, some larger models have proved more successful in EuroNCAP tests than competitors. But as a general rule, EuroNCAP tests have shown that the newer the car, the safer it tends to be.

EuroNCAP is Europe's authority on independent crash tests. The consortium has extensively tested the latest models from car manufacturers since 1997, and awards star ratings for occupant, pedestrian and child safety.

However, while EuroNCAP tests present useful guidance on crash test worthiness, car owners should be encouraged to find out more about 'active safety' systems *(see previous page)*.

The UK has the second best record in Europe for low road casualties, yet government figures show that more than 3,000 people each year die on our roads. Every one is a tragedy but your vehicle choice - and the way you drive - can help.

To see how your car performed visit **www.euroncap.com** or **www.thatcham.org/safety**

Technological innovations

EuroNCAP test

www.smmt.co.uk

CHILD SEATS

According to RoSPA – the Royal Society for the Prevention of Accidents - 70 per cent of child seats are incorrectly fitted or used by owners. THINK!, the DfT-sponsored road safety campaign, reports even more startling news. Nine out of every 10 child fatalities in road collisions could be avoided if children were correctly strapped-in.

So think about it. Checking your child seat may be the most important thing you do today. Taking a few minutes to follow the advice below could be the difference between an accident prevented and a tragedy.

- Talk to your franchised dealer about the most suitable child seat to fit to your car.
- Make sure that you have the correct seat for your child's height and weight.
- Ensure the seat fits your car by getting a trained member of staff to demonstrate correct fitting.
- Read the instructions before fitting your child seat - and keep them handy next to the owners' manual in the car.
- Where ISOFIX anchors are fitted, use them.
- Before starting any journey, check your child's seatbelt or harness is properly secured.
- Don't let your child play with the seatbelt buckle or strap.

The future is ISOFIX

ISOFIX mounting points are built into the frame of your car. It means that a compatible seat can plug directly into the points in the car, without the need to use seat belts to secure it in place.

Around 75 per cent of all new cars are now fitted with ISOFIX mountings. By February 2006, all new cars approved for sale in Europe will be equipped with ISOFIX mountings – an important initiative to drive down child casualties.

For more information about car seats and how they should be fitted, see the following web sites:

www.thinkroadsafety.gov.uk/advice/childcarseats.htm

www.rospa.org.uk

www.racfoundation.org

www.smmt.co.uk

SEASONAL DRIVING

Motorists encounter a wide range of driving conditions in the UK as the weather changes from season to season. This creates a number of hazards that a driver must be able to respond to.

For example, a low sun in autumn months can mean poor visibility whilst summer weather can lead to driver fatigue and uncomfortable driving conditions.

However, winter is particularly treacherous because of poorer weather conditions and fewer daylight hours. Research undertaken by GreenFlag suggests that 50 per cent of motorists admitted that they did not know where to start in order to prepare their car for the winter.

The following tips will ensure you are prepared whatever the weather:

- Take your car for a winter service. This will ensure it is in peak condition.
- Check the condition of your car's wiper blades, as they will maintain your visibility ahead and behind.
- Top up your screen wash, oil and coolant to the recommended levels.
- Anti-freeze is vital for your cooling system during the cold winter.
- If your tyres are in good condition this will improve your safety in winter conditions. Change marginal tyres before the winter months.
- Check that your spare tyre is in good condition and correctly inflated.
- Leave plenty of room between your car and the one in front - poor driving conditions will increase the distance you need to stop.
- Get your car battery checked at a garage before winter sets in.
- Less than a third of drivers carry their breakdown cover details with them. Invest in breakdown cover and keep hold of it in case of emergencies.
- If you are less confident about travelling at night, plan your journey to coincide with daylight hours.
- Check all your lights are working before each journey - they will maximise your visibility and safety on the roads.
- Check lights and number plates are clean as road film and grime can reduce their effectiveness.
- Turn fog lights off unless the conditions require their use. They can dazzle and confuse other drivers if used incorrectly.
- Keep a warm coat, hat, gloves, a torch and a blanket in the car in cold weather. A fully-charged mobile phone will be invaluable in case of breakdown.
- If the windscreen is frozen or covered in snow, don't use the wipers without first freeing them otherwise you could burn out the electric motor. Using de-icer and a scraper will make cold-starting easier.

