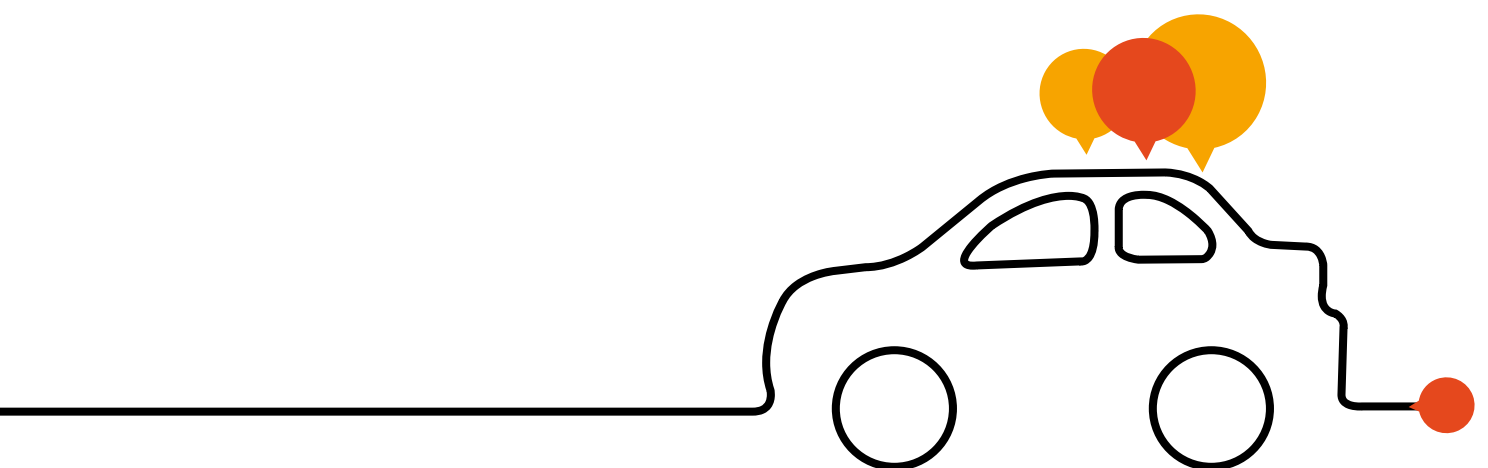




accidents don't have to happen

Driving for Work

Using Telematics



Produced with the support of
the Department for Transport

Introduction



Driving is the most dangerous work activity that most people do, and contributes to far more accidental deaths and serious injuries than all other work-related activities. Over 100 people are killed or seriously injured every week in crashes involving someone who was driving or riding for work. This includes passengers, pedestrians and riders, as well as at-work drivers or riders themselves.

HSE'S *Driving at Work* Guidelines state that:

“Health and safety law applies to on-the-road work activities and the risks should be effectively managed within a health and safety system.”

Therefore, employers must conduct suitable risk assessments and ensure that:

- Work related journeys are safe
- Staff are fit and are competent to drive safely
- Vehicles are fit for purpose and in a safe condition.

Essentially, this means that you should have policies, people and procedures in place to enable you to understand:

- How your organisation uses the road (the staff who do so, the vehicles they use, the journeys they make and how they drive or ride)
- The risks this creates to your staff and other people
- The potential consequences of those risks, and
- The measures needed to manage and reduce these risks and consequences.

Telematics are a practical way of achieving this. It enables accurate information about your staff's driving to be collected, and their driving behaviour to be analysed to identify strengths and weaknesses, crash risk and to create personalised feedback for each driver.

Telematics can help you to:

- Risk assess drivers and journeys
- Monitor and analyse the real driving behaviour of your staff
- Provide tailored, personalised feedback to help improve their driving
- Identify driver training and education needs of each driver
- Identify other ways of reducing their risk (e.g. changing journey schedules)
- Incentivise improved driving
- Reduce crash rates and risky driving
- Improve accident investigations
- Reduce costs, with savings paying for the investment in the technology.

There are a wide range of telematics products but broadly speaking, there are two types: Journey Data Recorders (JDRs) and Event Data Recorders (EDRs), although they have many different names.

Journey Data Recorders monitor and record driving throughout a journey so that it can be analysed later. Some also provide real-time visual or audible alerts to the driver during the journey.

Event Data Recorders monitor driving throughout a journey but only record data for several seconds before, during and after an 'event' (for example, a collision or sharp braking) so it can be analysed later. Some also provide real-time visual or audible alerts to the driver during the journey.

