Department for Transport

Proposals for a High Risk Offenders Drug Driving Scheme

Panel members:

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Glossary

ALPRAZOLAM	Alprazolam is a short-acting benzodiazepine commonly used in the short-term management of anxiety disorders and has known sedative effects. Brand names for the drug include Xanax® and outside the UK Xanor® and Niravam®.
AMPHETAMINE	Amphetamine (also amfetamine) is a central nervous system stimulant often called speed when used illegally. It causes hypertension and tachycardia with feelings of increased confidence and wakefulness. Clinically it is used to treat attention deficit hyperactivity disorder. Brands include Adderall® and Evekeo®.
BAC	*Blood Alcohol Concentration is* a surrogate measurement of alcohol intoxication used for legal or medical purposes. In the UK, *BAC units are milligrams per 100 millilitre of blood (mg/100mL). Whereas in other jurisdictions the units are grams per litre (g/L). A BAC of 100 mg/100 mL is equivalent to 1 g/L*.
BENZODIAZEPINE	*Benzodiazepines* (BZD, Benzos) are a large class of drugs with psychoactive effects. They are commonly used to treat anxiety and insomnia
BrAC	Breath Alcohol Concentration, measured by breathing into a breathalyser
BZE	Benzoylecgonine (BZE) is the major non-active breakdown product (metabolite) of cocaine in the body
CATHINONES	Cathinone is chemically similar to ephedrine, cathine, methcathinone and other amphetamine-type compounds. It is thought to be the main contributor to the stimulant effect of khat (see below).
CLONAZEPAM	Clonazepam is a benzodiazepine that is used to prevent and treat seizures and panic disorder. It is a psychoactive drug and brings about mild euphoria and then sleepiness when misused.
CPS	The Crown Prosecution Service, prosecutes *criminal* cases that have been investigated by the police and other investigative organisations in England and Wales.
COCAINE	Cocaine, commonly known as coke, snow or blow is a strong central nervous system stimulant most frequently used as a recreational drug. *Crack cocaine, cocaine free base,* is made by mixing baking soda into the powder form of cocaine, which dries into a crystalline form (rocks).

CSEW	The Crime Survey for England and Wales (previously called the British Crime Survey) seeks to measure the amount of crime in England and Wales. The self-completion module is restricted to those aged 16-59 years, and includes questions relating to alcohol and illegal drug use, drink driving and drug driving.
DIAZEPAM	Diazepam is a long-acting benzodiazepine used to treat anxiety, alcohol withdrawal, muscle spasms, and certain types of seizures. It has strong addictive potential and the main brand name is Valium®.
DVLA	The Driver and Vehicle Licensing Agency is the organisation of the UK government responsible for maintaining a database of drivers in Great Britain and a database of vehicles for the entire United Kingdom. Its Drivers Medical Group is responsible for handling the High-Risk Offender scheme for drink drivers
EMCDDA	The European Monitoring Centre for Drugs and Drug Addiction is an agency of the European Union. It provides evidence on the European drugs problem to inform policymaking and national government decision making
FIT	Field Impairment Test is an assessment conducted by a police officer to check drivers for impairment through intoxication with drugs or alcohol
FLUNITRAZEPAM	Flunitrazepam is a benzodiazepine that is no longer licensed in the *UK. I*t was prohibited for prescription by the NHS in 1992. However, it is available under private prescription and illegally on the internet. It is used in the short-term treatment of insomnia but is best known for the bringing about anterograde amnesia, meaning that people often are unable to remember what happened while they were on the drug. The main brand name is Rohypnol®.
FTPA	Failure to Provide a Specimen for Analysis is a road traffic offence.
FSP	Forensic Science Providers (FSP) are laboratories accredited by the UK Accreditation Service to provide forensic services to police forces across the UK (see below).
HMCTS	The Courts & Tribunals Service is responsible for the administration of criminal, civil and family courts and tribunals in England and Wales.
HRO	High-Risk Offender: a driver who meets the criteria for inclusion on a scheme for high-risk drivers

OR	Odds Ratio (OR) is a statistical measure of association between exposure and an outcome. The OR represents the odds that an outcome (road traffic collision) will occur given a particular exposure (drug use), compared to the odds of the road traffic collision (outcome) occurring in the absence of that drug use (exposure)
KETAMINE	Ketamine is a medication mainly used for starting and maintaining anaesthesia. In recreational doses it has mild stimulatory and hallucinatory effects.
KHAT	It is the plant *Catha edulis.* The fresh leaves and tops are chewed for their stimulant and euphoric effects. See cathinones above.
LORAZEPAM	Lorazepam is a short acting benzodiazepine that is used to treat anxiety disorders, sleeplessness and active seizures and alcohol withdrawal. Brand name Ativan®, the drug has high addiction potential
LSD	Lysergic acid diethylamide, is a hallucinogenic drug which causes altered thoughts, feelings, and awareness of one's surroundings. LSD when used recreationally has a variety of different names including, Tripper; Tab; Smilies; Rainbows; Micro Dot; Lucy; Liquid Acid and Acid.
MDMA	3,4-Methylenedioxymethamphetamine, commonly known as ecstasy or molly, is a psychoactive stimulant. It is used recreationally and known for inducing empathy (the love drug) and increased energy.
METABOLITE	A breakdown product of a drug or compound that can be found in the body.
METHADONE	Methadone is a long-acting opioid drug commonly used to treat heroin addiction. It is also used therapeutically as a powerful analgesic. The drug's major adverse effect is to cause respiratory depression.
METHAMPHETAMINE	Methamphetamine is a powerful, highly addictive central nervous system stimulant used recreationally and commonly known as meth, ice, and crystal.
6-MAM	6-monoacetylmorphine (6-MAM) is a short-acting, pharmacologically active breakdown product (metabolite) of heroin. Its presence in biological fluids indicates recent use of heroin.
MORPHINE	Morphine is a strong naturally occurring opioid analgesic with respiratory depressant effects and high addiction potential. It is also a breakdown product of heroin.

NICE	The National Institute for Health and Care Excellence (NICE) is the independent organisation responsible for conducting health technology assessments, and for providing national guidance on promoting good health and preventing and treating ill health. NICE guidance is highly regarded and established using expertise from the NHS, healthcare and other professionals, academics, patients, service users and carers.
OXAZEPAM	Oxazepam is a short-to-intermediate-acting benzodiazepine. It is used to treat anxiety and insomnia and in the control of symptoms of alcohol withdrawal syndrome. It is a breakdown product of Diazepam and Temazepam.
RTC	Road Traffic Collision: defined in law as a reportable collision involving a vehicle on a road or other public area. The description, Road Traffic Accident, is not used
TEMAZEPAM	Temazepam, is an intermediate acting benzodiazepine used to treat sleeping disorders and anxiety. It has high addiction potential.
THC	Delta-9- tetrahydrocannabinol, the main psychoactive constituent in cannabis.
UKAS	The United Kingdom Accreditation Service is the sole national accreditation body recognised by the British government to assess the competence of organisations that provide forensic services to police forces across the UK.
Z-DRUGS	The controlled medicines zaleplon (no longer available in the UK), zolpidem and zopiclone are commonly called the Z drugs. They are prescribed to treat insomnia and act in a similar way to benzodiazepines
ZERO TOLERANCE	This is a term applied to the drug-driving cut-off concentrations that are set just above the limit of detection of the method. In Great Britain the cut-off determined for Section 5A legislation took into consideration accidental exposure.

Introduction

The North Report North [1] recognised the absence of a High-Risk Offender (HRO) Scheme for individuals convicted of driving under the influence of drugs, who pose the threat of repeat offending. The Department for Transport (DfT) has been considering options for developing such a scheme following the introduction of Section 5A (1) and (2) of the Road Traffic Act 1988 [2]. The DfT made a commitment in the 2015 Road Safety Statement [3] to consult on the matter and the 2019 Road Safety Statement recognises the need to seek advice from experts to explore options for developing a High-Risk Offender (HRO) scheme for drug drivers [4] . To deliver this goal the DfT has convened a Panel of experts to assess options using relevant clinical, scientific and professional expertise. This report details the outcome of their work.

Currently, the practical consequence of becoming a High-Risk Drink-Drive Offender is that the driver's licence is not automatically re-issued once the period of disqualification has ended. Instead, the HRO must apply for a new licence and the Driver Vehicle & Licensing Agency (DVLA) will only issue a licence after a satisfactory medical assessment. Evaluation of the HRO drink-driver scheme established that those who had committed previous drink-drive offences were more likely than other HROs to re-offend [5]. Other researchers such as Roberts have found similar patterns of behaviour [6]. Re-offenders were disqualified from driving for longer periods than other HROs, although they were often fined less frequently. It was also determined that many HROs were already driving illegally before becoming an HRO: 'Driving while disqualified' was a common offence [5]. The HRO scheme for drink-drivers has thus served an important role in helping to keep unsafe drivers off the roads and has set a precedent for the establishment of a similar scheme for high-risk drug-drivers.

Drug-Driving in an International context

Most countries have laws against driving while impaired by drugs. In the UK and many other countries, including Canada and the United States, police must have individualised suspicion that the driver has recently used an impairing substance before they can gather the evidence required for laying a criminal charge [7]. Drug-driving, otherwise known as driving under the influence (DUI), Driving under the influence of drugs (DUID) or Driving while intoxicated (DWI), can become a criminal offence when an individual is caught with

blood concentrations in excess of a legal limit. A conviction may not necessarily involve driving a vehicle; prosecution can also follow in the UK from, being in charge of a parked vehicle and for failing to cooperate with the police in taking a preliminary roadside test or providing a sample for laboratory analysis [7].

The figures in Table 1 below shows the number of drug-driving endorsements for different offences in England and Wales between March 2015 and 12 November 2016 [8] . It indicates that there were more than 9,000 drivers with drug-driving offences on the roads in the first year after the new legislation had been introduced. It is widely believed that numbers are escalating, which further supports for the introduction of a HRO scheme for drug-drivers.

Table 1. Number of drug-driving endorsements for different drug-driving offences in England and Wales between March 2015 and 31 December 2016 (DVLA, scan 17.04.2019)

Offence	**Number of offences on record**
DG60 Causing death by careless driving with drug above the specified limit	2
DG10 Driving or attempting to drive with drug above the specified limit	9,050
DG40 In charge of a vehicle while drug above specified limit	173
Total	9,225

Many jurisdictions have guidelines for dealing with drivers who have problematic drug and alcohol use. Spain has adopted a points-based driving licence. When a driver loses all their points, their driving licence is revoked and the driver must enrol on a Driver Awareness and Re-education (DARE) course, but relicensing does not involve a medical assessment of alcohol or drug use [9]. Other countries for instance, Australia [10], Italy [11], Germany [12] and Belgium [13] have licence re-granting schemes for drivers known to use drink and/or drugs in a problematic or dependent way. These schemes may require clinical evaluation by medical practitioners and/or drug screening tests. However, HRO schemes are less common.

In establishing a rationale for a High-Risk Offender (HRO) scheme for drug-drivers in Great Britain drug-driving and drink-driving offences were compared. The Institute of

Alcohol Studies reported that driving or attempting to drive a vehicle when a biological sample confirmed alcohol concentrations in excess of the prescribed limit was one of the top five offences leading to the highest number of convicted repeat drink-drive offenders in 2012 in Great Britain [14]. More recent data was collated from prosecutions under Section 4 of the Road Traffic Act 1988, which refers to being 'unfit to drive through alcohol or drugs' and data produced under Section 3A, which refers to 'causing death by careless driving when under the influence of alcohol or drugs'. The Risk Solutions Evaluation Report (2017), which followed the introduction of the Section 5A drug-driving legislation in England and Wales, shows a downward trend for drink-driving proceedings and convictions from 2009 to 2014, which levelled off in 2015 [8]. However, the numbers of proceedings brought for drink-driving were significantly higher than for drug-driving. In 2014, the number of drink-driving proceedings brought was a factor of 37 higher than those for drug-driving but, following the introduction of the Section 5A offences this gap has more than halved: drink-driving proceedings remaining higher by a factor of 16 [8].

Final estimates for 2016 from the Department for Transport statistical release report (August 2018) [15], of the latest official figures, show that there were 6,070 drink-drive accidents bearing 9,040 casualties in Great Britain. Two hundred and thirty of the casualties were involved in fatalities. The number of fatalities has stayed largely unchanged since 2010. Data was derived from the STATS19 forms completed by the police plus toxicology data for road fatalities from coroners and procurators fiscal.

Persistent or high-risk drug-driving has not been as well characterised. There is some evidence that individuals continue to drive when under the influence of drugs, despite being aware of the legal consequences. An evaluation of random roadside drug testing in Queensland, Australia revealed that approximately one fifth of the 899 participants in the study reported drug-driving in the previous six months. Additionally, the analysis indicated that punishment avoidance and vicarious punishment avoidance were predictors of the propensity to "drug-drive" in the future. There were indications that knowing others who had been apprehended for drug-driving was not a sufficient deterrent on its own. Sustained testing and publicity of the legislation and other countermeasures were advocated as necessary to increase the deterrent impact for drug-driving [16].

The HRO drink-driver scheme in Great Britain has enabled the identification of different types of drinking behaviour and has carefully managed their relicensing in a controlled manner. Therefore, we can consider that it has been successful in preventing drivers (who have driven under the influence of alcohol in a way that has been deemed dangerous by the criminal justice system) from continuing to drive. This report explores the evidence for the introduction of a similar scheme for drug-drivers. There was no intention to recommend major changes to the existing HRO drink-driver scheme since this is well established and would be beyond the scope of the Panel. Nor is it intended that the report will provide an argument for significant change to existing regulations, but the Panel accepts that some of its recommendations may require consideration of how the drink and drug HRO schemes would sit symbiotically together.

METHODOLOGY

The Panel agreed that:

1. The most effective way to approach the task of establishing criteria for a 'High Risk Offender Scheme for Drug-Drivers' would be to consider the existing criteria for High Risk Offenders (HRO) for drink-drivers (Table 2 and 2a).
2. An evaluation would be undertaken to determine if the criteria would be appropriate, taking into consideration the cut-off concentrations detailed in Section 5A (1) and (2) of the Road Traffic Act 1988.
3. Each drug in the Section 5A legislation would be considered separately rather than setting the threshold for entry into the HRO scheme as a single limit for all drugs.
4. Where appropriate the criteria for the high-risk drug-driver offender scheme would not be restricted to drugs covered under Section 5A legislation. This allows the scheme to consider a wide range of potentially impairing drugs. For instance, drivers committing offences under Section 4 could also be considered for the high-risk drug-drive offender scheme [17].
5. The newly recommended HRO scheme would specify drug limits, which where possible be based on an agreed increased collision risk as outlined for some drugs in the 2013 DfT Drug Driving Expert Panel report [18] and elsewhere in the scientific literature [19].
6. Illicit drugs would be considered distinctly from medicinal-controlled drugs, reflecting the different approaches employed in setting limits for the Section 5A legislation. Section 5A limits for illicit drugs were set based on consideration of the lowest detectable limits, whilst taking account of accidental exposure, whereas limits for medicinal controlled drugs were based on consideration of risk threshold evidence [18].

