# The High Performance Course

## Syllabus

# *Introduction*

In 1966, Denise McCann, then Chairman and Managing Director of the British School of Motoring, wrote in the foreword to '*High Performance Driving for You'* by Tom Wisdom:

"*There can be few skills more satisfying than that of handling a car correctly, using its power to the full and being capable of taking advantage of every opportunity for the speediest, safest journey…we in Britain now have the world's most traffic-congested highways. This is where the really skilful high-performance driver comes into his own, for conditions are such that only the motorist with advanced skills and specialised techniques can hope to overcome them in safety, while maintaining a fast time."*

In the book itself, Tom Wisdom went on:

*"It seems that few motorists have ever sat down and really thought about driving. Few people have felt the joy of knowing what a car can do for you or the horror of realising what a car can do to you…..It is not enough to drive so that you do not cause accidents. You should also drive so that you are not involved in accidents, however they are caused. A good driver is rarely in trouble and never causes trouble. He never takes risks because on a public road there is no such thing as a justifiable risk. He never frightens passengers or pedestrians and his driving is smooth and easy and relaxed whatever his speed. He concentrates always on the job of driving and never has to take emergency action because he deals with potential emergencies before they arise."*

The High Performance Course went on to embody these ideas and principles.

The syllabus set out herein sets out skills and competencies that will be taught on the High Performance Course, and the standard needed to successfully complete the Course.

# *ATTITUDE AND BEHAVIOUR*

| Skill | Attitude and Behaviour |
|---|---|

## Introduction

Perhaps the single most important attribute of HPC drivers is the ability to manage their internal state of mind and interactions with other people, whilst driving to the highest standards of safety within the performance envelope of the vehicle, and with recognition of the prevailing environmental constraints.

HPC drivers will have a desire to continue the learning process, seeking to improve their driving and to derive enjoyment from it, whilst being mindful of their responsibilities to others whose skill levels, driving aspirations and purpose may be very different from their own.

| **Competencies – Attitude and Behaviour** |
|---|
| A desire constantly to learn and improve, and to derive enjoyment from the process of driving safely to a high standard |
| The ability to interact appropriately with other road users |
| The ability to manage one's own state, emotions and stress levels, to avoid emotional engagement with the stress of others and to recognise the usefulness of restraint or detachment when appropriate |
| To be aware of one's limitations at any particular moment and drive within them and that of the vehicle |
| To focus on what is important and not be distracted. To know where to put mindful attention |

## Demonstration

Show a desire to learn from the training undertaken in becoming an HPC driver, enjoy the process and recognise that it is only the start of an ongoing process of improvement, not merely the gaining of recognition of a standard. Recognise that what were traditionally regarded as mistakes are better viewed as opportunities to learn. Seek advice rather than self-retribution. Show that safety is regarded as the paramount consideration in any situation.

Adopt a courteous and curious approach to other road users. Show an understanding of how to analyse the immediate driving environment, and how to assist with its flow. Be cognisant of the behaviour and desires of others, and modify one's driving speed, position and overtaking decisions accordingly. Recognise the importance of the effect that one's actions may have on others, and how they may be perceived.

Show an ability to understand one's own emotional responses to a situation, and how that may affect the situation in a positive or adverse manner. Be able to explain how

these emotional responses are influenced by external factors. Know when it is appropriate to detach from a situation and adopt a relaxed attitude, and the importance of managing one's levels of concentration in accordance with the prevailing conditions.

Show an understanding of the factors that determine one's own limitations, be they internal (mental and physical state), self-imposed (the objectives of the journey), or external (vehicle, environment), and how the driving plan can be adjusted to respect these limitations.

Understand the negative effects of attempting to apply 100% concentration 100% of the time in all situations. Show the ability to manage one's levels of concentration and awareness according to the prevailing risks, and not to be distracted by focusing attention on factors that are not relevant to immediate and potential hazards.