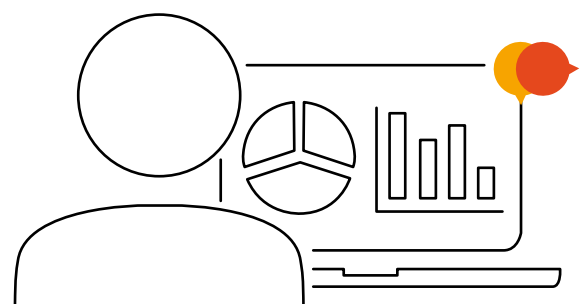
Typically, telematics monitor the types of driving that influence the likelihood of crashing, and the severity of the crash (for example, speed, or harsh acceleration and braking). This type of driving also uses more fuel, and so is more expensive. It provides data and feedback about the driving to the driver, and/or a manager, usually by a website, app, or email.

The telematics software is normally contained in a small device that is fitted in the vehicle, embedded in another device, such as a SatNav, or delivered by a dongle, or an app on a smartphone. Some systems also provide video of what's happening outside the vehicle, or inside it, to provide contextual details about the driving and an indication of what the driver is doing (e.g. not wearing a seat belt, using a mobile phone).

Telematics calculates a risk rating for each driver based on how they drive. You can use the resulting data to identify, and prioritise driver training needs, change schedules and routes, and if necessary, instigate disciplinary action.

A key feature of telematics is that it provides feedback, and advice, about a person's driving, to the driver and to a manager in the company. This feedback is crucial because it highlights how the individual's driving can be improved to reduce risks and costs, either by changing the manner of the driving, and/or changing the journey or vehicle.

However, telematics is not a miracle cure; it needs to be used as part of your overall road risk management. Managers and drivers will need help to understand what the telematics data and feedback means, and how it can inform risk management. It's also important to understand that it does not measure some types of poor driving, such as crossing solid white lines or going through a red light. Staff may be concerned about privacy and how the organisation will use the data.



Effective Use of Telematics

Set Aims and Objectives

Setting clear aims and objectives for using telematics will help everyone to understand their purpose and inform the type of telematics that will best suit your needs.

Your main aim is likely to include reducing driving for work incidents, injuries and costs, but could also include identifying higher risk drivers, vehicles and routes, optimising routes and schedules, reducing exposure to high risk driving situations, identifying driver training needs, reducing vehicle costs and improving accident investigation.

Objectives are the very specific ways in which you expect to achieve your aim(s). They describe what you expect to change by using telematics, by how much and by when.

Example Aims

- To improve the driving behaviour of drivers who drive for our company
- To reduce the road accident/incident rate of our company
- To reduce fuel and other driving costs.

Example Objectives

- To reduce incidences of speeding [or another driving behavior] by 15% by a specific date
- To provide driver training for the 10% highest risk drivers as identified by the telematics data
- To reduce our rate of driving for work accidents or incidents by 15% by a specific date.

To measure changes you need some baseline data against which to compare your new data. For example, your company's accident rate before you introduced the telematics, can be compared to the rate a year after its introduction.

More advice and information about setting aims and objectives is available at roadsafetyevaluation.com.

Clear Policy & Procedures

Develop a clear written policy on telematics and procedures for how it will be used in consultation with the fleet manager, human resources and department heads. Consult your insurer, broker and/or lease vehicle company; they may be able to recommend suppliers and advise on the best way to manage the data and use it to inform your risk management. This is a good time to discuss whether investing in telematics could generate reduced insurance premiums. You will need the agreement of your lease vehicle provider to retro-fit telematics in their vehicles.

Consult staff and their representatives, such as trade unions or staff associations, and take the time to reach consensus within the company and win employee consent, gain their insights into how it might best be applied and to help them understand how the telematics will be used.

Staff may be concerned about real-time tracking, data security, personal privacy and that managers may use the data in a punitive way. Be clear and transparent about why and how you propose to use telematics and the benefits it will provide the company and the staff. Explain how individuals' data will be protected, who is allowed access to it, and for what purposes.

Be clear about whether drivers and vehicles will be monitored in real-time. Many types of telematics only download their data at the end of the day, so the vehicle is not monitored in real-time. However, some systems do provide real-time tracking, which can be very useful in the delivery and logistics industries. If this is the case, staff should be informed, and the reasons explained.

