Preventing death and injury caused by LGV and PSV drivers falling asleep at the wheel – the case for a joined-up approach by Government

1. This document highlights the dangers of sleep apnoea amongst professional drivers and the need for stronger action to control it. It is organised as follows:

   - **BACKGROUND** (paragraphs 2–4) describes 9 fatalities in 4 recent road accidents in which sleeping drivers of large goods vehicles crashed into and killed other road users.
   - **THE PROBLEM** (paragraphs 5–16) presents a brief overview of sleep apnoea and its prevalence and consequences; a description of the legal requirements placed on drivers in relation to medical fitness to drive; an outline of current inconsistencies in relation to how sleep apnoea is handled in criminal prosecutions of drivers; and an overview of government and industry policy on sleep apnoea.
   - **A NEW APPROACH TO TACKLE THE PROBLEM** (paragraphs 17–27) presents a wide range of actions that government agencies and employers of large goods vehicle (LGV) and public service vehicle (PSV) drivers should take; these should, taken together, go a long way to lessen the chances of ordinary road users being killed or injured by a driver suffering from sleep apnoea.
   - A **SUMMARY** can be found in paragraphs 28–35.

BACKGROUND

2. On 1 August 2005 Alice-Anne Fuge, Nestor Siles and Jessie McCann were killed on the A82 near Alexandria, Scotland, by an LGV driven by Colin Kane. On 21 July 2006 Malcolm, Janice, Richard and George Dowling were killed on the A34, near Bicester, by an LGV driven by Ian King. On 8 August 2006 Toby Tweddell was killed while waiting in a traffic queue at the M62 Rocket Interchange, Merseyside, by an LGV driven by Colin Wrighton. On 14 April 2007 Leonard Nicholls was killed on the A48, Eastern Avenue, Cardiff, by an LGV driven by Hayden Bailey.

3. In every case the driver of the LGV – each of whom suffered unknowingly from sleep apnoea – had fallen asleep at the wheel. Kane, King, Wrighton and Bailey were all prosecuted for causing death by dangerous driving. The outcomes of the four cases differed.

4. On 1 October 2007, just prior to the case coming to court, the Crown Prosecution Service (CPS) decided to offer no evidence against Wrighton, who was acquitted.[1] On 12 October 2007 a Scottish jury found the case against Kane unproven, guided by the judge who reportedly told the jury that if Kane had an attack of sleep apnoea but had no way of knowing he would suffer such an attack he could not be held responsible. In contrast, on 7 December 2007, King was convicted by the jury at Oxford Crown Court, and jailed for 3 years and 9 months on 11 January 2008, and on 23 February 2008, Bailey pleaded guilty and was sentenced to 10 months in jail with a 3-year driving ban.

THE PROBLEM

Sleep apnoea

5. Sleep apnoea is the most common of a wide range of medical conditions which can produce poor sleep quality. Sufferers are starved of oxygen during the night. They awake momentarily many times each night, without being aware of this, and as a result they experience waking symptoms ranging from general drowsiness and tiredness, difficulties in concentrating, through to sudden falling asleep.

6. The risks associated with driving while suffering from sleep apnoea are well known from published research. Good summaries of this research can be found in *Sleep apnoea and road accidents* (2003) produced by the Royal College of Physicians of Edinburgh and the Royal

[1] The reason for the CPS offering no evidence was that Wrighton had been diagnosed (after the accident, and in the process of preparing his defence) as suffering from sleep apnoea. Wrighton had several times consulted his GP in the previous few years about tiredness, but sleep apnoea had never been diagnosed.

