



S m a r t E c o - D r i v e W O R K B O O K

Green is for Go

A Complete Guide to Safer, Smarter and More Fuel-Efficient Driving

Smart Eco-Drive Training Programme

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Chapter Introduction

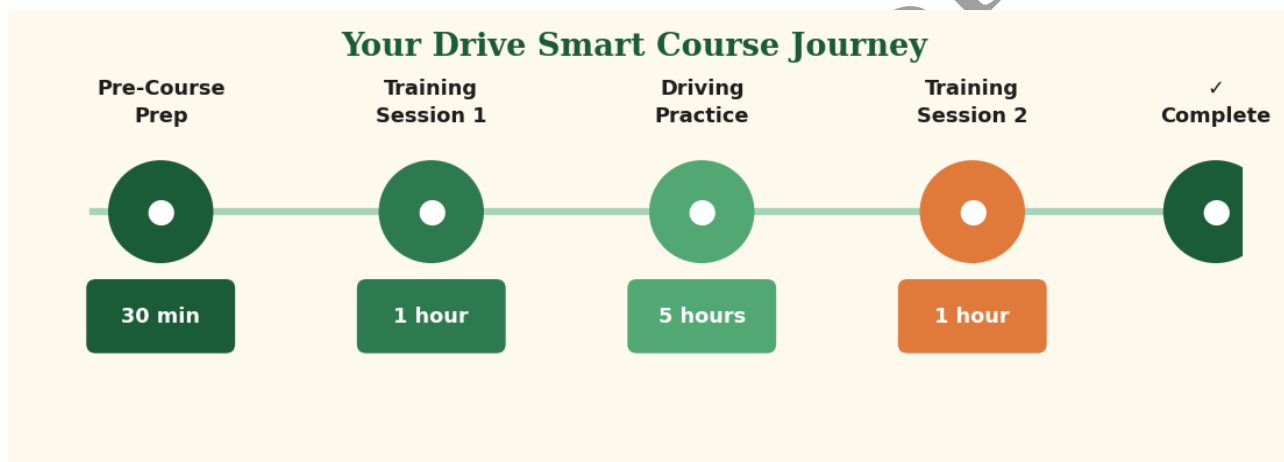
Green is for Go

Welcome to your Drive Smart journey

Whatever your motivation for taking this course, undertaking Drive Smart training will help you to become a better, safer and more aware driver. Your Drive Smart course is designed to appeal to all learning styles and to fit in around your commitments.

The exercises in this workbook will guide your home study preparation and ensure you gain the maximum benefit from your first practical session. You will agree on an action plan with your instructor to aid your driving practice before your second session together.

At the end of your Drive Smart course, you will be encouraged to take part in continual development through an agreed action plan and further training. Remember — the more you put in, the more you will get out.



COURSE OBJECTIVES — By the end of this course you will be able to:

- ◆ Identify the causes of any incident that led you to attend this course
- ◆ Explain why it is important to be a safer, more fuel-efficient driver
- ◆ Demonstrate how to drive more safely and more economically
- ◆ Develop an action plan for continued improvement as a driver

Course Guidelines

To make sure you get the best out of this course, keep the following principles in mind at all times:

- ◆ **Keep an open mind.** Continually test your understanding. Make sure you understand all aspects of the course.

- ◆ **Keep a positive mental attitude.** Stay positive and focused – it will make the learning process much easier.

Drive Smart Course Workbook

Your Guide to Safer, More Efficient Driving

- ◆ **Challenge yourself.** Push yourself to perform all activities and practise the areas identified by your trainer.
- ◆ **Ask questions.** Note anything you are unsure about as a reminder to discuss it with your trainer.
- ◆ **Enjoy yourself.** Having fun is the best way to learn.

Training Sessions at a Glance

30 min

Pre-course preparation – review of your personal driving experience and techniques

1 hour

Training Session 1 – driving assessment, training, and agreeing practice points

5 hours

Driving Practice – implementing newly trained techniques between sessions

1 hour

Training Session 2 – review of driving practice and further training

⇒ Reflection

Before you begin, note your thoughts, feelings and attitudes towards this course. If there was a specific incident that led you to attend, write what was happening in the time leading up to it.

