

# Advanced Rider Course

Observer's handbook





## The IAM RoadSmart Advanced Rider Course relies on you

IAM RoadSmart would like to thank you for helping us to make our roads a safer more pleasant environment. The associates you train will help to cascade the message of co-operation on the road by employing the skills you have helped to develop.

The course handbook has been designed to identify a set of competency statements that an advanced rider must fulfil to be operating at the required level. Each competency statement has an expanded explanation to help the associate understand it and it offers a roadmap to the skills required. This will only ever be a two-dimensional framework to allow the development of the three-dimensional skill that is advanced riding.

It is your expertise and passion that will bring the text to life and allow an Associate to develop their driving to a standard that encourages enjoyment and allows them to promote safe sharing of road space.

The competencies will all interlink and the document does not have to be completed in order. By encouraging improved information gathering through effective Observation, Anticipation and Planning and a systematic approach to hazard management your associate will always have time to deal effectively with situations that present themselves on the road.

During the Associates development, the run sheets will be used to show areas that are satisfactory and others that require work to be at the level we expect. The run sheets deliberately do not mirror the test sheet, we are looking to develop a rider who is prepared for every situation not just one who is able to pass a test. A detailed explanation in the areas requiring development will help the associate to progress through the course. An important part of the development process will be to encourage your associate to practise self-reflection.

We will look to develop a rider who is in the correct position on the road at the right speed with an appropriate gear engaged and ready to respond to changing information. Operation of the controls should be assured and confident to keep the ride Safe, Systematic and Smooth. Restraint should be balanced with progress allowing the ride to flow.

We are looking for desired outcomes and within reason are less concerned with inputs, if it is not broken why do we need to fix it, a planned overlap at low speed as part of a systematic approach is more appropriate than a hurried attempt to separate brakes and gears which makes us rush into a hazard. If technology is available to make us all safer we need to understand it and use it to our advantage, but not rely on it, it should be the guardian angel that never has to step in but is always willing to watch just in case.

When the Associate gets to test we are looking to assess the range of skills that have been developed throughout the course, the ride should display the 'quiet efficiency' of an advanced rider, a successful candidate will be more aware than an average rider and will plan their ride to promote safe sharing of the road. A sound understanding of what other road users require, how vulnerable road users may need extra space and of the limitations of our own machine and other vehicles on the road will give the confidence to interact safely.

**Thank you again for the time you devote to IAM RoadSmart and for your efforts to make our roads safer.**

# Advanced Rider Course Logbook





## The bigger picture

**Advanced motorcyclists should be able to ride in a safe, smooth and efficient manner at all times.**

Through good Observation, Sensible anticipation and accurate Planning (OAP) combined with sound operation of their machine's controls, they should enjoy a comfortable, progressive ride while maintaining safety.

Modern riding aids such as satellite navigation systems, anti-lock braking and traction control systems are becoming more commonplace; used correctly, they can complement the skills of an advanced rider and enhance the overall riding experience. Appropriate use of such technology should therefore be encouraged.

Combining well developed skills and understanding with developments in technology should make you into a 'thinking rider' and create a safer more enjoyable riding experience.

## IAM RoadSmart riding for your safety

This course logbook has been designed to identify a set of competency statements that an advanced rider must fulfil to be operating at the required level. Each competency statement has an expanded explanation to help you understand it and it offers a road map to the skills required. This will only ever be a two dimensional framework to allow the development of the three dimensional skill that is advanced riding.

It is the expertise and passion of your observer that will bring the text to life and allow you to develop your riding to a standard that encourages enjoyment and allows you to promote safe sharing of road space.

The competencies will all interlink and the document does not have to be completed in order. By encouraging improved information gathering through effective Observation, Anticipation and Planning and a systematic approach to hazard management you will always have time to deal effectively with situations that present themselves on the road.

During your development the run sheets will be used to show areas that are satisfactory and others that require work to be at the level we expect. The run sheets deliberately do not mirror the test sheet, we are looking to develop a rider who is prepared for every situation not just one who is able to pass a test. Detailed explanation in the areas requiring development will be given by your observer as you progress through the course. An important part of the development process will be to practise self-reflection.

Our aim is to develop a rider who is in the correct position on the road at the right speed with an appropriate gear engaged and ready to respond to changing information. Operation of the controls should be assured and confident to keep the ride Safe, Systematic and Smooth. Restraint should be balanced with progress allowing the ride to flow.

If technology is available to make us all safer we need to understand it and use it to our advantage – but not rely on it – it should be the guardian angel that never has to step in but is always willing to watch just in case.

When you get to test we are looking to assess the range of skills that have been developed throughout the course. The ride should display the 'quiet efficiency' of an advanced rider, a successful candidate will be more aware than an average rider and will plan their ride to promote safe sharing of the road. A sound understanding of what other road users require, how vulnerable road users may need extra space and the limitations of our own machine and other vehicles on the road will give the confidence to interact safely.

**Thank you again for choosing IAM RoadSmart and enjoy your engagement with us.**

# Group Information

## Your local IAM RoadSmart group is:

Address: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
Your Observer is: \_\_\_\_\_  
Tel: \_\_\_\_\_ Mob: \_\_\_\_\_  
Email: \_\_\_\_\_  
Group Meetings are on: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
Your Chief Observer: \_\_\_\_\_  
Tel: \_\_\_\_\_ Mob: \_\_\_\_\_  
Email: \_\_\_\_\_

## Your Information

Your Name: \_\_\_\_\_  
Address: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
Mob: \_\_\_\_\_  
Your Membership No: \_\_\_\_\_  
Eyesight Checked on: \_\_\_\_\_

# Your privacy and the General Data Protection Regulation

Here at IAM RoadSmart we are committed to protecting your privacy. We comply with the principles of the General Data Protection Regulation (GDPR) and aim to maintain consistently high levels of best practice in our processing of personal data.

Details on the collection, use and sharing of the information you provide IAM RoadSmart can be found at the foot of our website homepage. Our policy also details your rights and how to contact us.



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# Human Factors

This section refers to the Rider, their motorcycle, their journeys and lifestyle in relation to becoming an advanced rider.

As it relates more to the person than the act of riding, is the only component not framed in IPSCA

# Competency sheet -

## Human factors

This page gives an overview of the competency requirements for this section

	Achieved
<b>The Rider</b>	
Puts safety first in all riding judgements	
Remains calm and considerate of others at all times	
Always maintains concentration while riding	
Manages any external influences and distractions	
Changes their plans if any factor is likely to impair their performance or decision making	
Consistently evaluates their own performance, with a view to retaining and developing their skills	
Applies new-found knowledge in order to improve their riding performance	
<b>The Motorcycle</b>	
Conducts pre-ride checks correctly and ensures that machine maintenance is up to date	
Knows the performance and safety features of their machine	
Understands the purpose of and conclusions from a moving brake test	
Recognises the issues when riding an unfamiliar machine	
<b>The Journey</b>	
Understands purpose of their journey and time available may influence their riding and decision making	
Understands that route choice and planning will influence the way they ride	
<b>The Wider World</b>	
Considers the range of influences that may impact on their riding	
Understands how attitude to risk may affect riding choices	



# The Rider

There are a number of personal qualities or behaviours that any advanced rider must demonstrate

- **To put safety first in all riding judgements**

- No journey is so important that safety can be compromised; advanced riders should never put themselves or others in harm's way

- **To remain calm and considerate of others at all times**

- Advanced riders are always aware that their decisions and actions may have an effect on other people
- They recognise that the road-space needs to be shared and that this is most successfully achieved when everyone communicates and cooperates
- As well as complying with legislation and the Highway Code should set a good example to other road users
- Displays courtesy to other road users

- **To always maintain concentration while riding**

**Concentration is defined as: The action or power of focusing all one's 'attention' (Oxford English Dictionary)**

Advanced riders should be able to focus on their riding while disregarding any unrelated factors

- They should be able to manage riding related tasks, such as identifying road junctions or using satellite navigation

- **To manage any external influences and distractions**

- Advanced riders must remain in charge and not be negatively influenced or distracted if they have a pillion passenger

- Certain pillion riders, such as first timers or those lacking experience, are more likely to present a risk and recognising this can be the first step to successfully overcoming it

Advanced riders can help by giving instructions and advice

- Increasingly, people are using hands-free telephones on motorcycles. However, they do cause a distraction and despite being legal, use is discouraged

- Advanced riders should always pull over somewhere safe if they need to answer a call

- **To change their plans if any factor is likely to impair their performance or decision making**

- Advanced riders must be aware of any physical influences that might impair their decision-making and ability to ride safely

- For example, if they start to feel tired or experience physical discomfort while riding, they should consider whether they are still able to concentrate fully

- Similarly, if they feel angry, frustrated, anxious or frightened, they should:

- In the short term - find somewhere to stop safely and try to deal with those outside influences

- In the longer term - use the experience to develop new methods for managing such influences prior to riding

- To consistently evaluate their own performance, with a view to retaining and developing their skills
  - The IAM RoadSmart approach to rider development seeks to encompass all of the components necessary to produce safe, well-rounded riders. It encourages self-reflection as a means to develop as an advanced rider
  - A mistake can often be defused with just an apologetic wave
  - Advanced riders should always assess their motorcycle control and riding performance as if through the eyes of a third party
  - Other factors to consider include the time of day, the route and any potential negatives, such as tiredness, stress, the effects of prescription medication and traffic conditions
  - In terms of the bigger picture, advanced riders should also have an understanding of how riding fits into their lifestyle and life goals
- To apply newfound knowledge in order to improve their riding performance
  - Advanced riders are constantly learning and developing. They should always use any new-found knowledge to improve their riding performance

## The Motorcycle

There are certain key actions that any advanced rider must take in relation to their motorcycle

- To conduct pre-ride checks correctly and ensure that motorcycle maintenance is up to date
  - Advanced riders should have an ordered approach to checking their motorcycle
  - They should undertake that check to a high standard, remembering that the primary concern is always safety
  - Given that many modern machines have extended maintenance programmes, they may clock up a lot of miles/time between services. It is therefore important to adhere to their service schedules
  - Even the most sophisticated checking systems will not detect every problem so visual inspection is still required
  - If any doubts arise, advanced riders should have their machine checked by a professional
- To know the performance and safety features of their motorcycle – and have the ability to explain them



- They must be aware of their machine's capabilities in order to remain safe and legal
- Maximum appropriate acceleration will vary considerably from machine to machine
- They should be aware of the safety features and aids fitted to their machine, and be prepared to explain them
  - For example, when starting their machine, they should know which warning lights should come on and when they should go off
- They should also know when to stop and investigate if a warning light comes on during a ride, i.e.
  - If it is red - as soon as it is safe
  - If it is amber - the next time they stop

- **To understand the purpose of and conclusions from a moving brake test**

- While a modern machine may display a warning light in the event of a brake failure, the effect of an obstruction or other outside influence won't be monitored
- Advanced riders should be able to conduct a moving brake test at a low speed in order to safely assess that the machine pulls up evenly on both wheels with no adverse effect
- They should be aware if the braking system makes any untoward noises
- They should also know the required pressure on the controls to slow and stop their machine - and be aware of the performance of their tyres in the given conditions

- **To recognise the issues when riding an unfamiliar machine**

- When riding an unfamiliar machine, advanced riders should be aware of any features that may affect their ability to ride it. They should adjust their riding accordingly

## The Journey

There are certain important factors that advanced riders must be aware of in relation to their journey

### **That the purpose of their journey and the time available may influence their riding and their decision-making**

- Advanced riders must always consider the purpose of their journey - and whether it is likely to change
- For example, an observed ride may, on conclusion, become a ride to visit friends or to pick-up a pillion, so priorities may change
- Similarly, they must be aware that if time is short, that may become the focus of their concentration and affect their decision-making process and attitude towards other drivers and riders
- For example, they should not become less willing to share space nor more aggressive in their communication

By recognising these changes at an early stage, an advanced rider can manage them effectively

- **That route choice and planning will influence the way they ride**

- Advanced riders should consider their knowledge of the route and the possible effects of how they choose to get there
- For example if the bypass is closed and they have to go through the town centre unexpectedly, how might that affect the way they approach the ride? If they are relying on Sat Nav and it fails, can they deal with it?

# The Wider World

Motorcycling doesn't happen in a vacuum; it is part of life. Advanced riders should therefore be aware of the possible impact other lifestyle factors may have on their riding. In particular, they should

- **Consider the range of influences that may impact on their riding**

- For example, whether their peer group's view of how to behave on the road differs from that of a careful and competent rider
- How peer group pressure might influence their attitudes and behaviour when riding
- Similarly, what is their focus if they are a courier under pressure to complete their deliveries?

- **Understand how attitude to risk may affect riding choices**

- A thrill-seeking, try-anything-once to life can easily translate into risk-taking behaviour on the road; something which is unacceptable in an advanced rider
- To counter this risk:
  - Advanced riders should pause to consider the negative consequences of any risk-taking behaviour
  - Effectively manage any behaviour that may lead to inappropriate risk taking





# IPSGA

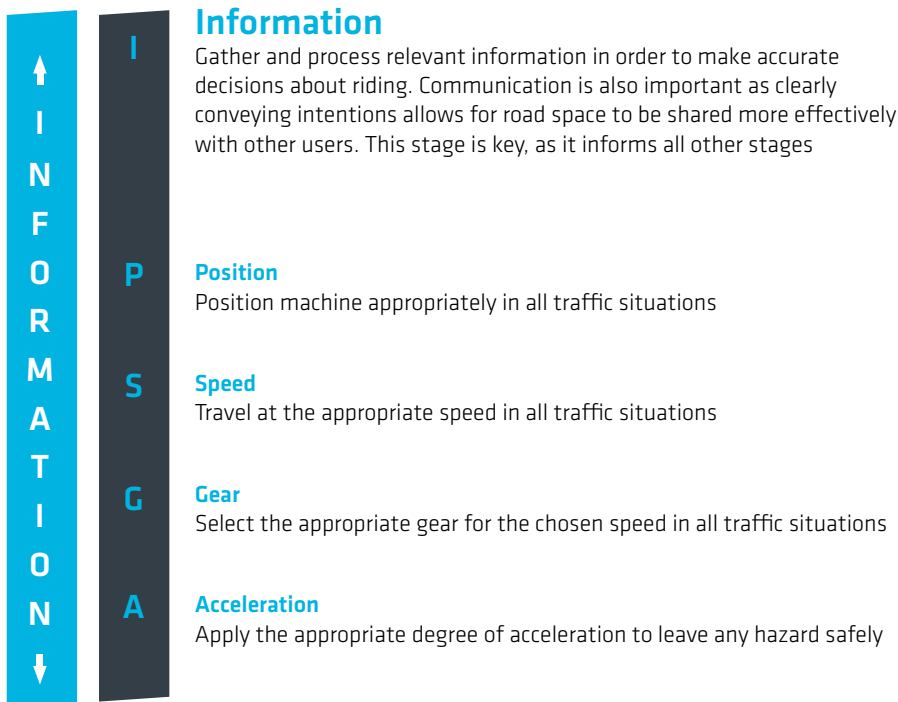
Information, Position, Speed, Gear and Acceleration – the system at the core of Advanced Riding

The purpose of IPSGA is to promote safety and prevent collisions by encouraging riders to adopt a systematic approach to any hazard. In this case, a hazard is “anything which contains an element of actual or potential danger”

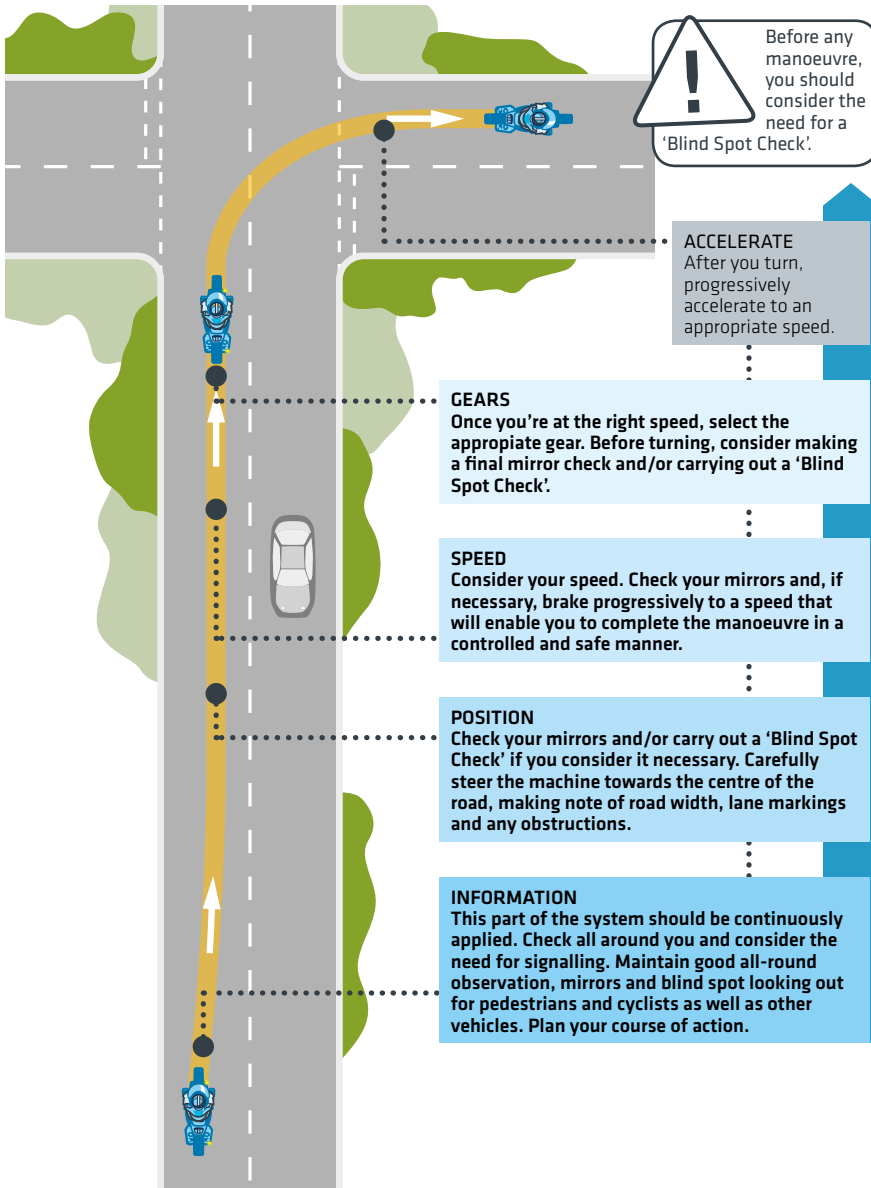
With the exception of ‘Human Factors’, IPSGA runs like a spine through the entire advanced riding course. It promotes careful Observation, sensible Anticipation and accurate Planning (OAP), good communication with other road users and the smooth application of a machine’s controls. A riding plan is made on a combination of what can be seen, what cannot be seen and the circumstances that can reasonably be expected to develop. These are qualities that any advanced rider should be able to demonstrate