Create a process for staff to challenge any conclusions drawn from the data about their driving, or to explain the circumstances of any instances of apparent poor driving.

Review the policy periodically in joint health and safety committee (or other relevant) meetings.



Choose Your Supplier



Consider the different options, and take time to research suppliers and their products to ensure that you invest in the one most likely to meet your needs. Ask potential suppliers about:

How driving data will be collected

If vehicles do not have telematics already installed a small device will be retro-fitted to the vehicle, usually by a professional installer. This provides reliable and accurate data and is difficult to interfere with, but is more expensive and time-consuming to install.

A 'dongle' that connects to the vehicle's engine diagnostic port provides accurate and reliable data, and is easier and less expensive to install but perhaps easier to remove for some journeys.

A smartphone app is probably the least expensive method as it does not require installation, but drivers need a phone or other device for the app, which they switch on for every journey. This may be a better option for pool vehicles (see below) provided each driver has a smartphone, but you may need to provide phones so that drivers do not have to use their data allowance on their personal phone.

The data they will measure

The types of driving behaviour that tends to be measured include vehicle speed and acceleration, location, braking and cornering. Data collected every second or more frequently gives an accurate and reliable picture of continuous driving; ask how the driving is mapped onto the road location so the driving can be put into context.

How the data will be fed back to drivers and managers

Typically, feedback is via a web portal, although it may be by email or through an app. Consider the best way for your drivers to access the feedback, especially if they do not tend to use PCs or laptops. Access to the feedback needs to be secure (so only the driver and relevant managers can access it) and reliable (if they struggle to get access, they will soon stop trying).

What training will be provided to drivers and managers

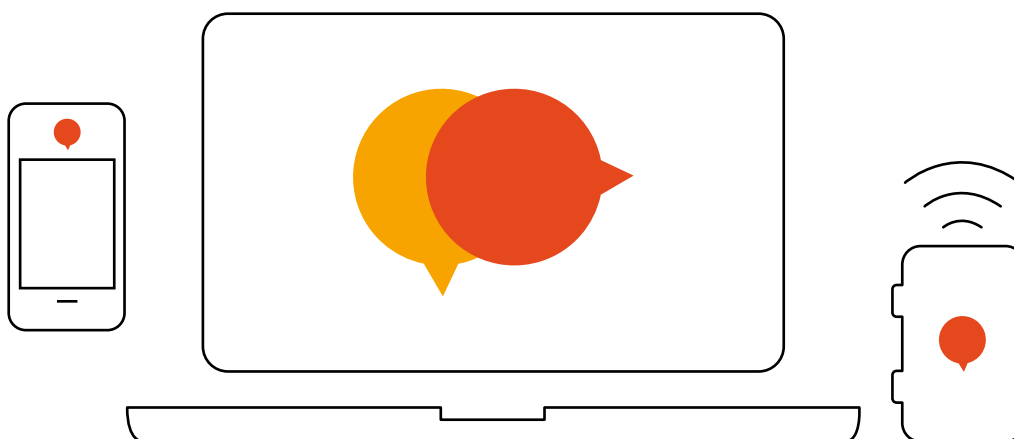
Drivers and managers need to understand how they can access their driving data, and what it actually means. So some form of training from your supplier should be expected.

How the telematics will be installed

If devices need to be installed in the vehicles, discuss the installation arrangements and costs carefully, including what happens if an appointment is missed. Agree arrangements for removing the devices later if it becomes necessary, for example, if you sell or swap some vehicles.

How they will cope with pool and grey fleet vehicles

One of the most difficult issues is how to use telematics for pool vehicles that are driven by more than one driver, for drivers who drive more than one vehicle and for grey fleet vehicles.



Implement Carefully



Work closely with your drivers and telematics provider to implement the use of the telematics and to:

- Ensure all staff and managers are aware of your organisation's policy on the use of telematics and the data it generates
- Install the telematics
- Decide how to identify drivers of pool vehicles
- Decide how to use telematics for grey fleet drivers and vehicles, if applicable
- Provide feedback to drivers and managers, and encourage them to view it regularly
- Incorporate the driving data into your accident investigation process.

Policy

Ensure your drivers and managers are aware of the policy on telematics, how the telematics work, the data it records and the processes involving it, such as any incentives to improve their driving scores, or consequences for poor driving.