Chapter 1

The Driver and the Environment

Why your driving choices matter

In the UK, driving in a safe and environmentally friendly way can achieve savings of between 5% and 17% (averaging 8.5%) in fuel used — with a significant reduction in atmosphere-polluting emissions as a result.

Throughout the EU, passenger cars account for about 12% of overall carbon dioxide emissions. A few good habits will help save money, prolong the life of your engine and actively contribute to protecting the planet.

A REAL-WORLD EXAMPLE

In one practice run, a driver using eco-driving techniques on a 10km drive cut his consumption from 7.3 to 4.96 litres per 100km (32 mpg → 47.4 mpg).

Over a year of driving 25,000km, that equates to a saving of approximately £700.

⇒ Reflection

What would you treat yourself to with an extra £700 a year? Write your motivation here — having a goal in view will help focus your development throughout the course.

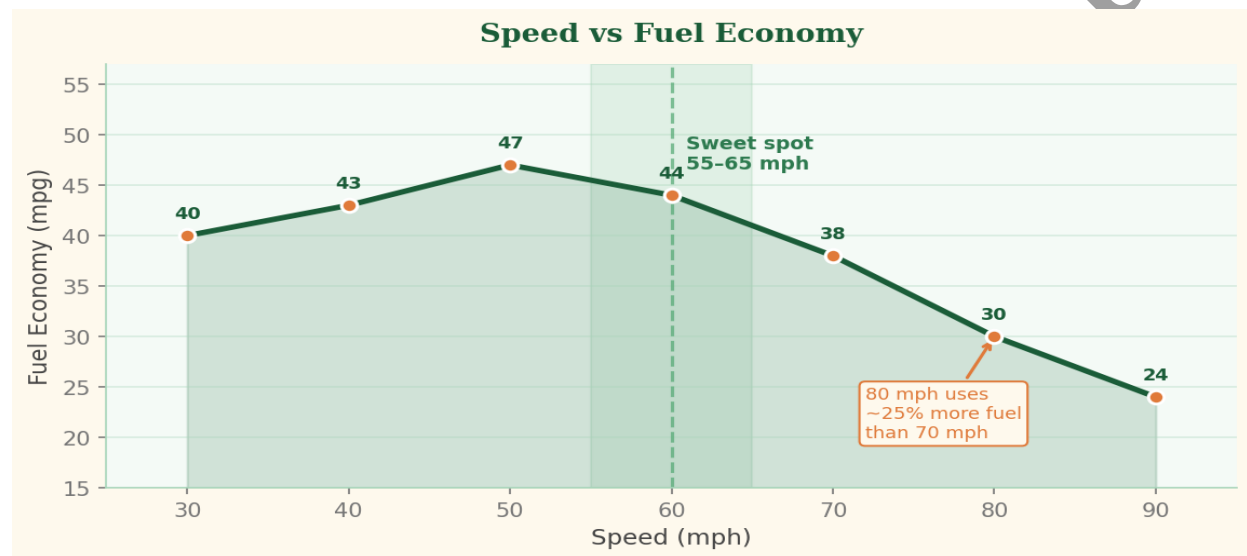
Chapter 2

Speed Choice

Obeying the law and managing your pace

Speed limits must be obeyed — it is the law. Driving just 5 mph over the speed limit can affect fuel economy by up to 23% and can compromise safety. Not keeping up to a reasonable pace can also waste fuel.

Stick to speed limits and watch your fuel costs drop. The simplest way to monitor this is to record the amount of fuel you put in your car against the miles travelled.

**KEY PRINCIPLE**

The sweet spot for most cars is 55–65 mph. At 80 mph, you can use up to 25% more fuel than at 70 mph.

If your car has a trip computer, use it to check your fuel consumption in real time.