## In summary:

On approach to any hazard, each stage of IPSGA should be considered in sequence. As circumstances change and new information becomes available, the system can be revisited at the appropriate stage



# Using IPSGA on a right hand turn



# Information

There are three aspects to effectively gathering information and communicating well with other road users

## **TAKE** information

## **USE** information

## **GIVE** information

### TAKE information

Advanced riders should:

- **Look all around, scanning to the front and sides of their machine**
  - The further they extend and widen their vision, the more information they will gather
- **Consistently use their mirrors and check for potential blind spots**
  - Mirrors should be used throughout the IPSC stages. Shoulder checks may also be used to eliminate blind spots
- **Look for information given by other road users**
  - Where possible, make eye contact with other drivers to assist in communication, as well as looking at the position of other vehicles
- **Gather visual information from a number of sources**
  - For example, manure on the road may give early warning of horses in the area, and fresh mud on the road may indicate a tractor ahead
- **Make good use of other senses**
  - For example, the smell of diesel may identify a slippery road surface
  - The sound of a vehicle horn may give warning of an as yet unseen hazard just as a siren will signal the presence of an emergency vehicle

### USE information

Advanced riders should:

- Use observation links to anticipate how their riding may be affected
- Make observational links to anticipate how their riding might be affected
- By identifying seemingly normal items such as bins at the roadside or a church steeple in the distance we can adjust our riding plan for possible problems
  - For example, 'The bins are out = I'm expecting to see the collection lorry = I am planning to deal with that'
  - Church steeple in view = I'm approaching a village = I should limit my speed'
- **Prioritise hazards to stay safe**
  - Which hazard is closest, which presents the greatest risk. Deal with the most important first

### GIVE information

Advanced riders should:

- **Reinforce the information given by their position and speed with accurate signalling**
  - If any other road user may benefit from a signal, it should always be given - clearly and in good time
- **While a signal alone may not convey a rider's intention, it can prove useful alongside other factors, such as a change in road position and/or speed**
  - It's also important to remember that signals can be misinterpreted, for example, a flash of headlights could be interpreted as a warning or an invitation
- **It is important to check mirrors before signalling and recognise that giving a signal does not also give the right to carry out the intended manoeuvre**

- Certain road users fall into the vulnerable category, be particularly mindful of cyclists, horse riders and pedestrians and keep them safe with timely accurate communication
- **Be aware that following traffic will not always share their level of awareness**
  - It may be necessary to show brake lights to other vehicles even when slowing down using acceleration sense. This is an excellent example of how through observation, anticipation and communication, advanced riders can help keep other road users safe
- **Make eye contact with other riders and drivers to assist in communicating their intentions**
  - this is also a good way to TAKE information
- **Use other communication methods, such as sounding their horn or flashing their lights only when it's appropriate to let other riders and drivers know they are there**



**Good advanced riders observe, anticipate and plan ahead, effectively creating a safe working space or flexible “safety bubble” around their car or bike the size and the shape of the ‘bubble’ needs to be varied to prioritise hazards**

## Position

Positioning a motorcycle accurately on the road reduces the risk of a collision. However, the ideal position will vary according to specific circumstances, such as road layout, surface and traffic conditions

### Advanced riders should:

- **Always consider safety first**
  - Do not relinquish safety for any other perceived advantage. Be prepared to sacrifice position for safety
  - Position to see and be seen
- **Be aware of potential hazards on both sides of their machine**
  - To the nearside – cyclists, pedestrians, parked vehicles and their occupants are all examples of who and what might present a hazard, as are other riders and drivers pulling out of junctions
  - To the offside – there is potential conflict with oncoming traffic
- **Assess their speed when moving to the nearside or the offside**
  - For example, when it isn't possible to allow a door-width of room when passing a parked car, riders should slow down so they have time to react if a door were to open
- **Be particularly aware of cyclists and other motorcyclists when adopting their position**
  - For example, they may be unseen to the nearside or filtering past on the offside
- **Position themselves at least two seconds behind any vehicle they are following**
  - This allows enough time to respond if the vehicle ahead slows down. It gives them better vision beyond it, and enables them to develop an overtake, if appropriate

- Take up the appropriate position for turning, depending on the size of their machine, the road width and layout, and other traffic
  - To turn left – advanced riders should usually position themselves in the centre of the left hand lane on the approach to a junction
  - To turn right - advanced riders should usually position themselves towards the centre of the road, paying particular attention to oncoming traffic. If in any doubt, they should stay away from the centre white line

Optimum positioning for bends and corners, and when overtaking, is dependent on a number of factors. These are discussed in detail in later sections of this handbook

## Speed

For the purpose of IPSCGA, the correct speed is “the speed required to safely negotiate the hazard”. As with all stages, this is influenced by the information gathered plus other factors such as the type of motorcycle, the road, weather and traffic conditions

**Advanced riders should:**

- Recognise that the speed phase of IPSCGA is not about making progress but adjusting to a safe entry speed for the hazard
- Continually assess the speed requirement and adjust it accordingly in relation to the changing information and priorities identified
  - For example, a damaged road surface or mud on the road demand a slower speed for safe entry to a bend than is normally required
  - Similarly, if there are vulnerable road users close to a hazard, riders may need to further reduce their speed

- Be aware that the smooth operation of the throttle and brakes are essential qualities in an advanced rider
- The smooth and accurate progressive braking covered under core riding skills is desirable as it allows for safe speed reduction

## Gear

Accurate use of the gears allows an engine to deliver the required performance in all situations

**Advanced riders should:**

- Develop sound knowledge of the performance of their machine in each gear
  - So it becomes easier to choose an appropriate gear and to know when a gear change will be needed
- Engage the correct gear for the speed they are riding now, while taking account of what may be required in the immediate future
  - Select a gear with sufficient flexibility to allow for speeding up and slowing down
  - Consider other factors, such as fuel economy, machine sympathy (not over-revving or allowing the engine to labour) and the amount of acceleration required
  - Consider when a new gear is required for future requirements although the speed has not changed
    - For example - to complete a planned overtake or for control in a series of challenging bends

- Conduct gear changes in a smooth steady manner
    - When changing down, advanced riders should recognise if it is necessary to engage drive in an intermediate gear, or whether a block change is possible – and only engage drive in the required gear
    - Where speed has been lost through braking during latter stages of braking hold in clutch and operate gears until the correct gear is selected then apply a rev before releasing the clutch. (care needs to be taken to ensure the correct gear is engaged if too low a gear is engaged the rear wheel may lock)
  - or
  - In the latter stages of braking change down through each gear briefly engaging each gear sequentially
- Both of these techniques are acceptable
- Operate an automatic gearbox correctly if fitted to the motorcycle
- When required, they should match engine revolutions to road speed
  - Know when to select neutral when stationary for a period of time

## Acceleration

For the purposes of IPSGA, acceleration is mainly concerned with the rider’s ability to leave any hazard safely

Advanced riders should:

- Assess a number of factors when deciding on the amount of acceleration they need to apply. The correct degree of acceleration will allow for safe unobtrusive progress
  - To achieve this, it’s important to take all of the limiting factors into account
    - For example, the speed limit, the condition of the road surface, lean angle, grip and weather conditions
  - The proximity of the next hazard

## Competency sheet - IPSGA and timing of IPSGA

	Achieved
Applies IPSGA appropriately	
Times IPSGA correctly	

- Understand that advanced riding isn’t about making maximum progress; it’s about making the level of progress required for the particular journey safely in the given conditions

The correct timing of IPSGA is paramount in achieving a safe smooth drive.



# The six competencies framed by IPSGA

This section looks in detail at what is required of an advanced rider in each of the following six areas:

- Core Riding Skills
- Bends
- Junctions and Roundabouts
- Overtaking
- Motorways and Dual Carriageways
- Slow Riding

# Competency sheet -

## Core riding skills

This page gives an overview of the competency requirements for this section.

Information	Achieved
Demonstrates early and accurate identification and anticipation of hazards by raising and expanding vision	
Checks the appropriate mirrors before altering their position or speed of their machine	
Through observation, is aware of how other road users may affect decisions	
Uses all appropriate signals to communicate with other road users	
<b>Position</b>	
Demonstrates smooth accurate steering	
Understands the benefit of positive (counter) steering and how to use it	
Steers the machine appropriately to maintain Safety, Stability and Vision	
<b>Speed</b>	
Demonstrates smooth acceleration, deceleration and accurate use of 'acceleration sense'	
Demonstrates smooth and accurate progressive braking	
Brings their machine to a controlled stop with the appropriate foot to the floor	
<b>Gear</b>	
Demonstrates an ability to select the correct gear on every occasion	
Makes all gear-changes smoothly, matching engine revolutions where appropriate	
<b>Acceleration</b>	
Accelerates smoothly when vision and speed limits permit	



# Core riding skills

Core riding skills are those required to take use and give information effectively and to operate a motorcycle's controls with a degree of finesse. For example, the ability to change gear in a smooth and timely fashion, to steer accurately and to accelerate with due consideration

The overall impression should be of a careful and competent rider who is relaxed well informed and in control



# Information

Advanced riders must be able to:

## TAKE information

- **Demonstrate early and accurate identification and anticipation of hazards by raising and expanding vision**
  - Lift vision and look in all directions for early signs of potential problems
  - On identifying a hazard, plan to deal with the situation
  - Use their mirrors to link information on the hazard to what's happening behind
  - Always check both ways at junctions
  - At roundabouts be aware of danger to the right, and of other traffic entering the roundabout at speed
  - Be aware of responding emergency vehicles
- **Check the appropriate mirrors before altering the position or speed of their machine**
  - Before slowing, check appropriate mirror
  - If necessary, both mirrors
  - To move out, check offside mirror
  - To move in, check nearside mirror
- **Use blind spot checks (shoulder checks) where appropriate**

The overall aim is to maintain a safe operating space or 'safety bubble'

## USE information

- **Through observation, be aware of how other road users may affect their decisions**
  - Give extra space to vulnerable road users such as cyclists, pedestrians and horse riders
  - Advanced riders should always be prepared to share or give up space for safety

## GIVE information

- **Use all appropriate signals to communicate with other road users**
  - Be aware that motorcycle position assists communication
  - Give signals in a timely fashion to communicate intentions
  - Use indicators, brake lights and even arm signals if required
  - Look at the other drivers and riders not just at the vehicles to communicate
  - Only use headlamps or horn to alert another road user to your presence never as a rebuke



# Position

Additional points on positioning for specific hazards such as bends and roundabouts can be found in the relevant sections of this handbook

**Advanced riders must be able to:**

- **Demonstrate smooth accurate steering**
  - It is just as important for a rider to accurately steer their motorcycle to a chosen course as it is to have the correct course in the first place
  - Advanced riders must therefore achieve their planned position in a controlled and effective manner
  - The machine can be turned by a number of different inputs to the handlebars, these will be further explored during riding and the slow riding sessions
  - They should ensure that these inputs are accurate and applied progressively to achieve the desired outcome
- **Understand the benefit of positive (counter) steering and how to use it**
  - Your Observer will give you an overview of the physics involved in a motorcycle turning, and a full explanation of how and why positive steering is so effective
- **Steers the machine appropriately to maintain Safety, Stability and Vision**
  - Awareness gained from your Observer will help you understand the likely effects of destabilising your motorcycle
  - Coarse or inappropriate steering inputs are likely to place the machine in a different area to the one planned
  - The aim is a smooth transition to the desired course

Additional points on positioning for specific hazards such as bends and roundabouts can be found in the relevant sections of this document

# Speed

Acceleration sense is the ability to vary machine speed in response to changing road and traffic conditions by accurate use of the throttle, so that you use the brakes less or not at all. It requires active observation, anticipation and planning for it to be used correctly

**Advanced riders must be able to:**

- **Demonstrate smooth deceleration and accurate use of 'acceleration sense'**
  - When increasing speed - a smooth application of the throttle will assist in balancing the machine
  - When slowing down - a controlled release of the throttle will maintain stability
  - Advanced riders should also be aware their brake lights may be needed to communicate and acceleration sense may not be appropriate in certain circumstances
- **Demonstrate smooth and accurate progressive braking**
  - Apply gentle pressure on the lever and pedal to settle the machine onto front suspension
  - Apply firmer braking to lose speed as required
  - Gently release pressure to allow the suspension to resetttle
  - Although described in three stages, care should be taken to ensure a smooth progressive transition between each stage to make the whole action seamless
  - In addition, front to rear brake balance and application will need to be adjusted for machine load, road surface or weather conditions

- Bring their machine to a controlled stop with the appropriate foot to the floor

- In the last stages of stopping, advanced riders must decide which foot to use to balance the machine when they become stationary

There are perceived advantages when the machine is stationary to putting either foot down or even if appropriate, both feet at the same time

- It may be advantageous in the event of a collision to have control of the rear brake to retain steering control
- However, retaining control of the rear brake necessitates swapping feet in order to either select neutral or engage a gear to move off
- At times it is easier to give up control of the rear brake in order to be able to select gears
- The ability to use either foot or both feet, is advantageous if road conditions dictate a change from your normal action
- The important outcome is that the machine comes to a controlled stop and is balanced effectively

## Gear

Advanced riders must be able to:

- Demonstrate an ability to select the correct gear on every occasion
  - Gear changes need to be smooth and accurate at all times
  - An ability to engage the required gear without using drive in an intermediate gear may be advantageous
- Make all gear-changes smoothly, matching engine revolutions where appropriate
  - Employ a rev on the down change or sustained throttle pressure to match engine revs to road speed, where necessary to achieve a smooth transition
  - When speeds are low this may not be required, the aim is to make the transition smooth

## Acceleration

Advanced riders must be able to:

- Accelerate smoothly when vision and limits permit
  - Apply the correct degree of acceleration to leave the hazard safely
  - Acceleration should be brisk and business-like, with due regard to speed limits, weather and traffic conditions
- Consider the requirements for Eco riding, is it necessary to gain speed quickly? Is a higher gear more appropriate?

# Competency sheet -

## Bends

This page gives an overview of the competency requirements for this section.

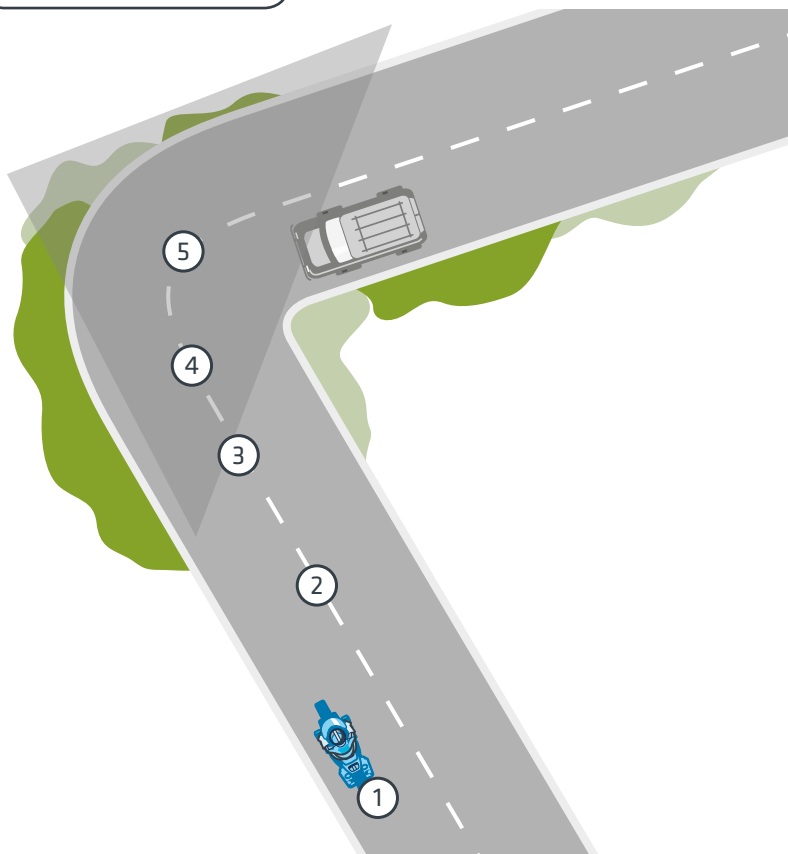
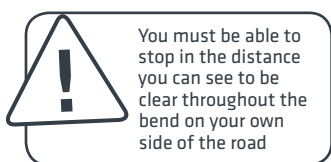
Information	Achieved
Actively scans the road to the limit point in the distance and back	
Builds awareness of other road users' position and activity	
Position	
Positions correctly on the approach to a bend	
In a right hand bend - towards the nearside	
In a left hand bend - towards the offside of lane	
Positions correctly throughout the bend without compromising safety	
Speed	
Uses the limit point correctly and is able to stop within the distance seen to be clear on their own side of the road	
Uses appropriate speed to negotiate the bend safely	
Gear	
Selects and engages the appropriate gear for the speed and circumstances	
Acceleration	
Maintains appropriate throttle application to retain stability	
Accelerates to an appropriate speed in relation to hazards	



# Bends

Safely negotiating bends requires an awareness of the road ahead, for example, to ensure there is sufficient space to stop within the distance that is seen to be clear on your own side of the road

By using limit points and looking across the bend for hazards, advanced riders can enhance their vision. Whilst crucial, this must be balanced with other factors such as an awareness of the physical limits of grip when turning





1

150 metres from the bend in the road and the Limit Point of Vision is getting closer the distance available to stop reducing. Slow down.



2

You're 50 metres from the bend, when the LPOV appears static, continue to slow until it starts to move away. You need to be able to stop in that distance.



3

40 metres from the bend. The LPOV is just starting to move away from you as the bend opens up. You can maintain or your speed if you have enough room to stop.



4

You're right on the bend now. The LPOV is moving away from you, so you can consider accelerating.



5

Exiting the bend, the LPOV moves away from you. Accelerate to match the improving vision.