VEHICLE SECURITY

Home Office figures show much progress in the battle against car crime. New cars, fitted with immobilisers, are increasingly difficult to steal and initiatives to prevent stealing valuables from cars are working.

Theft of, or from, vehicles peaked at 4.3 million in 1995 in England and Wales. In 2004/05 this figure had fallen by 56 per cent to 1.9 million, despite 27 per cent more vehicles on the road. The British Insurance Car Security Awards (BICSA) recognise the commitment by manufacturers to produce the most secure cars and help raise consumer awareness of the best security available. Results can be found at **www.thatcham.org**

Tips to reduce the risk of car crime

- Hide all possessions, or even better remove them from your car completely.
- Keep your car keys out of sight at home and at work.
- Ensure all windows, doors and sunroofs are firmly shut.
- Do not leave your car unlocked; remember to double check.
- Never leave the keys in your car when you pay for fuel at a re-filling station.
- Always use a steering lock every time you leave your car. New cars have this feature built into the steering column.
- When parking at home, try to use your garage. If you don't have a garage, park in a busy and well-lit area.
- Use car parks that are part of the 'secure car parks' scheme.
- Modern car stereos are coded and can only be used with the individual vehicle - if you have an older car invest in a stereo with a detachable fascia to help prevent theft.
- Car alarms can deter thieves who are attempting to break into your car. But make sure they are fitted by a reputable aftermarket supplier.
- Locking doors when driving could help reduce the likelihood of car-jacking or people stealing bags or coats from your seats.
- An immobiliser prevents a car's engine being started without the ignition key.
- Locking wheel nuts of good quality are easy to fit and will prevent thieves from stealing your wheels.
- Mark all your car's equipment with your registration and its vehicle identification number (VIN).
- Laminated security glass provides added strength and protection over conventional glass, making it harder for criminals to gain access.

For more information, please visit **www.secureyourmotor.gov.uk**

DISPOSING OF YOUR VEHICLE RESPONSIBLY - TOP 10 TIPS

1. Cars have an average life-span of 13 years - but your car will last longer if it is driven carefully and is properly maintained.
2. The last owner is responsible for disposal of scrap cars. Improving DVLA records will identify last owners.
3. Car dumping is a crime. It is also irresponsible, creates eyesores and costs local authorities money.
4. Report people who abandon old cars - they damage the environment and cost you money to remove through council tax.
5. Got a scrap car? - then call the council. Local authorities have details of your nearest vehicle dismantling site.
6. Dispose of oil, coolant, fuel and other fluids responsibly - your local refuse and recycling facility should help.
7. There is 'brass in steel' - many private companies offer collection services for old cars. Shop around if someone expects you to pay. Your scrap car may be worth more than you think.
8. Car makers will help - from 1 January 2007 car makers will have networks where owners take old cars free of charge for environmentally-responsible recycling.
9. Do not assume it all goes to landfill - for example, playgrounds are often surfaced by recycled tyres to protect youngsters in the event of a fall. Did you know, 85 per cent or more of a car can be recycled or re-used?
10. Keep your registration records updated - immediately tell the DVLA if there is a change in ownership or you dispose of your vehicle. If you do not, you will continue to pay road tax.

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END OF LIFE VEHICLES (ELVs)

Every car will eventually reach the end of its life. Around 40,000 cars are scrapped each week in the UK. Cars on UK roads have an average 13 year life span, but this varies. It depends on how and where they have been driven and how well they have been maintained - as well as the durability of the model itself of course.

Ultimately, the last owner has a responsibility to dispose of their car properly when it reaches the end of its life. Those tempted to simply abandon an old car will find they are soon tracked down and punished.

Improving DVLA records will be able to identify the last owner and you may be prosecuted. You may also be vulnerable to fraud if criminals use your serial and registration details.

Industry and environmental bodies have been working closely with government to establish authorised treatment facilities (ATFs) to deal with scrap cars in the UK. Since 1 January 2006, these networks began to accept scrap cars for disposal.

Contact your local authority and ask for details of the nearest dismantling site for your make of vehicle. You may be surprised to see how much your scrap car is worth to dismantlers.