Installation

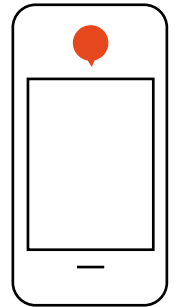
If telematics are retro-fitted into your vehicles, they may need to be fitted by a professional installer. So you will need a process for agreeing the date, time and location for the installer to access the vehicles, and your drivers will need to know when and where to attend the appointments. Keep the line managers aware of the appointments so they can encourage their drivers to attend or re-arrange them, rather than miss them, which may incur a call-out fee and delay the process.

If using vehicles that already have telematics, a smartphone app or some other method that does not require a retrofit, installation will be easier and less expensive.

Pool Vehicles

The driving data needs to be correctly assigned to the driver who was driving the pool vehicle at the time, otherwise it will be relatively meaningless. The most practical method is to incorporate the means of identification into the telematics, for example, a key fob that identifies each individual driver. However, this is likely to be more expensive.

Another option is to use a smartphone app because it will be related to the driver rather than the vehicle. But, you will need to ensure that drivers do not use the smartphone for other purposes while driving, that they always carry the smartphone with them, and do not swap phones between themselves. You may need to provide phones to drivers rather than expect them to use their own.



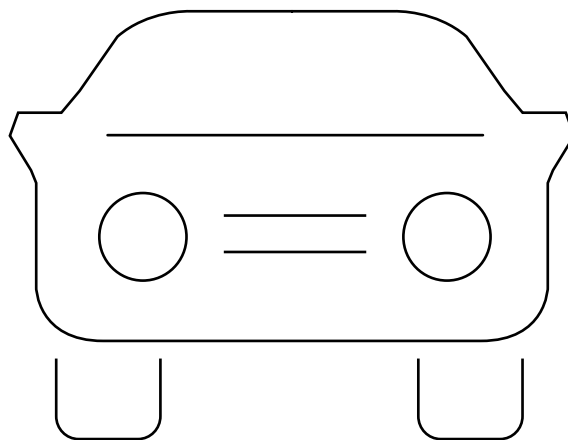
Other options, such as driver log books or specifying which drivers can use the vehicle at different times, are likely to be less reliable ways of identifying who was driving a vehicle at particular times.

Grey Fleet Drivers

Staff who drive their own vehicle for work will need to agree to fit telematics in their vehicle, and check with their insurer or lease vehicle provider that they can install the devices. Using a smartphone app will circumvent any installation issues, but has the same potential disadvantages discussed above.

All Drivers

It is vital to ensure that each driver has an email address, internet access or a device on which they can access their feedback.

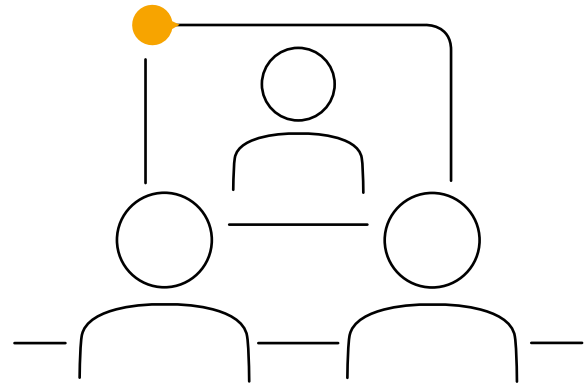


Train Your Drivers & Managers

Your drivers and managers need to clearly understand why and how you are using telematics, what it records and how they can access the feedback about their driving. Explain the benefits to the company and to the drivers themselves. It can:

- Improve their driving and their safety
- Reduce their driving costs and business costs
- Protect them from false allegations about their driving by providing evidence about how they were actually driving, and proving they were not at fault
- It can protect the company from false insurance claims following an accident by providing evidence of what actually happened.

Explain what happens if the data shows problems with driving. For instance, help and advice will be given, driver training may be provided, or a driving task may be changed (a different route or schedule, for example). However, everyone should be aware that disciplinary measures may be an option for consistently poor driving, which shows no sign of improvement, or for a case of extreme bad driving. The driver would always have the opportunity to explain the circumstances and offer mitigation.



Explain how drivers can access their personalised driving feedback, probably through a password protected web portal, direct by email or through an app.

A key message should be the importance of using the driver feedback regularly and the process of accessing it. It is crucial that drivers understand how, and why, they should access their feedback. Explain any incentives, such as a drivers' league table, to encourage feedback use.

Encourage Drivers To View Their Feedback Regularly

Much of the improvement in driving from using telematics occurs when drivers regularly view and understand the feedback about their driving. This can identify areas where they can improve (for example, better observation and anticipation will mean less harsh braking, which will reduce risk, fuel consumption, emissions and vehicle wear and tear).