**The limit point is the furthest point to which you have an uninterrupted view of the road surface as it disappears around a bend or over a brow. It is the point where the two edges of the road appear to meet. On a left hand bend you should treat this as where the left hand verge appears to meet the centre line**

# Information

- **Actively scan the road to the limit point in the distance and back**
  - By looking ahead and scanning back, advanced riders give themselves more time to respond to the situation ahead
  - This scanning or visual sweeping should be a continuous process
  - By looking across a bend, advanced riders can better plan how to deal with it. For example:
  - They may see other vehicles and/or further hazards
  - Similarly, hedge or tree lines and lamp posts etc. may give an indication of the severity of the bend
- **Build awareness of other road users' position and activity**
  - Be aware of signs and signals, for example, the more side profile they see of other road users appearing or disappearing through a bend, the sharper it is
  - The speed of other road users may also indicate the severity of a bend
  - If the vehicle in front is showing its brake lights, this may indicate a problem through the bend
  - They may need to change position or speed, or indicate to traffic behind that there may be a problem
  - The position of approaching road users may also indicate that a change of speed or position is required

# Position

Advanced riders must be able to:

- **Position correctly on the approach to a bend**
  - Safety must not be compromised when positioning for a bend
  - Advanced riders must be able to achieve the correct position smoothly, without destabilising the motorcycle, generally:
    - In a right hand bend – a position towards the nearside will usually afford a better view but be aware of nearside hazards
    - In a left hand bend - a position towards the offside of lane will usually afford a better view, be particularly aware of potential conflict with oncoming traffic
  - The presence of other road users may affect position, either on the approach or through the bend
  - Physical features such as junctions, or changes to road surface may also require a change of position
  - In areas with lower speed limits, a more central position within the approach lane may be preferable as extreme positioning may cause confusion to other riders and drivers
- **Position correctly throughout the bend without compromising safety**
  - Where view permits, it may be safe to take a straighter line through a bend
  - It may be possible to do this within the confines of one lane with no effect on other road users
  - Advanced riders must have an unhindered view of the road surface and both kerbs, to be certain there are no unseen hazards
  - Mirrors and appropriate blind spot checks must be utilised before straightening a bend

**If in doubt, do not straighten**



# Speed

Advanced riders must be able to:

- Use limit point correctly and be able to stop within the distance seen to be clear on their own side of the road
  - Utilising IPSCA correctly and matching the limit point of vision to your speed of approach will give you a safe speed at which to negotiate a bend
  - Adjusting speed in good time allows for the appropriate gear to be selected
  - Speed should be matched to the rate at which the limit point appears to move
  - The limit point will appear to be static, moving or matched relative to your approach. Your observer will explain and/or demonstrate this in action. They will demonstrate how to adjust your speed of approach in order that you will always be able to stop within the distance you can see to be clear on your own side of the road
- On a left-hand bend, the limit point is on the far side of the road. In these circumstances your safe stopping distance is marked by the centre line of the road so speed needs to be adjusted accordingly
- Use appropriate speed to negotiate the bend safely
  - It is important to maintain machine stability and to be aware of any hazards when negotiating bends
  - It is necessary to continually reassess the limit point by scanning ahead, back and across the bend and to adjust speed as necessary



# Gear

Advanced riders must be able to:

- **Select and engage the appropriate gear for the speed and circumstances**
  - Advanced riders must consider which gear will be both flexible and responsive, without causing the engine to labour or over-rev
  - By looking ahead and planning, advanced riders will be able to maintain the appropriate gear for future hazards
  - On an automatic machine allow time for a gear to select after select, or manually select if appropriate (it may be advantageous to select the gear manually and hold it throughout the bend)

# Acceleration

Advanced riders must be able to:

- **Maintain appropriate throttle application to retain stability**
  - Gentle throttle application allows a motorcycle to maintain speed and stability through a corner
  - This may need to be varied, depending the severity of the corner and in light of changing circumstances
- **Accelerate to an appropriate speed in relation to hazards**
  - Accelerate when improving vision and prevailing speed limits allow, taking into account any future hazards
  - All acceleration needs to be made smoothly, without coarse adjustments



# Competency sheet - Junctions and Roundabouts

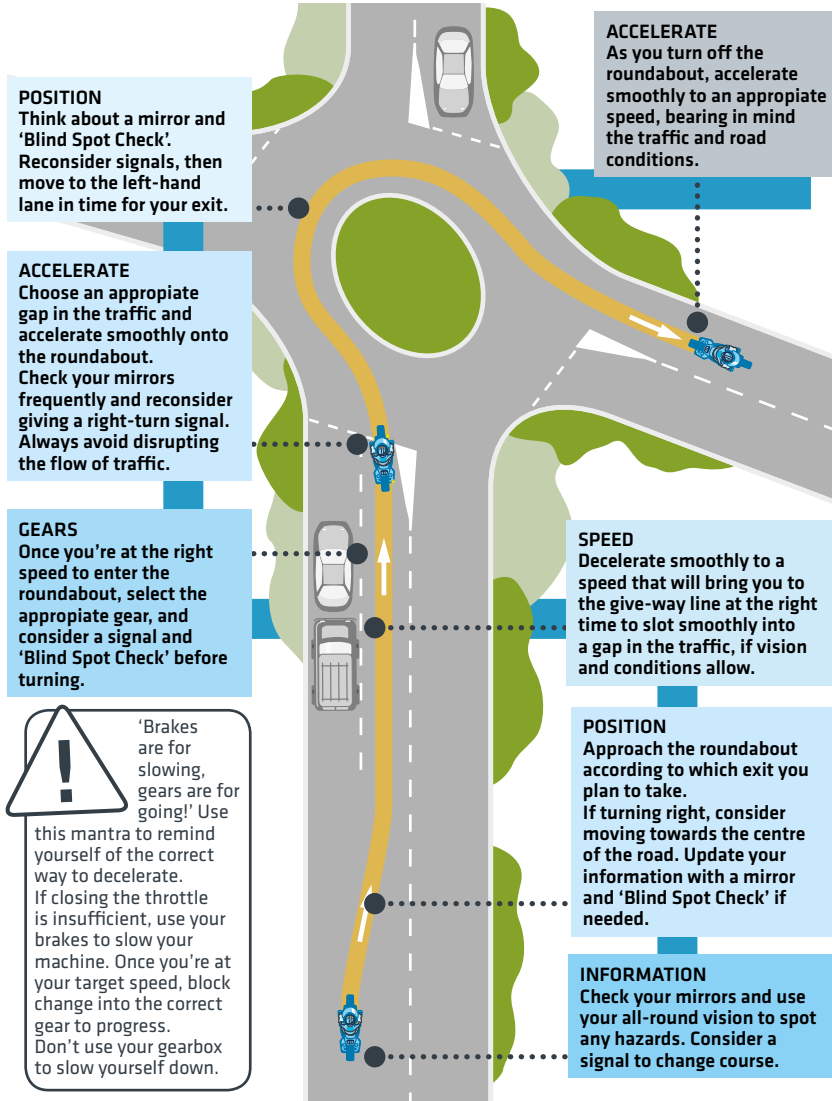
This page gives an overview of the competency requirements for this section.

Information	Achieved
Identifies type of junction system they are dealing with	
Monitors their speed and distance on approach	
Assesses the speed and position of other road users	
Identifies hazards and prepares for situations that may arise	
Identifies the best position to enter, negotiate and leave the junction	
Checks mirrors and/or blind spots before deciding on their actions	
Considers their signals prior to changing position	
Accurately identifies the first entry gap that is safe to use	
Identifies the correct exit and looks for an early view into the exit road	
<b>Position</b>	
Adopts the appropriate position without causing others to alter course or speed unnecessarily	
<b>Speed</b>	
Accurately adjusts speed in relation to the physical features of the junction and traffic flow	
<b>Gear</b>	
Selects and engages the appropriate gear for the speed and circumstances	
<b>Acceleration</b>	
Applies appropriate timely acceleration to leave the hazard	

# Roundabouts

Roundabouts are generally a complicated form of a junction. The principles for dealing with both are generally the same. Early vision and accurate information are what allow you to make your plan to stop or proceed with safety (for a simple right turn junction refer to page 14)

When approaching a roundabout, the aim is to keep the motorcycle moving as long as it is safe to do so; an aim summed up in the phrase “planning to stop but looking for information to go”.



# Information

Information is crucial to safely negotiating a junction. There are therefore a number of skills and behaviours that advanced riders should demonstrate

- **Identify the type of junction they are approaching**
  - Signs on approach to a junction or roundabout detail its size, the location and often the angle of the exit
  - On a large roundabout - give priority to traffic from the right
  - On a mini roundabout - riders should give way to traffic from the right, also giving priority to traffic closely approaching the roundabout
  - A series of mini roundabouts should be assessed individually
- **Monitor their speed and distance on approach**
  - Advanced riders must monitor their speed on approach to a junction or roundabout, especially if it is located at the end of a motorway or dual carriageway slip-road or road where the national speed limit applies
  - Allow time to gather the relevant information and make a suitable plan on approach
  - Make appropriate decisions about whether to give way or take precedence. If in doubt, stop
  - Planning to stop sometimes allows sufficient time for an advanced rider to gather information and proceed safely without stopping
  - Take care to signal correctly so as not to mislead other road users
  - Remain vigilant, never assuming that other road users' signals are accurate
- **Assess the speed and position of other road users**
  - Scan all road users' movement to anticipate intentions and make appropriate decisions on whether to give way or take precedence
  - Having entered the roundabout, remain aware of traffic joining from other entry points
  - If a junction has approaches with limited vision in any direction, be prepared to slow down or stop in order to gain information before entering the junction
- **Identify hazards and prepare for situations that may arise**
  - Use visual clues to predict possible hazards and prepare for situations that may arise
  - Prioritise response to any hazard in a safe, controlled manner
- **Identify the best position to enter, negotiate and leave the roundabout**
  - Use the information gathered to make the right plan to deal with entry to the roundabout, route around it and exit
- **Check mirrors and blind spots before deciding on other actions**
  - Make effective use of mirrors and check blind spots before taking actions, such as:
    - Changing speed, lane or direction
    - Choosing whether or not to use signals
- **Consider their signals prior to changing position**
  - Apply signals in good time, taking care not to mislead or confuse other road users
- **Accurately identify the first entry gap that is safe to use**
  - By timing arrival correctly, it may be possible for advanced riders to keep moving onto the roundabout

Each time you ride your motorcycle on the road, you face a whole host of potential dangers. Check out this picture. It highlights the sort of risks you could face in your everyday riding.



- If it is necessary to rush into a gap, waiting may have been a better option

• Identify the correct exit and look for an early view into the exit road

- Look to exit by using road signs, counting other exits or using sat-nav instructions and position appropriately being aware of other road users around you
- Look for an early view into the exit route to put a plan in place to deal with any hazard

## Position

Advanced riders must be able to:

• Adopt the appropriate position without causing others to alter course or speed

- On identifying the type of junction, advanced riders must decide what position to take for their chosen route
- Within reason an early adoption of the correct position will be beneficial
- A straight line may be taken through the roundabout if it is safe and no other road users are present
- Check mirrors and/or blind spots prior to taking such a line

- If there is any doubt as to whether safety will be compromised or confusion caused, stay in lane
- If traffic is queuing on entry to a roundabout advanced riders must consider using the lane of least resistance. Be aware of any prohibiting road markings and don't cause confusion to other road users

## Speed

Advanced riders must be able to:

- Accurately adjust speed in relation to the physical features of the roundabout and traffic flow
- Understand how the tightness of a turn, any positive or negative camber, and the physical size and offset of a roundabout will influence speed
- Speed will also be influenced by other road users on, or likely to join, the roundabout
- Rushing into a gap but then having to slow down may cause problems for other road users

## Gear

Advanced riders must be able to:

- Select and engage the appropriate gear for the speed and circumstances
- Consider which gear will be both flexible and responsive, without causing the engine to labour or over-rev
- Try to engage a gear suitable for the whole roundabout
- If a gear change is needed, it should be done while the machine direction is fixed

## Acceleration

Advanced riders must be able to:

- Maintain correct acceleration application on entering, negotiating and leaving the roundabout
- Once the correct entry speed for the roundabout is achieved, advanced riders should use the throttle to maintain it
- If conditions allow, they may increase speed and accelerate away from the roundabout



# Competency sheet - Overtaking

This page gives an overview of the competency requirements for this section.

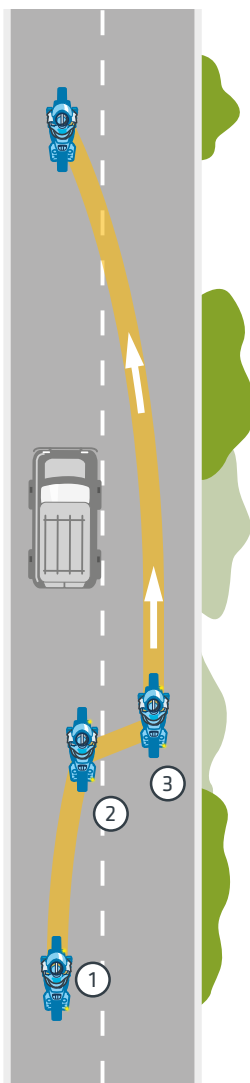
Information	Achieved
Identifies a safe imminent opportunity to overtake	
Identifies a safe return gap	
Accurately judges the difference between their own speed and that of the vehicle[s] they plan to overtake	
<b>Position</b>	
Adopts the overtaking position - Stage 1	
Moves out towards the offside - Stage 2	
Allows a safe gap between vehicles - Stage 2	
Moves into the chosen return gap - Stage 3	
<b>Speed</b>	
Controls speed to safely complete the overtake	
Adjusts speed to safely return to the nearside of the road	
<b>Gear</b>	
Selects and engages the correct gear for their chosen speed and the prevailing circumstances	
<b>Acceleration</b>	
Applies the correct acceleration to complete the overtake	



# Overtaking

At times, even a perfectly executed overtake within the speed limit can be seen as 'dangerous' by another party. In fact, overtaking is the area where riders are most likely to come into conflict with another road user; either the driver of the vehicle being overtaken or the driver of another vehicle that witnesses in the manoeuvre. Ask yourself whether any overtake you are about to attempt is really necessary and worthwhile. What's the point in exposing yourself to unnecessary danger to jump one or two places in a queue of traffic?

Advanced riders must therefore be keenly aware of their actions - and how others perceive them.



## 1) The following position

The following position is a position that allows you plenty of time to react should the driver in front brake suddenly. Apply the two second rule

Adopt this position if you have no intention of overtaking, cannot do so imminently due to other hazards, or when prevented from doing so by solid white lines or no overtaking signs. In the absence of any other hazards, and if it is safe to do so, you can move directly to (3), the overtake (this would be a momentum overtake)

## 2) The overtaking position

If you anticipate an opportunity to overtake, close in on the vehicle in front until you're in the 'overtaking position'. This is normally closer than the 'following position' and towards the centre line, increasing your view ahead

Match your speed to the vehicle in front and consider taking a lower gear to pass it

If the overtake doesn't develop, consider dropping back to the 'following position' and then start the whole process again

## 3) The overtake

When it's clear, move carefully to the other side of the road to increase your view. If the overtake is safe, accelerate quickly past the vehicle. If it's not, drop back behind safely and smoothly

The final part of the manoeuvre returns you safely back to your side of the road in as straight a line as possible

Consider using mirrors and/or a "Blind Spot Check" to make sure that you do not affect the vehicle you have just passed

# Information

Advanced riders must be able to:

- **Identify a safe imminent opportunity to overtake**
  - When preparing to overtake, advanced riders should look as far down the road as possible to check for hazards
  - Read and respond to road signs and markings
  - Check hedges for any breaks in shadows that might signify an entrance
  - Be aware that any buildings will have entrances, and clear them as safe
  - Keep gathering information to decide if there is enough space to make the overtake safely
  - If in any doubt delay the overtake, hold back and reassess
  - Use mirrors to link the developing potential of the overtake to the information behind, and to the sides prior, to committing
  - Advanced riders must always be prepared to cancel the manoeuvre if circumstances change for the worse
- **Identify a safe return gap**
  - During a multi-vehicle overtake, an advanced rider must decide how many vehicles to overtake before committing
  - Identify a safe return gap that will not affect other traffic
  - Bear in mind that if the gap is likely to close before they achieve the overtake, it is unrealistic
  - Be aware of any negative affect they may have on other drivers
- **Accurately judge the difference between their own speed and that of the vehicle[s] they plan to overtake**

- Accurately assess speed and position in relation to the speed and position of the vehicle[s] to be overtaken and the distance to the next hazard
- Achieving sufficient speed difference to overtake safely in the space available within the speed limit must be realistic
- Never plan to exceed the speed limit, so if the other vehicle is travelling at close to the limit, recognise that overtaking may not be legal

## Position

Advanced riders must be able to:

- **Adopt the overtaking position**
  - Advanced riders should already be positioned in a safe following position, in line with Highway Code advice
  - When safe and appropriate, you should move into an overtaking position, this will be closer than a regular following position but safety must always be prioritised
  - You must be prepared to drop back if the circumstances change. Remaining in the overtaking position can cause the driver in front to be distracted and to focus on you in their mirrors rather than the road ahead
- **Move out towards the offside**
  - When it is safe, advanced riders should move out towards the offside keeping their motorcycle stable and matching speed with that of the vehicle to be overtaken
  - You should continually update information and be prepared to abort if circumstances change as safety is paramount
  - From this position make the overtake when safe

- **Allow a safe gap between vehicles**
  - Advanced riders must allow a safe gap between their own machine and the vehicle they are going to pass
  - If the road is narrow, you should consider the likely reaction before starting the manoeuvre
  - If in any doubt, you should hold back and reassess
  - Be particularly aware of vulnerable road user
  - This safe gap also applies to parked vehicles
- **Move into the chosen return gap**
  - If there are other vehicles in view, albeit some distance off, you should try to display clear intent that you are returning to your own side of the road either by positioning or by showing a signal
  - Advanced riders must be able to move into the chosen return gap without causing other road users to alter course or speed
  - Complete the return to the nearside of the road in a controlled fashion
  - Avoid cutting in too close to the overtaken vehicle

## Speed

Advanced riders must be able to:

- **Control speed to safely complete the overtake**
  - Maintain speed with the vehicle being overtaken until ready to commence the overtake
  - Adjust speed so that the overtake can be completed in the available clear road space, within the posted speed limit
  - Advanced riders do not plan to exceed the speed limit, so if the other vehicle is travelling at close to this speed, overtaking may not be legal
- **Adjust speed to safely return to the nearside of the road**
  - Adjust speed so as not to inconvenience other road users when returning to the nearside of the road

## Gear

Advanced riders must be able to:

- **Select and engage the correct gear for their chosen speed and the prevailing circumstances**
  - Consider which gear will be both flexible and responsive, without causing the engine to labour or over-rev
  - Try to engage a gear that is suitable for the whole overtake
  - If a gear change is required, try not to make it while alongside the vehicle being overtaken

# Acceleration

Advanced riders must be able to:

- Apply the correct acceleration to complete the overtake
  - Acceleration should be smooth and progressive throughout the overtake and return to the nearside of the road

- Advanced riders should make a considered effort to complete the manoeuvre within the shortest possible time, but within the speed limit



# Competency sheet -

## Motorways and Dual Carriageways

This page gives an overview of the competency requirements for this section.