⇒ Reflection

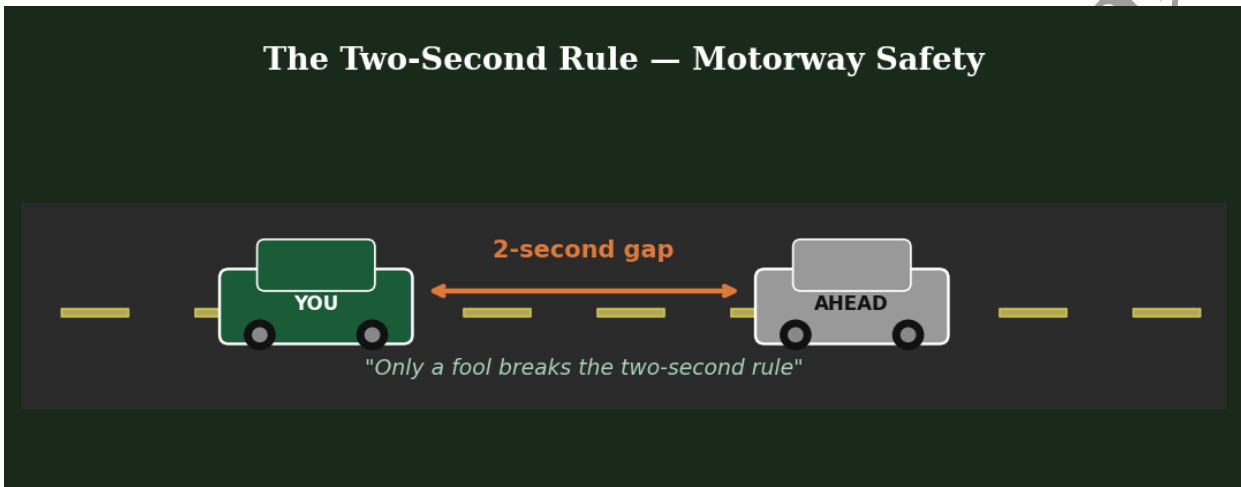
Reflect on your speed habits. Do you accelerate harshly and brake at the last moment? Note one specific change you will make to your speed management.

Chapter 3

Motorway Driving

Britain's safest roads – used well

Motorways were and still are the safest roads upon which to drive – just 8 accidents per 100 million kilometres versus 37 on A roads. Yet many drivers develop poor habits due to lack of motorway tuition.



- ◆ **Keep a two-second gap.** "Only a fool breaks the two-second rule." If you reach a reference point before finishing the phrase, you are too close.
- ◆ **Always have an escape route.** Avoid being boxed in. Watch all directions and maintain an exit path at all times.
- ◆ **Avoid unnecessary braking.** With good hazard awareness, it is possible to avoid flashing brake lights – a frequent cause of motorway tailgating.

Chapter 4

Starting Up and Driving Away

The efficient cold start

When starting up, avoid revving the engine or delaying driving away. Pull away smoothly. Revving a cold engine is a myth — the most efficient way to warm it up is on the move.

When pulling away, use just enough revs to move off without risking a stall, and engage the clutch fully as soon as the vehicle is in motion.

OBSERVATION EXERCISE

Notice how quickly your engine warms to normal temperature when driving away compared to when it's stationary.

Consider how you might change where you park and the route you drive while the engine warms up.

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Chapter 5

Use of the Accelerator

Smooth progress, less waste

The accelerator should be used smoothly and progressively — this is known as acceleration sense. The engine needs very little fuel when the accelerator is not pressed, as it will also help to slow the vehicle naturally.

Many drivers accelerate in short, sharp bursts, causing speed to fluctuate in peaks and troughs — sometimes requiring heavy braking to compensate. Engine braking is frequently disregarded as a gradual means of slowing.

TECHNIQUE TO PRACTISE

Develop an acceleration sense when driving. Use momentum to sustain progress and use engine braking for gradual speed reductions.

Try to anticipate potential hazards — the earlier you see them, the less braking you need.

⇒ Reflection

Note a recent journey where you could have used engine braking instead of the brake pedal. How far ahead were you looking?

Chapter 6

Use of Gears and Engine Power

Block changes and the right gear

Use block gear changes to skip gears as required. Modern vehicles deliver engine power at much lower revs than older models — making it possible to use higher gears at lower speeds.