Table 2 The criteria for the existing High-Risk Drink-Driving Offender Scheme

High Risk Offenders are Drivers who
1. Have been disqualified by order of a court upon conviction for either (DR20, DR40, CD40, CD60 for convictions after June 1990) by:
a. Driving or attempting to drive with excess alcohol (*DR10*), or;
b. Being in charge of a vehicle while alcohol level above the limit (DR40);
c. Being in charge of a vehicle while unfit through alcohol (*DR50*);
d. Causing death by careless driving when alcohol level is above the prescribed limit (CD60);
e. Driving or attempting to drive while unfit through alcohol (DR20);
f. Causing death by careless driving while unfit through alcohol (CD40);
g. While being over two and a half times the legal drink-driving limit with a blood alcohol concentration that equalled or exceeded: 87.5 µg/100 mL breath, or 200 mg/100 mL blood, or 267.5 mg/100 mL urine.
2. Having been disqualified by order of a court for failing, without reasonable excuse, to provide a specimen for analysis when ordered to do so while either (CD70 those convicted after June 1990) by:
a. Driving or attempting to drive (*DR30*);
b. Causing death by careless driving and then failing to supply a specimen (CD70);
c. Being in charge o f a vehicle (*DR60*)
3. Having been disqualified by order of a court for failing, without reasonable excuse, to give permission for a laboratory test of a specimen of blood taken (DR31, DR61 For those convicted after June 2013)
a. Refusing to give permission for analysis of a blood sample that was taken without consent due to incapacity (DR31);
b. Failing to allow a specimen to be subjected to a laboratory test (DR61)

Reg 74: The Motor Vehicles (Driving Licences) Regulations 1999
http://www.legislation.gov.uk/uksi/1999/2864/regulation/74/made
Reg 2 The Motor Vehicles (Driving Licences) (Amendment) (No.2) Regulations 2013 (Amending Reg 74)
http://www.legislation.gov.uk/uksi/2013/1013/regulation/2/made/data.pdfv

Table 2a The criteria for the existing High-Risk Drink-Driving Offender Scheme continued

High Risk Offenders are Drivers who
4. **Have been disqualified by order of a court on two or more occasions within a period of 10 years for any of the following offences***
a. Driving or attempting to drive with alcohol concentration exceeding the legal limit (*DR10*) Applicable for those convicted on or after 1 June 1990: Causing death by careless driving with alcohol level above the limit (CD60)
b. Driving or attempting to drive while unfit through alcohol (*DR20*) Causing death through careless driving while unfit through alcohol (CD40)
c. Driving or attempting to drive then refusing a specimen (DR30) For those convicted on or after 6 May 1983: In charge of a vehicle while unfit through alcohol and alcohol level is 2.5 times legal limit (DR50)
d. Being in charge of a vehicle with alcohol concentration exceeding the legal limit (*DR40*) For those convicted on or after 6 May 1983: Failure to provide a specimen (FTPA) for analysis in circumstances other than driving or attempting to drive (DR60).
e. Being in charge of a vehicle while unfit through alcohol (*DR50*) A second disqualification on or after 1 June 1990 for DR10, DR20, DR40, DR50, CD40, CD60 and the offence is combined with an earlier disqualification where the date of conviction or sentence is after 6 may 1983 for DR10,DR20, DR30,DR40,DR50 or DR60 and the second disqualification is within 10 years of the original offence. The alcohol levels are not require.
Notes: *Two separate disqualifications on or after 6 May 1983 and there is a combination of DR10, DR20, DR50, DR30, DR60 Sec 94 RTA 1988: http://www.legislation.gov.uk/ukpga/1988/52/section/94 Reg 74: The Motor Vehicles (Driving Licences) Regulations 1999 http://www.legislation.gov.uk/uksi/1999/2864/regulation/74/made Reg 2 The Motor Vehicles (Driving Licences) (Amendment) (No.2) Regulations 2013 (Amending Reg 74) http://www.legislation.gov.uk/uksi/2013/1013/regulation/2/made/data.pdfv

Table 2 and 2a demonstrates the criteria for the HRO scheme for drink-drivers and includes reference to different offence codes and the regulatory changes that have taken place since the scheme was established. The Panel agreed that the criteria for the HRO scheme for drug-drivers would rely as much as possible upon data currently available to the Panel concerning drug-drivers in Great Britain and Northern Ireland. A process of triangulation of research data and information management data on numbers of drink- and drug-drive offenders would be employed. The Department for Transport Expert Panel (2013) previously used this method successfully: that is national epidemiological data was used to identify population level drug-use figures and these were cross-referenced against sub-populations of high-risk drivers. This enabled the Panel to gauge the extent of the problem of driving-under-the-influence of drugs.

The Panel also agreed that the following sources of information contained data of value:

1. Risk Solutions data collected for the evaluation of the 2015 Section 5A drug driving legislation (includes data on drug types and drug concentrations measured in drivers from confirmatory whole blood analysis) [8].

2. STATS19 data provide detailed information from the police about the circumstances of personal injury from road traffic collisions (RTC) [20], including date, time, location, the types of vehicles involved, numbers of people injured and the severity of any injuries. Whilst the factors selected are based on the individual police officer's judgment and may under-report impairment by drugs, the STATS19 remains a key source of information on road safety metrics in Great Britain.

3. Research and data from the Department for Transport 2013 Driving Under the Influence of Drugs: Report from the Expert Panel on Drug Driving (includes relevant details on suggested specified drug limits and rationale behind these) [18].

4. Crime Survey for England and Wales (CSEW): self-reported data on illicit drug use and driving (2018/19) [21, 22].

5. The E-survey of Road User Attitudes (ESRA), a joint international initiative involving research centres and road-safety institutes across the world provided data on having driven under the influence of drugs, by country [23, 24].

6. HM Courts & Tribunal Service (HMCTS) data from monthly management information reports and specifically created to support the work of the Panel.

7. Consultation with Forensic Service Provider accredited laboratory staff regarding analysis of biological samples in relation to Section 5A and Section 4 offences.

8. Relevant national peer-reviewed scientific literature on drug driving. For instance, the retrospective study of blood concentration data of drugs found in motorists (N = 4684) suspected of driving under the influence of drugs from 2010 to 2012 in England and Wales [19], and international literature where 'UK-specific' data were absent [25, 26].

9. The European Union's research project on Driving under the Influence of Drugs, Alcohol and Medicines, known as the DRUID project. The project looked at experimental studies, epidemiological studies, enforcement, and classification of medicines as related to drug-driving. Over 5 years of work across 18 European countries and Norway, the project has produced some 50 reports, each one contributing key evidence to road safety policy. The DRUID research projects were the most comprehensive ever carried out in the EU on drugs and driving [27, 28].

10. Data from the DVLA:
    a. On the different offences that apply to driving under the influence of both alcohol and drugs, which vary according to the severity of the incident. The DVLA provided data from different (**all** notified) drug-driving offences since 2015, as well as numbers of offence codes held by drivers where the driver has more than one alcohol and/or drug offence at one time point (scan of DVLA data on 17/04/2019). Details of specific offences are listed in Table 3.

    b. On the total number of drivers notified to DVLA with both a drug-driving and a drink-driving offence committed on the same day (point prevalence assessment) using national alcohol specified concentrations in breath, blood and urine, HRO alcohol limits and the reported concentration of drug in whole blood.

Table 3. Offences that apply to driving under the influence of both alcohol (DR) and drugs (DG) including careless driving (CD).

Driving offences for alcohol and drugs	Penalty points	Retention	Disqualification	Offence code	Section
Causing death through careless driving when unfit through alcohol	3-11	11 years	Obligatory	CD40	3A(1)(a)
Causing death by careless driving when unfit through drugs	3-11	11 years	Obligatory	CD50	3A(1)(a)
Causing death by careless driving with alcohol level above the prescribed limit	3-11	11 years	Obligatory	CD60	3A(1)(b)
Causing death by careless driving then failing to supply a specimen for analysis	3-11	11 years	obligatory	CD70	3A(1)(c)
Driving or attempting to drive with alcohol level above the prescribed limit	3-11	11 years	obligatory	DR10	5(1)(a)
Driving or attempting to drive when unfit through alcohol	3-11	11 years	obligatory	DR20	4(1)
Driving or attempting to drive then failing to provide a specimen for analysis (FPSA)	3-11	11 years	obligatory	DR30	7(6)
Driving or attempting to drive then failing to allow a specimen to be subjected to a laboratory test	3-11	11 years	obligatory	DR31	7A(6)
In charge of a vehicle with alcohol level above prescribed limit	10	4 years	discretionary	DR40	5(1)(b)
In charge of a vehicle when unfit through alcohol	10	4 years	discretionary	DR50	4(2)
Failure to provide a specimen for analysis in circumstances other than driving or attempting to drive	10	4 years	discretionary	DR60	7(6)
Failure to provide a specimen to be subjected to a laboratory test other than driving or attempting to drive	10	11 years	discretionary	DR61	7A(6)
Failing to co-operate with a preliminary test	4	4 years	discretionary	DR70	6(6)
Driving or attempting to drive when unfit through drugs	3-11	11 years	obligatory	DR80	4(1)
In charge of a vehicle when unfit through drugs	10	4 years	discretionary	DR90	4(2)
Driving or attempting to drive with drug level above the specified limit	3-11	11 years	obligatory	DG10	5A(1)(a) (2)
In charge of a vehicle when drug level above the specified limit	10	4 years	discretionary	DG40	5A(1)(b) (2)
Causing death by careless driving when drug level above the specified limit	3-11	11 years	obligatory	DG60	3A

Table 3 lists the offence codes that apply to driving under the influence of both alcohol (DR) and drugs (DG) including careless driving (CD). The table details the number of penalty points awarded, the period over which the penalty applies and whether or not the decision to rescind a driving license is mandated or subject to a decision by the courts.

The differences in the data used are important to acknowledge. For instance, some cover different geographical regions. The names '*Great Britain'* and the '*United Kingdom'* are often used interchangeably although they are not synonymous: Great Britain consists of England, Wales and Scotland, whereas the United Kingdom also includes Northern Ireland. In addition, some datasets focus on illegal drugs only, such as the driving questions in the CSEW, which also has a different reporting mechanism than the EU-generated data from the E-Survey of Road User Attitudes (ESRA, https://www.esranet.eu/). Differences in data will be highlighted where appropriate.

Since there is a wide-ranging list of drugs included in the Section 5A legislation, the Panel agreed that in relation to the need to provide an agreed specified drug limit above which an offender would join the HRO scheme, the specified limits for the HRO scheme would be set through consideration of the following:

1) Setting a limit based on the point at which a drug was considered to cause a considerably increased level of risk of a Road Traffic Collision (RTC) as described by an Odds Ratio (OR) or other statistical outcome. This would be based on the scientific evidence in the Driving under the Influence of Drugs: Report from the Expert Panel (2013) [18].This approach was particularly useful when considering the combinatorial effects of more than one drug and drugs and alcohol on driving;

2) Setting a limit based on the point at which a drug was considered to cause a considerably increased level of impairment;

3) Drawing on the historical Section 5A evaluation data [8], and giving consideration to the proportion of drug drivers with a drug concentration in excess of a particular blood concentration.

The Panel was aware that type-approved roadside testing capability screens for cannabis and cocaine would skew the drug prevalence data found at confirmatory analysis towards those screened for at the roadside. The Panel recognised operational constraints such as these (especially in drug prevalence discussions) when considering the data.

FINDINGS

Drug driving prevalence

The Panel considered EU-wide research drawing together data on the prevalence of drug-driving in Europe. It was noted from the E-Survey of Road User Attitudes that a considerable proportion of EU drivers report drug driving (Figure 1). Great Britain, Norway, Sweden and Switzerland have the lowest risk of road-deaths per billion vehicle-km travelled, although the United Kingdom has achieved the slowest progress in further reducing road deaths since 2010 [29]. Figure 1 shows data on self-report drug driving from the E-Survey of Road User Attitudes (ESRA). It shows a much higher level of self-reported drug-driving in the UK than was observed in the 2019 Crime Survey from England and Wales (CSEW) and reported by the Department for Transport (see Tables 4 and 5 below) [21, 30]. Table 4 shows that only 0.4% of drivers reported driving under the influence of illegal drugs in the previous 12 months, compared to 13% in the ESRA survey.

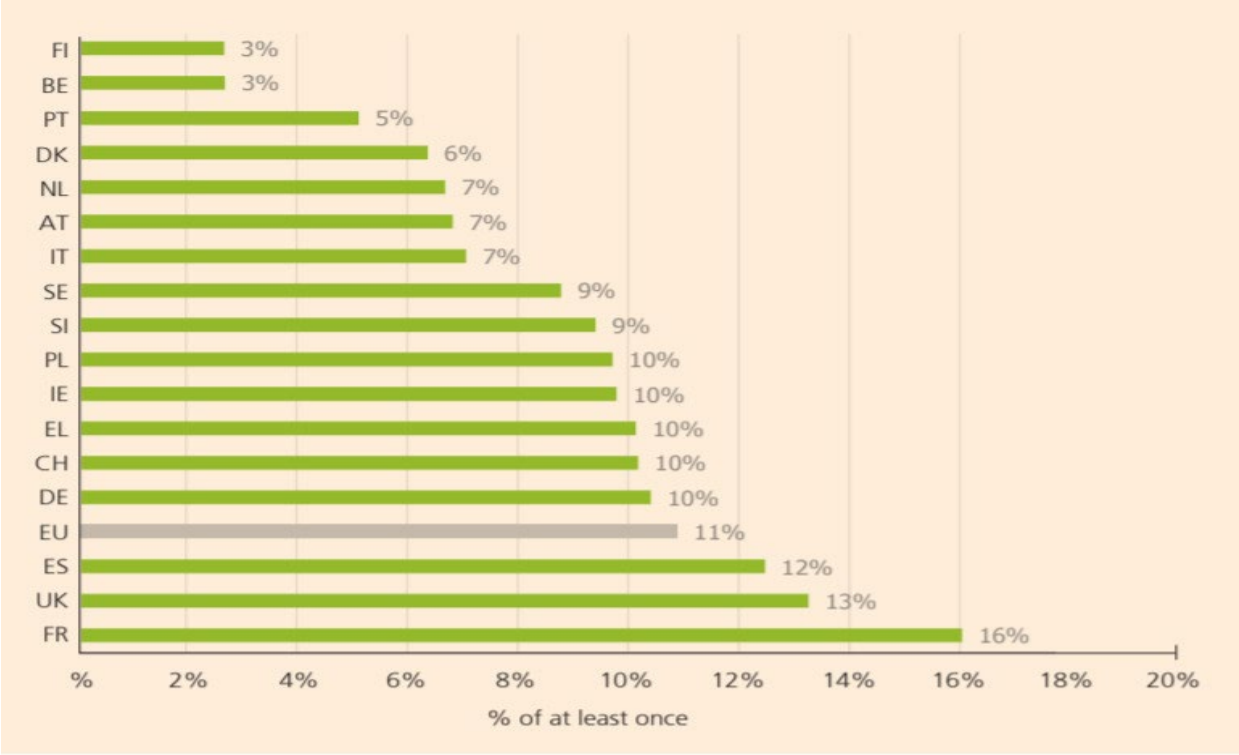

Figure 1. Self-declared behaviour as a road user (%) having driven under the influence of drugs, by country, at least once within the last 12 months. Taken from the E-survey of Road User Attitudes (ESRA) [23, 24]: A road-user in this context is a survey respondent who stated they had driven at least once in the last 12 months.