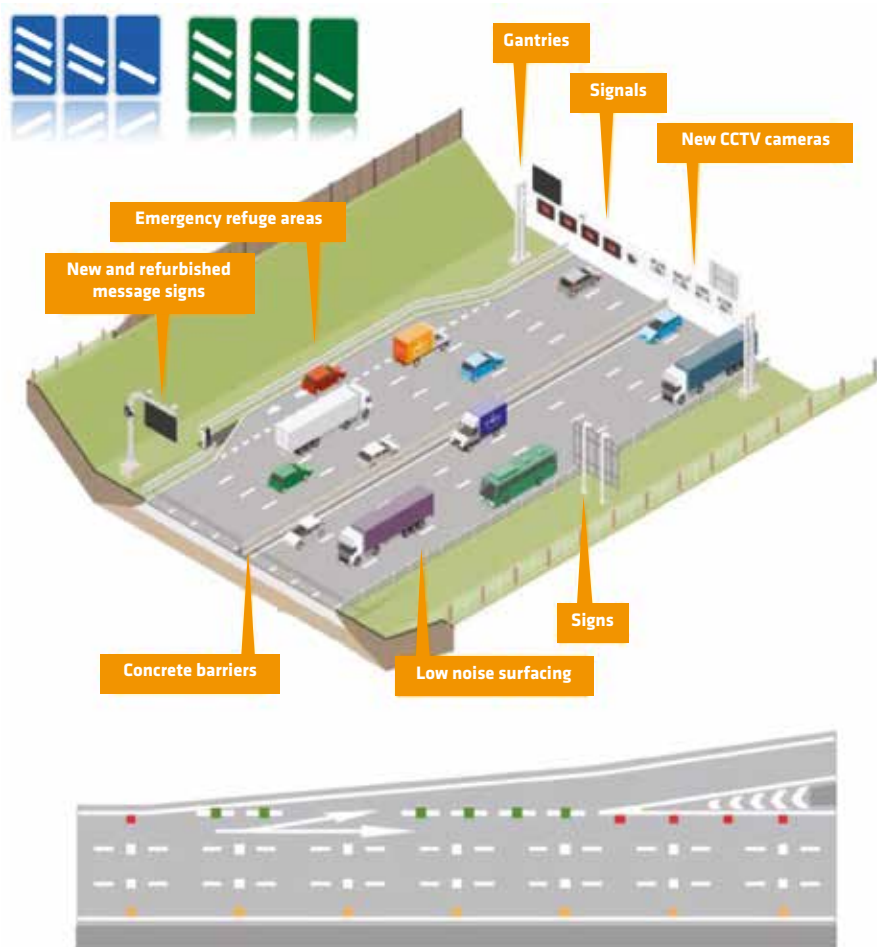
Information	Achieved
Identifies and uses signs in planning their riding	
Gathers information on traffic flow when entering a new road	
Conducts appropriate mirror and/or blind spot checks	
Communicates effectively with other road users	
Anticipates the movements of other road users	
Gathers appropriate exit information	
<b>Position</b>	
Adopts an appropriate entry position	
Uses the nearside lane whenever possible	
Adopts an appropriate following position	
Plans an appropriate overtaking position	
Positions to maintain a safe space and gain the best view	
Positions safely when exiting	
Exits to the appropriate lane of the slip road	
<b>Speed</b>	
Accurately adjusts speed to match the identified entry gap	
Balances progress with restraint	
Exits at the appropriate speed	
Stop appropriately in an emergency	
<b>Gear</b>	
Selects the correct gear for the chosen speed in the given circumstances	
<b>Acceleration</b>	
Applies appropriate acceleration	

# Motorways and Dual Carriageways

Despite faster riding speeds, motorways are statistically the safest roads we travel on

Dual carriageways however, have the potential to be less safe, as they have the same speed limits as motorways without the same regulations. For example, cyclists, learners, pedestrians and other vulnerable road users – even horses – can all use Dual Carriageways. This, combined with less user-friendly entry and exit points, increases the potential for an accident or near miss

It is therefore vital for advanced riders to recognise the differences between motorways and dual carriageways and to have a finely tuned awareness of the likely hazards – and how quickly they can develop



# Information

## Advanced riders must be able to:

- **Identify and use signs in planning their riding**
  - By extending and widening their vision, advanced riders will be able to obtain early information from signs to assist in their decision making
  - They must be able to identify whether they are entering a motorway or a dual carriageway
  - Motorways have blue backed signs:
    - they have additional regulations which prohibit a number of vulnerable road users
  - Direction signs prior to a motorway also show motorway information in blue boxes
  - Direction signs on motorways give additional information, e.g. an unusual feature such as a sharp bend on an exit slip road
  - Smart or managed motorways also have overhead gantries to convey information or warnings of problems ahead, e.g. lane closures or a variable speed limit
  - Dual carriageways have green or white backed signs - unless signed to the contrary, a dual carriageway can be used by all road users
  - On dual carriageways, traffic has the potential to leave or join from either side at junctions (some motorways also have this but it is a rare occurrence) and this may be at 90 degrees with no slip road
- **Gather information on traffic flow when entering a new road**
  - On approach to a motorway, it is sometimes possible to see the carriageway above or below this helps gather information in relation to traffic flow
- **If traffic is at a standstill, advanced riders should try to identify the problem early enough to choose an alternative route**
- **While in the slip road, they should try to obtain an early view of traffic and carry out blind spot checks - especially for other motorcycles which can easily be lost in a mirror**
- **They should also assess the speed of approaching vehicles and identify an entry gap early**
- **Conduct appropriate mirror and blind spot checks**
  - Check mirrors before changing speed or position on a motorway or a dual carriageway and make appropriate checks to cover the blind spot area
  - When changing lanes, good mirror use will help to accurately assess the speed of approaching traffic
  - It is essential to link what is in the mirror to the hazards developing ahead in order remain safe
  - Be aware that high-speed traffic approaching from the rear is relevant to decision-making even when still a long way behind. It is important to ensure your mirror use is good enough to identify this early
- **Communicate effectively with other road users**
  - Advanced riders should be aware that the position they adopt may begin to communicate intentions to other road users
  - Well-timed signals will help to reinforce this
  - They should promote safe sharing of the road space by identifying a potential problem early and actively communicating with other road users
  - For example, early brake lights can alert a following driver or rider to a problem ahead

- **Anticipate the movements of other road users**

- Traffic joining the main carriageway from a slip road may be travelling at a slower speed, so advanced riders should be prepared to change lanes and allow others to join
- Whenever possible, they should avoid being immediately beside joining traffic and identify junctions early to assist in planning for this. This helps avoid the risk of being in the blind spot or being caught out by late lane changes
- On a dual carriageway, traffic joining may be slow to accelerate. Similarly, traffic leaving a dual carriageway may have to slow considerably or early, causing passing traffic to displace into offside lanes
- Early anticipation of where and when this is likely to happen helps to avoid heavy braking
- In addition, large goods vehicles and coaches are restricted and coaches over 12 metres are limited to 60mph respectively. Any smaller vehicles behind them may be travelling more quickly, so advanced riders should anticipate them pulling out into their path - and plan for this

Early anticipation of where and when this is likely to happen will avoid possible conflict

- **Gather appropriate exit information**

- Motorways typically have a signing system giving early warning of junctions
- Dual carriageways tend to offer more limited information
- If countdown markers are present they will be equidistant from each other and usually 100 yards apart.
- Exits may be very sharp or from the offside lane
- The size and shape of a junction will influence the speed of exit
- It may be necessary to slow and display brake lights earlier if exiting a dual carriageway to a sharp exit
- Having an early view helps with planning a route through other traffic





# Position

**Advanced riders must be able to:**

- **Adopt an appropriate entry position**

- Advanced riders should make safe use of the entry slip road to build up speed and position alongside a gap
- They should avoid being alongside any vehicle when joining the main carriageway to maintain their “Safety Bubble”

- **Use the nearside lane whenever possible**

- Advanced riders should monitor the position and speed of other road users in order to enter the nearside lane as soon as practicable
- This is the lane all riders should be travelling in, unless overtaking slower-moving vehicles
- They should maintain their overtaking lane until a sensible gap appears and not move into the nearside lane if they would have to move straight back out again
- They should monitor mirrors to avoid holding up any emergency vehicles or fast moving traffic that may wish to pass
- Staying out and attempting to enforce the speed limit is likely to provoke an adverse reaction from other road users

- **Adopt an appropriate following position**

- Advanced riders should maintain their safe operating space (their “Safety Bubble”) and the safety of other road users with a following gap of at least two seconds
- This allows time to respond to changing information and to plan safe progress
- They should be prepared to adjust this

gap to avoid being alongside other traffic for a prolonged period

- They should be prepared to increase this gap if safety demands it
  - For example, stopping distances are longer in wet weather, and significantly longer in snow and ice
- It may be advisable to extend the following distance in heavy traffic, to allow other vehicles to move in and out of the space in front
- This can avoid the need for repeated braking

- **Plan an appropriate overtaking position**

- Advanced riders should avoid being alongside the vehicle being overtaken for any longer than necessary
- They should move to the nearside lane as soon as it is safe and overtaking is complete
- In general, they should avoid being alongside another vehicle which is itself overtaking as any displacement may have an impact
  - For example, if a lorry is overtaking another lorry, it is wise to hold back until a safe gap is available



- **Position to maintain a safe space and gain the best view**
  - Advanced riders should always position with enough space around to remain safe
    - and to be seen
  - For example, far enough behind an HGV to see its mirrors, or the HGV driver will not see them following
- They should adjust position to see beyond other traffic as this will help with planning
  - For example, increasing the following gap may allow an advanced rider to see beyond a group of large vehicles
- **Position safely when exiting**
  - Advanced riders should achieve a safe exit gap in the appropriate lane in good time - to avoid affecting other road users
- **Exit to the appropriate lane of the slip road**
  - Advanced riders should enter the slip road in the appropriate lane for their continuing journey
  - And ensure that any signals they give are updated as necessary



# Speed

Advanced riders must be able to:

- **Accurately adjust speed to match the identified entry gap**
  - This should be achieved using acceleration sense where possible
- **Balance progress with restraint**
  - Advanced riders should be aware that traffic, road surface and speed limits will all affect ability to make progress – and be prepared to alter speed to maintain a safe following distance
  - They will be able to do this by looking beyond the vehicle they are following and adjusting their speed using acceleration sense instead of braking
  - They should also recognise when it is necessary to show brake lights to warn following traffic
  - They must also be aware of how weather conditions can affect their own machine and other vehicles
    - For example, wind may affect high-sided vehicles and motorcycles causing them to change lanes unexpectedly
  - Take care moving into or out of the space beside large vehicles in high winds
  - Spray, especially from large vehicles, can make it difficult to see or be seen when making an overtake
  - Bright sunshine can also have a negative effect on vision, in which case it is important to slow down
- **Exit at the appropriate speed**
  - Advanced riders should adjust their speed to match the identified exit gap, ideally using acceleration sense
  - They should try to avoid entering their chosen gap and braking, as this may cause following traffic to brake in

response

- They should allow time to adjust to the slower speed required at the end of the exit slip or to join any queue
- And be aware that on a dual carriageway, it may be necessary to start slowing early to achieve the desired speed reduction and to display brake lights to warn following traffic if the exit is sharp
- **Stop appropriately in an emergency**
  - If stopping in an emergency, advanced riders should try to enter the hard shoulder before braking, so as to slow down with less risk to themselves or following traffic
  - When re-joining the main carriageway, they should build up speed on the hard shoulder to match the traffic in the nearside lane
  - They should also be able to identify when an apparent hard shoulder is actually a live lane, e.g. on SMART motorways

# Gear

Advanced riders must be able to:

- **Select the correct gear for the chosen speed in the given circumstances**
  - Advanced riders should aim to have enough flexibility to deal with the circumstances without constantly having to change gear
  - They should understand that on many machines, there may be more than one gear which is appropriate for a given situation
  - They might also consider higher gears for eco riding as long as they provide adequate performance

# Acceleration

Advanced riders must be able to:

- Apply appropriate acceleration
  - Display acceleration sense to achieve speed and lane changes wherever

possible, and accelerate smoothly when circumstances allow a higher speed



# Competency sheet -

## Slow riding

This page gives an overview of the competency requirements for this section.

	Achieved
Ride at walking pace under control	
Ride at walking pace, speed up and slow to walking pace	
Bring their machine to controlled stop, left foot down	
Bring their machine to controlled stop, right foot down	
Perform a U-turn in the width of the road	
Pull away with lock applied	
Complete a simple slalom course through cones	
Understand balance when manually handling a motorcycle	
Manually handle a motorcycle into parking bay	
Place a motorcycle on and off its centre stand (if fitted)	
Place a motorcycle on and off its side stand	



# Slow riding

It is expected that an advanced rider will be able to control their machine with a degree of finesse in all circumstances

The DVSA part one test now ensures that riders new to motorcycling are able to perform certain slow riding task to a satisfactory degree

Advanced riders must be able to demonstrate competence and proficiency across a number of tasks, outlined in the next few pages



## Advanced riders must be able to:

- **Ride at walking pace under control**
  - In order to ride safely at slow speed, it is essential to have good control over the clutch and accelerator on the motorcycle
  - Riding at walking pace is a way to practice balancing the controls
  - For example, the rear brake gently applied will steady the machine and assist with keeping it upright
- **Ride at walking pace, speed up and slow to walking pace**
  - This is a development of riding at walking pace under control
  - Mastering this skill allows riders to progress in slow moving traffic without constantly having to put their foot down
- **Bring their machine to controlled stop, left foot down**
  - It can be practiced in the controlled environment but needs to be carried through into everyday riding to demonstrate true competence
  - It is essential to bring a motorcycle to a stop in a controlled fashion, with one foot placed to the floor as we achieve a stop
  - Placing the left foot to the floor gives the advantage of retaining control of the rear brake until the machine is at a total standstill
  - However, it does mean that if the rider needs to change gear before moving off, a shuffle of the feet will be required







- **Bring their machine to controlled stop, right foot down**

- Advanced riders understand, it is beneficial to have options available even when performing the simplest of tasks
- For example, while most riders favour one foot or the other when stopping it is essential that each can be used – in case road or traffic conditions, or other outside influences dictate this
- When it isn't possible to stop with the left foot on the ground, it is important to be able to put the right foot down in a controlled way
- While this means losing control of the rear brake in the latter stages of stopping, it does allow for a gear to be selected without any shuffle
- On some modern machines, the linked braking system may apply a degree of rear brake from the front brake lever negating, this disadvantage

- **Perform a U-turn in the width of the road**

- The ability to turn a machine around in the road is a requirement of the DVSA novice test and a skill which is likely be needed during the course of normal riding
- The ability to balance the throttle with the clutch and to apply a small degree of rear brake to steady the bike and keep it

upright are essential to safely making a U-turn

- The confidence to apply steering to almost a full lock is also required
- Practice undertaken in riding slowly will prove helpful
- **Pull away with lock applied**
  - Once you have confidence in performing a U-turn, a sensible development is to practice moving off with lock applied
  - This technique can prove useful when moving around stationary or slow moving vehicles
  - Again, practicing in a controlled area first is essential; build up to full lock in manageable stages and allow confidence to build

- **Complete a simple slalom course through cones**

- Remember, we are looking for accuracy not speed





- **Understand balance when manually handling a motorcycle**

- A modern motorcycle, even a lightweight super sport machine, is a heavy piece of machinery
- Advanced riders must understand the dynamics and balance of their machine while pushing it as well as riding it
- A motorbike is designed to balance when upright and will require little physical effort to keep it in this position
- If it is allowed to lean even a small amount in either direction when stationary, the physical effort to keep it upright increases significantly
- It is important to have a strategy to deal with the increased effort required

- **Manually handle a motorbike into parking bay**

- Putting a motorcycle into a parking space backwards is safer when the person doing it has confidence
- Paddling the machine backwards whilst sitting astride it, either into or out of a

parking space, is fraught with danger

- If the rider was to slip or lose their footing, they could easily drop the bike, fall to the floor and suffer an injury
- It is safer and more practical to manoeuvre the machine while standing alongside it
- Remembering the lesson learned above, it will take very little effort to keep the bike upright, allowing all the effort to go into pushing
- Some people prefer to hold both handlebars when doing this
- Others will hold the handlebar and either the seat or the rear of bike
- You should opt for what is most comfortable and practical for you
- Remember, when releasing one side of the handlebar on a slope it will be necessary to control the brakes. Consider leaving the machine in gear and using the clutch as a brake

- **Place a motorcycle on and off its centre stand (if fitted)**

- If the bike has a centre stand fitted, they must familiarise themselves with the manufacturer's instructions in relation to its use
- Some centre stands are designed for maintenance purposes and are not expected to be used on a daily basis
- Even on a heavy machine, safely deploying the centre stand requires careful co-ordination of effort - not brute force
- If it seems that an excessive amount of effort is required, it's worth getting it checked

- **Place a motorcycle on and off its side stand**

- When lifting a motorcycle to an upright position from the side stand, riders should be aware of the effort that may be required

- For example, if the machine is leaning over further because of the camber of the road it may well require extra effort to get it to the upright position
- When pushing a motorcycle with the side stand in the down position, be careful not to trip
- Some machines are fitted with devices to prevent a gear being engaged while the side stand is deployed. Others may have a spring device which lifts the side stand when the weight is released from it
- Riders need to be aware of the systems fitted to their own machine and how they are likely to affect them



# **Run Sheets Framed around IPSGA**

## Run Sheet Driver/Rider- Competencies covered

This run sheet will assist in the development of the driver/rider on the reverse side is an area to record further information.

In the run column mark		
Competence Levels: 1 = Commended 2 = Satisfactory 3 = Requires Development		
Name	Competence	Observer comments Run no.
Preparation	Pre-Drive/Ride Checks	
	Fitness/Eyesight check	
	Cockpit Drill (car only)	
	Rolling brake test	
	Knowledge – IPSGA	
Information	Observation – scanning	
	Use of mirrors and rear observation	
	Take, Use, Give (TUG)	
	Road signs and markings	
	Anticipation	
Position	Hazard Identification	
	Bends	
	Junctions and Roundabouts	
	Motorways	
	Overtaking	
	Hazard Management	
Speed	Vulnerable road users	
	Speed limits	
	Acceleration sense	
	Limit point	
Gears	Braking technique	
	Clutch and changing gear	
	Choice of gear	
	Timing of changes	

Acceleration	Smoothness		
	Anticipation and planning		
	Hazard awareness		
	Progress and restraint		
Other skills	Steering		
	Slow manoeuvring		
	Knowledge H/code & course material		
	Courtesy to other road users		
	Vehicle/machine sympathy		
	Spoken thoughts (car only)		

Run sheet - Observer Notes

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# **Appendix 1**

## **Handouts**



# Emergency Vehicles

An emergency vehicle responding to a call and using warning equipment would like to pass you but will not expect you to put yourself or others in danger to facilitate this. This handout applies a commonsense approach assisting where possible.