From 1 January 2007, the car industry's network of ATFs will accept all complete ELVs free of charge for recycling. Your car will pass through two stages. Firstly, it will be de-polluted - where all fluids and chemicals are removed and safely disposed of. Then the car will be recycled. Around 85 per cent of a modern car by weight, including 80 per cent of steel used, can now be recycled or re-used for other purposes.

Recycling is now a priority for car makers as part of the design process. Designers are looking at ways to make plastics and other materials easier to recycle in a process called 'design to recycle'.

Every component and material used in a new car is now carefully considered to ensure that materials can be broken down and reused when a car is scrapped - in other words, to minimise the environmental impact of the car from cradle to grave.

Locate your nearest authorised treatment facility at **www.autogreen.org** and **www.cartakeback.com**

TOWARDS A GREENER FUTURE - TOP 10 TIPS

1. Road transport is a significant emitter of carbon dioxide - around 23 per cent of all man-made CO_2 comes from road transport.	**6.** The motor industry is a safer industry in which to work - the number of 'lost time' incidents at manufacturing sites fell by 30 per cent from 2003 to 2004.
2. According to the DfT total transport emissions are set to rise by seven per cent between 2000 and 2010. However, from 2012 total road transport emissions are set to fall due to technological improvements.	**7.** Consider using biofuels in your vehicle to reduce your CO_2 emissions. Modern vehicles can run on blends of up to five per cent biofuel content and specific flex-fuel vehicles can run on even higher blends.
3. New cars are better than old - each year average fuel consumption is improving, carbon dioxide emissions are falling and more improvements are on their way.	**8.** Hybrid technology is here - sales of electric hybrid models are soaring. And more car makers are committed to delivering hybrid options as well as delivering cleaner diesel and petrol engines.
4. Engine standards improve air quality - tighter emission limits are cutting pollutants like particulates from new diesel cars and diesel particulate filters (DPFs) almost eliminate soot completely.	**9.** Hydrogen is a very promising future propellant - hydrogen fuel cell prototypes are already in operation in London. Hydrogen cars emit nothing but water from the exhaust. But the production of hydrogen must be sustainable and energy-efficient.
5. Manufacturing is more efficient - the energy and water used to make each new vehicle is falling.	**10.** Everyone needs Foresight - the Foresight Vehicle Programme is helping drive the technologies of the future.

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THE CAR AND OUR ENVIRONMENT

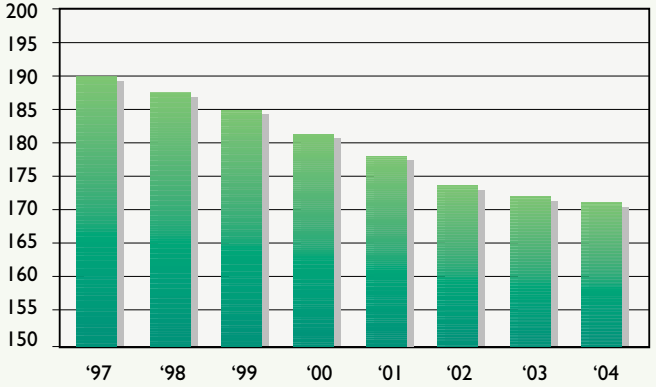
The UK automotive industry recognises climate change and other environmental concerns and is committed to improving its performance in terms of products and production processes.

The automotive sector has a good record in reducing carbon dioxide emissions.

Toyota Prius

Citroën C2

Average new car CO_2 emissions



Source: SMMT

The latest available data indicates that average CO_2 emissions from new passenger cars in the UK fell by 9.7 per cent between 1997 and 2004. In the 4x4 segment the figure fell by nearly 15 per cent.