## *PRE-DRIVING CHECKS*

| Skill | Pre-Driving Checks |
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### Introduction

The HPC driver's preparation starts even before getting behind the wheel. Through a systematic and thorough pre-drive checklist the objective of the journey, the state of the driver, the condition of the car and the controls of the vehicle are considered in turn. This initial stage is the basic foundation upon which the drive is planned and ensures both driver and vehicle are prepared for the drive ahead.

| **Competencies – Pre-Driving Checks** |
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| Demonstrate need for 'fitness to drive checks' – paperwork – physical – emotional |
| Ability to check all fluid levels, pressures and status of all critical systems |
| Ability to carry out a detailed and systematic controls familiarisation |
| Ability to demonstrate a relaxed deportment that provides full control of the vehicle |

### Demonstration

Before a journey the driver considers whether there are any factors that may have an influence on the drive, such as tiredness and emotional stresses, and the completeness of all licence and insurance requirements as applicable.

The driver should carry out all checks to ensure the vehicle is road worthy.

Before driving an unknown car the driver carries out a comprehensive familiarisation check to ensure awareness of the location and operation of all controls.

The driver takes time to adjust the position of the seat and steering wheel to ensure full access to all controls and a relaxed driving position that will minimise fatigue or strain.

## *CONTROLS*

| Skill | Controls – Smoothness |
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### Introduction

The smooth use of all controls is a fundamental attribute of the HPC driver. Any change in the driving process, such as in speed or direction, should be executed with smoothness and minimal physical inputs. A vehicle driven smoothly is inherently more stable and the resultant ride more comfortable for driver and passenger alike and is the hallmark of an HPC drive.

| **Competencies – Controls – Smoothness** |
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| Ability to handle all vehicle controls smoothly and sympathetically regardless of speed or driving environment |
| Ability to display an unhurried, measured and planned use of all inputs – smoothness always linked with the driving plan, giving sufficient time for all actions to be carried out without rushing |

### Demonstration

The HPC driver will aim to minimise the incidence and intensity of a given input. The initial and final phase of any given input should be gradual and progressive, allowing the vehicle to prepare for whatever change of state is being asked, be it braking, acceleration or steering.

Irrespective of external speed a driver's actions will appear to be measured and unhurried, and the driver will consider the comfort of any passengers. Safety, however, is absolutely the first priority, and the HPC driver will always be ready to sacrifice smoothness for safety when necessary.

All use of the controls will be blended seamlessly together and in plenty of time before reaching the hazard.

| Skill | Controls – Accelerator |
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## Introduction

The use of the accelerator and associated acceleration sense is one of the defining characters of the HPC driver. *Roadcraft* defines acceleration sense as "the ability to vary vehicle speed in response to changing road and traffic conditions by accurate use of the accelerator."

| **Competencies – Controls – Accelerator** |
|---|
| Ability to utilise the power of the vehicle smoothly, accurately and progressively |
| Ability to plan the phases of acceleration to match the prevailing vision |
| Ability to use acceleration in combination with other controls to maintain optimum stability |

## Demonstration

From the start of a journey the HPC driver will blend the application of accelerator with clutch to ensure a seamless and smooth pickup, with no firm application of accelerator until the clutch is fully engaged.

The use of the accelerator will be tapered and progressive; both the initial and final stages will be gradual with firmer application progressively applied as appropriate. In preparation for a gear change the accelerator will be smoothly blended to ensure a seamless transition.

In corners and bends the driver will use the accelerator to optimise vehicle stability.

The driver will appreciate the effect on the stability and handling of a car as a result of operation of the accelerator.

The driver will demonstrate the ability to assess the cut-off point and transition from acceleration/constant speed to reduced speed for the hazard, using deceleration skills alone or a combination of deceleration and braking on the approach.

| Skill | Controls – Clutch and Gears |
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## Introduction

The efficient use of the clutch and gears on a manual car are interdependent. The HPC driver should be aware of the point of clutch engagement (the biting point) and avoid the full application of power until the clutch is fully engaged. The use of the clutch should be progressive and smooth to avoid premature wear. The selection of the correct gear for the speed to negotiate the hazard should be carried out as part of a systematic driving plan and well before the hazard is negotiated. To achieve a smooth change the driver should be able to match precisely the engine revs with the speed of the car with consideration of the role of the synchromesh and flywheel characteristics of the vehicle.

| **Competencies – Controls – Clutch and Gears** |
|---|
| Ability to use the gear lever sympathetically and positively to make smooth gear changes |
| Understanding of the flexibility and power delivery characteristics of the gear ratios |
| Ability to accurately and seamlessly match road speed with engine revs |
| Understanding of the technique of Heel and Toe |
| The ability to use an automatic gearbox, or derivative, with an understanding of the characteristics and optimum use of that system (optional) |

## Demonstration

Drivers will familiarise themselves with the power characteristics of each gear and, in the early part of a drive in an unfamiliar car, will take time to explore the full range of the gearbox at the earliest opportunity.