## Highway Code References.

The Highway Code makes reference to emergency vehicles in three areas. In each instance a sensible planned response will assist.

## Highway Code Rule 31

### Emergency vehicles.

If an ambulance, fire engine, police or other emergency vehicle approaches using flashing blue lights, headlights and/or sirens, keep off the road.

Whilst this rule applies to pedestrians it is also apt for drivers if you have not yet joined the main road. If you can safely stay out of the way let them pass. It may be that this information about an incident along a particular route will affect your choice of route.

Ambulances are easy to spot. Fire engines even easier. Both are likely to mean a possible delay on your route.



## Highway Code Rule 219

### Emergency and Incident Support vehicles.

Emergency and Incident Support vehicles. You should look and listen for ambulances, fire engines, police, doctors or other emergency vehicles using flashing blue, red or green lights and sirens or flashing headlights, or traffic officer and incident support vehicles using flashing amber lights. When one approaches do not panic. Consider the route of such a vehicle and take appropriate action to let it pass, while complying with all traffic signs. If necessary, pull to the side of the road and stop, but try to avoid stopping before the brow of a hill, a bend or narrow section of road. Do not endanger yourself, other road users or pedestrians and avoid mounting the kerb. Do not brake harshly on approach to a junction or roundabout, as a following vehicle may not have the same view as you.

When you hear a siren the natural reaction is to look for a marked police car, a fire engine or an ambulance.

Try to be open to the possibility the vehicle trying to pass may be a plain looking car, with emergency warning equipment fitted. The lights are not always easily visible and the sirens can appear to come from a different direction. Motorcycles are now used by all emergency services and they may be hard to see, although they will make a lot of noise. Be sensible in your response and

plan as an advanced rider. Stopping may be inappropriate and slowing down may cause delay. Each situation will require its own response. The drivers of the emergency vehicles are trained to help you and should appreciate your efforts. Look for some indication of what they would like you to do, the position of the vehicle or a signal from the driver may help. If you can't help immediately, continue at a sensible speed until you can. Exceeding the speed limit is not expected of you and a camera will have no discretion if you get flashed.

Likewise with bus lane cameras you may find it difficult to prove why you went into the bus lane. (It is likely that the emergency vehicle will be using an empty bus lane in any case). As a general rule if the road is wide enough for them to pass pull over to the left and stop, if it is not wide enough keep moving until it is or you can pull into the mouth of a junction or utilise a dropped kerb (they will not expect you to drive up a kerb to allow them to pass).

At traffic light junctions or give way lines be aware that you have no exemption to ignore them. However well intentioned your actions may be any collision or incident will be your responsibility. The presence of the emergency vehicle would merely be regarded as mitigating circumstances.

Do not place yourself or others in danger by proceeding through a traffic light junction, safety is the number one consideration. Be aware a camera at the location may record you jumping the light but may not accurately capture the circumstances in which you did it. The emergency services driver is trained to make "safe" progress and will be aware that you may not be able to assist. (In these circumstances their training would suggest switching off the warning equipment to "relieve the pressure").

A good plan of what to do will assist you make positive decisions. On a wide road simply showing a left signal, moving left and slowing may suffice. If they don't come past stop. It may be they wish to speak to you.



On a narrower road choosing where to stop, mindful of traffic bollards, parked vehicles and other hazards may help.

If you are not able to assist safely then by keeping moving at the speed limit if it is safe you are allowing them to get to their intended location (unless they indicate otherwise see above). Be positive and do not panic. If they ask you to move somewhere specifically and it is safe, follow the instruction.

Be aware that a collision involving you will likely result in the emergency vehicle not arriving at their intended incident as they will be required to stop and deal as a "vicinity only" incident so they definitely do not want you "crashing" in an attempt to help.

Whilst the emergency services are in certain circumstances exempt from some road traffic legislation they have to comply with a large proportion of it specifically in relation to the standard expected of a careful and competent driver.

You may also see other plain cars fitted with blue lights, senior fire officers often use an unmarked vehicle to respond to serious incidents

All of the emergency responders work to the rule

"No call is so urgent as to justify an accident which will in itself always cause delay"

They should be courteous and grateful for your efforts.



## Highway Code Rule 281

Warning signs or flashing lights.

If you see or hear emergency or incident support vehicles in the distance, be aware there may be an incident ahead (see Rule 219). Police officers and traffic officers may be required to work in the carriageway, for example dealing with debris, collisions or conducting rolling road blocks. Police officers will use rear-facing flashing red and blue lights and traffic officers will use rear-facing flashing red and amber lights in these situations. Watch out for such signals, slow down and be prepared to stop. You **MUST** follow any directions given by police officers or traffic officers as to whether you can safely pass the incident or blockage.

Try to be patient - if the road is closed, it is done for safety or to gather evidence. It may seem that not much is happening, but the emergency services want the road opened and moving as much as you do.

They do have better things to do! But none as important as the incident they are dealing with at the moment.

Doctors and some of the volunteer ambulance services may have vehicles fitted with warning equipment but not have any exemption from road traffic legislation. Be sensible if you see them trying to get somewhere quickly help if you are able to do so.

## The Legal Bit

The Road Traffic Regulation Act 1984 and The Traffic Signs Regulations and General Directions 2002 exempt emergency vehicles from:

- 1) observing speed limits
- 2) observing keep left/right signs
- 3) complying with traffic lights (including pedestrian controlled crossings).

These exemptions are subject to further guidelines during the emergency response training



# Filtering

The word filtering is mentioned in the highway code in a number of areas, it has specific mentions in rule 88, rule 160 and rule 211 which all advise care and caution either when filtering or sitting in a queue with others filtering. If done correctly it allows the advanced rider to make safe progress whilst the motorist suffers delays. If not done correctly it can place the rider in a position of extreme danger. This handout sets out some basic principles for making filtering as safe as possible. It also tries to provide a distinction between filtering and overtaking dangerously.

## Basic principles of filtering

Any filtering is tiring and requires the utmost concentration. Sports bike riders may find the slow speeds encountered when riding in traffic create extra weight on their wrists due to the riding position. Prolonged filtering in traffic may also cause the machine to overheat if no fan is fitted to the cooling system. In these circumstances, it may be safer to stay in line for a short while to ease the pressure on the rider's arms and turn the engine off momentarily to prevent overheating of the machine (and rider).

The most important rule of thumb is to only filter when the surrounding traffic is moving at less than 20mph, and then only exceed that speed yourself by 10 to 15 mph maximum (if safe and legal to do so). You may have seen motorcyclists filtering between lanes of fast-flowing traffic on dual carriageways and motorways. They are not filtering at high speeds, they are actually undertaking and overtaking traffic. There is a far higher chance of a collision occurring as you have less of a safety margin to stop or avoid anyone changing lanes in these circumstances.

## Filtering to the offside of traffic

When filtering to the offside of a line of slow moving or stationary traffic, continually scan for side turnings and entrances to both sides of the road. If possible, try to keep a car door's width away from the vehicles you are passing, in case a driver or rear seat passenger suddenly opens their door to take off a jacket or see what is causing the holdup. Obey all 'Keep Left' bollards and also be aware that temporarily stationary vehicles at traffic lights, pedestrian crossings etc are not classed as stationary for the purposes of solid white lines and therefore you cannot cross a solid white line to filter.

Where possible, look into the vehicles you are about to pass, or in the wing mirrors of the vehicles to see the drivers faces. Do they look like they are preparing to pull out of the line of traffic, to turn right or perform a U-turn to avoid the queue? Your riding plan must include your plan B and/or an escape route if necessary. Continue looking between vehicles for pedestrians and other motorcyclists/ pedal cyclists who may be looking to cross. Also look for gaps in traffic where vehicles may emerge into your path.

Cycles and motorbikes engaged in aggressive filtering will sometimes weave in and out through a line of traffic attempting to find their route forward.

## Using 'Stepping Stones'

Whilst filtering to the right of traffic, consider the use of 'stepping stones' within your riding plan. Whilst you don't actually have to move into the spaces, consider which ones would be suitable. If your riding plan changes, be prepared to move in. Consider the fact that when you do move into a gap, even though you do so on acceleration sense and don't show your brake light, the driver behind may well brake anyway (often due to an overreaction). A polite wave of the hand is often sufficient to negate a sense of grievance by the driver behind, even though it may be unjustified.



## Filtering between lanes

The potential for danger is doubled when you filter between lines of stationary or slow moving traffic. You now have two lines of vehicles that may well move into your path. Your scanning should include other motorcycles approaching you from the rear as well as those who may choose to filter along a differing path to your own. Be aware that this causes problems for the drivers of vehicles when they have motorcycles moving on either side of them. They can only move in one direction to help and they may well move into your path to assist those approaching them from the other side of their vehicle.

## Other considerations

Never assume that you have been seen by any other road user. Headlamps and hi-visibility clothing are not a guarantee that you have been seen. Always look for evidence that the driver has seen you and comprehends that you are passing them. Be prepared to stop or change direction if necessary.

Whilst filtering, you may well be riding on a part of the carriageway that is used less often and therefore you may encounter debris or loose surface material. Scan for this and plan appropriately. Paint on a wet road has less adhesion than the tarmac road surface, only ride on it if you really have to and adjust your riding accordingly.

The practice of displaying hazard lights whilst filtering is not recommended. Apart from the fact that you may be committing a moving traffic offence, it reduces your ability to convey your intentions to change direction in the normal manner.

Many towns permit motorcyclists to ride in bus lanes but do not assume you can do so in all bus lanes. Check the information signs as you approach the start of the bus lane for the motorcycle symbol, as well as the times of operation. Look out for offenders driving in the bus lane during the times of operation and ensure your safety is uppermost in your plan. Try not to overreact if a vehicle does not move over for you: you do not have a right of passage and besides, it may just be that the driver has not seen you for some reason.



# How a Motorcycle Steers

The most efficient way to initiate a turn in normal riding is to push the handlebar on the same side that you wish to turn, we refer to this input as positive steering (counter steering).

Many steering problems are caused by gripping handlebars too tightly, adopt a relaxed grip but be prepared to exert positive force if required.

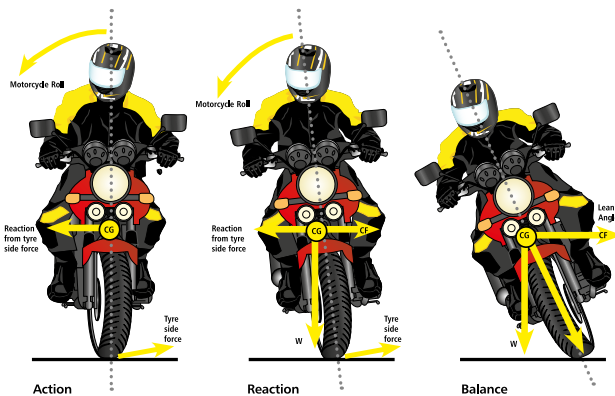
There should be a gentle bend in the elbows and the shoulders should be relaxed to minimise unwanted steering inputs.

The angle between your forearms and the fork legs should be as close to 90 degrees as is reasonable to maximise the efficiency of positive steering inputs. To make a motorcycle turn right the rider needs to push forward on the right handlebar, this will cause the front wheel to turn slightly left as shown in **Action** below.

The net result of this input will be the machine will begin to lean to the right as shown in **Reaction** below.

When the forces acting on the machine reach an equilibrium the machine will prescribe a controlled right turn as in **Balance** below.

## Positive steering technique applied to a right-hand turn



## KEY

CG: Centre of gravity

CF: Centrifugal force

W: Weight

## Quiet efficiency – The hallmark of the expert.

Aim to steer in a controlled and progressive way, making smooth changes of direction, rather than jerky turns that unbalance your machine. Accurate and smooth steering requires planning, know when and where you are going to turn. Recognise a smooth and controlled ride is safer more comfortable and ultimately more progressive than an erratic jerky one.

Sudden steering inputs challenge the ability of suspension and tyres to perform efficiently.

For a really smooth ride focus on your steering, apply inputs progressively when initiating the lean.

Practice these inputs in a quiet area and experiment with what happens when you change the degree of input.

The higher your speed, the stronger the self-stabilising properties of the front end. You may feel the bike is sluggish and harder to turn as your speed increases, to overcome this effect your steering command must be more powerful to make the bike turn when and where you want.

In order to assist with this positive input a complementary pull with the other hand can be used to help initiate the turn.

The physics of a motorcycle turning are explained fully in the full control document which can be accessed on the members section of the IAM website. Your observer has access to this and if you require a detailed explanation they will work through the steering section with you.



# Inclement Weather

This handout offers advice for riding during inclement weather. With each season comes a range of riding challenges all of which need to be managed safely.

## The weather conditions discussed in this handout are:

- Rain
- Snow and Ice
- Bright Sunlight
- High Winds
- Fog

## Rain

The Highway Code gives advice in relation to doubling potential stopping distances when riding on a wet road, but there is so much more to consider in wet conditions.

Ensure your screen and visor are in good condition. Be able to set the ventilation system on your helmet to assist in demisting your visor and spectacles if worn. Consider using an anti-fog insert or product. (Washing up liquid can be a cheap alternative.)

Consider if you are struggling to see other drivers that they may struggle to see you even more. Consider dipped headlamps (modern machines will have lights permanently on.)

If steering is applied, a puddle may pull the bike towards the verge or centre of the road. Apply a firm grip to prevent unwanted change of direction.

Deep water may cause “aquaplaning” this is where the tyre treads are unable to clear sufficient water and a wedge of water forms preventing the tyre from gripping the road this feels like riding on ice and steering and braking capabilities are lost. Gently close the throttle and retain a firm grip on the handlebars, do not brake or attempt to steer as any input is likely to be excessive when

the grip returns. The grip will return within a short time; do not overreact.

If possible avoid standing water.

### Consider:

- What is in it?
- Does it have potentially damaging pot holes that are now concealed?
- How deep is it?
- Will it flood the air intake of the machine?  
If so don't ride into it as the engine may “hydro-lock” causing major damage.

If you must go through it and it is not too deep keep engine revs high but speed slow.

When you reach the other side dry the brakes by applying them in a safe area.

## Snow and Ice

**Best practice is to avoid riding 'iAM RoadSmart activity should not take place when there is snow or in temperatures where ice likely.** If it is absolutely essential to ride in the snow and ice the following may help.

Highway Code advice for stopping distances in the snow and ice is they need to be increased by up to 10 times.

On packed snow and ice tyres have virtually no grip available. Whilst it is possible to get a motorcycle moving reasonably effectively, stopping it or changing direction can be much more difficult.

Gentle acceleration in a higher gear may assist in moving away. Slowing down is best achieved using the gears. A common problem in snow and ice is riding at a generic speed which is perceived to be “safe”. At times it may be that 40mph is acceptable but at other times 15mph may be far too fast.

Where you need to be able to change direction or stop, reduce speed gradually. Be aware that the machine may skid. ABS systems are designed to allow the wheel to lock at very low speeds (otherwise they would never stop) severely reduced grip may mean the machine slides forward at a slow speed.

Coarse steering input may induce a skid. Be smooth with steering in order not to break grip. If you have to steer do it gently until you are back to the course you wish the machine to follow.

Be aware of the effect of extreme cold, concentration will flag when you are cold or wet. Make sure your motorcycle kit is fit for the job.

Minor roads are not always treated for ice, if there is evidence of road salt on major routes, or the temperature is low, take extra care. In extreme conditions stay on the major routes if possible.

Understand where a micro climate is likely to occur. Ice may form in isolation in low lying areas, under trees or on bridges and will remain for longer in shaded areas.

## Bright Sunlight

Bright sunlight may affect your vision. If it does you must slow down. In winter the sun is lower and may affect you even more.

If you decide to wear sun glasses be aware they may mist up behind your visor and

reduce your vision. Your vision will also be reduced in a tunnel or shaded area. Take extra care when emerging from junctions and if in any doubt don't move.

A peak on your crash helmet or a tinted visor strip may assist.

## High Winds

Be aware that wind will affect motorcycles in different ways. Faired machines will be more susceptible to wind and speeds may need to be reduced.

When passing a high sided vehicle be aware the wind affecting you will change, so ensure you give them sufficient space. If you see them being affected don't pass.

Be especially careful if crossing exposed bridges.

## Fog

Fog and mist cause some of the most dangerous and difficult riding conditions.

Use dipped beam; if fitted use your fog-lights when the visibility drops below 100m. Don't forget that when the fog clears, you will need to turn the fog-lights off again as soon as possible, otherwise you may dazzle other road users. Remember in patchy fog, you may need to turn your fog-lights off in the clearer patches, and on again when the fog gets thicker.

Avoid using full beam, even when there's nobody else around, because the fog will reflect the light back at you, and that has the effect of reducing, rather than improving, your visibility.

Periodically wipe your visor or turn your head sideways to clear the visor. Sometimes the reduced visibility is as a result of mist formed on the outside.

# Motorcycle Ancillaries

Motorcycles are often used for holidays and various items of ancillary equipment are often fitted to make this use more pleasurable.

The items discussed in this handout are:

- Satellite Navigation
- Hands-free Telephone
- Luggage
- Tank Bag/Map holder

## Satellite Navigation

Satellite navigation systems are becoming more commonplace on motorcycles either as a manufacturer fit or aftermarket accessory

If used correctly they can enhance your motorcycling experience.

- If possible have the system connected to a headset allowing spoken instructions to be conveyed (Some continental countries prohibit the use of in-ear speakers).
  - The screen will inevitably be small and possibly difficult to see.
  - Programme the system before riding off and if you need to change route criteria stop in a safe area before attempting this.
- Be wary of the possible distraction at junction and roundabouts when concentration should be on your riding.



## Hands-free Telephone

Many motorcyclists now have access to hands-free telephone facilities whilst riding.

- This may be through navigation systems, bluetooth crash helmets, headsets or hard wired systems.
- Although the use of these systems is not illegal research shows they are a distraction and do slow response times.
- Good practice is to stop in a safe place to make or take calls.

## Luggage

Various types of luggage carrying capability are available for motorcycles.

- Hard Panniers. These are generally a bolted on accessory firmly secured with a locking mechanism. As long as they are fitted correctly they are generally reliable.
- Top boxes. Again generally bolted on, be careful about over-loading as they may severely destabilise the machine.
- Soft luggage often secured with elastic straps, take care to secure it properly. Poorly strapped luggage has fouled the rear wheel and caused accidents.

Whatever type of luggage is fitted it will affect the handling of the machine.