College of Physicians and Surgeons of Glasgow,[2] and the *Sleep SOS Report: The Impact of Sleep on Society* (2004),[3] produced by the Sleep Alliance.[4]

7. In brief, international research studies into sleep apnoea have established that:

   - around 4% of middle-aged men – about 500,000 people in the UK – suffer from sleep apnoea;[5, 6]
   - partly as a result of the sedentary nature of their jobs, there is a significant incidence of obesity amongst professional drivers, and approximately 50% of sufferers from sleep apnoea are obese (see note 6). As many as 1 in 6 professional drivers are estimated to be suffering from undiagnosed sleep apnoea;[7]
   - sufferers from sleep apnoea have been shown to be 6–15 times more likely to have a road traffic accident than those without the condition;[8] and in simulated driving performance tests, sleep apnoea sufferers score worse in terms of hazard awareness and reaction times than test subjects who are drunk;[9]
   - 20% of motorway accidents in the UK are caused by sleepiness[10] and the death toll from these accidents is three times higher than in other accidents; drivers who are asleep do not swerve or apply their brakes to take avoiding action.[11]

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[2] http://www.behindthemedicalheadlines.com/articles/sleep-apnoea-and-road-accidents last accessed 23/3/2008.

[3] http://www.sleeping.org.uk/news/documents/SOSreport_pages_29.06.04.pdf last accessed 23/3/2008.

[4] The Sleep Alliance was formed in 2004 as an umbrella group of stakeholders and organisations with an interest in sleep and the consequences of excessive sleepiness. It launched the Sleep SOS Report on 1 July 2004 at Somerset House in London, but seems since then to have been quiescent.

[5] Stradling, J.R. and Crosby, J.H., 'Predictors and prevalence of obstructive sleep apnoea and snoring in 1001 middle-aged men', *Thorax*, 1991:46, pp. 85–90; Young, T., Palta, M., Dempsey, J., Skatrud, J., Weber, S. and Badr, S., 'The occurrence of sleep-disordered breathing among middle-aged adults', *New England Journal of Medicine*, 1993:328, pp. 1230–35; Bearpark, H., Elliott, L., Grunstein, R., Schneider, W., Althaus, W., et al., 'Snoring and sleep apnoea: A population study in Australian men', *American Journal of Respiratory and Critical Care Medicine*, 1995:191, pp. 1459–65; Jennum, P. and Sjol, A. 'Epidemiology of snoring and obstructive sleep apnoea in Danish population age 30–60', *Journal of Sleep Research*, 1992:1, pp. 240–44.

[6] Young, T., Palta, M., Dempsey, J., Skatrud, J., Weber, S. and Badr, S., 'The occurrence of sleep-disordered breathing among middle-aged adults', *New England Journal of Medicine*, 1993:328, pp. 1230–35.

[7] Howard, Mark E., Desai, Anup V., Grunstein, Ronald R., Hukins, Craig, Armstrong, John G., Joffe, David, Swann, Philip, Campbell, Donald A. and Pierce, Robert J., 'Sleepiness, Sleep-disordered Breathing, and Accident Risk Factors in Commercial Vehicle Drivers', *American Journal of Respiratory and Critical Care Medicine*, 2004:170. pp. 1014–21.

[8] Findley, L.J., Unverzagt, M.E., Suratt, P.M., et al., 'Automobile Accidents Involving Patients with Obstructive Sleep Apnoea', *American Review of Respiratory Disease* 1988:138, pp. 337–40; Teran-Santos, J., Jimenez-Gomez, A. and Cordero-Guevara, J., 'The association between sleep apnoea and the risk of traffic accidents', *New England Journal of Medicine* 1999:340, pp. 847–51; Horstmann, S., Hess. C.W., Bassetti, C., Gugger, M. and Mathis, J., 'Sleepiness-Related Accidents in Sleep Apnoea Patients', *Sleep*, 2000:23, pp. 1–7.

[9] George, C.F., Boudreau, A.C. and Smiley, A., 'Simulated driving performance in patients with obstructive sleep apnoea', *American Journal of Respiratory and Critical Care Medicine*, 1996:154(1), pp. 175–81.

[10] Horne, J.A. and Reyner, L.A., 'Sleep-related vehicle accidents', *British Medical Journal*, 1995:310, pp. 565–7.

8. In 1999 the Task Force of the European Respiratory Society[12] pointed out the prevalence of sleep apnoea amongst professional drivers, and the consequent high risk (and high actual rate) of accidents caused. Their report highlighted the need for uniformly accepted regulations concerning driver licensing, with a shared responsibility between the physician, patient and licensing authority.