To encourage drivers to regularly view and consider their feedback, set expectations for how often they should do so, and monitor how often they actually do. Consider setting targets, and incentives, such as a league table.

Consult your drivers to identify whether they find the feedback easy to access and understand, and whether they find it useful. Ways to assess how well feedback is used include:

- Monitor the number of access visits or emails sent
- Ensure the design and content of the feedback is accessible, attractive and relevant
- Provide scoring, map views, and dynamic messaging upon the completion of every trip to a driver
- Provide regular reminders to drivers, by emails or texts, to use their portal
- Operate an incentive scheme that includes accessing the feedback regularly
- Provide feedback at the end of a journey
- Provide dynamic automated emails or texts, with relevant safety tips/messaging
- Conduct regular reviews with drivers and managers
- Create competition between drivers, for example a drivers' league
- Link driver training or education to the telematics data
- Provide regular rewards for improving driving scores, and maintaining good scores
- Provide 'penalties' for poor or deteriorating scores.

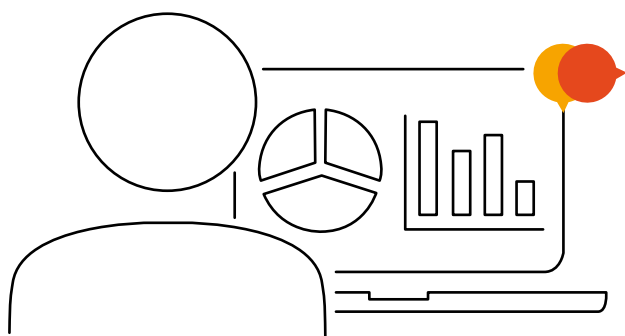
Use The Data Proactively



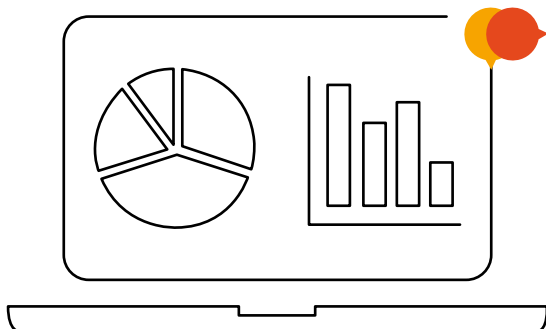
Use the Feedback

Feedback is most often provided as reports on a website or email or a mobile phone app. It can refresh the memory of critical incidents during the trip, or draw the driver's attention to something they did not even realise they were doing. It can encourage self-reflection and understanding of the particular types of driving that increases their risk. As drivers often overestimate their ability, feedback can help to calibrate their perceived performance (i.e., how safe they think they drive) with their actual performance.

Research shows that driving improves once the driver and/or a third party begin to receive feedback.



Managers can use the feedback to inform other measures to improve their staff's driving, for example, amending journey schedules or providing tailored driver education or training that focuses on the specific issues raised by the data for each individual driver. The data can also help managers to identify which drivers, vehicles or journeys are higher risk, so they can be prioritised for remedial action.



Be Constructive

Use the data and feedback in a positive manner to help staff reduce their risk and stress rather than negatively just to identify and punish bad drivers. Although, there may be cases which ultimately lead to disciplinary actions, the initial approach should always be to listen to the individual's views about their driving and to discuss with them how it can be improved. The answer may be to change something about the driving they are required to do.

Drivers should be aware that the data could be helpful to them by demonstrating that they are driving safely and responsibly.

Ensure Data Privacy and Security

A common concern about the use of in-vehicle monitoring technology is data privacy. Ensure that staff understand who can access their driving data, how it is stored and how it may be used.

To get the best use from your investment in telematics, it is essential that managers regularly view the feedback for their drivers, and proactively use it to inform safety improvements. For example, it can identify priority drivers and vehicles, and potential counter-measures, such as driver training or a change in routes.



Set up processes for managers to monitor the data and feedback and check that they understand what the data means. For example, if the telematics gives drivers a score out of 100, what does that mean? What's good, bad and average? How is the score calculated? Your telematics provider should explain all this.