- Suspension may have to be adjusted to compensate for weight changes.
- Panniers may increase the width of the machine and will affect filtering ability.
- Aerodynamics will be affected and the machine may become unstable at speed.
- Make sure you adhere to the manufacturers loading limits for panniers or top box.



## Tank Bag / Map holder

A bag secured to the tank is a handy place to keep items which need to be easily accessible during the ride.

- When fixing take care it does not interfere with the movement of the handlebars.
- It should not obstruct your view of the instruments.

If used to hold a map, be prepared to stop to read it. You would not try to read a map whilst driving.

# Picking up a Motorcycle

Motorcycles are big and heavy with little stability when stationary. On uneven ground or if your foot slips on the surface there may come a point where you are unable to keep the motorcycle up as it starts to lean further from the upright. The safest thing to do in these circumstances is to let it go to the ground.

## How to drop a Motorcycle

Let it down as slowly as possible to ensure that damage is minimal to the bike, but also to yourself!

Try to keep all body parts from being trapped under the bike as it touches the ground. The bike is heavy and contains parts which are sharp or hot – all of which could cause serious injury to you.

## Shall I pick it up again?

Is it safe to pick the machine up?

Is it in the path of traffic?

Is it damaged too much, or leaking fuel onto hot engine components?

Is it in a dangerous position requiring you to warn other road users of its presence (such as around a blind bend)?

Now consider yourself. Are you injured? You may well be out of breath.

If possible, take stock of your surroundings and situation whilst you get your breath back. Dropping a motorcycle can be embarrassing, painful and actually quite a shock for some riders.

You may get help from passers by or other riders/drivers, but if you are alone, the following technique should work for the majority of people regardless of the weight of the machine or the size of the rider. The overriding advice is, if you are not confident

that you will be able to pick the machine up, then don't do it - but do ensure you and other road users remain safe at all times regardless of what decision you make.

## Preparing to pick it up

Switch the ignition off using the cut-off switch if it has one, then turn the ignition off with the key if possible.

Turn off the fuel supply to the engine (if the machine has a fuel tap). Bear in mind that if the machine is laying on it's left side you may not have access to the fuel tap.

If the machine is on its right side, put the side stand down and ensure it is in gear (if possible).

If the machine is on it's left side then be prepared for the fact that if it is not in gear, it may roll backwards or forwards.

Keep your gloves on and ensure you have a good surface for grip under your feet - although if on grass or gravel be careful, you may have to wait for assistance.

## One method to pick up a motorcycle

1. Turn the handlebars to the full lock position with the front of the wheel pointing skyward

Crouching down with your back straight, position yourself in line with the handlebars. Your feet should be shoulder width apart.

2. Grip the lowest handlebar in both hands with one hand under the other and both palms facing upwards.

**Keeping your back straight** and using your legs, start to lift gently until the bike is resting on both wheels.

3. If the bike is balanced on both wheels, then in one slow, controlled movement, straighten your legs with your hands gripping the handlebar and your arms straight down until the machine is upright. Be careful not to go beyond the upright in case you drop it again on the other side!

4. The motorcycle is going nowhere if it is in gear or you are holding the front brake on. Take a moment to get your breath back in preparation for moving or securing the machine

If the wheels and tyres are OK, you can push the machine to a safe location if necessary.

5. If you are holding the right handlebar and the side stand was placed down before you commenced lifting, check it is still in place and then lower the bike away from you until it is firmly on the stand. Alternatively, whilst the machine is in the upright position, work your way around the bike until you are able to put the machine on the side or main stand.





# Pre-Ride (weekly) Checks

Before setting off on any journey, it is important to ensure the machine is safe to ride and all systems are operating correctly. This handout describes how to conduct a thorough weekly machine check, how to go through a systems check and then the start up procedure to be used prior to riding off. A shortened version of this check should be used when returning to your motorcycle.

## Visual examination of the machine for:

1. Damage ( Dents and scratches, wheel rims etc) Where did it happen?
2. Defects ( wires hanging down, exhaust loose, fairing plastic insecure)
3. Leaks (fluids under the machine, what are they, you may not want to touch them. You can see the brake calipers, is there fluid on them)
4. Luggage and straps (is the luggage secure, are the straps fouling any moving parts)

## Tyres

1. Condition (no cuts or bulges)
2. Tread (1mm across the central  $\frac{3}{4}$  around the whole circumference is legal. More tread is safer). Mopeds need a visible tread pattern.
3. Pressure (check cold if possible with an accurate gauge, the recommended pressure will be found in the handbook and also on the frame or swinging arm somewhere.

## Mechanical Checks

1. Oil (does the oil require a physical check using a dipstick or is it checked via a computer or sight glass. You need to know the checking process as some machines are very easy to overfill)
2. Engine coolant if used (visual inspection of the header tank, if it is below the level required add the correct mixed coolant. Modern cooling systems contain a chemical mix which is more efficient than water alone and has corrosion inhibiting properties). If it has lost fluid why, this may be a problem.
3. Brake fluid (a physical check of the reservoir will show the level) If the level is low why? Could it be the brake pads are close to the wear limit, or do you have a leak?
4. Clutch fluid (As above)
5. Drive Train (chain, belt or shaft. Check as per handbook instructions)
6. Is everything as you expect it to be, no loose items or leaks visible.
7. Levers and pedals (do they move freely)

**A brief examination of your machine should be conducted every time you ride**

## Lights/Electrics

1. Check operation of all lights, remember that some lights will require the ignition to be active. If possible get help to operate or check the lights, if this is not possible you may be able to see reflections in windows or may have to walk around. Check brake light operation from all brake levers or pedals (some modern machines will check bulbs automatically and display a warning if any are faulty)
2. Check horn (be aware of not sounding it between 11.30pm and 7am)

## Systems Check and Start Up Procedure

- Check machine is in neutral
- Make ignition live
- Check warning lamps:
  - What is on?
  - What should be on?
  - What goes out?
  - What doesn't?
  - Is everything as it should be?
- Are you left with the lights that should be illuminated?
- Operate clutch lever as this guards against false neutral and reduces strain on the starter motor. Most modern machines won't start without the clutch being operated.
- Ensure the machine will not roll by applying a brake. Ensure kill switch is in correct position



- Press starter and start engine.
- All warning lights should now extinguish except for ABS and Traction Control lights on certain machines, which require information from the sensors as the vehicle begins to move.
- Gauges should read as you expect.
- The rev counter (if fitted) should respond to the throttle.
- The fuel gauge should show sufficient fuel for your immediate journey.
- Before moving off, ensure the side stand is fully retracted.
- As you move off slowly, the remaining warning lights should extinguish. If they fail to do so, stop and re-assess.

## Moving Brake Check

Check your brakes in a safe environment before getting into a situation where you really need them..

Apply the brakes at low speed to ensure they are working. Then ideally achieve 30mph in a non-retarding gear and apply the brakes in a progressive manner. If this is not possible make sure you get a feel for the brakes before relying on them.

The machine should pull up evenly and as expected, you should now know the required pressure to slow and stop your machine.

If it is not possible to conduct this check due to traffic conditions or other factors, you must ensure you introduce the brakes early for a hazard until you are satisfied with their performance.



# Riding at Night

Night riding presents unique challenges for riders, the limit of vision is dictated by the performance of your headlamps, the condition of your visor and your eyesight. This handout covers legislation and some practicalities regarding riding at night.

**This handout covers legislation and some practicalities regarding riding at night.**

- Legislation
- Practicalities of riding at night
- Limit point analysis
- Practicalities of lighting

## Legislation

The Road Traffic Act 1988 and the Road Vehicle Lighting Regulations 1989 confer on vehicle users certain responsibilities when riding at night. Obligatory lights must be displayed during the hours of darkness on all mechanically propelled vehicles. In areas with a speed limit above 30mph dipped headlamps must be used.

## Practicalities of lighting

It must be remembered that vehicle lighting is designed to ensure that your machine is seen as well as to ensure the rider can see. With this in mind, care should be taken when stopping at night with lights switched on, to ensure road users are not left confused as to whether the motorcycle is actually parked, or appears to be in the opposite carriageway.

Ensure all lights are kept clean and visible. In certain weather or riding conditions, they may require regular cleaning to ensure they remain effective. If you use a coloured headlamp protector during the day remove it at night.

Whilst it is dark and raining, visibility will be further affected by dazzle from on-coming vehicles, in these circumstances it is important that your visor is clean and in good condition. Scratched visors will magnify the dazzle problem.

Tinted visors must not be used at night. Spectacles if worn also need to be clean and scratch free. When dazzled by headlamps from the rear you may be able to move your head to reduce dazzle. If you need to lift your visor, be aware of possible eye injury from foreign objects.



## Practicalities of riding at night

The overriding principle of safe riding is that you must be able to stop in the distance you can see to be clear on your own side of the road. In areas of extreme darkness the limit of your vision is restricted to the limit of your headlamp beam.

In these circumstances your speed must be adjusted accordingly. It may be that your vision is extended by use of the headlamps on the vehicle in front. Use the information beyond them to good effect, but do not rely on them as a guide to a safe speed.

### Limit point analysis

Negotiating bends using the limit point requires adjustment when riding in the dark. Some lateral information that may have been available during the day, will not be visible at night.

The photo opposite shows a typical bend viewed in ideal daylight conditions. Now study the same view taken at night and see how much detail is lost: depth of vision, colour and distance are all more difficult for the human eye to register in the dark.

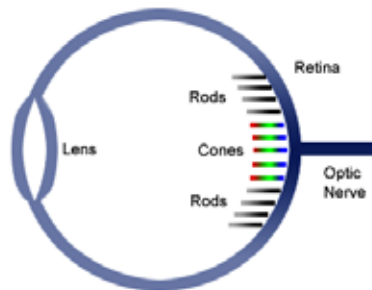
Dipped headlamps rather than main beam, may assist in locating the nearside of the road in a bend. If you become dazzled by oncoming traffic, look down and to the left to try to locate the edge of the road and slow down until you can see again.

The way human eyes work means that in very dimly lit conditions, peripheral vision is more sensitive to light than the central portion of your vision. Bear this in mind on unlit rural roads. You can aid your night vision by keeping ambient lighting to an absolute minimum.

For information, the human eye takes around twenty minutes to become fully adapted to darkness. Any bright lighting, including mobile phone screen, instrument lights or sat nav will diminish your night vision.



Be prepared to change your satellite navigation system to night mode if this is not an automatic function.



# Technology - Riding Aids

This handout offers advice on a range of technologies now found on motorcycles. It is not exhaustive and further information can be found in your manufacturers handbook or by contacting your motorcycle dealer.

## The technology discussed in this handout is:

- ABS
- Traction Control
- Stability control
- Power Modes

## ABS

ABS (anti-lock braking system) is compulsory on all new cars sold in the UK and is becoming more common place on motorcycles. It operates by using sensors to detect wheel speed and a modulator to adjust braking effect in order to detect and prevent the wheels locking during maximum braking. It allows a rider to retain steering control whilst braking.

As it will be applying and releasing the brakes to prevent the wheels locking a number of times every second, your overall stopping distance will increase. It is a safety aid and should not be operating as a matter of course during normal riding. Before turning ABS systems off refer to your owner's manual for information on how the machine will respond.

## Traction Control

Traction Control is also becoming a more common feature on mainstream motorcycles. Basic systems use the ABS sensors to detect a difference in speed between the front and rear wheel. More complex systems add engine torque sensors and accelerometers. When wheel slip is detected the system reduces engine power. This is achieved by; cutting cylinders, closing the throttle (only on electronic throttle systems) or retarding the ignition or a combination of the three. The purpose of the system is to prevent loss of grip through wheelspin. Sophisticated systems can be adjusted to alter working parameters. Before turning off traction control refer to your owner's manual.



## Stability Control

Stability control is a relatively new concept on motorcycles but a lot of manufacturers are introducing or developing systems for the market. The system fitted to each motorcycle will vary from model to model. The most sophisticated systems combine information from the ABS and traction control systems, together with other motion and lean angle sensors to adjust power and braking in accordance with the grip available. They can give confidence in tricky conditions but as with all safety features they cannot operate outside the laws of physics. Your owner's manual will detail the system fitted to your machine.

## Power Modes

Adjustable power modes, once available only on sports machines, are now a regular feature on touring and adventure bikes. The systems work by reducing the available maximum power and softening the way in which the power is delivered. A typical system may have three settings: Sports (or dynamic), normal and rain. The systems are usually combined with a fly-by-wire throttle system and can be used to good effect to complement riding when conditions are tricky.



# The Test – What to Expect

The test is the culmination of your training, it is your opportunity to show how good you are and justify your observer's faith in you. A little bit of nerves can be a good thing. Stay focused and try to enjoy it. The perfect rider has not yet been discovered but how close are you?

## What to expect during the test

- The administration process
- The test
- You
- At the conclusion of the test

## The administration process

Having applied for your test you will be contacted by your examiner either by telephone or email. This is to arrange a mutually convenient date, time and location for the test to take place. The location should be safe, easy to find, of no cost to either of you with facilities and easy access to a variety of roads. Supermarket car parks and fast food restaurants are often chosen. (Beware of time limited parking).

## The test

This should be about 75 minutes from start to finish with no more than 60 minutes riding or driving.

### What will be tested?

After the document disclaimer is dealt with the examiner will conduct an eyesight check. This is the same as the DVSA test or a police roadside check. You must be able to read a standard number plate at a distance of 20.5 metres. (New style 20m but aim for 20.5m to account for old style number plate).

During the ride you can be tested on anything from the course material. It may not be possible to assess some areas practically so the examiner may ask questions.

You will be asked to conduct a practical real life manoeuvre and your decision making process is part of the assessment. On a motorcycle you may be asked to perform a slow riding manoeuvre if this has not been displayed during the test.

Your ride must be safe and legal. Use your speedometer to keep to the speed limits which must be adhered to at all times, there are no exemptions when making an overtake so do not plan to exceed the speed limit when deliberating.

### Your Examiner

All of the IAM RoadSmart examiners are trained advanced police riders or experienced IAM RoadSmart riders who have 'National Observer and Masters qualifications. They are all experienced in dealing with road safety matters. They will:

- Put you at ease.
- Set the scene for you and explain what they are looking for.
- Explain clearly the route directions and how they will communicate them.
- Explain test protocols such as safety. For motorcycles the following procedure.
- Explain that any road traffic offence is likely to lead to failure (exceptions for safety may apply in certain circumstances).

[illegible]



# The Thinking Rider

## **The thinking rider – A pause for thought** **An article by Peter Rodger.**

This is about every one of us – I hope. Some thoughts to prompt your own thinking...

In recent years, at the annual IAM Groups' Conference in October there has been a session on test standards queries. These sessions have involved much discussion about specific driving or riding issues – some of them very specific indeed.

In many cases, the questions being raised seem to be seeking – as is so often the case for driving or riding related questions – a form of “rule” that can always be applied.

As examples, issues around crossing or straddling double white line systems, speeding, and being on the right hand side of the road in, or approaching, bends were in discussion.

The impression I gained was that a decision on whether it was always right, or never right, in a test scenario was what was being sought. I can understand that observers helping people prepare for the test seek some form of guidance about these things. I can understand that they want to know they are “giving the right advice” and not all giving differing messages to those preparing to take the test.

Let me work through an example to try and help understand how to deal with this in an everyday way. If you are not an observer – please read on, this is for you as well. It's actually about how we all behave on the road.

Imagine driving or riding along an unfamiliar country road towards a left hand bend, with a high hedgerow on both sides, a comfortable road width for two lorries to pass each other.

Please picture the road as a lengthy virtually straight stretch, which allows you to travel at the national speed limit. You cannot gain any effective observation to the left, the direction the road bends, because there is a banking, topped by trees, and that thick, high hedge.

The centre line is a hazard warning line as you approach the bend, and there are oncoming vehicles restraining you from positioning near the white line, so as you approach the bend you are positioned a bit to the left of that.

It is a bright sunny, early summer – let's say early June – day, and the foliage is thick and not yet cut back from all its energetic spring growth. You lose some speed – probably down to about 40 mph – turn into the bend, and see the road straightens again with some houses on either side a hundred yards or so away.

As you straighten up, and start to accelerate back up towards the speed limit, a 30 mph speed limit sign buried in the depths of the foliage on your left becomes visible, giving you just enough space to brake to that speed, if you brake very firmly indeed (at the level of an emergency stop).

## The questions are:

Do you brake very firmly and reach the speed by the time you get to the sign, or a bit less firmly and run the braking through into the 30 zone by perhaps twenty yards?

There is a decision to be made here – if you do not brake and meet the speed restriction by the time you get to it, you are breaking the speed limit – that's simple, it is a black and white law.

Now if I, as the Chief Examiner, were to give a black and white ruling about “what is allowed in the test”, the only one I could give which would satisfy the black and white constraints of the criminal law is to brake very firmly and conform with the law. The test form has a box for marking whether the drive or ride was legal or not, and doing more than 30 in the 30 zone would clearly be illegal.

But things are not really like that. Let me pick up on just one thing I did not mention in the description of the approach:

What is in your mirror/over your shoulder?  
Do you have a car following you at a one car length distance, being “pushy”?  
Is the mirror clear?

Let me alter things a little in a different way. Instead of being a nice sunny June day, let's make it a proper English summer's day – so pouring with rain, and with a road surface that's highly polished, and oily looking. Would that affect your decision in the real world, on an everyday journey?

I hope that thinking about these differing circumstances which arise in exactly the

same place is prompting some alteration to the idea that there is an “I would always.....” answer.

Where this takes us is where driving and riding become interesting – this is the bit where the person sitting at the controls of the vehicle – be it a lorry, motorcycle, car or bus – has to look at the circumstances they are dealing with, apply some interpretation, and reach a decision.

A decision which might be different if the circumstances were different. So does a “that's simple, it's a black and white rule” statement stand up to the rigour of real life?

I don't think it does. Now I happen to hold the view that if you were prosecuted for breaking the speed limit in that first few yards, someone involved in making that happen needs to be taken to one side and be given some advice about what proper enforcement is about. However – when I am pressed for black and white rules about what is allowed in the IAM RoadSmart test, I find that these kind of issues are there all the time.

The advanced driving or riding test is performed in the real world among real people going about real journeys – just the same as the “L” test is. Like all those other people making their journeys, the person taking the test has to deal with real circumstances, and – whilst my example above is a deliberate construction designed to produce a theoretical dilemma – they will sometimes face real decisions, in which conforming with “Always do...” or “Never do...” produce results which are obviously not the best outcome – or may even conflict with another “always do/never do...” rule.

So the response to the question becomes “It depends...”

I get asked to define “It depends”.