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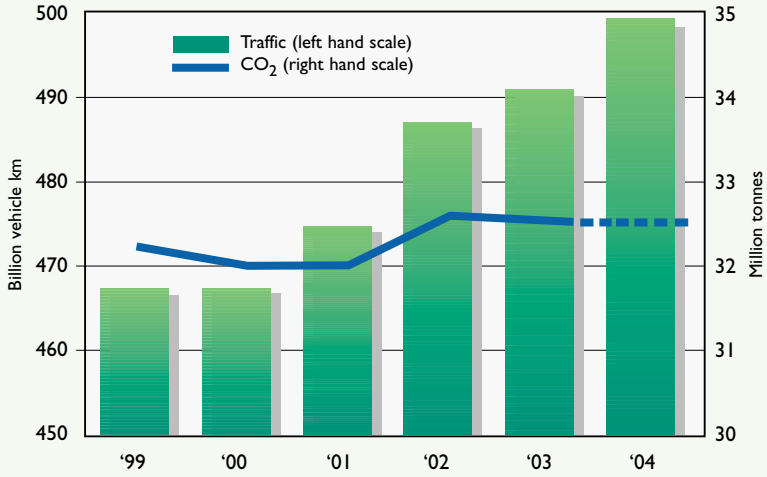
Road transport traffic in the UK versus total road transport CO_2 emissions



Source: DfT

The graph shows that total road transport has increased by five per cent since 1999, whilst CO_2 emissions have risen by under one per cent. Older cars on the road are constantly replaced by cleaner, modern petrol and diesel variants as well as petrol-electric hybrids and biofuel and LPG models.

Industry faces many challenges on the road to sustainability, but we are committed to doing our bit. However, everyone must work together to solve the issue of rising transport emissions.

Technological advances by industry have cut CO_2 emissions from new cars, but motorists have an equally important role to play by switching to lower carbon fuels and technologies, improving the way they drive, and making sensible travel choices. Industry supplies motorists with information to make responsible choices, fuel companies should provide emerging low carbon fuels whilst government should incentivise the shift towards low carbon motoring.

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EXHAUST EMISSIONS

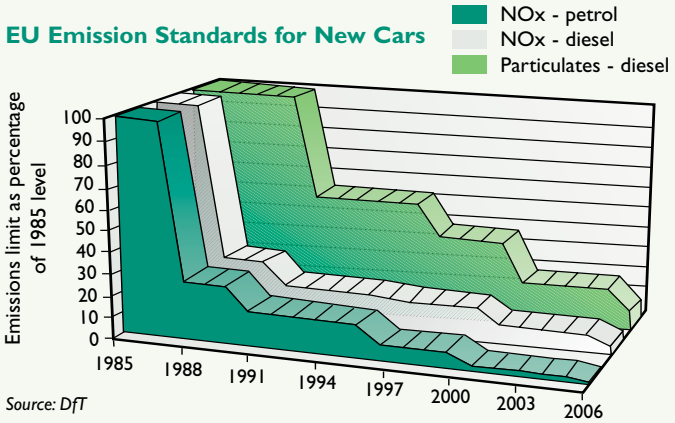
Industry has made significant progress in improving engine technology and fuel quality. This has resulted in dramatic reductions in tail pipe emissions.

Pollutant	Description
Carbon dioxide	Also known as CO_2, it is the main greenhouse gas responsible for global warming.
Carbon monoxide	Also known as CO derives from the incomplete combustion of fuels containing carbon. Catalytic converters have significantly reduced carbon monoxide emissions.
Particulates	Also known as PM10, are airborne particulates that are generated from diesel engines, brake wear, tyres and fossil fuels. They affect local air quality and human health.
Nitrogen oxide	Also known as NOx, forms in the combustion of fossil fuel. NOx contributes to the formation of ozone which is a harmful secondary pollutant in the lower atmosphere.
Hydrocarbon	Also known as HC, contribute to ground level ozone formation. They are also indirect greenhouse gases.

NEW CAR EMISSION STANDARDS

In 1992, exhaust emissions limits, known as Euro I, were introduced for new cars. Since then ever more stringent limits have been introduced across Europe for new vehicles. The following graph outlines the progressive limits for nitrogen oxide and particulates under Euro standards.

EU Emission Standards for New Cars



Source: DfT

Emission test

Particle filter

Euro 4 standards for new cars became mandatory from 1 January 2006. Our industry is already in preliminary discussions with the European Commission on forthcoming Euro 5 emission limits.

For commercial vehicles, strict Euro 4 standards have applied to all new-types since October 2005.