The Crime Survey for England and Wales (2018/19) [21, 30] shows that self-reported drug-driving as a proportion of the driving population as a whole has gone down since 2014/15 and has plateaued more recently (Table 4). A driver in this context is a survey respondent who stated they had driven at least once in the last 12 months. However, considering drivers who are self-reported drug users, and thus possibly more of a road-safety risk, driving under the influence of drugs has increased since 2015/16 and more regular use (weekly) has re-emerged as a behaviour. Self-reported drug-driving as a proportion of all drivers who have taken illicit drugs in the last 12 months has steadily risen since 2015/2016 (Table 5). In Table 5, weekly use can be seen to have risen at least 6-fold and monthly use has also increased from 2018. Although the figures are lower than those reported in the ESRA survey (this may be explained by different methodologies for data collection), they are still a cause for concern and further endorse the need for a HRO scheme for drug-drivers. The Panel acknowledged that when looking at trends and differences involving small sample sizes or very low percentages caution is needed as small differences may not be statistically significant.

Table 4. Department for Transport statistics RAS51103: Self-reported drug driving as a proportion of all drivers
https://www.gov.uk/government/collections/road-accidents-and-safety-statistics

In the last 12 months how often, if at all, have you driven when you think you may have been affected by or under the influence of illegal drugs?

	2014/15	2015/16	2016/17	2017/18	2018/19
At least once	**0.9**	**0.6**	**0.4**	**0.4**	**0.5**
95% confidence: upper limit	*1.1*	*0.8*	*0.5*	*0.5*	0.6
95% confidence: lower limit	*0.7*	*0.5*	*0.2*	*0.3*	0.4
of which					
Every day/almost every day	0.1	0.1	-	-	-
A few times a week	0.1	0.1	-	-	0.1
Once or twice a week	-	0.1	-	-	0.1
Once or twice a month	0.2	0.1	-	0.1	0.1
Once every couple of months	0.1	0.1	0.1	0.1	0.1
Once or twice in the last 12 months	0.4	0.3	0.1	0.2	0.2
Not at all	**99.1**	**99.4**	**99.6**	**99.6**	**99.5**
of which					-
Taken drugs in the last 12 months	8.8	12.0	Table 5.8	5.2	5.5
Not taken drugs in the last 12 months	90.4	87.3	93.9	94.4	94.0
All drivers	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

Table 5 Department for Transport statistics RAS51103: Self-reported drug driving as a proportion of all drivers who have taken drugs in the last 12 months https://www.gov.uk/government/collections/road-accidents-and-safety-statistics

In the last 12 months how often, if at all, have you driven when you think you may have been affected by or under the influence of illegal drugs?

	2014/15	2015/16	2016/17	2017/18 2018/19
At least once	**9.2**	**5.0**	**5.8**	**7.0** **7.8**
95% confidence: upper limit	*11.1*	*6.3*	*7.6*	*8.9* *9.8*
95% confidence: lower limit	*7.3*	*3.8*	*3.9*	*5.1* *5.8*
of which				
Every day/almost every day	1.1	0.4	0.7	0.6 0.4
A few times a week	0.6	0.5	0.7	0.1 0.8
Once or twice a week	0.5	0.4	0.4	0.2 1.2
Once or twice a month	1.8	0.7	0.6	0.9 1.4
Once every couple of months	1.1	0.6	1.1	1.3 1.3
Once or twice in the last 12 months	4.1	2.4	2.3	3.8 2.7
Not at all	**90.8**	**95.0**	**94.2**	**93.0** **92.2**
All drivers who have taken drugs in last 12 months	**100.0**	**100.0**	**100.0**	**100.0** **100.0**

Consideration of Section 4 and Section 5A legislation

Prior to the introduction of the Section 5A drug-driving legislation, impairment evidence had to be collected for the existing Section 4 offence, as proof that the driver was impaired, and as part of the consideration that the impairment was due to drugs. Impairment evidence is not necessary to support a charge for the Section 5A offence, but police officers are advised to conduct a field impairment test (FIT) where possible [8], since an individual may be arrested for the Section 4 offence only, the Section 5A offence only, or for both. International research suggests that police documentation in relation to drug impairment among drivers who have been involved in a RTC has been particularly difficult to standardise because of the wide range of circumstances that might prevail. This is particularly the case if a driver's impairment through illicit drugs or controlled medication was not obvious as a possible contributory factor.

Comparisons made between biological tests and police reports in 1,816 injured Canadian drivers found police reported that a driver's ability was ‘impaired’ by alcohol or was a possible contributory factor in 64.1% of the crashes in which alcohol was detected [31]. Blood tests detected THC in 7.5% of cases, whereas the police identified THC as a possible contributory factor in 5.9% cases [31]. And, only 2.2% of 363 crashes involving ‘medication-positive’ drivers were identified by the police. These findings suggest that reliance on police RTC reports alone may underestimate the prevalence of drug-impaired driving [31] and that a combination of objective tests and police acumen works best, particularly when concerned with very low cut-offs (zero-tolerance legislation) .

For the Section 5A offence, whole blood is currently the only available evidential matrix, and a comparison is made between drug concentrations found in the evidential specimen and the legal limits set out in legislation. The Risk Solutions Evaluation report [8] found that 88% of drug-driving cases in England and Wales had a blood sample taken for evidential analysis. The Panel agreed that Section 5A offences should be reflected in an HRO scheme for high-risk drug-drivers (**Recommendation 1 (illicit drugs) and 2 medicinal controlled drugs**).

For the Section 4 offence, legal limits (drug concentrations) are not defined. Instead, the presence of a drug in an evidential specimen is required, in addition to evidence that the suspect is impaired following a medical assessment. In contrast to Section 5A, for the Section 4 offence if a blood sample cannot be obtained, a urine sample can be requested as an acceptable evidential specimen. Although occasionally when no evidential specimen is obtained it can still be possible to prosecute on the basis of opinion evidence that the driver was impaired and this was through drugs.

Following the introduction of the Section 5A offence in March 2015, the Risk Solutions Evaluation report [8] found that only 7% of records indicated evidence of impairment testing (FIT) at the road-side, suggesting that impairment evidence was not often collected.

Other data from the Risk Solutions report [8] indicates that about 65% of drivers who had a drug detected in a confirmatory blood test had ingested only one drug (1152 drug-positive samples, 749 for one drug). For those who had consumed more than one compound, cocaine and cannabis were the most common combination [8]. Driving under the influence of more than one drug at one time has also been observed in Europe [32]. For instance, Hels et al (2013) using data (2490 cases) from six countries (Belgium, Denmark, Finland, Italy, Lithuania and the Netherlands) found that the second most risky drug-drive category was polysubstance use involving various drug-drug combinations including, amphetamines and medicinal opioids such as methadone [33].

The Panel agreed that drivers who commit more than one Section 5A drug-drive offence should be considered for inclusion in the HRO scheme. The Panel recommends that the criterion should focus on two or more compounds from different drug families over the specified Section 5A limit but would not include non-active metabolite(s) such as

Benzoylecgonine (BZE) in the presence of the parent drug cocaine. For instance, a driver with both 6-monoacetyl-morphine (6-MAM) and cocaine detected in an evidential blood test, both being above the limits set out in the Section 5A legislation, would qualify. The presence of BZE and the presence of MDMA both detected in blood at concentrations over the limits set out in the legislation would also apply (**Recommendation 3**).

Collisions involving drugs and/or alcohol as a contributory factor

The Panel considered the number of collisions resulting in casualties and fatalities with drugs as a contributory factor, as these drivers may be classed as high-risk [34, 35]. Figure 2 shows trends in collisions in Great Britain featuring casualties and fatalities with drug-driving as a contributory factor. It indicates that since 2013 there has been an upward trend in both casualties and fatalities involving drugs in Great Britain: casualties increasing from 869 to 1889 between 2007 and 2017 and fatalities from 41 to 105 in the same time period. The Panel agreed that drivers who bring about casualties or fatalities whilst under the influence of drugs were of sufficient road-safety risk to warrant inclusion in a high-risk offender scheme.

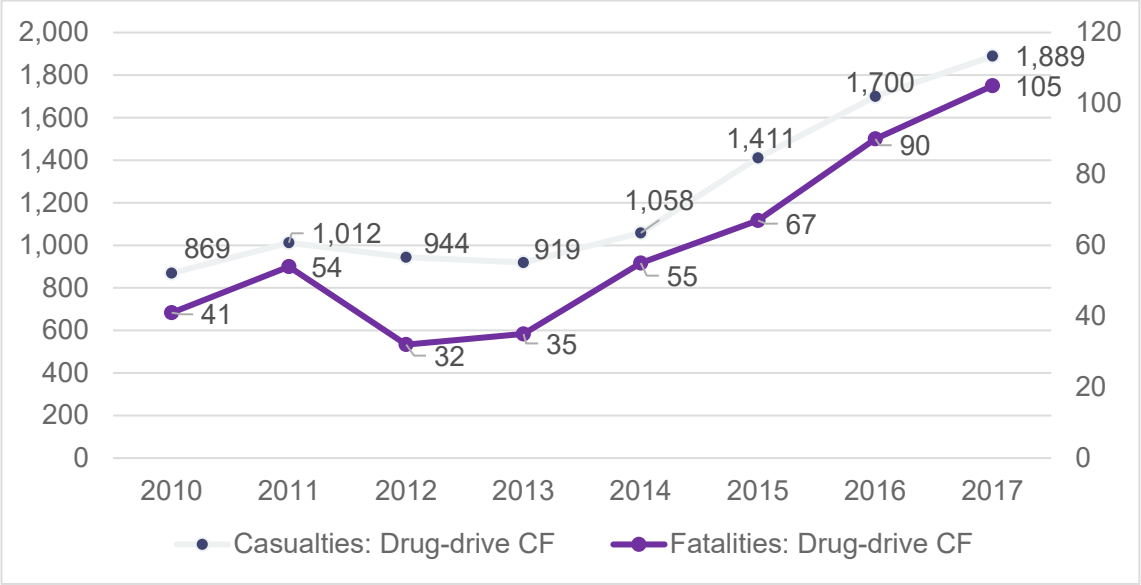

Figure 2 - STATS19 data for collisions in Great Britain featuring casualties and fatalities with drug-driving as a contributory factor (GB: 2007-2017, STATS19): CF – contributory factor

In looking at the more serious offence of causing death by careless or dangerous driving [36] the Panel compared fatalities in collisions where unsafe driving through alcohol or drugs was cited as a contributory factor per billion vehicle miles 2007-2017 (STATS19 data), as shown in Figure 3. Figure 3 shows that, drink-drive fatalities have largely plateaued since 2012, whilst the number of fatal collisions involving drugs has continued to rise and has tripled between 2012 and 2017. The growth in numbers of drug-drivers in this high-risk driving category (causing death by careless driving under the influence of drugs) led the Panel to agree that these drivers committing death by Careless Driving or Dangerous Driving offences should be assigned to a HRO scheme (**Recommendation 4**).

The criterion would apply to several offences including Section 1 of the Road Traffic Act 1988, death by Dangerous Driving (a single offence) and Section 1A, serious injury by dangerous driving when drug use was a factor. Drink and/or drug use are used as an element of the dangerousness of driving and are often considered as an aggravating factor for sentencing. Section 2 of the Road Traffic Act 1988 is driving a mechanically propelled vehicle dangerously. There is no offence code for section 2A as this is the definition of Dangerous Driving, whereas Section 2B is causing death without due care and attention, or without reasonable consideration for other persons using the road or place and apply when drug use was a factor. Section 3A (1) of the Road Traffic Act 1988 is causing death without due care and attention or without reasonable consideration and driving when unfit to drive through drink or drugs or in excess of the prescribed limit (drink) or specified limit (drug), or failing to provide a specimen or give permission for a laboratory test of a specimen of blood.

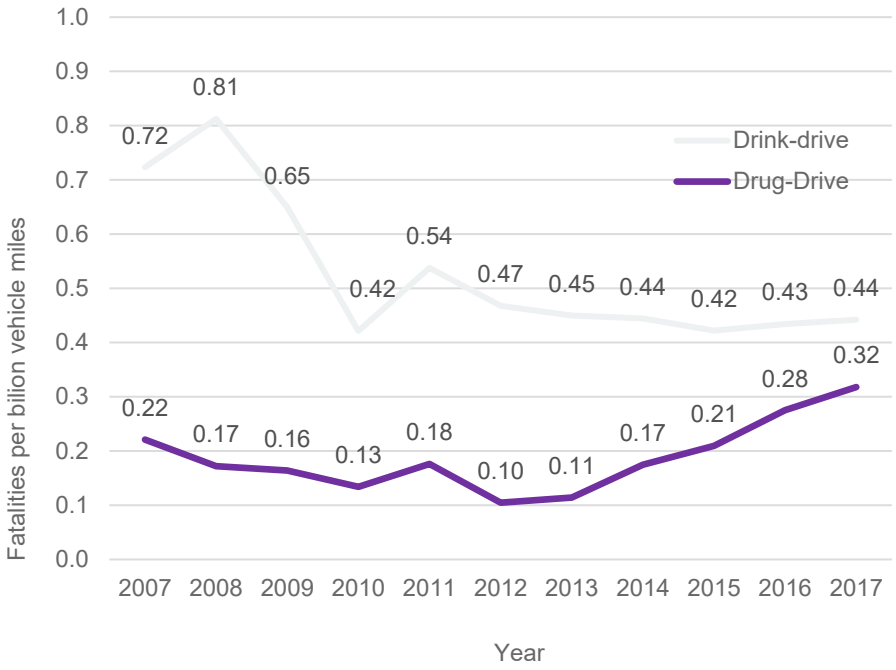

Figure 3 – STATS19 data for fatalities in collisions in Great Britain where alcohol or drug-driving was cited as a contributory factor per billion vehicle miles (GB: 2007-2017, STATS19).