Allow me to let you into the secret of that definition. After seventeen years of dealing with life, death, injury, honesty and deviousness in operational policing of things happening on the road, twelve years of dealing with driver and rider training in the



police service, conducting driving and riding tests throughout it; training and qualifying as a driving instructor, and a driving examiner; acting as a volunteer examiner for an advanced driving organisation for just under twenty years; and a further period of nearly ten years here as Chief Examiner at IAM RoadSmart – I have yet to see a definition of that which is clear or concise or answers queries in a black and white way.

Therefore – advanced driving and riding is not about being black and white, and having things laid out in simple rules. It is about being mature, sensible, and applying principles to the circumstances. It is about being “the thinking driver” or “the thinking rider”. Actually, “ordinary” driving and riding are like this – let alone advanced driving and riding.

Without the flexibility to meet circumstances and deal with real life head on, safely and sensibly, advanced driving or riding would be valueless and not worthy of



your time, or mine. When you first become a parent, you control the life of your new-born child. As the baby becomes a toddler, you allow it a little more freedom, but you decide when it goes to bed, and you put it there.

Then as the child grows, that bedtime tends to become a bit later... and later... and later, as the years go by. When your child has grown up and left school and is at work or college, you no longer tell it what time to go to bed – but you might remind him or her “Don’t forget you have to go to work in the morning”.

Driving is similar – as we first start our instructor needs to give us close attention and help, with easy to understand ideas

and “rules”. But as we mature, we need to be allowed more room to think and make decisions... to use our experience and understanding.



Of course, there are principles we should abide by – be safe, be systematic, be legal and be smooth. There are others, but let’s hold it there, as those are enough for now. Sometimes they can conflict with one another, and the one that must always come out on top is safety.

I was intrigued by an enquiry I received in the office recently from a driver who was having a problem at a roundabout. He explained it all, and when I read it the position was clear – he said that he did not want to “do what is wrong” according to how he read the Highway Code, but this meant he was in conflict with other traffic, with potential danger arising.

Ignoring the complexities of roundabouts, the principle is clear – it is better to be wrong but safe, rather than right but dangerous. (Please don’t write in about dangerous driving always being wrong – I’m trying to make a point here about prioritising).

So – be a “thinking driver” or a “thinking rider”. If you are an observer, doing that brilliant thing that so many of you do so inspirationally well around the UK of

helping people develop – help them become “thinking”.

If you are an examiner doing that thing you do so well – look for the “thinking” solution. We all need to give each other enough space to allow for the thinking to happen, allowing people to grow and develop, and to value the maturity and flexibility that brings.

Examiners need to give candidates room to adopt the “thinking” solution, observers need to help the thinking to develop, and we all need to think when we drive and ride.

The advanced test should really just be a drive or a ride like any other – safe, systematic, smooth, legal, and thought through. A demonstration of the thinking driver or rider making a journey and doing it well.

I cannot advise you to break speed limits, or enter bus lanes and cycle lanes you shouldn't be in, or lots of other things. However I can advise you to think as you drive or ride. Be a thinking driver or rider, (and decide your own bedtime as well!)

[This article was written by Peter Rodger and appeared in the Advanced Driving \(Summer 2014\) magazine.](#)

# Vulnerable Road Users

This handout offers advice for sharing the road with vulnerable road users. The roads are there for everyone to use and as advanced drivers and riders we have a duty to make sure we share them safely.

A vulnerable road user is someone who has very little or no protection around them. There are many types including:

- Pedestrians
- Motorcyclists
- Horses
- Cyclists
- Mobility scooter users

## Pedestrians

Pedestrians are made up of different types of people e.g. young, elderly, blind, deaf, people with limited mobility, all of whom share the road with us and do not have the protection of being in a vehicle with modern safety features. Pavements are usually the safest place for pedestrians to be, however, they need to be able to cross the road safely. Where there is no pavement for them to use they may be in the road. Not everyone on the pavement will be walking: people use roller blades, skateboards and scooters, you may need to adjust your riding to share the road safely with them.

Most of us will walk at some time; treat pedestrians the way you would want to be treated, keep them safe.

- Give them the time and space they need to use the road, especially those who have restricted mobility.

Children can be hard to see, moving quickly and doing the unexpected. Anticipate this and plan for it.

- Be patient when directed to stop by a school crossing patrol or when stopping at pedestrian crossings.

Think about where you park your vehicle.

- Is it obstructing a dropped kerb?
- Does it obscure or restrict the view of a vulnerable road user?

Never wave a pedestrian across the road, you could be inviting them into danger.

## Cyclists

Cyclists share our roads and are therefore vulnerable to other traffic, especially at roundabouts and junctions. In heavy traffic cyclists may filter on either side, so you have to ensure you check your mirrors and blind spots before changing position or speed.

Cyclists may wobble because they are easily affected by side winds, which can also be generated when being overtaken. They may adjust their road positioning unexpectedly to avoid drains and uneven road surfaces;



anticipate this and prepare to adjust your riding.

**You can help keep cyclists safe by:**

- Allowing plenty of room when passing, be patient and plan to overtake only when it is safe to do so.
- Not following too closely as this may be intimidating.
- Respect cycle lanes and advance stop lines, give cyclists time to move off safely as they may not move away as fast as you.

## Motorcyclists

There have been a number of campaigns highlighting the vulnerability of motorcyclists and yet there are still high numbers being injured every day on our roads.

**Motorcyclists are:**

- Harder to see, especially at junctions; they may be in a blind spot created by the 'A' pillar.
- Often travelling faster than you perceive or may be filtering either side of you.
- More affected by side winds when being overtaken or when in open areas.

Where is a motorcycle likely to be, in your mirrors or in your blind spot?

Take extra care when at junctions.

Motorcycles are harder to see as they have a different profile to a car or van. A motorcycle's headlamp may be confused with that of a car behind it, and high visibility clothing can sometimes blend into the background.

Motorcyclists may avoid riding over drain covers and paint on the road as these can cause stability problems especially in the wet.

A wet road surface may also cause them to alter their positioning on bends and roundabouts; be prepared to allow them extra space.

## Mobility Scooters

Mobility scooters are becoming more prevalent. There are 2 main types:

- **Class 2** which are designed to be used on pavements and footpaths and have a top speed of 4 miles per hour.
- **Class 3** which may be used on the roads and have a top speed of 8 miles per hour.

These vehicles are electric, almost silent and therefore difficult to hear. Their slow speed means traffic may catch them up very quickly. Both types of mobility scooters may use the road at junctions and at some roundabouts; this is where they are most vulnerable. Remember, the users of these types of transport may have restricted movement, vision or hearing. As an advanced driver/rider you need to allow these road users plenty of space and time.

## Horses

Horses are normally found being ridden in the rural areas, but may be encountered in towns. Although they prefer to ride on bridleways and other off-road places, sometimes the riders have to use the roads.

Horses can be very unpredictable and scare easily. When you see a horse and rider, slow right down, give them plenty of room, turn the radio down and keep the engine revs low, be as quiet as possible the highest useable gear will help. Only pass when you can give them plenty of space. Wide and slow should be your mantra.

Sometimes you may find horses riding double file, this may be because of a young or novice rider, or a nervous horse. Give them plenty of space and be patient.

[illegible]

## Notes

[illegible]



# Documents Declaration

## How to use this form

This form replaces physical checks of your driving licence, MOT and insurance documentation and should be signed and handed in prior to your drive or ride with IAM RoadSmart.

If you do NOT hold all of the required valid documentation listed then you should not sign the form and will not be able to drive or ride with IAM RoadSmart.

If you have any questions then please speak to your local IAM RoadSmart group or call Customer Care on 0300 303 1134.

Name \_\_\_\_\_

Membership number \_\_\_\_\_

Date \_\_\_\_\_

## IAM RoadSmart documents declaration

I confirm that I am the holder of a valid current driving licence and that I have appropriate insurance for any vehicles used for IAM RoadSmart courses, either personally or via my employer, and that those vehicles, if appropriate, have valid MOT and tax. I also confirm that these will be in place throughout the duration of my IAM RoadSmart course.

I confirm that I am fit to drive or ride and not under the influence of any drug (including prescribed medication that may adversely affect my fitness to drive/ride). I will wear corrective eyewear while driving or riding if my eyesight requires it.

I am aware that I am responsible for all driving or riding decisions and I will make my Observer/ Examiner or Trainer aware if I become distracted. I agree that any advice/direction given will require my diligence to be applied safely. If I have any doubt I will ask for clarification before following the advice/direction.

Signature \_\_\_\_\_

**IAM RoadSmart is the trading name of all businesses owned by The Institute of Advanced Motorists**

Charity number: 249002 (England and Wales)  
SC041201 (Scotland).

[www.iamroadsmart.com](http://www.iamroadsmart.com)  
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**iam**  
**RoadSmart**

## Hints & Tips



# Human Factors

## Hints and Tips

### Observer Aims

To provide the Associate with the necessary knowledge, understanding, skill and attitude to handle the different situations presented during their riding world.

### Objectives for the Associate

1. Discuss the qualities of an IAM RoadSmart rider
2. Conduct machine safety check
3. Consider factors related to the journey
4. Discuss the effects of the external world on their riding

### Explain

**IAM RoadSmart approach to Human Factors**

“An IAM RoadSmart Rider” shows how we need to consider all the influences on a rider

**Why all the elements are important and how they blend together to achieve an IAM RoadSmart Rider.**

Riding on today's roads takes not just skill but a certain amount of understanding and co-operation to communicate and interact with other road users'

#### **Importance of Machine Checks**

'A regular, logical, ordered check of your machines road worthiness assists in keeping moving. Show me tell me questions can be used to encourage understanding'



## Understanding the impact of Human Factors



A rider skilled in vehicle control but lacking in the ordered mental approach to riding will not make an IAM RoadSmart rider



Starting to consider the Human Factors that affect their riding and beginning the process of self-evaluation puts the associate well on the way to achieving their goal



An IAM RoadSmart rider will understand the impact of the four Human Factor elements on their riding. They will use this knowledge to inform all of their riding decisions and will always be striving to improve.

Self-evaluation? Encourage your Associates to reflect on their riding and use their experiences to improve. Self-evaluation and asking questions of one's own riding often leads to improvement in the future

**When Associates learned to ride they would have started with the machine controls and with practice they developed their skills and muscle memory. Once they had mastered the basic skills they were able to concentrate on traffic situations and reacting accordingly**

**One of the main things to think about here is that when we get onto a bike we are not a blank canvas: We bring our beliefs, life experiences and personalities into the ride with us. All of these different aspects influence how we ride a bike**

### **The Rider**

How we are as humans can impact upon the way we ride. The way we behave, our emotions, attitude, mood and how tired we are all affect our riding and behaviour

### **The Journey**

Every journey we make has a reason behind it, whether we are going to work or riding to the local shops we are able to justify our journey: However, do we

always think about the best time to make the journey and allow additional time or do we judge journey time by the minimum time to get somewhere

### **The External world**

Lifestyle choices can affect riding. What influence does work, peer group or social pressure have on riding

Communicating with others and anticipating their actions takes skill and concentration. Situational awareness is crucial in becoming a well-rounded rider

### **The Bike**

Knowing your limitations as a rider is one thing but how often do we 'assume' our machines are capable of the journey we are taking them on? Checking the condition of our machine and knowing it's limitations are just as important as knowing our own limitations

# Core riding

## Hints and Tips

### Observer Aims

To provide the Associate with the necessary knowledge, understanding, skill and attitude to ride safely using IPSGA

### Objectives for the Associate

1. Demonstrate how they Take, Use and Give information
2. Discuss how they observe, anticipate and plan
3. Demonstrate understanding and application of IPSGA
4. Smooth operation of machine controls

### Explain

#### What do we mean by core riding skills

Core riding skills are the skills required to operate a bike's controls with the high degree of finesse required to be an IAM RoadSmart rider

#### Why do we use IPSGA

The IPSGA system of bike control is a trusted and effective method of creating time to negotiate a hazard safely

#### How the information phase is broken down into TUG

Take – Use – Give information

### Demonstrate using OAP as part of their riding plan?

By developing observation, anticipation and planning (OAP) skills the Associate is able to identify hazards at the earliest opportunity and therefore have more time to plan what to do

#### Taking information

The Associate needs to demonstrate their ability to take information in. All round scanning is where most of the information will come from, however, encourage the Associate to use other senses i.e. country smells, hearing sirens, feeling any abnormalities with the steering, etc.

#### Using information

The Associate will gather the information taken and decide what they are going to do with it

Use the information to link possibilities i.e.

- On hills a cloud of exhaust smoke from an HGV suggests that it may be changing down a gear to cope with the hill
- A cluster of lamp posts may indicate a roundabout
- A single lamp post may indicate a junction opposite it

### Giving information and communicating

Advanced riders need to demonstrate how the position of their bike assists with the communication between them and other road users. The Associate needs to show how their signals communicate their intentions i.e. indicators, brake lights, hand signals where appropriate making eye contact may help in the communication being two-way rather than the Associate just giving information

## Understanding the System



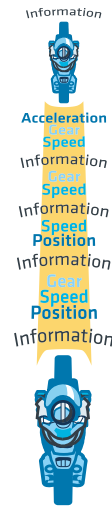
Thinking of the information phase as just one stand-alone part of the system should be avoided. Information may change at any time and the system needs to be considered again



The system should be **considered** in sequence and the appropriate feature visited and adjusted if required



The information phase of the system runs throughout and feeds into all the phases. All phases should be **considered** on the approach to every hazard



### Position

IAM RoadSmart Riders need to demonstrate how the position of their machine assists with the communication between them and other road users. The Associate needs to show how they decide their road position based on safety, what they can see, the road layout and traffic conditions. The position of a motorcycle helps to communicate the rider's intentions. Positional changes must be preceded by effective rear observations

### Speed

The Associate needs to choose a speed that is legal and allows them to stop safely in the distance they can see to be clear. Stopping distance comprises of a thinking component and then the distance to brake to a stop. Discuss the 'two-second rule' as a way of assessing a good following distance'

Smooth operation of the throttle gives a comfortable ride and reduces stress, avoiding jerky throttle movement and using acceleration sense when appropriate will avoid unnecessary brake applications (but if brake lights are required they can be operated)

### Gear

To be able to ensure the motorcycle responds correctly the Associate needs to be in the correct gear. They need to understand the working range for each gear and be able to use the gearbox

### Acceleration

The associate should apply the correct degree of acceleration to negotiate and leave the hazard safely, positive throttle application will aid stability

### Tyre-grip-trade off

A bike's tyre only has a certain amount of grip used either for, steering, braking or acceleration. Careful braking and accelerating leaves plenty of grip available for steering



# Bends

## Hints and Tips

### Observer Aims

To provide the Associate with the necessary knowledge, understanding, skill and attitude to corner safely.

### Objectives for the Associate

1. Demonstrate safe cornering both LHB and RHB
2. Discuss the use of limit points when cornering
3. Discuss the four key principles of safe cornering (see overleaf)

### Explain

#### When a bike is most stable

A bike is most stable when travelling in a straight line, on a level course and at a constant speed

#### What characteristics affect stability

Machine type and specifications, tyre size, any stability control and the surface grip

#### What is tyre grip trade-off

The more grip used for accelerating or braking, the less there is for steering and vice-versa

#### What information can be obtained through observations links?

Road signs and markings

Position, angle and speed of machines sharing the road including the angle of headlights at night. Are there any danger poles (red – left side of road, white – right side of road) or cats-eyes, trees, lamp posts, building lines, change in road surface (varying condition and type) or weather conditions

#### Will the camber affect the handling in the bend?

Crown Camber: centre of the road is higher than kerbs - (Effect on steering is positive on LHB and negative on RHB)

Positive or Adverse: Positive favours the turn and adverse works against it

**Super elevation:** Where the whole width of the road is banked up towards the outside edge of the bend making favourable for cornering in both directions

#### Positioning

Three elements to consider when deciding where to position the machine are Safety, Stability and Vision

Extending your vision to the furthest point and scanning backwards allows you to build an overall picture and then to paint in the intermediate details

## Limit Point Terms



**Static:** The limit point is not moving it is getting closer to the bike and the distance available to stop is reducing. Speed needs to be reduced to retain a safe stopping plan.



**Moving:** the limit point is moving away but not as quickly as we are approaching - again our distance available to stop is reducing - we need to slow down to retain our safe stopping plan.



**Matched:** the limit point is moving away from us at least at the rate of our approach, we can stop safely in the distance we can see to be clear on our own side of the road. If all other conditions allow we can maintain our speed of approach and as it improves further increase speed if safe and legal.

### Limit Point

The limit point is the furthest you can see along the road surface, where the nearside and offside verges appear to intersect the far side of the bend.