These developments have meant that the main vehicle emissions affecting local air quality have fallen substantially during the last decade. This benefits the local environment. Industry is working hard to ensure that it delivers further improvements to meet air quality targets and cut pollution from its products.

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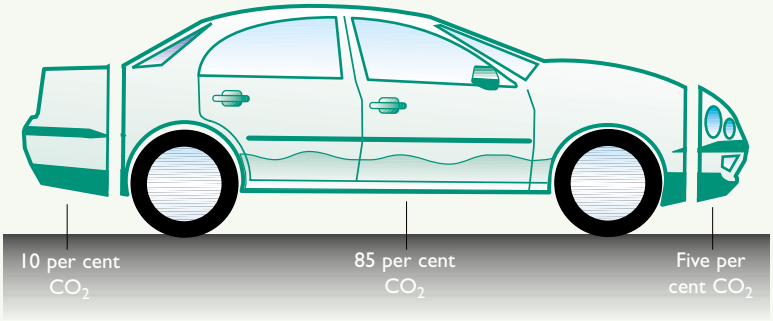
VEHICLE LIFE-CYCLE AND SUSTAINABILITY

Total CO_2 emissions during a vehicle's life-cycle

- 10 per cent of emissions are produced during the production and manufacturing of a vehicle.
- 85 per cent of emissions are emitted during the vehicle's road use.
- Five per cent of emissions are produced during the disposal of the vehicle.



Source: LIRACAR/SMMT

Sustainable manufacturing

Clearly, the industry has a responsibility to cut CO_2 and improve in other measures of environmental performance during the production process. Car manufacturers have cut the amount of energy it takes to produce each car. They also use less water and reduce manufacturing emissions. Importantly, the industry is committed to reporting annually on progress through an SMMT-led sustainability report.

	2000	2001	2002	2003	2004
Energy use per vehicle produced (MWh/unit)	3.9	4.3	4	2.8	2.5
Water use per vehicle produced (m^3)	5.3	6.2	5.6	3.4	3.4
Total combined CO_2 per vehicle produced (tonnes)	1.1	1.3	1.2	0.7	0.7

Source: SMMT Sixth Annual Sustainability Report

LOW CARBON FUELS

Zero emission fuels such as sustainable hydrogen may be the long-term answer to tackling climate change. However, if the energy and emissions expended in producing the fuel offset the benefits from the tailpipe, then progress won't be made.

While these and other issues like safe storage and development of a UK-wide infrastructure are being addressed, there are interim solutions. For example, a low carbon biofuel such as E85, a naturally produced ethanol blend, has a well-to-wheel CO_2 benefit of up to 70 per cent. A number of manufacturers have biofuel versions of mainstream models. Biofuels can be produced from a variety of biomass sources such as waste.

The UK Government plans to introduce a Renewable Transport Fuels Obligation (RTFO). By 2010, fuel and oil companies will be obliged to ensure that at least five per cent of fuels sold in the UK are from renewable sources.

Then there are fuels like liquefied petroleum gas (LPG) and compressed natural gas (CNG), which are available at around 1,300 fuelling stations across the UK. To locate your nearest cleaner fuel station visit **www.est.org.uk/fleet/calculators/refuelling**

Conventional fuels also have further potential enabling petrol and diesel engines to become increasingly clean.

The industry looks towards the introduction of zero sulphur fuels to further this process.

Fuel-efficient hybrid vehicles are increasingly popular with motorists. Hybrids use electric motors at lower speeds, then switch seamlessly to conventional petrol engines as the vehicle speeds up. This can significantly reduce fuel costs. Since their introduction in 2000, sales of these vehicles have increased to over 6,000 a year as motorists recognise their lower costs of ownership and the benefits to the environment.

For further information and advice on grant funding for clean, low carbon vehicles and fuels, visit the Energy Saving Trust (EST) grant programme web site visit **www.est.org.uk/fleet/funding**

Some cleaner-fuelled vehicles are also exempt from the London congestion charge, which could save you as much as £2,500 a year in addition to your cheaper fuel costs. For more visit **www.cclondon.com/exemptions.shtml**

The Low Carbon Vehicle Partnership (LowCVP) is a partnership of over 140 organisations at the forefront of initiatives to reduce CO_2 emissions from road vehicles. LowCVP is a forum for stakeholders to accelerate the shift to low carbon vehicles and fuels. For more visit **www.lowcvp.org.uk**

DRIVING INNOVATION

What about future technology?