Gear selection is always appropriate to the speed and conditions.

The driver will display consistent and precise gear changes and the gear lever will be handled positively. Changes will be executed smoothly and seamlessly.

The driver will use the technique of double declutching, together with boost or sustained revs, to assist the gear changing process when circumstances require it, and will understand the technique of ‘Heel and Toe’ and when it may be appropriate. (During the Course the driver should be able to explain the theory of Heel and Toe without necessarily giving a practical demonstration.)

## Optional – Automatic and electronically assisted gear selection systems

Automatic gearboxes are many and various and are constantly developing, many are marque specific. The driver should be familiar with, and able to explain, the characteristics of the automated/ semi-automated transmissions systems of the vehicle. The driver will show an understanding of the effects of downchanges induced by 'kickdown', and the characteristics and appropriate use of any manual overrides or alternative settings with which the car is equipped.

The driver should utilise the car's automated gearbox functions to best effect (e.g. using automatic mode in town and reverting to manual selection when in rural areas).

The driver should be able to use the accelerator to assist with smooth changes where necessary, and be aware of the effects of the gearbox automatically changing down during prolonged braking.

| **Skill** | **Controls – Braking** |
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## Introduction

Excellent braking control is a fundamental attribute for the HPC driver. As part of the vehicle familiarisation phase the HPC driver would be expected to explore the capabilities of the braking system; firstly a static brake check, then a moving brake check. Some braking systems employ electronic assistance that sense unusual or emergency braking and a driver would be expected to be fully aware of the braking capability of the vehicle.

| **Competencies – Controls – Braking** |
|---|
| All braking to be carried out progressively, smoothly and accurately |
| Understanding of electronically assisted braking and stability systems, and the characteristics of cadence braking techniques |
| Understanding of the effect of braking on the stability of the vehicle |
| Ability to stop the vehicle in an emergency situation under full control |

## Demonstration

The normal braking action is expected to be tapered, progressive and smooth, ensuring maximum stability and comfort for any passengers — initially hinting to the braking system with a brief period of soft braking, then firm braking applied in the middle phase, then tapering off during the final phase avoiding any 'jerk'.

The driver will aim to carry out all braking in a straight line to maintain optimum stability, and will judge the braking phase to arrive at the hazard at the desired speed.

The planned braking phase and braking effort will be adjusted in response to variations in road surface and grip, to avoid braking in unsuitable places such as standing water or loose surfaces.

The driver will understand the effect of weight transition as the load shifts under braking.

Ability to describe the effect of ABS and cadence braking.

### Emergency Braking

Smoothness is not a priority in an emergency situation. Drivers will be able to stop the vehicle in the shortest possible distance in an emergency, without an uncontrolled skid. The driver would be expected to depress the clutch to avoid stalling and stranding the car in a dangerous position.

If the vehicle is fitted with ABS or electronically assisted braking, the driver should be aware of its effect.

| **Skill** | **Controls – Steering** |
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## Introduction

The choice of steering technique is a matter of personal preference; however, the HPC driver should be able to appreciate the advantages and disadvantages of different methods, and be willing to show adaptability and flexibility in the application of steering techniques. Regardless of the method used, steering inputs should always be smoothly progressive and provide optimum control of the car in all circumstances, with reserve to cater for unexpected circumstances.

| **Competencies – Controls – Steering** |
|---|
| Understand the use of different steering techniques, including but not limited to pull push, rotational and fixed grip, and how they may be applied in appropriate circumstances |
| Steering inputs are smooth and precise |

### Demonstration

The driver shows adaptability in using the steering technique that is most appropriate for the driving environment, the speed and individual characteristics of the car; for example the ratio of the steering rack.

There should be no sudden change of direction that may unsettle the stability of the car or cause undue discomfort for passengers.

The driver's inputs will be phased, the initial phase tapered, hinting at the intended course, before progressively steering to the required direction thus allowing the vehicle to prepare for the change in direction and maintain optimum balance.