There is currently no offence code for death by Dangerous Driving due to alcohol or drug use. DD80 and DD10 are not specific in this regard. Since death by Dangerous Driving whilst under the influence of drugs is a growing category of driver in Great Britain, the Panel recommend that the Department for Transport and the Ministry of Justice review the offences for Section 1 and 1A and Section 2, 2B of the Road Traffic Act 1988 so that drug-driving is recognised as a specific offence in relation to Dangerous Driving (**Recommendation 5**).

Drug-and drink-driver offending in Great Britain by different Sections of the Road Traffic Act 1988

In recognising that drivers may commit both alcohol and drug offences concurrently the Panel felt that it was important to understand the extent of this behaviour in England and Wales, and to explore which type of offences were involved. Data for drug-drivers in Great Britain have been characterised according to the different offences in the Road Traffic Act 1988 and these were compared to drink-drivers using point prevalence data provided by the DVLA (Table 6).

Table 6, using a single time point as an exemplar shows that drivers may have a combination of different offences at any one time. These offences include:

- Causing death through careless driving when unfit through alcohol or drugs (Section 3A of the Road Traffic Act 1988);
- Driving or attempting to drive when unfit through alcohol (Section 5) or drugs (Section 4 of the Road Traffic Act 1988);
- Driving or attempting to drive with a drug concentration above the specified limit (Section 5A of the Road Traffic Act 1988);
- Failing to provide a specimen (FTPA) or give permission for a laboratory test of a specimen of blood when suspected of being under the influence of alcohol or drugs (Section 7 of the Road Traffic Act 1988).

Table 6: Numbers of drivers with more than one alcohol and/or drug driving offence and/or failing to provide a specimen (Section 7 and 7A) in Great Britain in April 2019 (scan of DVLA data carried out 17/04/2019): This table also includes Section 5A data (drugs above specific limits), which only covers England and Wales.

Description of Offence Code	Section 3A & 4	Section 3A, 4 & 5	Section 3A, 4 & 5A	Section 3A, 4, 5 & 5A	Section 5	Section 5A	Section 5 & 5A	Grand Total
Alcohol	248	342			8,643			**9,233**
Alcohol & Drugs	76	208	20	18			1,506	**1,828**
Alcohol & FTPA	673	3,615						**4,288**
Alcohol, Drugs, FTPA	9	15	1	49				**74**
Drugs	244		297			7,425		**7,966**
Drugs & FTPA	330	1	635	1				**967**
FTPA	2,729							**2,729**
Grand Total	**4,309**	**4,181**	**953**	**68**	**8,643**	**7,425**	**1,506**	**27,085**

In total, 1,828 drivers had both one drink-drive and drug-drive offence at this time point (Table 6). Data from the DVLA (scanned 17/04/2019) suggests that in April last year there were 27,085 drink-drive offenders across Great Britain who had been convicted of more than one alcohol or drug-driving offence, this includes 9,233 with more than one drink-driving offence and 1,902 with both drink-drive and drug-driving offences (Table 6). There were 7,966 drivers in Great Britain in 2019 with more than one drug-driving offence (types of different offences can be seen in Table 2) across Section 3A, Section 4 and Section 5A of the Road Traffic Act 1988, compared to 9233 drink-drivers when the scan was conducted (Scotland did not introduce Section 5A until October 2019).

Table 7 indicates the number of offence codes amongst drivers where the driver has more than one alcohol- and/or drug-driving offences. Again, using a single time point as an exemplar, drivers can be seen to hold different offences at one time. These include, Section 3A of the Road Traffic Act 1988, Section 4, Section 5A and driving with a blood alcohol concentration (BAC) above the prescribed limit (Section 5), and failing to provide a sample or a specimen for analysis (FTPA) when suspected of being under the influence of alcohol or drugs (Section 7 and 7A).

Table 7: Total numbers of offence codes held by drivers where the driver has more than one alcohol and/or drug offence or has failed to provide a specimen for analysis (FTPA), scan of DVLA data on 17/04/2019: This table also includes Section 5A data (drugs above specific limit) which only covers England and Wales.

Description of Offence Code	Section 3A & 4	Section 3A, 4 & 5	Section 3A, 4 & 5A	Section 3A, 4, 5 & 5A	Section 5	Section 5A	Section 5 & 5A	Grand Total
Alcohol	502	743			17,905			**19,150**

Alcohol & Drugs	172	433	53	81			3,787	**4,526**
Alcohol & FTPA	1,361	7,927						**9,288**
Alcohol , Drugs & FTPA	31	48	3	187				**269**
Drugs	492		793			17,216		**18,501**
Drugs & FTPA	676	3	1,631	4				**2,314**
FTPA	4,759							**4,759**
Grand Total	**7,993**	**9,154**	**2,480**	**272**	**17,905**	**17,216**	**3,787**	**58,807**

In total, drivers in Great Britain held 58,807 offence codes when the scan was undertaken during April 2019. There were 649 more alcohol-only offences held by drivers than drug-driving offences at this time. It was clear from the data that those suspected of driving under the influence of drugs were also committing offences concerning a failure to provide a specimen. There were 4759 drivers in all who committed FTPA offences as well as drink or drug driving offences on the day that the scan was conducted by the DVLA (Table 7).

A sub-set of the drivers presented in Tables 6 and 7 will be on the current HRO drink-driver scheme. To establish an evidence base for high-risk drug-drivers the Panel felt it was important to understand the extent to which drug-driving offences had been committed by drink-drivers already known to be high-risk i.e., from the HRO scheme. Table 8 shows the data for drivers on the HRO scheme for drink-drivers in Great Britain, who are also drug-drive offenders. Research suggests these are the most high-risk driving population [6, 18, 37, 38].

Table 8: Drivers in England and Wales who are currently meeting drink-drive criteria on the High Risk Offenders (HRO) Scheme and have obtained an additional Section 5A drug offence on a different occasion (data scan 01/05/19, DVLA): This table also includes Section 5A data (drugs above specific limit) which only covers England and Wales.

Offence Codes	Total
Drink-Drive HROs with one “driving or attempting to drive with a drug level above the specified limit” offence	**745**
Drink-Drive HROs with two “driving or attempting to drive with a drug level above the specified limit” offences	**307**
Drink-Drive HROs with three or more “driving or attempting to drive with a drug level above the specified limit” offences	**75**
Drink-Drive HROs with one or more “in charge of a vehicle while drug level above specified limit offence”	**21**

Drink-Drive HROs with both “driving or attempting to drive with a drug level above the specified limit offence” and “in charge of a vehicle while drug level above specified limit offence” offences	**6**
Total number of Drink-Drive HROs with additional Section 5A offences	**1,154**

Data in Table 8 are from the DVLA and were accessed May 2019 and represent notifications from the Courts up until that time. These figures highlight ‘point prevalence’ data and are only reflective of the period in which the scan was conducted. Despite being a snapshot in time the data show that Section 5A drug-drive offences were detected in drink-drivers who have met the criteria for the HRO drink-driver scheme. The Panel felt that knowledge of patterns of offending was helpful to inform policy makers and help determine criteria for the HRO drug-driver scheme. In total, there were 1,154 HRO drink-drivers who had also committed section 5A offences.

Currently, HRO are drink-drivers who are convicted of a serious alcohol offence (s) and/or repeated offending. There were no HRO drivers who had DG60 (causing death by careless driving when the drug concentration was above the specified limit) or DR80 (driving or attempting to drive when unfit through drugs) offence codes at the time of writing (further details of offence codes can be found in Table 2). The Panel noted that there are no sanctions for high-risk drink-drivers who drive under the influence of drugs. The DVLA data has shown the patterns of offending taking place in Great Britain concur with what has been reported in the scientific literature and are known to be unsafe [34, 39, 40]. The Panel therefore recommends the need to recognise HRO drink-drivers with drug-driving offences as an important criterion for inclusion in a high-risk drug-driver offender scheme (**Recommendation 6**)

Failure to provide a specimen for analysis (FTPA)

Data from the HM Courts & Tribunal Service (HMCTS) suggest between January 2014 and September 2018 that 14,004 individuals re-offended for either; a drink-driving offence; a drug-driving offence or; a failure to provide a specimen (FTPA) offence. Failing to provide or allow for a specimen to be taken for analysis in itself is an important category in law since the failure to provide a sample following a road-driving offence could imply that the driver does not wish to reveal their consumption of alcohol or drugs. The Panel agreed that to be consistent with the HRO drink-drive scheme the FTPA should be a criterion for the drug-drive HRO scheme (**Recommendation 7 and 8**).

Drivers who offend multiple times committing different offences

Failure to provide a specimen is often linked to other driving offences. Table 9 shows the number of people with multiple drink, drug and FTPA offences between January 2014 and September 2018, based on HMCTS data. As some offenders have multiple different drink, drug and FTPA offences the data in the columns cannot simply be added together to indicate the total number of people with different numbers of various offences.

Nevertheless, in the 2014-2018 period, 855 individuals committed at least one drink- and at least one drug-drive offence; 6,908 individuals committed two different drug-driving offences (compared to 12,458 with two drink-driving offences), and one individual had seven separate drug-driving offences. Those who commit multiple offences are often rightly deemed high-risk since they appear to pay little attention to drug-driving legislation.

Table 9 The Number of defendants who have multiple alcohol, drug or FTPA offences in England and Wales (Jan 2014 and Sept 2018) on different occasions running concurrently (HMCTS data).

	Number of offenders		
Number of offences	Drink	Drug	FTPAS
2	12,458	6,908	1,143
3	1,297	505	111
4	740	66	12
5	47	16	5
6	14	4	3
7	2	1	0
8	1	0	0

The Panel agreed that drivers who commit multiple drug-drive and FTPA offences at a single point in time should be a sub-population eligible for inclusion in an HRO scheme (**Recommendation 9**).

Repeat offenders

In addition, and in parallel with the HRO scheme for drink-drivers re-offending drug-drivers were considered to be an important sub-population of unsafe drivers because of the likelihood that they pay scant attention to traffic legislation [5, 6]. As such the Panel considered that drivers who had been disqualified by order of a court on two or more occasions within a period of 10 years for drug-driving offences should be eligible for the drug-drive HRO scheme (**Recommendation 10**).

Drug-Driving offences when alcohol concentration is over the specified limit for England, Wales and Northern Ireland.

There is considerable evidence in the scientific literature to suggest that consuming drugs concurrently with alcohol significantly increases the risk of a RTC [34, 41-43]. A particularly common combination is cannabis and alcohol. In a large study of fatal accidents in metropolitan France during 2011 (4,059 drivers) one in two drivers considered to be under the influence of cannabis was also under the influence of alcohol. With risks accumulating when these two drugs are taken concurrently it is particularly important to point out the danger of consuming them together [44] as shown in Figure 4.

Laumon and his research group [35, 44, 45] investigated the relationship between combined use of cannabis and alcohol and driving performance in France, interpreting risk estimates as odds ratios (ORs) and demonstrated that the risk to a driver of a RTC was greatly increased with combined alcohol and cannabis use. Similar findings were published in a responsibility study [44]. Drivers involved in fatal accidents and who tested positive for cannabis (THC ≥ 1 µg/L), had a risk twice as high (OR 1.89; CI 1.43-2.51) as the risk of drivers not testing positive for cannabis. In this study alcohol used alone conferred 8 times the risk of not using alcohol (adjusted OR 8.39, CI 6.95-10.11), whereas combined use of both alcohol and cannabis augmented the risk of causing a fatal accident (8.39*1.89 = 15.86) by a factor of about 16 times compared with not using these drugs together [45]. This increased risk (OR) of having a RTC after using either cannabis or alcohol alone or together at one time can be seen in Figure 4.

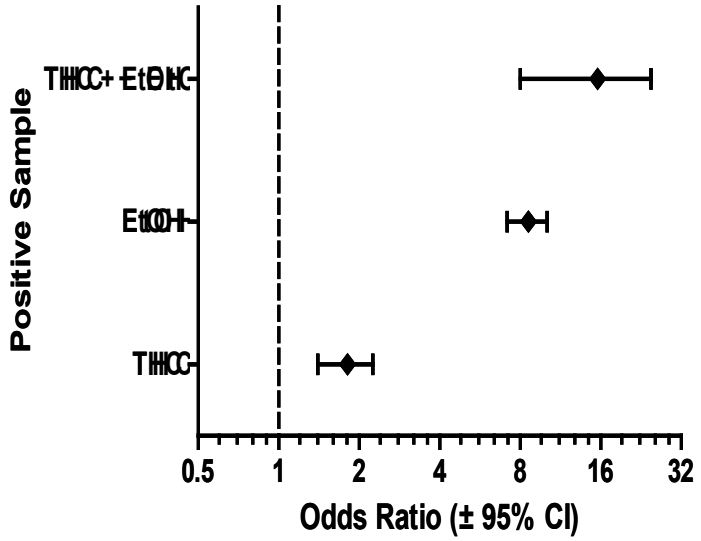

Figure 4 The odds ratio (OR) or risk of having a road traffic collision (RTC) when cannabis (cannabis metabolite, tetrahydrocannabinol (THC)) or alcohol (EtOH) are consumed alone and when combined and ingested together at one time [18]
This shows a significant increase in collision risk when using cannabis and alcohol.

Concurrent use of medicinal-controlled opioids and alcohol has also been associated with an increased risk, up to 21-fold, of fatal crash involvement [46]. Hels et al (2013) using data (2490 cases) from six countries (Belgium, Denmark, Finland, Italy, Lithuania and the Netherlands) found that the highest risk of the driver being severely injured was associated with driving while positive for concentrations of alcohol ≥ 80 mg alcohol per 100 mL blood, alone or in combination with other psychoactive substances [33].