SMMT Foresight Vehicle is the UK's prime knowledge transfer network for the automotive industry. More than 400 UK companies and universities are already involved, and Foresight provides a unique networking opportunity bringing together academic researchers and commercial manufacturing.

Foresight provides a focal point and catalyst for practical research that is influencing vehicle design and manufacture for the near future. But it goes much further - everything from the environmental impact of the industry to road design and transport issues are covered in Foresight's wide-ranging brief.

More than 100 research projects have benefited from Foresight Vehicle in the past and Foresight - managed by the Society of Motor Manufacturers and Traders (SMMT) - is directly involved in the government's recently announced Knowledge Transfer Networks (KTN).

The range of Foresight projects is vast - from advanced methods of designing and manufacturing tailored parts for vehicles to lightweight plastic truck trailers that save fuel and reduce road wear. It will make driving more comfortable and safer. Foresight Vehicle has produced a 'Technology Road Map', which details the possible development of vehicle markets, products, systems, and technologies over the next 20 years.

The Low Carbon and Fuel Cell Technology Centre (CENEX) will help UK businesses break into the market for low carbon and fuel cell technologies by facilitating knowledge transfer, identifying future technology and research themes for road transport and demonstrating innovation and excellence made in Britain.

The full potential of petrol and diesel is also a long way from being exhausted. Manufacturers are continually striving to maximise fuel-efficiency, reduce weight and improve reliability. One example is Citroën's 'stop and start' technology. This automatically disengages the engine in traffic, and then starts again when it moves off.

For tomorrow's world in the motor industry visit Foresight Vehicle at **www.foresightvehicle.co.uk**

www.smmt.co.uk

ROADSAFE – MAXIMISING DRIVER SAFETY

ROADSAFE®
A Partnership in Road Safety

RoadSafe is a partnership between the motor industry, traffic engineers, the police and road safety professionals promoting the safe design and use of vehicles and roads and encouraging improved education and innovation.
For more visit **www.roadsafe.com**

Responsible driving is all about minimising risk. A responsible motorist will plan ahead and avoid getting into a position where they are at risk.

RoadSafe's tips for responsible motoring include:

- Buy a safe car - do not look solely at the NCAP rating but consider modern vehicle technology such as ESP stability control that can reduce the likelihood of a crash by 30 per cent.
- Do not drive when tired - more crashes occur on our roads as a result of fatigue than any other factor. Rest for 15 minutes every two hours.
- Remain in control - a light but firm grip on the steering wheel will ensure you are in better control in an emergency.
- Obey the speed limit - at 40mph most pedestrians are killed, at 30mph half are killed and at 20mph, one in 20 is killed.
- Remember your passengers - a seatbelt must legally be worn if fitted in the vehicle. The driver has a responsibly to ensure all passengers under 14 years old wear a seat belt.

RoadSafe work closely with the Institute of Advanced Motorists (IAM) to improve the standard of driver training and information.

The IAM's Advanced Driving Test lasts around 90 minutes and covers 30 to 40 miles on a variety of road types. It is not easy but with the right guidance it will maximise your driving ability. By becoming an advanced driver with the IAM you will benefit from improved road awareness and road safety and will be able to master driving hazards on the road. You may also enjoy lower insurance premiums for your vehicle. For more visit **www.iam.org.uk**

The Department for Transport's (DfT) successful THINK! campaign aims to change people's attitude to road safety. Focusing on issues such as drink driving, driver tiredness, mobile phone use and seatbelts, THINK! shows the consequences of irresponsible behaviour and how motorists are risking their own lives, as well as those of passengers and pedestrians.
For more visit **www.thinkroadsafety.gov.uk**

www.smmt.co.uk

ALTERNATIVES TO YOUR CAR

It is your responsibility to choose the most appropriate means to travel from A to B.

Also, consider whether you necessarily have to travel. Your journey may be slow and unreliable if you travel during peak periods. Just sitting in traffic will also use extra fuel.