The driver will link throttle and steering to ensure the stability of the vehicle, and in particular gradually reduce the steering input as the throttle is applied exiting a hazard or corner.

## *ROADCRAFT AND DRIVING PLAN*

| Skill | Information and Observation |
|---|---|

### Introduction

The HPC driver displays a high degree of advanced observation, seemingly anticipating the threat of potential hazards well before they develop. Through a heightened sense of visual acuity and concentration, all long range and short range hazards are identified and prioritised as a basis of preparing and implementing the driving plan. Observation also includes information gathered from all the main senses of sight, touch, hearing and smell.

| **Competencies – Information and Observation** |
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| Ability to use long range observation and continual assessment to identify all hazards, assess their threat and prioritise them in order of risk |
| An awareness of zones of invisibility |
| Display a comprehensive knowledge of the Highway Code and *Roadcraft* |

### Demonstration

The driver will use a continual scanning process, from the horizon back to the car, scanning to the sides and then to the rear in the process. This process is a continual one and this visual sweep is also referred to as 'scanning and planning'.

In demonstrating long range observation the driver will negotiate all hazards (single and multiple) with the maximum safety margin. The driver can be observed to react appropriately to all hazards in a timely manner, and this may further be demonstrated by comments evidencing anticipated future hazards.

The driver will identify, and be able to distinguish between, zones of visibility and zones of invisibility and react accordingly.

The driver will show appropriate reaction to traffic signs and other information.

| Skill | Driving Plan and Hazard Management |
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## Introduction

The Driving Plan, as defined by *Roadcraft*, should be the foundation of the HPC drive, demonstrating a proactive approach to all hazards whilst minimising risk at all times. The plan should be applied in a logical and systematic manner, in accordance with the System of Car Control as described within *Roadcraft*, with the flexibility to adapt to changing circumstances. The HPC driver will demonstrate early anticipation and assessment, leaving nothing to chance, and will always seek to minimise risk and maximise safety.

| **Competencies – Driving Plan and Hazard Management** |
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| Ability to negotiate hazards with a systematic and logical plan of action, whilst minimising risk at all times |
| Ability to maintain an ongoing assessment of risk |
| Ability to clearly communicate intentions to other road users in an unambiguous and timely manner |
| Ability to create and manage a safe environment |
| Always driving within the capabilities of the car and driver |

## Demonstration

The car is in the correct position, speed and gear with an appreciation of the prevailing driving environment and hazards.

The driver displays the ability to anticipate the potential or actual threat from all hazards and continually evaluate 'what if?' scenarios to ensure there is always a contingency plan to respond to changes. The driver never appears surprised or caught out by a hazard.

The driver would be expected to demonstrate a consistent use of *Roadcraft's* system of car control in the driving plan, with evidence of separation of the phases of information, position, speed, gears and acceleration.

Application of brakes to reduce the speed of the car should be made with one progressive braking movement, avoiding multiple braking actions. The appropriate gear should be selected for the speed and hazard, missing intermediate gears where appropriate, providing optimum control to negotiate the hazard whilst having the ability to accelerate away safely and progressively.

The driver will show flexibility when applying the system of car control: all phases of the system should be considered though not all may be relevant for a given hazard. The

driver should be able to react to the need for an immediate change in the sequence of the plan in response to changing or unexpected hazards.

All signals will be given in sufficient time and be of adequate duration to convey the appropriate message. Signals will be given when there is a reasonable expectation that other road users will benefit from them and the driver will look for a reaction to any signal from other road users before committing to the next action.

Drivers will have a responsible assessment of their capabilities, and that of the car, and will maintain a reserve to deal with unexpected hazards.

| **Skill** | **Cornering and Positioning** |
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## Introduction

The HPC driver is expected to position the car consistently, particularly for bends, in a manner that affords optimum safety and stability, and minimises the threat to and from other road users. There will be an optimum safety position and line for each hazard and this should be demonstrated consistently throughout the drive.

| **Competencies – Cornering and Positioning** |
|---|
| Ability to position the car, on the open road, for maximum vision, greater stability and increased safety margin |
| Ability to analyse the limit point and determine the correct position, line and speed as the limit point moves |
| Ability to stop the car on one's own side of the road in the distance that can be seen to be clear, and that can be expected to remain clear. On a single track road it will be within half the distance that can be seen to be clear |
| Display an understanding of the cornering dynamics of the car and the selection of the most stable line |

## Demonstration

HPC drivers will position the car on the approach to any corner for maximum visibility, relative to the limit point of their vision, thus creating a greater degree of stability and increased margin of safety. Drivers will show recognition of the requirements to adapt their positioning to cater for the different hazards presented by blind left hand bends, blind right hand bends, crests and dips, and a sequence of bends. Positioning will take into account the nature of the road (width, edges) and possible unseen hazards, such as pedestrians and overtaking or oncoming motorcyclists.