In Great Britain, there are two drugs screened for at the roadside (cocaine and cannabis, (THC)) and as expected these were prevalent in confirmatory (evidential) testing. DVLA data based on notifications from the Courts provide a useful snapshot of the total number of drivers with one alcohol and one drug offence committed on the same day, although it should be highlighted that this information is for one period in time ('point prevalence'). As such, the data are only reflective of the period in which the scan was conducted (17/04/19):

Figure 5 shows data from a single scan conducted for drivers who have committed one alcohol and one drug (cannabis, THC) offence on the same day during April 2019. Figure 5 displays THC and alcohol concentrations detected in whole blood and breath collected for evidential testing.

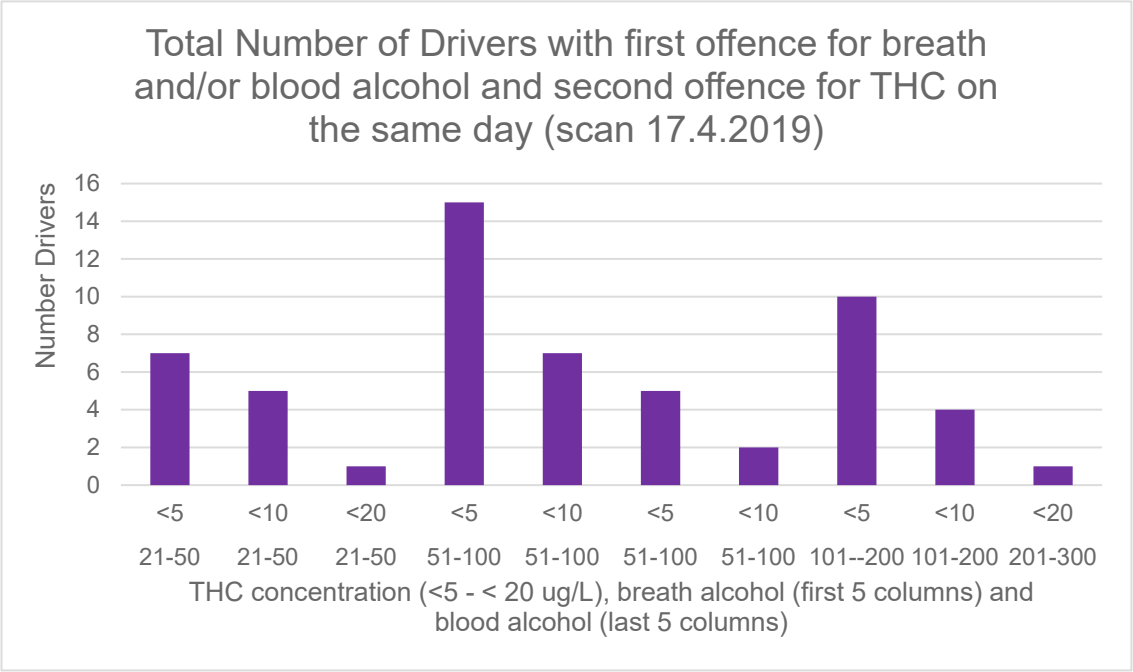

Figure 5. The total number of drivers where, on the same day, the first recorded offence was with a breathalyser test or confirmatory blood test for alcohol committed with a second drug-driving offence with cannabis, tetrahydrocannabinol (THC, µg/L) in Great Britain (scan 17.04.19).
Notes:

- **Drivers were grouped according to THC concentrations (<5 µg/L, <10 µg/L and <20 µg/L) (first row x axis);**
- **Breathalyser tests were grouped in 2 concentration ranges (21-50 µg, 51-100 µg alcohol/100 mL breath;**
- **Blood Alcohol Concentration was recorded in 2 concentration ranges (51-100 mg and 101-300 mg per 100 mL blood.**

There were 57 cases of drivers with one alcohol and one Section 5A drug (THC) offence on the day when the scan was conducted. The most common observation were drivers with concentrations of THC in blood < 5 µg/L (but > 2 µg/L, the legal threshold) and concentrations of alcohol in breath between 51 and 100 µg/100 mL (Figure 5). These data provide further evidence that drivers in England and Wales commit both drug-drive (THC above the Section 5A limit) and drink-drive (alcohol concentrations above the limit) offences concurrently. Drivers with these characteristics have been described by many driving jurisdictions internationally to be at high-risk of serious or fatal RTC [35, 40, 44, 47-49].

A **further** snapshot shows the total number of drivers with first and second offence being either alcohol and/or cocaine (blood concentration cocaine >10 µg/L) committed on the same day (the scan was conducted 17/04/19). The data outlined were sourced from

DVLA information systems, which is dependent on the accuracy and timeliness of notifications from the Courts and only highlight information at one in time ('point prevalence').

Figure 6 shows there were 52 drivers who had driven under the influence of both alcohol and cocaine. The most common observation was when a driver had breath alcohol >50 µg/100 mL and cocaine over the specified limit (Figure 6). This dangerous combination has been reported in other drivers [32].

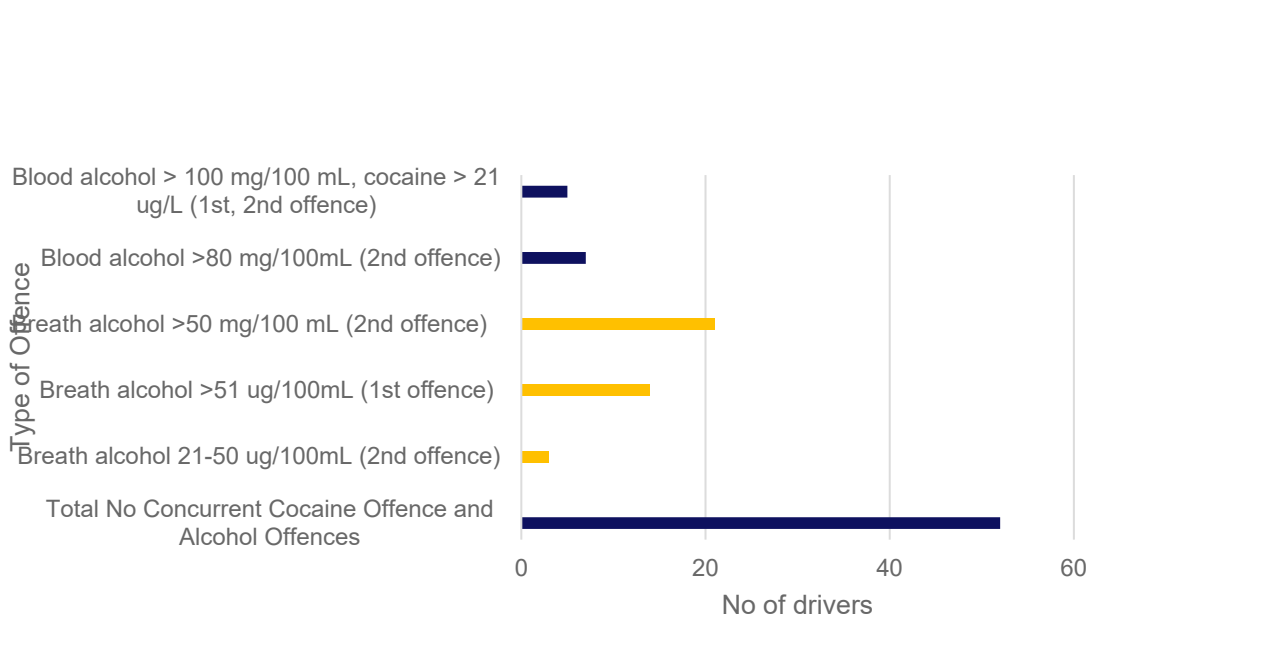

Figure 6. The number of drivers where a drug-driving offence (cocaine >10 µg/L) involving Section 3A, 4 and 5A offences had been committed as well as a drink-driving offence (blood alcohol concentration > 80 mg/100 mL blood or breath alcohol concentration > 35 µg/100 mL breath). The offences occurred either as the first or second offence, detected on the same day, in Great Britain (scan 17.04.19).
Note:

- **All cases had blood cocaine concentration above 10 µg/L except where indicated**
- **Yellow columns breathalyser tests**

These data provide additional evidence that there are drivers in Great Britain who drive under the influence of both cocaine and alcohol with cocaine concentrations above the Section 5A limit and alcohol concentrations above the permitted limit in either breath or blood who are at a high-risk of a RTC.

The Expert Panel are aware of research including meta-analysis in other jurisdictions (Italy, USA and Brazil) that reports, in long-distance drivers (truck drivers), the use of amphetamine-type drugs to sustain busy work schedules [50-52]. Although low-dose amphetamine has been shown to improve psychomotor skills, chronic and high dose users who drive show poorer compliance with traffic regulations [53] and have an increased risk of RTCs [39]. This is mainly because of the adverse effects of binge-style use such as hypersomnolence and fatigue [54, 55]. Some authors have suggested that blood amphetamine concentrations between 270 µg/L and 530 µg/L are associated with psychomotor impairment [39]. Amphetamine use has been estimated to increase the risk of fatal accidents by 5-times, being responsible in 2013 for around half of all road traffic deaths caused by illicit drug consumption worldwide, resulting in around 20,000 deaths [56].

Amphetamine-type drugs such as MDMA and methamphetamine and amphetamine itself are not currently screened for at the roadside in England, Wales and Scotland, but were nevertheless detected in evidential samples from drivers apprehended for drug-driving offences on the same day, and in combination with alcohol (Figure 7).

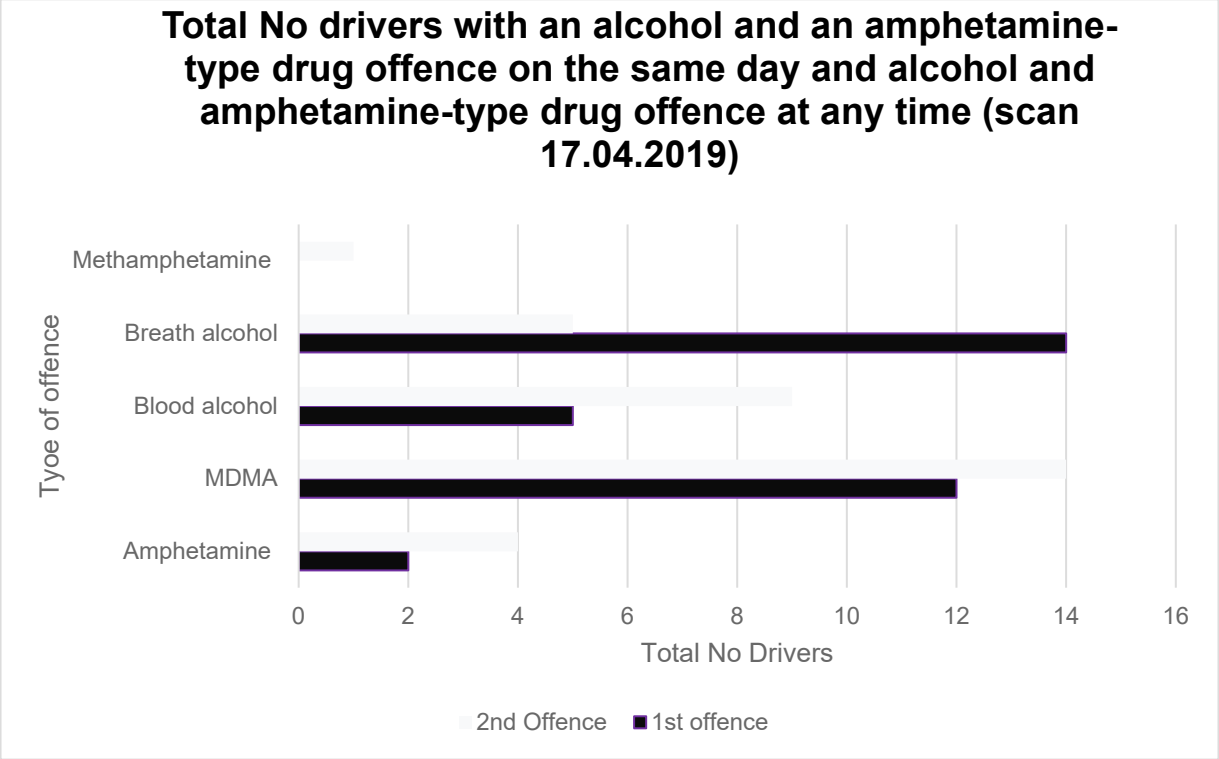

Figure 7. The total number of drivers where two concurrent offences: a (blood alcohol concentration > 80 mg/100 mL blood or breath > 35 µg/100 mL breath) and a drug-driving offence (amphetamine > 250 µg/L, MDMA > 10 µg/L or methamphetamine > 10 µg/L) occurred involving Section 3A, 4 and 5A offences detected on the same day. This was combined with

alcohol and amphetamine-type offences, at any time in Great Britain when the scan was conducted (17.04.19).

There were 33 cases identified by the DVLA scan of drivers (point prevalence) with an amphetamine-type drug offence (amphetamine, MDMA or methamphetamine detected over the specified Section 5A limit) with an alcohol offence. MDMA was most commonly detected (12 as a first offence and 14 as a second offence). The most common amphetamine-type drug detected in combination with alcohol was also MDMA (Figure 7). The DVLA data demonstrates overall that illicit drug use and misuse of a controlled medicine in combination with alcohol contribute to the number of drug-driving offences committed in Great Britain. The Panel considered therefore that a criterion for the HRO scheme should include the presence of one or more drugs listed in the Section 5A legislation over the specified limit in combination with the presence of alcohol above the legal limit > 80 mg/100 mL blood (or equivalent > 35 µg/100 mL in breath or > 107 mg/100 mL in urine) (**Recommendation 11**).

The Panel also discussed the importance of ensuring that road-side screening for drug-drivers was commensurate with evidence on likely prevalence of drug use in the general population (and thus driving population). To this end the Panel recommended that the Department for Transport should debate the expansion of the testing panel for road-side drug screening, as well as explore the possibility of evidential testing at the road-side (**Recommendation 12**). Discussions should be informed by the prevalence of use of specific drugs by drivers in England and Wales. For instance, the Crime Survey for England and Wales reported that the level of MDMA (ecstasy) use by adults aged 16 to 59 in the 2017/18 survey had increased (1.7%, or around 550,000 people) from the previous year (1.3%, around 439,000 people) [21]. Data from 2018/19 showed a similar trend that 1.58% of adults (aged 16–59 years) and 4.79% of young adults (aged 16–24 years) used ecstasy in the past year. Applying these rates to the population (34,376,005 people aged 15–59 and 6,988,755 people aged 15–24) in 2018/19, a user base of 543,141 adults and 334,761 young adults is estimated. Compared to other illicit drugs, ecstasy is the third most used in the past year, after cannabis (7.6% of adults and 17.3% of young adults) and powder cocaine (2.9% of adults and 6.2% of young adults) [30].