Many drivers hold onto a high gear after reducing speed, causing the engine to labour and waste fuel. Consult your vehicle handbook for the manufacturer's advice on optimum speeds in each gear.

- ◆ **Practise skipping gears:** Try changing from 2nd to 4th or 3rd to 5th when accelerating.
- ◆ **When braking:** Keep both hands on the steering wheel until ready to accelerate, then select the correct gear.
- ◆ **Coming to a stop:** Squeeze the clutch at around 10–12 mph, then straight into neutral once the handbrake is applied.

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Chapter 7

Route Planning and Parking

Preparation saves fuel and frustration

Route Planning

Avoiding becoming lost or stuck in roadworks through careful route planning can save a significant amount of fuel, time, and frustration. Many drivers set out without a planned route or checking for holdups.

Consider SMS bulletins, radio traffic news, and satellite navigation to make ad hoc changes when needed.

Parking

Park ready to drive away with minimal manoeuvring — it is easier when the engine is already warm and running efficiently. Practice makes manoeuvring easier. Try using old cardboard boxes to mark out a practice space in a quiet car park.

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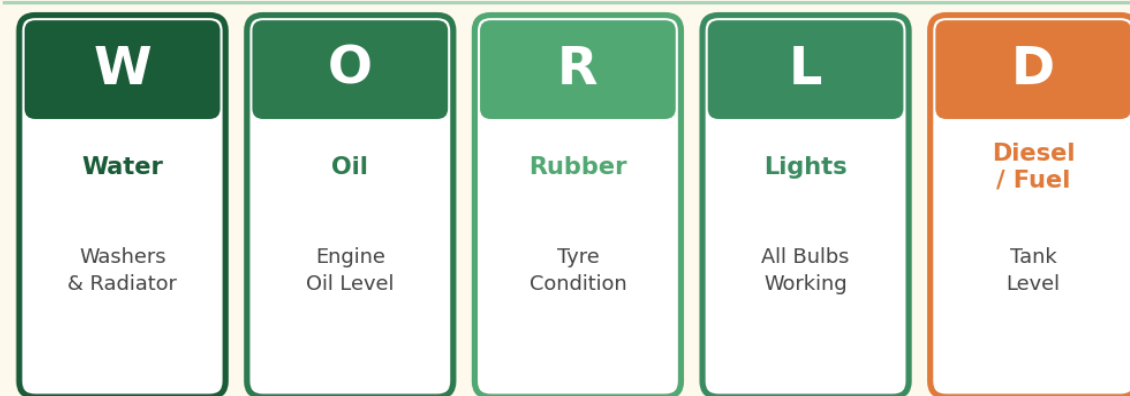
Chapter 8

Servicing, Vehicle Checks and Breakdowns

Keeping your vehicle at its best

A regularly serviced engine is up to 4% more fuel efficient and correctly inflated tyres are up to 3% more efficient — a total potential saving of 7%. Neglect of routine maintenance is the single biggest cause of breakdowns.

W · O · R · L · D Vehicle Checks



In the Event of a Breakdown

If you break down, do not panic. Think of your safety, those in your vehicle, and other road users. Get off the road or onto the hard shoulder where possible.

- ◆ **Switch on hazard lights** and wear a fluorescent/reflective vest.
- ◆ **Place a warning triangle** at least 50 metres from your vehicle (not on a motorway).
- ◆ **On a motorway:** ask passengers to wait on the embankment; use the free emergency telephone.
- ◆ **Tell the controller** if you are a vulnerable motorist (disabled, older, travelling alone, or with young children).

EMERGENCY KIT — RECOMMENDED ITEMS

Warning triangle · Fluorescent vest · Spare bulbs and fuses

Torch · Jump leads · Tow rope · Vinyl tape

Plastic water container · Membership card (keep on your person)

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Chapter 9

Night and Winter Driving

Staying safe when conditions change

Driving at night can be efficient as there is often less congestion. However, many drivers fail to allow for reduced field of vision. Most headlights illuminate only about 50 metres — approximately the stopping distance at 50 mph.