It is a reliable method to judge stopping distance if no wider views are available

## Four Key principles of safe cornering

### 1) Correct Positioning

Getting the correct position for the bend makes a big difference to the information you Take and Use. It will allow you to choose the best entry point increasing the radius of your path – the entry phase is the busiest for the Associate

LHB - Towards the centre line however IAM RoadSmart policy is not to teach off-siding to Associates. You must be aware of the impact of positioning on other road users

RHB - Towards the near-side kerb however be mindful of junctions, physical features, road surface, weather conditions and other road users

### 2) Correct Speed

Use the limit point to judge the safe speed to ride around the bend and the Associate should always be able to stop within the distance they can see to be clear on their

own side of the road. If there is good lateral vision you should be able to see the road ahead for a greater distance - the tarmac limit point should be used for deciding the correct speed in these instances (a positive throttle will maintain the speed and assist keep the bike stable)

### 3) Correct Gear

Allowing time for the system gives the Associate time to make a smooth gear selection and should be one that has the flexibility to both accelerate or slow down if circumstances dictate

### 4) Stop safely on your side of the road

The Associate should always be able to stop safely on their side of the road

**If others have to react you should not be there!**

# Roundabouts

## Hints and Tips

### Observer Aims

To provide the Associate with the necessary knowledge, understanding, skill and attitude to negotiate roundabouts safely using IPSGA

### Objectives for the Associate

1. Demonstrate early Observation, Anticipation and Planning when approaching a roundabout
2. Demonstrate safe entry onto a roundabout
3. Discuss the considerations of straight lining (apexing)
4. Demonstrate safe exit

### Explain

#### The meaning of straight lining

Straight lining is when you safely use all available lanes at a roundabout to keep the machine stable

#### What characteristics are different at mini-roundabouts

Mini-roundabouts have a different road sign, they can be painted on the road and may be grouped together you must ride around the disc on the road even if this requires slowing down,

#### How the road sign can help

Road signs often show the layout of the roundabout, assisting the Associate to plan their approach

#### How can an associate demonstrate early Observation, Anticipation and Planning (OAP)?

Look at the sign to identify the required exit early, this will assist with deciding on the Associate's approach position. Lateral scanning will give an early view of traffic approaching from other roads and assist with Anticipation and Planning. On the approach to a roundabout the Associate may plan for overtaking opportunities on the exit side - some other road users may not be looking for a progressive exit from the roundabout. This may be dictated by the size and type of the vehicle being overtaken

#### Safe entry onto a roundabout

With the approach position and speed chosen, merge safely with other traffic already on the roundabout matching speed where appropriate

Scan for other road users entering from the left, stationary traffic ahead and vehicles cutting across the Associate's path. Make progress where vision, circumstances and speed limits permit



## Straight lining (apexing)



Never straight line a roundabout if it could cause confusion to any other road users including pedestrians



You must be able to see both kerbs and have good lateral vision



Reducing the tightness of the turn can help with stability, but must be conducted with all-round awareness and reinforced with effective rear observations before moving across lanes

## Gaining an advantage

On approach to a roundabout plan to stop but look for information that allows you to keep going

Scan for new hazards such as diesel spills or differences in road surfaces that may affect the dynamics of the motorcycle

Exits off roundabouts are a common place for speed limit changes don't be caught out by missing it

### Exiting a roundabout

Looking ahead and extending vision into the new road will help the Associate determine how they leave the roundabout. Mirrors should be used before a change of speed or position and a blind spot check should be considered. Indicate if other road users would benefit from this type of signal. Maintain lane discipline where there is a presence of other hazards

### Mini-Roundabouts

Mini-roundabouts should be approached in the same way as normal roundabouts. The Highway Code states that all

vehicles must pass around the central markings except for large vehicles which are physically incapable of doing so

Mini-roundabouts naturally have less space to manoeuvre and less time to indicate your intentions to others. Before using these roundabouts for a U-turn consider the impact of this on other road users and beware of others doing this

### Multiple roundabouts

Some complex junctions have a series of mini-roundabouts. The Associate should treat each mini-roundabout separately and follow the normal rules



# Overtaking

## Hints and Tips

### Observer Aims

To provide the Associate with the necessary knowledge, understanding, skill and attitude to carry out an overtake safely without adversely impacting on other road users

### Objectives for the Associate

1. Discuss key safety points regarding overtaking
2. Discuss the legal restrictions on overtaking
3. Describe a three-stage overtake
4. Discuss a momentum overtake

### Explain

#### Why overtaking is hazardous

Overtaking can be considered hazardous because it may bring you into the path of other vehicles and dangers from the offside such as emerging traffic or pedestrians

#### What do we mean by an overtake?

An overtake is the process of moving past another vehicle or road user and often involves crossing the centre line onto the other side of the road

#### Obeying the speed limit

You should never plan to exceed the speed limit in order to overtake

#### Key safety points in relation to overtaking are

- Overtake only if you can see far enough to be sure it is safe
- Avoid causing any other vehicle to alter course or speed
- Be able to move back to the near-side in plenty of time. Be ready to abandon the overtake if necessary
- Plan to avoid being the 3rd vehicle beside two others (motorways)
- 'Is there another vehicle looking to overtake (either behind or in front)

Discuss where your Associate could come into conflict with other road users if they were to overtake at these points

- At or near road junctions or laybys
- Where the road narrows
- School crossing areas
- Near-side to a tram stop
- During traffic queues
- At level crossings
- Where a vehicle is indicating right

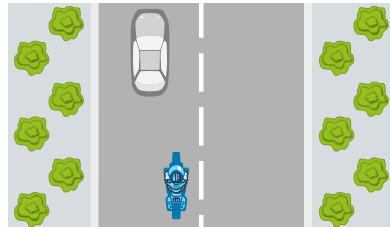
#### What do you need to pay attention to?

- Road markings, signs, junctions
- Driveways, bends and lateral vision
- How much of the road is clear ahead?
- The speed of the vehicle you want to overtake
- Where is your return gap after the overtake?
- What can't you see?

• How fast is the vehicle you want to overtake going?

• Is the vehicle in front waiting to overtake or turn?

• How will the driver in front feel about being overtaken?



• Is your bike powerful enough to make the overtake safely?

• Are there any bends in the road - what might be around them?

## Choosing when to Overtake



Never overtake unless it is safe to do so and does not adversely impact on others



Road markings, layouts and signs will help establish where to overtake



With the decision made conduct the overtake briskly within the speed limit and safely enter your return gap

### Did you know?

Motorcyclists are roughly 38 times more likely to be killed in a road traffic accident than car occupants, per mile ridden

30 motorcyclists are killed or injured every day at junctions

Two vehicles travelling towards each other at 60 mph are closing on each other at approximately 180ft per second!

### What mindset should we be in?

Look for reasons not to overtake, this way you are less likely to be affected by the things that make up our “human factors” as riders. Does the purpose of the journey affect your decision to overtake?

### What is a momentum overtake?

This is when there are no other hazards and you are able to approach and overtake the vehicle or obstruction in one smooth manoeuvre with little or no change in speed

### What is a three-stage overtake?

A three-stage overtake is the name used to describe the process of overtaking in situations that do not allow a momentum overtake. A situation where approaching vehicles or other hazards make it necessary to match the speed and follow the vehicle in front while planning your overtake

### Are there any additional dangers when overtaking a line of traffic?

- Overtaking a line of traffic will present additional safety issues for the Associate, some of which are listed below:
  - Longer time spent off-side
  - Potential danger of vehicles ahead pulling out into your path
  - Will your return gap be closed down by following traffic
- Avoid being over-ambitious and consider overtaking in bite-size pieces by looking for stop-over gaps

### Overtaking near hazards or bends

As with all overtakes, this requires excellent OAP skills. Look for these opportunities on the exit side of roundabouts, bends, etc. Make sure the object vehicle is committed to their plan of action before you overtake

**NO VISION = NO PERMISSION**

# Motorways and Dual Carriageways

## Hints and Tips

### Observer Aims

To provide the Associate with the necessary knowledge, understanding, skill and attitude to enter, use and exit a motorway or dual carriageway safely

### Objectives for the Associate

1. Compare the differences between Motorways and Dual Carriageways
2. Discuss positioning for safety
3. Recognising the difference on a smart or managed motorway
4. Demonstrate or discuss safe entry and exit of a motorway

### Explain

**The differences in lane descriptions**

The lanes on a motorway are normally 15ft wide compared to dual carriageways which have lanes of 12ft

**What characteristics are different**

Motorways are set out to improve safety and have restrictions on vehicles using them, there are no 90-degree junctions or cross-flow traffic

**What are the rules for using the hard shoulder in an emergency?**

Try to stop near an SOS call box, stay to n/s of machine, park machine and move to other side of Armco

**What are the main differences between a motorway and a dual carriageway?**

Motorways do not have roundabouts, T-junctions or exits with short or no slip roads. There are no sharp bends. Certain vulnerable road users are prohibited

**When on a motorway or dual carriageway how can you anticipate other road user's intentions?**

Identify slip roads, parking and service areas. Any slow vehicles in lane 1 & 2, gradients or clusters of traffic congestion may cause displacement into your lane

Watch for the "Non-Verbal Communication" of others: monitor following distances decreasing, wheel to white line distance altering, where the other driver is looking. These are the telltale signs of movement before a signal

**Positioning for Safety**

Stopping distance and thinking distance are both important factors when riding at speed on motorways and dual carriageways. Extending to a 3-second gap will allow other traffic to move in and out of the space in front without you having to repeatedly alter your speed, it is also less stressful than constantly fighting for space

## Overtaking

Overtaking on a motorway is easier than on a single carriageway. When your Associate needs to overtake they should move across the lanes gradually as safe opportunities become available (mirror/

shoulder check before each lane change). After an overtake is completed they should move back to the nearside lane when safe

Proactive OAP will help make early decisions about lane changes

## Three abreast



Reduced Visibility and no room for manoeuvring if hazards arise



Extra wind turbulence if passing two large vehicles



'Increased volume of traffic is making it much more difficult to achieve an overtake without making three abreast. Make sure you have an exit gap before moving alongside another vehicle

## GAP AT 70 MPH

Leaving a 2-second gap gives you a gap of 200 ft

Leaving a 3-second gap gives you a gap of 300 ft

Stopping distance at 70 MPH is 315 ft

## SMART Motorways with Active Traffic Management Systems (ATMS) and variable speed limits

Smart motorways now have Active Traffic Management Systems (ATMS) and/or variable speed limits. There are electronic signs on gantries above the motorway, these display the maximum speed limit allowed and what lanes can be used. In ATMS, vehicles may be allowed to use the hard shoulder as a running lane – but only when the electronic signs say so

### Entering a Motorway

When entering M/W or D/C the Associate should obtain early information: "On-slips" are often elevated. Looking to the sides during vision scans will assist with judgement and extending vision. Matching speed to that of the vehicles on the carriageway

makes for an easier transition and where gaps are limited it allows for safer merging

### The External World

Leaving the carriageway must be achieved without causing other road users to alter course or speed, therefore exits should be planned early and in plenty of time. Motorway exits usually have markers at 1 mile, this is where the Associate should be extending vision out and scanning back looking for spaces in the traffic

At the ½ mile marker they should be identifying and choosing a suitable gap often referred to as a 'Banker gap' (this is a space in the traffic in which they can gain access to the exit slip). In any event they should aim to be in a position to safely exit by the 300 marker. Speed should be reduced on the slip road



# Slow riding

## Hints and Tips

### Observer Aims

To provide the Associate with the necessary knowledge, understanding, skill and attitude to manoeuvre the bike safely

### Objectives for the Associate

1. Discuss how to choose what type of manoeuvre to make
2. Demonstrate how to carry out effective observations
3. Maintain safety during the manoeuvre

### Explain

**Why do we need to be able to manoeuvre well**

Low-speed manoeuvring accounts for about a third for all damage to machines, by doing this correctly we reduce our risk of incident

**Why should we keep manoeuvres slow**

Completing manoeuvres slowly gives time to carry out good effective observations

**How using the mouth of a junction can help when manoeuvring a bike**

Sometimes where conditions allow using a mouth of a junction to assist changing direction is the safe option as it gives more space to perform the turn

### What type of manoeuvre is best

Position, angle and speed of vehicles sharing the road will influence Associate's decisions when deciding which type of manoeuvre is safest to perform for their current road conditions. Available space may well dictate what manoeuvre is carried out i.e. if turning around in a narrow street can the mouth of a junction or driveway be used to help. As an advanced rider the Associate needs to be competent in all areas of slow riding

### Demonstrating effective observations

The Associate needs to demonstrate their ability to carry out all around observations before and during the manoeuvre, they will then be able to show what hazard is being prioritised

If a danger is identified the Associate will need to demonstrate how their response is proportionate to the danger and how they maintain safety

Demonstrating good observations and being able to make decisions that minimises the effect on other road users may mean completing the manoeuvre is the safest option

## Being in total control



Be aware of other traffic when manoeuvring, if you have to stop suddenly it is easy to over-balance



Be aware of broken or wet road surfaces which may de-stabilise your machine when making your turn



Good clutch control, sensible throttle application and appropriate use of the rear brake will assist in safe and secure slow riding

### Did you know?

Motorcycles become more stable with forward motion, as the speed decreases where your weight is distributed is more likely to affect the balance of the machine.

If you are turning in the road look where you want to go, if you stare at the kerb then that is likely where you will end up.

Practice is the only way to gain confidence, build up slowly by using a large space initially to practice balancing the controls. As you perfect this you can reduce your available space.

### Getting the correct starting position

Having the bike in the correct starting position will make any manoeuvre easier to accomplish successfully i.e. for a turn in the road a tight nearside position should be adopted

### Maintaining safety during the manoeuvre

Whilst conducting the manoeuvre the Associate will need to be mindful of their bike's position as well as the location of any street furniture such as bollards and lamp posts.

### Maintaining an appropriate speed for the manoeuvre

Safety is the primary concern, most manoeuvres are conducted at as slow a speed as possible. However "as quickly as necessary" is a good guide to judging the correct speed. The Associate needs to

control the bike slowly enough to ensure information can be gathered and assessed accurately without inconveniencing other road users. All manoeuvring exercises are a really good way for the Associate to demonstrate the control of the clutch, accelerator and brakes

### Assuring a safe finishing position

If the Associate was leaving their bike unattended, have they chosen the best place, is it likely to inconvenience any other road users and is it a safe place to leave the bike, have they chosen their parking neighbours with care? Respect disabled access and avoid blocking dropped kerbs

## Advanced Driver/Rider test report

Candidate information						
Surname				First Name		
Date			Time			Associate No
Advanced test <input type="checkbox"/>		Members re-assessment <input type="checkbox"/>		Declaration <input type="checkbox"/>		Eyesight test <input type="checkbox"/>

Vehicle information (tick and delete as required)					
Car <input type="checkbox"/>	Motorcycle <input type="checkbox"/>	Commercial (Heavy/Medium/Light) <input type="checkbox"/>		Bus/Coach/Minibus (with trailer) <input type="checkbox"/>	
Reg no			Make		
			Manual <input type="checkbox"/>	Automatic <input type="checkbox"/>	

**This must be brought to the attention of the Driver**

- As the driver you are deemed to be in control of your vehicle at all times including responsibility for safety

Competence Levels: 1 = Commended    2 = Satisfactory    3 = Requires Development			
Safety and legality	Gear changing	Cornering	
System	Use of gearbox	Overtaking	
Observation	Acceleration/sense	Restraint/progress	
Planning & hazard management	Mirrors/rear observation	Human factors & concentration	
Anticipation	Steering	Courtesy	
Vehicle sympathy & eco-driving	Braking	Slow manoeuvring	
Positioning	Signals	Smoothness	
Spoken thought	Knowledge	OVERALL RESULT	

Comments

Examiner name				Number				
Signature								

## ADVANCED DRIVING / RIDING TEST REPORT

### Note to Examiner

This form is to be used for all manner of vehicles. The terms 'Drive' and 'Ride', 'Vehicle' and 'Machine' should all be deemed interchangeable in relation to this form.

The associate should be encouraged to attempt spoken thought, if not attempted strike through the box. This will not result in a test failure but a FIRST cannot be awarded.

### Safety & Legality

As the examiner, you decide whether the associate's driving/riding is legal. There may be a trade-off between legality in the interest of safety. Consider if a police officer would prosecute for any breach of road traffic legislation or whether what was done was reasonable in the circumstances. An associate cannot PLAN to exceed the speed limit.

### System

Does the associate grasp the phases of the system and can they apply the system correctly to each hazard?

### Observation

Is the associate identifying hazards and making scans in all directions around the vehicle/machine?

### Planning & Hazard Management

Does the associate plan to deal with the hazards identified? Do they appropriately manage the risk associated with each hazard? (by change of speed, positioning, use of horn etc.)

### Anticipation

Does the associate make appropriate assumptions for what might occur, based on their observations?

### Vehicle Sympathy & Eco-Driving

Does the associate take opportunities to rest the engine in higher gears when appropriate for both vehicle sympathy and fuel efficiency?

### Positioning

Positions the vehicle safely and appropriately.

### Spoken Thought

Can the associate verbalise their thoughts in relation to their drive/ride? Does it explain the drive or is it historical. Speaking should not slow the drive or adversely affect the concentration. A FIRST cannot be awarded without the associate attempting spoken thought to at least a satisfactory standard.

### Gear Changing

Does the associate select the correct gear at all times without any difficulty? Is the clutch control matched with the gear selection on a manual gearbox? On automatic gearboxes does the associate understand the various drive modes available? Do they understand when and how to select a manual hold gear?

### Use of Gearbox

Does the associate select the correct gear at the correct time within the phases of IPSCGA?

### Acceleration Sense

Can the associate accurately match the speed of the vehicle to changing road conditions by using the accelerator? Constant 'comfort braking' or pulsing of the accelerator pedal are clear signs that acceleration sense is not being used.

### Mirrors/Rear Observation

Does the associate use mirrors in an appropriate and timely fashion? Are shoulder/blind spot checks employed when necessary?

### Steering

Are all steering inputs made smoothly and accurately? Is the associate able to reach all ancillary controls when necessary, whilst steering? (regardless of which technique is employed).

### Braking

Can the associate use three stage (progressive) braking smoothly? Does the associate avoid comfort braking, braking in a decisive and planned way. Do they understand how to perform and the benefits of a running brake check?

### Signals

Does the associate give signals when appropriate and do they interpret correctly those given by other road users?

### Knowledge

Does the associate understand the concept and application of IPSCGA? Do they have a sound understanding of the Highway Code and our advanced course materials? Do they have a sound knowledge of the technology fitted to their vehicle? This section is also to be used when a cockpit drill is performed.

### Cornering

Does the associate display safe positioning during cornering? Do they understand the principles of the limit point? Do they ensure the vehicle is balanced and under control during cornering in bends, junctions and roundabouts?

### Overtaking

Does the associate understand the principles of overtaking including the following position, overtaking position and then demonstrating a safe overtake. If no overtakes are actually demonstrated, consider their performance when moving out past parked vehicles or when passing vulnerable road users. If this is unachievable, discussion should take place to check understanding.

### Restraint/Progress

Has the associate demonstrated a clear understanding of the balance between when to use restraint and when to make progress?

### Human Factors & Concentration

Has the associate demonstrated mastery of their emotions in order to provide a safe and controlled drive/ride? Are they able to describe the various factors affecting themselves, their drive and other road users? Do they maintain concentration throughout the test?

### Courtesy

Does the associate use courtesy in the way they approach hazards (thanking other road users, giving way when appropriate etc.). Do they consider their effects on others (such as when overtaking or approaching puddles near the kerbside).

### Slow manoeuvring

Can the associate reverse a car or drive through narrow gaps with confidence? Can a motorcyclist ride at walking pace without losing their balance? The examiner may choose to ask for a slow speed manoeuvre to be performed if they have not seen sufficient skill demonstrated during the drive/ride.

### Smoothness

Can the associate operate all controls in a smooth and accomplished manner without undue effort and without the vehicle being adversely unbalanced?

### Definition of Requires Development category

Fails to consistently demonstrate the competency. Any grade 3 will result in the candidate being unsuccessful.

### Definition of Satisfactory category

Consistently demonstrates the competency

### Definition of Commended category

Consistently demonstrates the competency to a high standard with confidence; showing sound understanding of the interaction between this and other competencies.

### Awarding a FIRST

In order to be awarded a FIRST:

- No grade 3 is allowed
- Our Examiners have the discretion to recommend a candidate even if they score a '2' in no more than three categories. Those categories can be Spoken Thought (Car), Vehicle Sympathy & Eco-Driving and any one other category for Car or two other categories for Bike - except for Safety & Legality and Slow Manoeuvring which must score a '1'
- The remainder need to be grade 1.



**IAM RoadSmart is the trading name of all businesses owned by The Institute of Advanced Motorists**

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SC041201 (Scotland).

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