Flexible working can help change travel habits. Working from home is increasingly common as employees do not have to commute into the office.

Local authorities are looking to land use planning to help develop integrated transport systems. By building better public transport links, cycling routes and pedestrian facilities into new housing estates, authorities can do their bit.

You can help to reduce CO_2 emissions and air pollution by reducing the amount of fuel you use. That means walking, cycling or taking the bus for short journeys. When you do take the car, follow the eco-driving tips on page 10. You may also consider:

Car clubs

Car clubs provide drivers with the use of a car, as and when they require. Rather than investing in a car, signing up to a local car club will give you access to a car when you need to go shopping or make a longer journey. For example: **www.carplus.org.uk**

Car sharing

Share your journeys where possible. Car share schemes have risen in popularity nationwide. For example, **www.liftshare.com** boasts over 87,000 members and has a journey-matching success of over 40 per cent. Employers should also facilitate in-house car sharing schemes.

Park and ride schemes

Many local authorities have introduced park and ride schemes, whereby you drive your car to a local public transport point and you will then be taken into the town/city centre.

For information on other modes of transport visit **www.transportdirect.info** to compare journeys from door to door.

www.smmt.co.uk

The information contained in this guide is a compilation by SMMT from various sources including the following:

Buying a car

Check out manufacturers' web sites for the latest information on new and used cars.

DVLA - Vehicle Excise Duty	-	www.dvla.gov.uk/vehicles/taxation.htm#Private
Energy Saving Trust	-	www.est.org.uk
EuroNCAP	-	www.euroncap.com
HM Revenue and Customs - Company Car Taxation	-	www.hmrc.gov.uk/cars/company-cars-factsheet.pdf
HMRC - Capital Allowances for businesses buying low carbon cars	-	www.hmrc.gov.uk/capital_allowances/cars.htm
Low Carbon Vehicle Partnership (LowCVP) - New car green label	-	www.lowcvp.org.uk
Mobility Advice and Vehicle Information Service	-	www.dft.gov.uk/stellent/groups/dft_mobility
Motability	-	www.motability.co.uk
SMMT New Car Code of Practice	-	www.smmt.co.uk/consumeradvice
Vehicle Certification Agency (VCA)	-	www.vca.gov.uk

Driving your car

British School of Motoring (BSM)	-	www.bsm.co.uk
Department for Transport	-	www.dft.gov.uk
DVLA	-	www.dvla.gov.uk/vehicles/vehfee.htm
RoadSafe	-	www.roadsafe.com
The Highways Agency	-	www.highwaysagency.gov.uk
The Highway Code	-	www.highwaycode.gov.uk
The Institute of Advanced Motorists	-	www.iam.co.uk
TransportDirect	-	www.transportdirect.info

Route planners

The AA	-	www.theaa.com/travelwatch
The RAC	-	rp.rac.co.uk/routeplanner

Vehicle maintenance, safety and security

GreenFlag	-	www.greenflag.com
RAC Foundation	-	www.racfoundation.org
SMMT Foresight Vehicle	-	www.foresightvehicle.co.uk
Thatcham	-	www.thatcham.org
The AA Motoring Trust	-	www.theaamotoringtrust.co.uk
The Home Office	-	www.secureyourmotor.gov.uk
The Retail Motor Industry Federation	-	www.rmif.co.uk
Vehicle and Operator Services Agency	-	www.vosa.gov.uk

Disposing of your vehicle responsibly

AutoGreen	-	www.autogreen.org
Car Take Back	-	www.cartakeback.com
Department for Environment, Food and Rural Affairs	-	www.defra.gov.uk/environment/waste/topics/elvehicledir.htm

Towards a greener future

Energy Saving Trust grant programme	-	www.est.org.uk/fleet/funding
SMMT Sustainability report	-	www.smmt.co.uk/industryissues/sustainability

www.smmt.co.uk

SMMT would like to thank the Energy Saving Trust and RoadSafe for their input into this publication.

Suggestions in this guide are best practice recommendations and should not be taken as prescriptive or legally binding obligations.

SMMT welcomes any comments you may have on the industry's responsible motoring guide.

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Compiled by SMMT – January 2006. Drive Green, Drive Safely is printed on Mega recycled paper