- ◆ **Beware of bridges** and exposed road areas prone to icing.
- ◆ **Open the window briefly** — it reminds you of the outside temperature and guards against fatigue.
- ◆ **Between midnight and 7 am** your body's rhythms mean you will be less alert. If sleepy, take a break — caffeine and a short nap are most effective.
- ◆ **In winter:** do not drive if snow or ice is forecast unless your journey is essential.

WINTER EMERGENCY KIT

Warm drink and emergency food · Torch · Warm clothing and boots
Spade · De-icer and ice scraper · Jump leads

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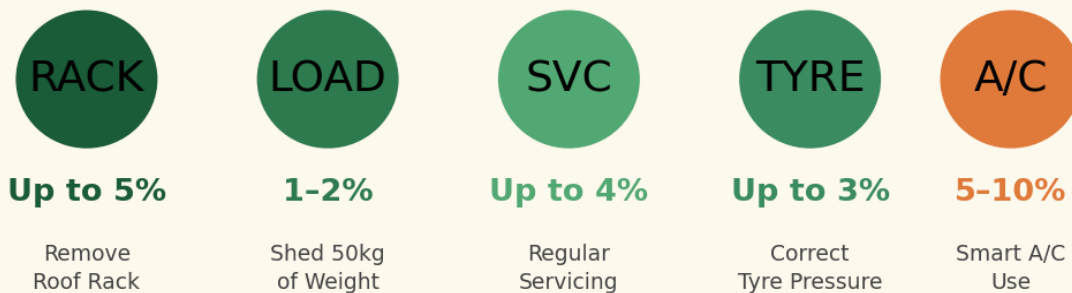
Chapter 10

Additional Points and Alternatives

Small choices, big impact

Many drivers are preoccupied and haven't been challenged to consider the fuel being wasted by simple everyday habits.

Quick Fuel Savings at a Glance



Alternatives to Driving

Walking, cycling, public transport, and car sharing all save fuel and help the environment. Alternative transport is a pleasant change, statistically safer than driving alone, and saves both fuel and emissions.

WHEN SHOPPING FOR YOUR NEXT CAR

Consider fuel consumption and CO₂ emissions — they are usually low priorities but well worth considering.

Cars with automatic transmission generally use more fuel than equivalent manual models.

Choose a car with low fuel consumption and low CO₂ emissions.

Chapter 11

Hazard Awareness and Planning

The foundation of safe, efficient driving

Driving safely, for economy, and in an ecologically helpful way are entirely compatible. The most important single skill underpinning all three is hazard awareness.

Early hazard recognition helps to avoid harsh, late braking and unnecessary stops. Most drivers do not look far enough ahead or take enough action on what they see.

TECHNIQUE: THE RUNNING COMMENTARY

Practise talking to yourself about the things you can see happening ahead.

Start by identifying road signs as you approach them, then add side roads, pedestrians, and other vehicles.

Once comfortable, look further ahead — thinking about what is occurring down the road and how it could affect you.

Reflection

*Can you identify occasions recently when you have driven in a way that increases your risk?
If so, what steps could you take to reduce that risk?*

Chapter Appendix

Your Training Record

Trainer details, practice log and sign-off

Trainer Details

Your trainer will contact you to agree on the details of your first meeting. Note their details below.

⇒ Reflection

Trainer's name: _____ Telephone: _____
 First meeting – Date: _____
 Time: _____ Place: _____ Please bring
 this booklet, your driving licence, and your glasses (if worn) to every meeting.

Training Session 1 — Assessment Notes

⇒ Reflection

Good points identified by trainer: _____ Points for development: _____ MPG reading from trip
 computer: _____

Driving Practice Log — 5 Hours

⇒ Reflection

What I practised: How much I practised (hours/minutes): Points to discuss with my trainer:

Training Session 2 – Sign-Off

⇒ Reflection

Points for development: What to practise going forward: MPG reading from trip computer:

Signature: _____ Date: _____

Trainer's signature: _____ Date: _____

To keep improving your safe, fuel-efficient driving – practise your action plan and maintain contact with your trainer.

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