The driver should be able to describe the limit point of vision, and be able to apply it such that the entry speed to a bend will be correct in relation to that limit point, with proper use of appropriate acceleration through and out of the bend.

The driver will always have enough reserve to stop the car safely in an emergency.

The driver should be capable of balancing the car on the throttle so that no further speed is lost from corner entry to acceleration point and the car remains stable.

| Skill | Overtaking |
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## Introduction

Overtaking is probably the most difficult skill to master and is potentially the most dangerous manoeuvre undertaken when driving. The subject is therefore covered in greater depth than other topics within this document.

The ability to judge and execute a safe, courteous and systematic overtake is an essential requirement of the HPC driver. The driver will be able to gauge whether an overtake is appropriate as part of the overall journey plan, and the resultant successful overtake is the product of good long term planning, excellent observation and driver discipline. The driver should be aware of how others might perceive overtakes, and allow for how they might react to the driver's actions while an overtake is still being planned.

A typical overtaking manoeuvre comprises three stages:

1. The Following Position
2. The Contact Position
3. The Overtake

### The '**Following**' Position

The car is positioned at a safe distance from, and at a similar speed to, the 'target' vehicle(s) whilst ensuring:

- ability to stop within the distance that is clear ahead
- not intimidating or pressurising the car in front
- the optimum vision ahead to allow the decision to be made as to when to move into a 'Contact' or potential 'Overtaking' position

This position is used to determine the optimum overtaking strategy and, by using the driving plan, to anticipate moving to stage 2 as any potential overtaking opportunity emerges. This decision to move to the Contact position will be influenced by, among other factors, the prevailing hazards, the action of other road users and the proximity of speed restrictions ahead.

### The '**Contact**' Position

Good forward planning and long range observation is used to judge when a potential overtaking opportunity may emerge. At that point the gap with the target vehicle will be closed to a contact position some two to three car lengths behind the target vehicle. The close is timed in relation to existing and anticipated hazards, with particular reference to side hazards and zones of restricted view. The contact position is inherently more risky as the safety margin is reduced and the move to this position should be circumspect and judged with precision. If the vision ahead and the situation behind allows, the car is positioned to the offside of the carriageway to obtain an uninterrupted vantage point of the road ahead; only then can the decision be made to overtake. This extended vantage point should be used judiciously; many other road users will be unfamiliar with this positive positioning and the driver should be aware of

the potential reaction of other road users, both that of the target vehicle and any vehicles behind that may attempt to close the gap just vacated. A driver should display complete all around awareness and plan for such eventualities, and consider using indicators to inform other road users of intention as appropriate.

From the extended vantage point all potential hazards can be evaluated from the uninterrupted view ahead. If hazards prohibit an overtake for the foreseeable future then the driver will return to the Following Position; if an overtake is decided upon then stage 3…

## The '**Overtake**'

Before committing to the overtake, the driver needs to be satisfied on certain essential issues:

- Can the overtake be completed within half the distance that has been checked as free of hazards, including those which may cause the target vehicle to change course?
- Is it reasonable to expect that distance to remain free of hazards for the duration of the overtake?
- Is the driver of the target vehicle aware of the intended overtake?
- Is the target vehicle stable, and likely to remain so?
- Is a warning signal required for the target vehicle, and what reaction is needed?
- Is a signal required to convey intentions to other road users?
- Could any signal be misinterpreted?
- What speed differential is required to complete the overtake safely, without causing problems to the driver of the overtaken vehicle and to other road users?
- What contingencies are needed and available?
- The HPC driver will always demonstrate self discipline and restraint; if there is any question of doubt the decision will be made not to overtake.