Increases were also seen in LSD (Lysergic acid diethylamide, also known as acid) use among 16 to 59 year olds from 0.3 to 0.4 per cent, equating to around 47,000 more

people using the drug than in the previous year. Ketamine (a hallucinogenic stimulant) was notable because use had doubled based on reports from the 2017/18 survey compared to the previous survey, largely amongst 16 to 24 year olds, with about 141,000 more people using the drug [21]. It was also found that people who had visited a pub or nightclub and consumed alcohol, or another drug, were more likely to have used New Psychoactive Substances (such as synthetic cannabinoids and cathinones) in the last year than those who had not. In addition, the United Kingdom Country Drug Report for 2017 (EMCDDA, 2019) noted changes in the patterns of drug-use behaviour, in particular the increased injection of crack cocaine (the crystalline form of the drug) and amphetamine-type stimulants [57]. Intravenous drug use is the quickest way to get a psychoactive drug into the body and is associated with greater toxicity, high-risk behaviour, criminality and previous incarceration [58].

The Panel felt that establishing a HRO scheme for drug-drivers would also provide the opportunity to explore potential future developments in scientific capability and technical feasibility around drug testing as applied to road safety [59]. This would help inform the government's considerations with regards to current legislation and any revisions needed to consider both current and future testing capabilities. The Panel were anxious to avoid, if possible the redundancy of its recommendations shortly after publication, by failing to acknowledge expected advances in technology (see annex 1).

Road safety risk for Drug Drivers using alcohol

Research on drink-driving is extensive and including those using a simulator, report poor driving performance, ability to stay in lane, car-following ability, speed control and reaction time when under the influence of alcohol [60]. These traits usually worsen when drug use is combined with alcohol [49, 61]. For instance, epidemiological studies have indicated that the combined use of alcohol (low BAC) with cannabis (THC) produced severe impairment of cognition, psychomotor and actual driving performance and sharply increases risk of a RTC [47].

Albalate [62] using data from 15 European countries found that alcohol-related driving death rates were 11.5% higher in young people aged 18-25, and by 5.7 % in men of all ages when the BAC was > 50 mg/100 mL. The relationship between alcohol consumption and risk of collision and injury has also been reviewed in the UK. In 2010 evidence gathered by NICE [63] found that drivers with a BAC of between 20 mg/100 mL and 50 mg/100 mL have at least a three times greater risk of dying in a RTC. This risk increased to at least six times the risk with a BAC between 50 mg/100 mL and 80 mg/100 mL and to 11 times the risk with a BAC between 80 mg/100 mL and 100 mg/100 mL. Research on drug-drivers who use alcohol has often focused on alcohol use *per se* rather than a specific cut-off concentration but nevertheless indicate a specific population of drivers. A study in New Zealand for instance, found respondents who reported drink-driving were 3.26 times more likely to report drug-driving than those reporting no drink-driving [64].

The DRUID (*Driving* Under the Influence of *Drugs* and Medicines) studies, an integrated European programme of research, highlighted the increased road safety risks associated with driving while under the influence of both drugs and alcohol [27, 28]. Researchers have shown that when drug use is combined with any amount of alcohol drivers are at a significantly increased risk of a RTC. It is widely reported that alcohol concentrations as low as 20 mg/100 mL blood have a negative effect on driving when drugs have also been consumed [27, 35, 65]. The relative risk of having a RTC with increasing BAC has been demonstrated and discussed in detail by Vearrier [66] and other researchers [67]. In the 2013 Department for Transport Drug Expert Panel Report recommendations were made for drivers who had blood alcohol concentrations > 20 mg/100 mL when using drugs listed in Section 5A (1) and (2) of the Road Traffic Act 1988 [18]. This was based on concerns about the combination of drugs and alcohol and risk to driver safety.

It is possible to calculate the risk of a RTC when there has been concurrent use of alcohol and drugs. This can be computed simply by multiplying the reported risk of a RTC from drug use by the risk reported from use of alcohol [18, 27, 35, 45]. For instance, Australian drivers testing positive with a blood THC concentration > 5 µg/L were 6.6 times more likely to be culpable for a RTC (OR 6.6; CI 1.50 - 28.0) than drivers not using this drug. Whereas drivers testing positive with a BAC ≥ 50 mg/100 mL were more than twice as likely to be culpable in a RTC (OR 2.9, 95% CI 1.1 - 7.7) than drivers not testing positive for either drug [39, 47]. Multiplying the reported risk for THC and alcohol when these substances are detected together (6.6*2.9 = 19.14) increased the risk of causing a RTC by a factor of about 19 times compared. Much higher than the risk associated with using each drug alone.

The Centres for Disease Control (CDC) and the NHTSA have published details of the predictable effects on driving associated with a given BAC and other sources have identified the relative risk of a road traffic collision at similar BAC levels. The Bloomberg report [65] is based on a study funded by the U.S. Department of Transportation, National Highway Traffic Safety Administration (NHTSA) and Dunlap and Associates (Contract DTNH22-94-C-05001) with input from the Southern California Research Institute (SCRI) and Peck and Associates (Table 10). Table 10 shows that even at low concentrations of alcohol there is an impact on driving behaviour. At the limit for drink-driving in England

and Wales (80 mg/100 mL blood), the impact on concentration, speed control, information capability (e.g., signal detection, visual search) etc. has been associated with 2.69 times the risk of a RTC. The increased risk of a RTC with increasing BAC alongside observed behavioural impairment is well documented in the scientific literature [67]. This information can be used to inform the risk of using alcohol concurrently with different substances.

Table 10. Relative Risk (RR) of a Road Traffic Collision (RTC) associated with a given blood alcohol concentration (BAC) adapted from Bloomberg et al, 2005 [65] associated with predictable effects on driving behaviour [66] over a wide range of BACs including the alcohol threshold for the Civil Aviation Authority*; European Union/Scotland; England, Wales & Northern Ireland; **** and HRO drink-drivers. A BAC of 1g/L is equivalent to 100mg/100mL.**

Blood Alcohol Concentration BAC (mg/100 mL)	Predictable effects on driving	Relative Risk (Final adjusted estimate)
20*	**Decline in visual functions (rapid tracking of a moving target); Decline in ability to perform two tasks at the same time (divided attention)**	**1.03**
30		1.06
40		1.18
50**	**Reduced coordination; Reduced ability to track moving objects; Difficulty steering; Reduced response to emergency driving situations**	**1.38**
60		1.63
70		2.09
80***	**Concentration impaired; Short-term memory loss; Poor speed control; Reduced information capability (e.g., signal detection, visual search Impaired perception**	**2.69**
90		3.54
100	Reduced ability to maintain lane position and brake appropriately	4.79
110		6.41
120		8.90
130		12.06
140		16.36
150	Substantial impairment in vehicle control, attention to driving task, visual and auditory information processing	22.10
160****	**Driving with this ≥ BAC concentration is a criteria for entry onto UK drink-drive HRO scheme**	

A 2013 report based on a stratified, random sample covering the 48 American contiguous states (8384 eligible motorists weekend, night-time drivers) found 10.5% of nondrinking drivers were using illegal drugs, and 29.4% of drivers with blood alcohol readings over the legal limit (≥0.08 g/dL grams per decilitre)) were using illegal drugs.

This was approximately 3 times greater (OR3.53, CI 2.27–5.40) than for drivers with zero alcohol consumption. Medicinal drug use was more common among nondrinking drivers (4.0%) than among drivers with alcohol levels over the limit (2.4%) [68]. The Panel noted that research indicates that driver-safety programmes are primarily oriented to apprehending drink-drivers [69] but may offer an opportunity not only to apprehend the highest risk drivers but also to identify and intervene with a substantial number of drug-using drivers [70].

Risk estimates for driving under the influence of psychoactive substances were calculated and presented, based on aggregated data from all countries involved, in the final report of the DRUID study (2012) [28] (Table 11). This was a sophisticated study with comprehensive statistical analysis: relative risk was defined as the ratio of two risks, the risk of an event occurring in the group of exposed subjects and the risk of the event occurring in the group of non-exposed subjects. The relative risk estimates were approximated to odds ratios, and calculated by means of logistic regression. The relative risk estimates were adjusted by age and gender (when there was enough data); if there was not enough data the crude odds ratio were calculated.

Table 11 summarises the DRUID data generated from 18 European countries according to a uniform study design: Samples of body fluids of approximately 3,600 seriously injured drivers and 1300 killed drivers and risk estimates for driving under influence of psychoactive substances were derived from the case-control studies (approximately 4,500 drivers seriously injured or killed in an accident) [28].

Table 11 A summary of the relative risk for a driver in Europe (DRUID research) of being seriously injured or killed in a road traffic collision (RTC) while under the influence of different drugs [28]. *Among car drivers detected positive for cannabis a significant concentration effect was identified and remained significant after adjustment for age, gender and alcohol.

Drug	Odds Ratio Risk Serious Injury	Odds Ratio Risk of fatality	Relative risk of responsibility for a fatal accident
Amphetamine Methamphetamine MDMA	8.35 (CI: 3.91-17.83)	24.09 (CI: 9.72-59.71)	
Cocaine	3.30 (CI: 1.40-7.79)	22.34 (CI: 3.66-136.53)	
Cannabis (THC)	1.38 (CI: 0.88-2.17)	1.33 (CI: 0.48- 3.67)	1.89 (CI:.43-2.51)*

Illicit opiates (heroin) 6-MAM	2.47 (CI: 0.50-12.10)	10.04 (CI: 2.04-49.32)
Benzodiazepines and Z drugs	1.99 (CI: 1.36-2.91)	Crude odds ratio 5.40 (CI: 3.90-7.46)
Medicinal opioids	9.06 (CI: 6.40-12.83)	4.82 (CI: 2.60-8.93)
Alcohol and drugs	28.82 (CI: 18.41-45.1)	31.52 (CI: 16.83-59.05)
Multiple drugs	8.01 (CI: 5.34-12.01)	18.51 (CI: 10.84-31.63)

The risk of a RTC differs according to type of drug consumed. The risk of being seriously injured when driving under the influence of drugs was greatest for medicinal-controlled opioids followed by amphetamine-type drugs. Notably, the highest risks to road safety were seen for driving under the influence of both alcohol and drugs. The Panel were conscious that the cumulative results were based on very different single European country estimates and that England and Wales were not included in the study. Further details of the discussion can be found in the 2013 DfT expert panel report [18].

The Panel considered polysubstance use in the context of the high-risk offender scheme because of the serious detrimental effect known to driver safety following the use of a combination of drugs and alcohol. Polysubstance use is defined as when a person uses at least three different substances (not including caffeine or nicotine) indiscriminately, but does not have a preference to any specific one. The Panel recommend that a HRO criterion should include polysubstance-use. For instance, drivers who commit serious drug-drive offences and where there is evidence of:

- Impairment for two or more drugs covered by Section 4 of the Road Traffic Act 1988 or;
- Two or more drugs are present at concentrations above that prescribed in the Section 5A legislation and the criterion should focus on two or more compounds from different drug families but would not include non-active metabolite(s) such as BZE in the presence of the parent drug cocaine or;
- Impairment for one or more drugs covered by Section 4 of the Road Traffic Act 1988 and one or more drugs present at concentrations above the prescribed Section 5A limit (that is in total two or more drugs) and;

- This behaviour is being observed alongside the presence of alcohol detected at BAC ≥ 50 mg alcohol/100 mL blood and accepted equivalents in breath (≥ 22 µg alcohol/100 mL breath) and urine (≥ 67 mg alcohol/100 mL of urine).

Drug use of this nature including alcohol consumption, as identified by the National Institute for Health and Clinical Excellence NICE [63], has been widely described in the scientific literature as particularly dangerous for drivers with the resultant, very high, risk of collision as described in Table 11 [37, 49, 66, 71], (**Recommendation 13).**

Section 4 offences

The Section 4 offence provided there is evidence of impairment covers those drugs either not covered by Section 5A or at concentration lower than prescribed in the Section 5A legislation. These include a wide range of drugs such as, the benzodiazepine alprazolam, opioids codeine, dihydrocodeine and tramadol, and the Z-drug zopiclone. Alprazolam (Xanax) is known to impair driving performance [72, 73], and has been identified by the English National Programme on Substance Abuse Deaths (NPSAD) as contributing to drug-drive fatalities. Similarly, the Z-drugs (zaleplon, no longer available in the UK), zolpidem and zopiclone are known to impair cognition, psychomotor performance, and driving ability [74]. The risk of being responsible for a traffic accident was higher in French drivers prescribed more than one tablet of zolpidem per day during the 5 months before the collision (OR = 2.46 (1.70-3.56) [75]). In a systematic review of epidemiological data Elvik found the OR for a fatal collision for zopiclone was 2.60 (CI 0.89 - 7.57) and the OR for serious injury was OR 1.42 (CI 0.87 - 2.31) [26]. The 2013 DfT Drug Driving Expert Panel were unable to include zopiclone in their recommendation because at the time it was not included in the 1971 Misuse of Drugs Act, but has been subsequently included (2014).

Further evidence for the impairing effect of drugs on driving was found in the DRUID studies, which used meta-analysis to gather evidence about the impact of antipsychotics, anxiolytics, hypnotics, sedatives, antidepressants and antihistamines on driving and skills related to driving [28]. Controlled medicines were deemed highly impairing at the following doses:

- Benzodiazepines (anxiolytics) alprazolam (1 mg), Oxazepam (30 mg), diazepam (20 mg), and lorazepam (2.0 - 2.5 mg)
- Benzodiazepines (hypnotics/sedatives) Flunitrazepam (2 mg), triazolam (0.5 mg)
- Antidepressants, mianserin (10 mg), amitriptyline (25 - 50 mg),
- Z-drugs, zopiclone (7.5 mg), zolpidem (20 mg)
- Antipsychotic promethazine (27 mg)

The Panel agreed that drivers who consume drugs and/or medicines known to impair driving, in a manner that causes careless or dangerous driving should be considered for inclusion in the HRO scheme when the identified risk to road safety is very high (**Recommendation 14**).

High Risk Offender Schemes

Once categorised as a high-risk, drink-drive offenders are then required to satisfy the DVLA of their fitness to drive by attending an independent medical examination with a DVLA appointed doctor before a driving licence will be re-issued to them upon expiration of their driving disqualification. The **DVLA medical** for drink-drivers on the HRO scheme consists of an examination, a biomarker blood test to determine abstinence from drinking (carbohydrate deficient transferrin (%CDT), a questionnaire and any other tests deemed relevant.