9. At present, sufferers from sleep apnoea tend to under-report difficulties when driving,[13,14] perhaps understandably as they have risked losing their licence and livelihood. Drivers should now be less concerned about this risk because the National Institute for Health and Clinical Excellence (NICE) recommended on 26 March 2008 that treatment for sleep apnoea using continuous positive airway pressure devices (CPAP) should be available throughout the NHS.

10. Delay in investigation and treatment can currently be up to four years, and around 90% of possible sleep apnoea sufferers remain undiagnosed and untreated[15] despite the publication of Guidelines in 2003[16] (for Scotland , at least) to assist medical practitioners in providing effective treatment for sleep apnoea. The Guidelines note a large and increasing demand for sleep service facilities, but a significant variation across the UK in diagnosis and treatment availability.

What the law requires

11. All applicants and re-applicants for LGV and PSV licences must complete a medical examination report (DVLA Form D4) with their General Practitioner. This form contains the questions “does the applicant have sleep apnoea syndrome?” and “is there any other medical condition causing excessive daytime sleepiness?” These questions are obviously not adequately identifying sleep apnoea sufferers.

12. If any PSV or LGV licence holder has a medical condition which has become worse since their licence was issued, or if a driver develops a new medical condition, the driver must inform the Drivers Medical Group at DVLA of their condition. Failure to do so is a criminal offence and is punishable by a fine of up to £1000.

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[11] Royal Society for the Prevention of Accidents (RoSPA), ‘Driver Fatigue and Road Accident: a Literature Review and Position Paper’, 2001.

[12] McNicholas, W.T., ‘Sleep Apnoea and driving risk’, editorial of *European Respiratory Journal*, 1999:13, pp. 1225–7.

[13] Engleman, H.M., Hirst, W.S. and Douglas, N.J., ‘Under reporting of sleepiness and driving impairment in patients with sleep apnoea/hypnopnoea syndrome’, *Journal of Sleep Research*, 1997:6, pp. 272–5.

[14] See Baroness Gibson’s speech in the House of Lords referenced in footnote 17 below.

[15] Douglas, N., *Sleep apnoea and road accidents*: http://www.behindthemedicalheadlines.com/articles/sleep-apnoea-and-road-accidents

[16] Scottish Intercollegiate Guidelines Network, ‘Management of Obstructive Sleep Apnoea/Hypopnoea Syndrome in Adults’, 2003: http://www.sign.ac.uk/pdf/sign73.pdf last accessed 23/3/08.

13. According to the current DVLA *At a glance guide for medical practitioners to the current medical standards of fitness to drive*,[17] sufferers of sleep disorders, including sleep apnoea, causing excessive daytime/awake time sleepiness, must cease driving until satisfactory control of symptoms has been attained; and ongoing treatment must be confirmed by consultant/specialist opinion. Subsequently, a regular, normally annual, licensing review is required.

Court cases involving sleep apnoea

14. When an accident is caused by a driver suffering from undiagnosed sleep apnoea, there is no consistency in how this is treated in criminal proceedings. In some areas it seems that the relevant CPS office would always advocate proceeding with a prosecution, leaving the jury to decide on the strength of the medical evidence; in other areas prosecutions are dropped when the defence produces medical evidence that the defendant was subsequently found to be suffering from sleep apnoea. The picture is made even less clear because members of the medical profession differ in their opinions about whether or not sleep apnoea causes sudden sleep without warning; and because the condition affects sufferers in different ways.

Government and industry policy

15. There is an apparent complacency about the problem in Government. For example, in response to a letter from Meg Munn MP[18] of 9 October 2007, Jim Fitzpatrick, Parliamentary Under Secretary of State in the Department for Transport, stated that "measures have already been put in place to address any risk posed". In March 2006 an attempt was made by Baroness Gibson of Market Rasen to introduce an amendment about sleep apnoea into the Road Safety Bill.[19] This was countered by the Government's Lord Davies of Oldham who stated:

    "*We rely on educating drivers about the risks, but the police can take action and prosecute irresponsible drivers who drive carelessly or dangerously because they are sleepy. The courts take this issue seriously. Falling asleep at the wheel is treated as an aggravating rather than a mitigating factor when considering sentencing in respect of accidents that have occurred through careless or dangerous driving.*"

16. Whilst some major businesses in road and passenger transport do take sleep apnoea seriously,[20] we are not aware of any example of a company routinely testing its drivers for sleep apnoea,

[17] http://www.dvla.gov.uk/media/pdf/medical/aagv1.pdf last accessed 5/1/2008.