Once a decision is made to overtake the manoeuvre can now be completed promptly and in as straight and stable a line as possible. Speed and distance should be judged to allow adequate clear visible road to pass before returning to the nearside, in order to avoid causing inconvenience either to the target vehicle by 'cutting in', or to other road users.

If appropriate the driver should consider the courtesy of acknowledging the cooperation of the overtaken driver.

***Finally, if there is any doubt, don't go!***

## Overtaking multiple vehicles

In assessing an overtake of more that one vehicle a driver would additionally consider:

- How many vehicles can safely be overtaken?
- Is there a sufficient gap to return into after the overtake without heavy braking, or causing other cars to brake?
- If part of a multi-stage overtake is there a sufficient 'stop-over' gap to fall back into in case additional hazards may emerge?
- Is there a contingency plan if the existing 'stop-over' gap disappears?
- The actions and position of all other road users – for example is the driver of one of the target vehicles likely to move out or change course as the overtake is being executed?

| **Competencies – Overtaking** |
|---|
| Understand when an overtake is appropriate in the context of the planned journey |
| Ability to safely, consistently and accurately assess overtaking opportunities |
| Ability to accurately assimilate all relevant hazards in making a decision whether to overtake, with particular attention to side hazards and driving into zones of invisibility |
| Able to demonstrate a systematic overtaking technique |
| Able to position the vehicle for optimum vision and safety margin in the preparation and execution of the overtake |
| Understand the increased risks of multiple overtakes and plan accordingly |
| Always prepared for changing situations and to abort an overtake if necessary |

## Demonstration

The driver should be able to explain the circumstances under which overtaking might or might not be considered in relation to the purpose of the journey and the prevailing environment. If there is no likelihood of overtaking opportunities on a section of the journey, the driver should display a relaxed attitude to the situation.

The driver should show an understanding of when safe overtaking opportunities are likely to arise in relation to the nature of the road, reacting to factors such as signage, road markings and exits from bends.

During the planning process the driver should show reaction to all hazards, and factors that would become hazards if the car was positioned for an overtake.

The driver should be able to explain the concept of, and be able to consistently demonstrate, the three stage approach to an overtake as described above. There should be clear evidence of distinction between the stages, such that a passenger is aware of when the decision to overtake is made.

The driver should be able to place the car for the optimum view, whilst maintaining a safe and constant following distance.

When considering overtaking a number of vehicles, the driver should show an awareness of the increased, and potentially changing, hazards presented by the situation. The driver should be able to state how many of the vehicles it is safe to overtake, and what the contingencies are if the situation should change.

The driver should always demonstrate an attitude that safety is paramount, and be prepared to abort an overtake if safety is compromised for any reason, including misjudgement by the driver.

| **Skill** | **Multi-Lane Roads** |
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## Introduction

Motorways and other multi-lane roads present additional hazards with typically high traffic density moving at high average speeds. The HPC driver should be constantly aware of the knock-on effect that the actions of a driver in one lane can have on traffic in other lanes, adopting a questioning attitude to variations in traffic speed, and always maintaining a safety zone around the vehicle. The driver should understand the importance of managing concentration levels according to the conditions, and the effects of tiredness creeping in.

| **Competencies – Multi-Lane Roads** |
|---|
| Awareness of increased risk factors from high average speed and traffic density |
| Ability to monitor and assess the risks from all lanes, including from the opposing carriageway |
| Awareness of on-slips, hard shoulder vehicles etc, and adopting a safety line |
| Adopting a defensive position and managing space around the vehicle |
| Ability to join, move across and leave carriageways smoothly and seamlessly |
| Knowledge of Highway Code applicable to motorways and dual carriageway systems |

## Demonstration

The HPC driver will be aware of the higher average speeds on multi-lane roads and the need for extended observation and more advanced planning, both ahead, behind and to the sides. The driver should be able to describe the additional hazards likely to be encountered, and show evidence of reaction to these.

The driver will react appropriately where the actions of other drivers can be predicted to affect the current driving plan, either directly or by the effects on other traffic.

The driver will show evidence of predicting and observing other traffic joining or leaving the road, and react accordingly. The driver will also react appropriately to the presence of vehicles on a hard shoulder. Where crossings or other hazards exist on dual

carriageways, the driver will show evidence of awareness of the hazard by managing position and speed of approach.