It is recommended that drug-drivers categorised as high-risk and placed on a HRO scheme will need to demonstrate abstinence from problematic or dependent drug use and provide evidence that they are not a persistent user. There is currently a mechanism for doing this through a DVLA appointed medical examination whereby a driver is permitted one month to provide an objective biological test (urine drug screen) for assessment. As an alternative to urine testing, hair testing is employed in Germany and Spain. Hair testing may be advantageous for relicensing because of the longer window of detection for this specimen. For the HRO drug-drivers scheme the offender will be required to satisfy the DVLA of their fitness to drive for relicensing purposes (**Recommendation 15**).

To be comparable with the HRO scheme for drink-drivers it is recommended that a medical examination, a questionnaire and an objective biological test (urine and blood samples) should form part of the relicensing process for high-risk drug-drivers. The Panel recommends that the HRO scheme for drink-drivers and the HRO scheme for drug-drivers be kept separate, reviewing this with time. However, in cases where an individual is

convicted for alcohol and drug offences and meets the criteria for both schemes then, it is proposed, that they are placed on both schemes. If an individual is placed on both HRO schemes, then it is recommended that the driver be required to demonstrate abstinence from both alcohol and the specific drug relative to the offence (**Recommendation 16**).

The Panel noted the need for balance in weighing up the practicalities of implementing the HRO scheme for drug-drivers against removing dangerous drug-drivers from our roads so that the scheme would not become quickly out-dated. The Panel recommends that the Department for Transport work with Forensic Service Providers and the CPS/Courts and DVLA to assimilate data on all offence codes related to drink and drug driving on an annual basis. This will enable regular review of both Section 5A and Section 4 data. This will allow the government to maintain an up-to-date picture of current drug-driving trends to ensure that legislation remains reflective of current risk and that the roadside screening capability aligns to this **(Recommendation 17)**.

Mindful of the advances in analytical toxicology the Panel encourage the Department for Transport to continue to support research and innovation in drug-driving, particularly in seeking solutions for evidential testing at the road-side. This would benefit important stakeholders such as the DVLA and the police in ensuring that dangerous drivers are tested at the earliest opportunity and improve the likelihood of detecting all substances in the body at the time of the driving incident (further detail in Annex 1).

RECOMMENDATIONS

The criteria for a high-risk offender scheme as it applies to driving under the influence of drugs.

1. **Having been disqualified by order of a court upon conviction with a blood drug concentration that significantly increased risk of a road traffic collision (f*or instance, DR10, DR80, DR40, DR90*): Section 5A: S*ingle offences with high concentrations of a single illicit drug***

In the HRO drink-driving scheme there is a criterion that refers to being over two and a half times the legal alcohol driving limit in blood, breath, or urine. The panel propose that this criterion could not be universally applied to individual drugs included in Section 5A (1) and (2) of the Road Traffic Act 1988 because of the different properties, potency and effects of each drug on ability to drive. However, single offences with high concentrations of specific compounds could be determined. The Panel agreed that for single offences with high concentrations of a single illicit or prescribed drug HRO limits should be based on the evidence at which there is an increased risk of a road traffic collision, as set out in the DfT Expert Panel report [2013] [18]. For comparative purposes, and where sufficient data were available, data obtained as part of the evaluation of the Section 5A offence [8] was examined to give an indication of the proportion of drug-positive Section 5A drivers that would be above the proposed HRO level.

I. **Benzoylecgonine (BZE):** - Current specified limit is 50 µg/L. Recommended HRO limit would be 500 µg/L. From examination of the Section 5A data [8] approximately 20% of drug-positive Section 5A samples containing BZE were above this concentration.

II. **Cannabis (THC):** Current Section 5A legislation specified limit is 2 µg/L. Recommended HRO limit would be 5 µg/L. From examination of the Section 5A data [8] approximately 36% of drug-positive Section 5A samples containing THC were above this concentration.

III. **Cocaine:** Current specified limit is 10 µg/L.

Suggested HRO limit would be 80 µg/L. From examination of the Section 5A data [8], approximately 8% of drug-positive Section 5A samples containing cocaine were above this concentration.

IV. **Lysergic Acid Diethylamide:** Current specified limit is 1 µg/L.
Suggested HRO limit would be 1 µg/L since any concentration of LSD in the body was deemed significantly impairing.

V. **Ketamine:** Current specified limit is 20 µg/L.
Suggested HRO limit would be 200 µg/L. The Norwegian Academic Advisory Group (2010), in preparing for drug driving legislation, reported that a ketamine blood concentration causing impairment was 238 µg/L [76]. Drug-driving concentration data provided to the DfT Expert Panel showed mean blood drug concentration of ketamine was 345 µg/L (range 20 µg/L – 1,300 µg/L, median, 300 µg/L) from 207 cases. A concentration of 200 µg/L ketamine would capture 70% of those drivers tested positive for ketamine in England and Wales as documented in the DfT Expert Panel report [2013] [18].

VI. **Methamphetamine:** Current specified limit is 10 µg/L.
Suggested HRO limit would be 200 µg/L using DfT Expert Panel report [2013] [18].

VII. **Methylenedioxymethamphetamine (MDMA):** Current specified limit is 10 µg/L.
Suggested HRO limit would be 300 µg/L using DfT Expert Panel report [2013] data, which indicates a median blood drug concentration found in drivers for MDMA 305 µg/L (mean 452 µg/L, range 20 µg/L–2,540 µg/L) from 76 of 2995 cases. [18].

VIII. **6 mono-acetylmorphine (6-MAM):** Current specified limit is 5 µg/L.
Suggested HRO limit would be 5 µg/L on the basis that the presence of 6-MAM in blood would indicate very recent use of heroin.

2. Having been disqualified by order of a court upon conviction with a blood drug concentration that significantly increased risk of a road traffic collision: Section 5A: S*ingle offences with high concentrations of a single proscribed controlled medicine*

The Panel agreed that for single offences with high concentrations of a single prescribed controlled medicine, each drug should be considered in isolation, and that HRO limits would be based on the evidence at which an increased risk of a road traffic collision was observed, as set out in the DfT Expert Panel report [18]. Thresholds for prescribed controlled medication have been set to avoid therapeutic concentrations where possible and therefore mostly did not need to be increased further. For comparative purposes, and where sufficient data were available, data obtained as part of the evaluation of the Section 5A offence [8] were examined to give an indication of the proportion of drug-positive Section 5A drivers that would be above the proposed HRO level.

I. **Amphetamine:** - Current specified limit is 250 µg/L.

Suggested HRO limit would be 600 µg/L based on DfT Expert Panel report [2013] [18] . From examination of the Section 5A data approximately 11% of drug-positive S5A samples containing amphetamine were above this concentration [8]

II. **Clonazepam:** – Current specified limit is 50 µg/L.
Suggested HRO limit would be 50 µg/L, which is at the top end of the therapeutic range [77] and associated with problematic use [78] and impaired driving [79, 80].

III. **Diazepam:** – Current specified limit is 550 µg/L.
Suggested HRO limit would be 550 µg/L using DfT Expert Panel report [2013] [18]. From examination of the Section 5A data [8] approximately 9% of drug-positive Section 5A samples containing diazepam were above this concentration. In a retrospective study of blood samples for drivers in England and Wales providing evidential samples between 2010 and 2012 12.5% had concentrations of diazepam- over this limit [19].

IV. **Flunitrazepam:** Current specified limit is 300 µg/L.
Suggested HRO limit would be 300 µg/L using DfT Expert Panel report [2013] [18];

V. **Lorazepam:** - Current specified limit is 100 µg/L.
Suggested HRO limit would be 100 µg/L using DfT Expert Panel report [2013] [18];

VI. ***Methadone:*** Current specified limit is 500 µg/L
Suggested HRO limit would be 500 µg/L using DfT Expert Panel report [2013] [18];.

VII. **Morphine:** Current specified limit is 80 µg/L.
Suggested HRO limit would be 80 µg/L; From examination of the Section 5A data [8] approximately 6% of drug-positive Section 5A samples containing morphine were above this concentration. In a retrospective study of blood samples for drivers in England and Wales, providing evidential samples between 2010 and 2012 4.8% samples containing morphine were above this concentration [19].

VIII. **Oxazepam:** Current specified limit is 300 µg/L.
Suggested HRO limit would be 300 µg/L. In a retrospective study of blood samples for drivers in England and Wales providing evidential samples between 2010 and 2012 14.7% samples containing Oxazepam were above this concentration [19]

IX. **Temazepam:** Current specified limit is 1000 µg/L.
Suggested HRO limit would be 1000 µg/L using the DfT Expert Panel report [2013] [18]. In a retrospective study of blood samples for drivers in England and Wales, providing evidential samples between 2010 and 2012 5.8% samples containing temazepam were above this concentration [19].

3. **Having been disqualified by order of a court upon conviction with a blood drug concentration that significantly increased risk of a road traffic collision: *Single offences with multiple different drugs over the specified Section 5A limits.***

The Panel recommends that an additional criterion should focus on the presence of two or more compounds from different drug families over the specified Section 5A limit. Data from Risk Solutions indicated in the first 18 months after the introduction of the legislation that

about 65% of drivers had a single drug detected in a confirmatory blood test (1152 drug-positive samples, 749 for one drug). For those who had consumed more than one compound, cocaine and cannabis were the most common combination [8]. This trend has also been observed in Europe [32].

For instance, the detection of **cannabis (THC)** above the Section 5A specified limit (2 µg/L) and **cocaine** detected above the Section 5A legislation specified limit (10 µg/L) as part of the same offence would satisfy this criterion. However, the presence of cocaine over the Section 5A legislation specified limit with BZE over the Section 5A specified limit would not.

4. ***Causing death by Dangerous Driving whilst under the influence drugs (drugs as an aggravating factor) is a growing category of driver in Great Britain. It is recommended that the Department for Transport and the Ministry of Justice review the offences in Section 1 and 1A and Section 2 and 2B of the Road Traffic Act 1988 to allow for drug-driving to be recognised as a specific offence in relation to Dangerous Driving.***

5. **Having been disqualified by order of a court upon conviction with a blood drug concentration above the Section 5A limit for Section 3A careless drug-driving offences and Sections 1 and 2 dangerous and careless driving offences (if the Section 1 and section 2 legislation is changed to accommodate drug use see above and pp 23)**

   For example, causing death by careless driving with the drug concentration above the Section 5A legislation specified limit *(DG60) or c*ausing death by careless driving while unfit through drugs *(CD50) and* the drug concentration above the Section 5A legislation specified limit. It is noted that the CPS Charging Guidance may need to be extended to accommodate drug use.

6. **Having been disqualified by order of a court upon conviction for:**
   - ***a.*** **a drink-driving offence and been placed on the HRO scheme for drink-drivers and also found to have committed Section 5A offence(s) where the confirmatory blood drug concentration is above the limit recommended for the HRO scheme for drug-drivers or a serious offence in consideration of Section 4 of the Road Traffic Act 1988;**
   - ***b.*** **a drink-driving offence and also been found to have committed Section 5A offence(s) where the confirmatory blood drug concentration is above the limit recommended for the HRO scheme for drug-drivers or a serious offence in consideration of Section 4 of the Road Traffic Act 1988;**
   - *c.* **a drug-driving offender who is placed on the HRO drug-driving scheme and also found to have committed drink-driving or FTPA offences;**

Currently there are no sanctions for high-risk drink-drivers who drive under the influence of drugs nor high-risk drug-drivers who drive under the influence of alcohol. The DVLA data

has shown that these patterns of offending occur in England and Wales and that this behaviour is a pattern of driving that has been reported in the scientific literature internationally and are known to be unsafe. This criterion allows dangerous drivers to be placed on both the HRO scheme for drink- and the HRO scheme for drug-drivers. Drivers would then need to apply to regain their license from both schemes.

7. **Having been disqualified by order of a court for failing, without reasonable excuse, to provide a specimen for analysis when ordered to do so**

The Panel agreed that this criterion would apply while either driving or attempting to drive (DR30/31) or being in charge of a vehicle (DR60/61) when under the influence of drugs. It was also agreed that this criterion should apply to all drugs listed in Section 5A (1) and (2) and should also apply in consideration of Section 4 of the Road Traffic Act 1988. Evidence from HMCTS shows that between 2014 and 2018 there have been 33,386 cases of an individual failing to provide a specimen for drug-driving offences. In this time period 27,488 individuals had a unique failure to provide a specimen offence (without any other driving offence): The mean number of these offences committed each year between 2014 and 2018 was 6853, which would reflect the possible number of drivers who would meet the criterion for placement on a new drug-driver HRO scheme.

8. **Having been disqualified by order of a court for failing, without reasonable excuse, to give permission for a laboratory test of a specimen of blood taken while that person was incapable of giving a valid consent to such a specimen being taken (DR61, DR31)**

The Panel agreed that to include this as a criterion would ensure consistency with the HRO scheme for drink-drivers. It was proposed that this should apply to all drugs listed in Section 5A (1) and (2) and should also apply in consideration of Section 4 of the Road Traffic Act 1988.

9. **Having been disqualified by order of a court upon conviction for multiple drug offences (several different offence codes) on one occasion**

The Panel agreed this should apply to all drugs listed in Section 5A (1) and (2) and should also apply in consideration of Section 4 of the Road Traffic Act 1988 and include failure to provide a specimen (FTPA) offences. Drivers committing 2 or more offences would meet this criterion (Table 9). In the 2014 - 2018 period 6,908 individuals committed two drug-

driving offences. Those who commit multiple offences are often deemed high-risk since they appear to pay little attention to drug-driving legislation.

10. **Having been disqualified by order of a court on <u>two or more occasions</u> within a period of 10 years for any drug-driving offence;**

Or

a. **Having been disqualified for a drug-drive offence and then a drink-drive offence**

Or

b. **A drink-drive offence and then a drug-drive offence**

To be consistent with the drink-driving HRO scheme there is also a criterion that refers to re-offending within a 10 year period. The Panel agreed that this should apply to all drugs listed in Section 5A (1) and (2) and should also apply in consideration of Section 4 of the Road Traffic Act 1988. The Panel agreed the driver will join the scheme that applies to the second conviction.

11. **Having been disqualified by order of a court upon conviction with a blood drug concentration above the Section 5A specified limit *<u>or</u>* in consideration of Section 4 of the Road Traffic Act 1988 <u>and</u> BAC <u>over the specified limit</u>: *Single offences with a single* <u>drug</u> *(or multiple)* <u>over the specified Section 5A limit *or*</u> in consideration of Section 4 of the Road Traffic Act 1988 <u>AND</u> alcohol concentration detected over the specified limit in England and Wales. Where convicted in Scotland and Northern Ireland, the alcohol concentration detected would have been over the specified limit <u>as if the offence had been committed in England and Wales</u>.***

For instance, the detection of **cannabis (THC)** over Section 5A legislation specified limit of 2 µg/L and a blood alcohol concentration that equalled or exceeded 35 µg/100mL breath, or 80 mg/100mL blood, or 107 mg/100mL urine would satisfy this criterion.