In [RoSPA's Scotland Black Box pilot](#) only half of managers reviewed their drivers' reports, but when they did so, the drivers improved more than when the managers did not engage with the feedback. Reviewing drivers' feedback helped managers to:

- Identify driver/management concerns in specific areas of risk
- Identify higher risk drivers and training needs
- Identify journeys, routes or vehicles that are higher risk, or more expensive in fuel use
- Encourage drivers to improve
- Increase awareness of road risk with their company's drivers
- Improve the company's safety record
- Achieve better fuel efficiency.

Consult managers to identify whether they find the feedback and data easy to access and understand, and whether they find it useful.

Use Telematics to Investigate Crashes and Incidents

Telematics can improve accident and incident investigation because it provides an accurate and objective picture of what happened, and can either confirm or contradict information given by the driver. This often means investigations are quicker, easier and less expensive to conduct, and the conclusions are more accurate and reliable.

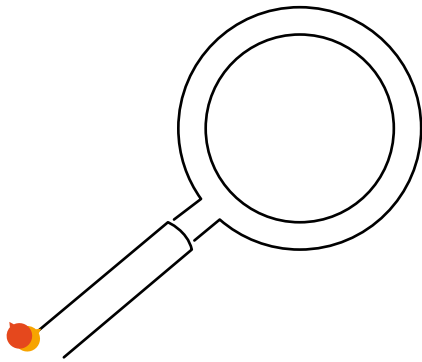
See '[Driving for Work: Incident Reporting and Investigation](#)' for more details.

Evaluate & Review



Evaluate and review your use of telematics to check that it is achieving your aims and objectives, identify any problems and improvements that could be made, and to help you to get the most out of your investment in the technology.

Measuring changes in the driving data provided by the telematics will show how behaviour, incident rates and fuel use have improved.



A common way of collecting baseline data is to collect the telematics data for a few weeks or months, or for a specific mileage (e.g. the first 250 miles) but not give drivers feedback during this period. It is likely that they will forget the telematics have been installed. Once you have reached the pre-set parameter, start to give drivers feedback and measure how their driving changes. You will probably have other baseline data you can use, such as your company's accident or incident rates, fuel use, vehicle costs and so on.

Produce a report about your findings and conclusions, with any recommendations you wish to make. This can be presented to senior managers to provide an evidence base to support the use of telematics and provide information on how to get the most out of their future use.

For further advice on evaluation, see roadsafetyevaluation.com.

Example 'Telematics' Policy



As part of our overall health and safety policy, we are committed to reducing the risks which our staff face and create, when on the road as part of their work. We ask all our staff to play their part.

Senior managers must:

- Lead by example, by ensuring that they drive safely and responsibly
- Ensure that all staff receive training about telematics and understand the benefits to them and the company.

Line managers must ensure:

- They also lead by personal example
- Staff understand the dangers and consequences of poor driving
- Staff receive appropriate training about the telematics, how it works, and what it records
- Staff regularly view the feedback about their driving
- Understand how telematics, and the feedback about their driving, benefits them
- Staff are confident that they can report and discuss driving issues with an appropriate person without fear of being treated unfairly
- Work related road safety is included in team meetings and staff appraisals and periodic checks are conducted to ensure our Policy is being followed
- They follow our monitoring, reporting and investigation procedures to help learn lessons which could help improve our future road safety performance
- They challenge unsafe attitudes and behaviours and encourage staff to drive safely.

Staff who drive for work must:

- Always drive within road traffic laws, safely and responsibly
- Use the telematics provided on every journey
- Regularly view and consider the feedback about their driving provided by the telematics
- Discuss any driving problems or concerns they have with their line manager
- Report any driving accidents or near misses, and any cautions, fixed penalties, summons or convictions, to their line manager
- Co-operate with monitoring, reporting and investigation procedures.

Further Advice



Driving at Work (HSE Guide INDG 382)

HSE Work Related Road Safety

Occupational Road Safety Alliance (ORSA)

Scottish Occupational Road Safety Alliance (SCORSA)

RoSPA Driving for Work Guides

Driving for Work DVD

RoSPA Vehicle Safety

RoSPA Fleet Safety

Driving for Better Business

Highways England

Road Safety GB

Highway Code

Think Road Safety

Department for Transport

Road Safety Scotland

Road Safety Wales

Driver and Vehicle Standards Agency



© The Royal Society for the Prevention of Accidents
28 Calthorpe Road, Edgbaston, Birmingham B15 1RP
Tel: 0121 248 2000
Registered Charity No. 207823
VAT Registration No. 655 1316 49



accidents don't have to happen

www.rospa.com

March 2017