There will always be a safety zone around the vehicle, and that zone adjusted to reflect the position of changing hazards.

The driver will accurately judge speed and position when joining motorways and dual carriageways, maintaining forward space in order to join the flow of traffic safely and seamlessly without causing inconvenience to other road users. When leaving, the driver will observe the nature of the exit, particularly on dual carriageways, and give appropriate signals and adjust speed in good time so as not to cause inconvenience to others.

Drivers will show good lane discipline, using the overtaking lanes for their intended purpose. Lane changes should be executed with good observation and planning, effective use of signals as appropriate, and with minimal inputs to steering and speed.

The driver should be able to describe, and show appropriate reaction to, the signs and surface markings used on these types of road.

| **Skill** | **Concentration** |
|---|---|

## Introduction

The ability to manage concentration levels is essential and HPC drivers will plan the drive to ensure they remain alert and focused throughout. This topic also forms an essential part of the Attitude and Behaviour section.

| **Competencies – Concentration** |
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| Possess a self-awareness to monitor personal concentration levels with an understanding of the factors that adversely affect concentration |
| Be able to manage concentration levels, and apply mindful attention according to the situation |

## Demonstration

HPC drivers will be aware of their levels of concentration during the drive and should display self awareness of factors that may lower concentration such as fatigue, physical discomfort, mental attitude, stress, low blood sugar or timing of meals, and the effects of food on the brain's functioning.

The average prolonged concentration period will vary amongst individuals but a driver should be aware of the need for regular rest breaks when planning a drive.

The driver should show the ability to manage levels of concentration and awareness according to the prevailing risks, and not to be distracted by focusing attention on factors that are not relevant to immediate and potential hazards.

| Skill | Maintaining Progress |
|---|---|

## Introduction

HPC drivers should seek to maintain their chosen level of progress in a manner that is consistent with, and determined by, the environment and all prevailing conditions. They should recognise that they may have a higher skill level and possibly be driving a higher performance car than the majority of other road users, and with that comes an increased burden of responsibility to drive with discretion and consideration.

HPC drivers will have the ability to cooperate unobtrusively and blend with other road users and though their average speeds across country may be higher, all interactions with other road users will be courteous and considerate.

| Competencies – Maintaining Progress |
|---|
| Ability to judge safe progress, appropriate to the prevailing driving environment and conditions |
| Ability to merge with traffic flow unobtrusively and discreetly |
| Display acceleration sense to consistently and accurately match speed with available vision, relevant hazards and the Driving Plan |

## Demonstration

At their chosen level of progress, HPC drivers will always drive at a speed such that they can comfortably stop the car within the distance they can see to be clear ahead. This maxim will always dictate the maximum speed for any given hazard, although the actual speed may be much less.

The driver will show recognition of changes in the nature of the road and the prevailing conditions by appropriate variation in speed.

HPC drivers will always interact with other road users unobtrusively and ensure that any speed differential of their vehicle and other road users never creates a hazard or is a cause for undue concern.

The driver will recognise that a safe speed is determined by the prevailing hazards, and will demonstrate an attitude that safety is always the overriding consideration.

## *CAR CONTROL*

| Skill | Car Control |
|---|---|

### Introduction

The HPC driver will be expected to display the basic skills of car control in a suitable private facility. A good understanding of the handling characteristics of a car is essential to experience the limitations of both car and driver.

| Competencies – Car Control |
|---|
| Understanding the trade off between tyre grip versus steering versus acceleration versus braking |
| Understanding the concepts of understeer and oversteer and the greater risks associated with the state of oversteer |
| Understanding the factors contributing to a skid |
| Ability to demonstrate skid correction for both oversteer and understeer scenarios |
| Able to demonstrate emergency braking techniques for cars with electronically assisted braking and stability systems, and the use of cadence braking for cars with no assisted systems |

### Demonstration

The driver will be able to explain the factors affecting grip and demonstrate the effect of steering, power and brakes in managing available grip.

Through the smooth and considered use of all controls the driver will display an appreciation of the potential impact on the stability of the vehicle.

The driver will be able to explain, and demonstrate within a safe private facility, the concept of understeer and oversteer. Further the driver will be able to explain and demonstrate the strategies to deal with simulated skid scenarios.