12. ***Road-side drug screening currently consists of an oral fluid test for cocaine/ BZE and cannabis (THC). In light of the evidence for recreational drug use and polysubstance use in the driving population in England and Wales it is recommended that the Department for Transport should <u>debate the expansion of the testing panel for road-side drug screening, as well as explore the possibility of evidential testing at the road-side</u>***

13. **Having been disqualified by order of a court upon conviction of driving under the influence of three or more drugs (polysubstance use) including alcohol: <u>That is, single *offences with 2 or more drugs (*</u>from different drug families) *detected <u>above the specified Section 5A limit AND BAC ≥ 50 mg alcohol/100</u>***

***mL blood*, or ≥ 67 mg alcohol/100 mL urine or breath alcohol 22 µg/100 mL breath.**

OR Single *offences with 2* or more drugs *(*from different drug families) detected in consideration of Section 4 of the Road Traffic Act 1988 *AND BAC ≥ 50 mg alcohol/100 mL blood* or ≥ 67 mg alcohol/100 mL urine or breath alcohol 22 µg/100 mL breath.

OR Single offences with one or more *drugs (*from different drug families) *detected above the specified Section 5A limit and* single *offences with one* or more drugs *(*from different drug families) detected in consideration of Section 4 of the Road Traffic Act 1988 AND *BAC ≥ 50 mg alcohol/100 mL blood* or ≥ 67 mg alcohol/100 mL urine or breath alcohol 22 µg/100 mL breath.

The Panel agreed that Section 5A or Section 4 offences committed following polysubstance use should be a criterion for acceptance onto the HRO drug-driving scheme. This was because of the high level of risk of having a RTC when under the influence of any drug listed in Section 5A (1) and (2) as well as in consideration of Section 4 of the Road Traffic Act when alcohol had also been consumed. For instance:

- THC and cocaine detected over the specific Section 5A limit and alcohol detected at BAC ≥ 50 mg alcohol/100 mL blood.
- The presence of gabapentin and mianserin (in consideration of Section 4 of the Road Traffic Act 1988) in a driver who also has BAC ≥ 50 mg alcohol/100 mL blood would apply.
- The presence of the benzodiazepine Oxazepam (in consideration of Section 5A) and promethazine (in consideration of Section 4 of the Road Traffic Act 1988) would also apply

The presence of cocaine and BZE detected together in blood in consideration of Section 5A and BAC ≥ 50 mg alcohol/100 mL blood would not qualify under this criterion.

14. **Having been disqualified by order of a court upon conviction for drug-impaired driving in consideration of Section 4 of the Road Traffic Act for Section 2A (if legislation allows) and Section 3A (careless) drug-driving offences**:

The Panel agreed this would apply to s*ingle or multiple offences* where evidence of impairment was proven through Section 4 of the Road Traffic Act 1988. This would include, causing death by careless driving while unfit through drugs *(CD50)* or fulfilling criteria for Section 2A (dangerous driving, if the legislation permits) and driving in a way that would be dangerous due to the influence of drugs should be a criterion for the High-Risk Offender scheme.

15. It is recommended that the HRO drug-drivers scheme follows the process for relicensing that is currently used for the HRO scheme for drink-drivers

That is, drivers will need to demonstrate abstinence from problematic drug use: that they are not a persistent drug user. There is currently a mechanism for doing this through a medical examination whereby a driver is permitted one month to provide an objective biological test (urine drug screen) for assessment. It is proposed that medical examination and the completion of a questionnaire would also take place.

16. **It is recommended that the Department for Transport work with:**
    a. **Forensic Science Providers to collate and regularly review both Section 5A and Section 4 data**
    b. **CPS/Courts/DVLA to assimilate data on all offence codes related to drink and drug driving on an annual basis**

This is to maintain an up-to-date picture of current drug-driving trends to ensure that the legislation remains reflective of current risk and that the roadside screening capability aligns to this.

17. **It is recommended that the Department for Transport continue to support research and innovation in drug-driving**

A particular area of interest would be in seeking solutions for evidential testing at the road-side. This would help ensure dangerous drivers are tested at the earliest opportunity and improve the likelihood of detecting all substances in the body at the time of the driving incident (see Annex 1 at the end of this document).

Other observations/considerations

The Panel was aware of separate work ongoing concerning the alcohol rehabilitation scheme and hope the review will consider the recommendations for a high-risk drug driver scheme in its deliberations.

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Annex 1

Implementation to future proof the HRO scheme for drug-drivers

Potential future developments in scientific capability and technical feasibility in the area of drug testing pertinent to drug-driving

Initial roadside drug screening

The Panel has shown that a growing road safety risk is the use of more than one psychoactive substance at one time, with drivers using combinations of drugs (particularly alcohol use with illicit substances) listed in the Section 5A legislation. The High-Risk Offender Scheme Panel noted the need for balance in weighing up the practicalities of implementing the HRO scheme for drug-drivers against removing dangerous drug-drivers from our roads in such a way as to future proof the scheme so that it would not become quickly out-dated. Mindful of the advances in drug-testing the Panel encourage the Department for Transport to continue to support research and innovation in drug-driving, including the development of mobile drug testing technologies. This would benefit stakeholders such as the police in ensuring that dangerous drivers are tested at the earliest opportunity.

The Panel recommend that the Department for Transport should work with Forensic Service Providers to synthesise and regularly review both Section 5A and Section 4 drug-drive data to maintain an up to date picture of current drug driving trends. This will help to ensure that legislation remains reflective of current risks; and that the screening capability remains aligned to this. A regular review of the substances being found in the drug-drive population will help mitigate against the risk that processes become less relevant through a changing drugs landscape and displacement to other substances. The Department for Transport could also keep under surveillance changes in other jurisdictions for potential improvements in their practice of monitoring and deterring drug and drink driving. Attention to roadside screening is particularly important given that only two drugs are screened for at present. Prevalence data suggests that amphetamine-type drugs like MDMA (ecstasy) in the 16-24 age group and ketamine may be more likely to be used by the general population in 2020 than they were when the legislation was introduced (CSEW, 2018/2019) [1].

There is also some evidence from the Risk Solutions evaluation of the drug driving legislation that driving occurs under the influence of a range of drugs [2], and data from reported road casualties contributory factor (CFs) data suggests that increasing numbers of serious RTCs involve drivers under the influence of illicit or medicinal drugs [3] (Table 12). Table 12 shows that all accidents with drug use as a contributing factor have increased twofold between 2013 and 2018: including fatalities. All this suggests that there would be a safety benefit from expanding roadside screening. There is existing technology that utilises a wider panel of drugs and testing a wider panel of drugs at the roadside would ensure continuation in the 'duty-of-care' responsibilities that the police and other stakeholders have. Comprehensive and up-to-date review of the drugs found in the drug-driving population, through regular assimilation and evaluation of both Section 4 and Section 5A data is warranted: the 5-year anniversary of the Section 5A legislation will occur in March 2020. This type of activity will be essential in continuing to deliver effective road-safety capability.

Table 12. Drivers/Riders impairment by drugs (illicit or medincal) obtained from reported road casualties Contributory Factor (CF) data (https://www.gov.uk/government/statistical-data-sets/ras50-contributory-factors#contributory-factors-for-reported-road-accidents-ras50---excel-data-tables)

Driver/Rider impaired by drugs (illicit or medicinal)- CF data								***Number / %***
	Fatal accidents		Serious accidents		Slight accidents		All accidents	
	Number	%	Number	%	Number	%	Number	%
2018	80	*5*	404	*2*	837	*1*	1,321	*2*
2017	96	*7*	351	*2*	704	*1*	1,151	*1*
2016	81	*6*	336	*2*	637	*1*	1,054	*1*
2015	62	*4*	259	*2*	560	*1*	881	*1*
2014	47	*3*	197	*1*	440	*0*	684	*1*
2013	31	*2*	181	*1*	382	*0*	594	*1*

Evidential testing

Currently, to prove a drug-driving offence has taken place an evidential blood sample is collected from the driver to determine whether a drug is above a pre-determined cut-off. In 2017, the Department for Transport to determine if other matrices could be used for evidential testing set up an Expert Panel. The 2017 Department for Transport Panel on 'Alternative matrices for evidential testing' determined that whole blood continues to be the most appropriate tool for evidential testing where a *per se* threshold approach is required

Oral Fluid: Although Oral Fluid had some potential as an evidential matrix in Great Britain and Northern Ireland this capability was thought best suited to when a 'zero tolerance' approach was used e.g., for illicit drugs. However, legislative changes would be required as currently, legislation only provides for the use of blood and urine as evidential matrices. In addition, certain practicalities would need to be overcome. For instance, some commercial test devices do not collect sufficient volume to allow computation of uncertainty data for all the drugs of interest to satisfy the criminal justice system;

a) The sample collection kit and the OF collection tube would need to meet minimum standards for preservative, stabiliser and buffer;
b) Storage and transportation of samples would need to be monitored and controlled

The 2017 DfT Panel that examined the evidence for oral fluid established that, the introduction of oral fluid as a confirmatory matrix for a strict liability offence would need consideration of a new set of legal limits in oral fluid. Potential contamination challenges when interpreting results (e.g. contamination of the oral cavity when drugs are ingested or insufflated) would need to be determined. In addition, the large reported variability in blood: oral fluid conversion factors for different drugs would pose a significant barrier to translating blood drug concentrations into corresponding concentrations in oral fluid. Australian authorities use oral fluid to carry out evidential testing. However, they use a 'laboratory bus' at the sampling site with sophisticated equipment for confirmatory purposes, which may be difficult to implement elsewhere and work with a much smaller list of regulated substances compared to those in the Section 5A legislation.

Dried blood spots (DBS): DBS technology has since significantly improved over the last 5 years suggesting this is an area worth revisiting. Gaugler et al has described an automated forensic routine DBS drug screening for workplace testing [4]. The use of DBS offers several advantages over existing methodology due to reduced costs and ease of sample collection. Laboratory analysis has previously involved many steps, such as the preparation of standards (STD), establishing QC samples in blood and the preparation of the spots themselves. However, automation has made DBS bioanalysis much more desirable [5].

Technological improvements have included moving away from "spotting" a small volume of whole blood (5-100 µL) from a finger "prick" onto a piece of filter paper to micro-sampling (such as Volumetric Absorptive Microsampling (VAMS, Mitra, Neoteryx), which is reportedly more accurate with a consistent volume of blood (regardless of the blood haematocrit percentage), facilitating accurate quantitative analysis [6-8]. Acceptability of the test has been widely proven in the treatment of diabetes and in paediatrics.

Since whole blood is well known to be the best matrix for providing information about driving under the influence of drugs DBSs should be advantageous in providing time relevant information about drug concentrations in the body for driving offences that cannot be easily achieved by oral fluid and urine. Other advantages include that more than one sample can be collected from one collection point; there is generally no requirement for refrigeration and postal, or courier, with no reasonable expectations of occupational exposure to blood or other potentially infectious dried-blood materials, can ship the specimens. The ease of sample collection and micro-sampling technique may make DBS a suitable option for use at the roadside for evidential testing.

Breath: The use of breath for evidential drug-driving tests has been explored in Sweden, initially with the Sensabues device, which has been employed by Swedish transport police as a novel method to detect non-volatile substances by collecting an exhaled breath biological sample for laboratory-based analysis of illicit substances. Breathexplor is another similar device that has the advantage of collecting screening plus evidential samples at one time (**https://breathexplor.com/).** The ease of sample collection and micro sampling suggest that exhaled breath may be a suitable option for use at the roadside for evidential testing. However, as for oral fluid the introduction of a breathalyser for drug-driving would need consideration of a new set of legal limits, piloting of

instruments and legislative change. In addition, for interpretation purposes the need to understand the kinetics of exhaled drugs.

Interstitial Fluid (ISF): ISF has recently come to prominance as a biological fluid that could be used as an alternative to blood for biomedical applications such as drug testing [9]. Microneedles have been propsed as a minimally invasive techniuque for sampling the dermal ISF as an alternative to blood matrices with potential for real-time testing applications [10]. Cambridge Medical Technologies (CMT) are reported to be developing a handheld device to monitor alcohol levels (https://www.envestors.co.uk/cambridge-medical-technologies-blood-testing-transforms-the-medical-industry/). However, as for other novel approches the physiology of ISF is as yet poorly understood and its use for drug-driving would need consideration of a new set of legal limits, piloting of sample collection techniques and legislative change

Latent Fingerprints/marks: Latent fingerprints have been used to screen for drugs of abuse using lateral flow immunoassay methods. Hudson et al. (2018) successfully identified Δ9-tetrahydrocannabinol (THC), amphetamine, opiates and cocaine in deceased individuals. The ease of collection and speed to test result suggest this technique may be suitable for road-side testing. At present results need to be confirmed using UHPLC-MS/MS [11, 12]. This technique would also require a new set of legal limits, legislative changes and further investigation for use in a judicial environment.

The Panel encourages the Department for Transport to initiate research and technological development in drug-driving particularly around evidential testing. Technological advances in the field are fast moving and application of a simple, cost effective tool for confirmation of the initial drug screen would benefit society in ensuring that dangerous drivers are appropriately removed from our roads.

The Department for Transport could helpfully reassess the recommendations from the 2017 Panel report ‘Alternative matrices for confirmatory tests’ particularly its section on ‘blue-sky’ projects. Opportunities should be explored to assess whether DBS, exhaled breath and other innovative techniques could be used at the roadside with possible commissioning of trial or pilot studies**.**

Relicensing drivers who are placed on the High-Risk Offender scheme

Consideration will need to be given to relicensing drug-drivers if they are to be placed on a HRO scheme and how they will demonstrate that they are safe to return to driving. The HRO scheme for drink-drivers has procedures in place for doing this through the DVLA. For relicensing purposes, a driver must undertake a medical examination and provide a blood for assessment. A driver is permitted one month to provide the biological sample for assessment and a questionnaire and medical examination take place. It is envisaged that a similar scheme would work for the HRO scheme for drug-drivers. Other jurisdictions use hair analysis (e.g., Germany) but they have a central laboratory funded by the government for this purpose and require drivers to attend the laboratory to provide a hair sample under controlled conditions. The DVLA also uses urine to assess drug-drivers in Great Britain. Discussions around what other types of samples could be permitted for relicensing assessments should include the ease and cost of implementation of such tests by the DVLA.

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