[18] Toby Tweddell's uncle is Meg Munn's constituent.

[19] http://www.theyworkforyou.com/lords/?id=2006-01-10c.61.0&s=apnoea+hgv#g105.1 last accessed 5/1/2008.

[20] 16 companies (out of 30 approached) replied to an enquiry made in December 2007 by Nic and Monica Tweddell concerning the company's approach to the problem of sleep apnoea. Industry practice varies widely and in no case was

and the general attitude (in the road-haulage industry at least) is one of complacency, with, for example, no mention of sleep apnoea, at the time of writing, on the Road Haulage Association's information-packed web site, and no reference to sleep apnoea in the syllabus of the Certificate of Professional Competence (CPC) in Road Haulage.[21]

A NEW APPROACH TO TACKLE THE PROBLEM

17. Section 3 of the 1974 Health and Safety at Work Act requires employers (and the self-employed) to ensure that non-employees (e.g. the general public, contractors and contract staff) do not have their health and safety adversely affected by work activities. A driver with undiagnosed sleep apnoea is "an accident waiting to happen". Thus bus and coach operators, and transport and logistics companies, either as employers of drivers, or as users of agency drivers, ought to be playing a major part in preventing sleep apnoea sufferers from being on the road until they have been successfully treated. But to bring this about a fully joined-up approach is needed involving the (at least) 6 Government Departments that have a role to play.

18. The following paragraphs summarise what is required, on a department by department basis.

Department for Transport

19. The Department for Transport, which regulates the issuing and renewal of PSV and LGV licences, needs to tighten up the requirements for identifying potential sufferers of sleep apnoea. In particular, PSV and LGV drivers should regularly be screened for this, and related disorders, and this should be part of their licence requirements. Furthermore, it should be a requirement on road haulage and passenger transport operators for them to have screening processes in place. The syllabus of the CPC in Road Haulage should be improved so that issues associated with sleep apnoea, its identification and treatment, and the rules pertaining to driver licensing are covered.

Health and Safety Executive

20. The Department of Work and Pensions, in dialogue with the Health and Safety Commission, needs to ensure that the Health and Safety Executive (HSE) – with its responsibilities for minimising work-related death and injury, and with its powers to insist on action by employers

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compulsory testing and/or treatment of drivers for sleep apnoea the norm; nor is there yet any significant use of technical systems to detect driver sleepiness.

[21] The Traffic Commissioners (the issuing authority for operator licences) require professional competence to be demonstrated by at least one member of the management team of a road-haulage business that operates vehicles with a gross plated weight of more than 3.5 tonnes or vehicles which are not plated and which have an unladen weight of more than 1525 kg. One way of demonstrating this competence is by the designated member of the management team achieving the Certificate of Professional Competence in Road Haulage.

to prevent risks to non-employees (that is, road users at risk from drivers suffering from sleep apnoea) – plays a much more prominent role in relation to work-related fatal road-traffic accidents and their prevention. In particular, HSE should be working on the introduction of legislation, if necessary on a European basis, on compulsory testing of professional drivers for sleep apnoea.

21. The HSE should ensure, with employers and the trade unions, that proper and thorough publicity is given to the problem of sleep apnoea and the measures needed to deal with it throughout the road haulage and passenger transport industries. In this regard the HSE's two main official guides, *Health and safety in road haulage*[22] and *Managing work-related road safety*,[23] and in *Work-related road traffic incidents: an explanation of the circumstances where HSE may have a role to play*,[24] make scant, if any, reference to the problems of sleep-related accidents. HSE therefore has much work to do.[25]

22. Finally, the Reporting of Injuries, Diseases and Dangerous Occurrences Regulations (RIDDOR) should be amended to make work-related road traffic accidents causing fatalities or serious injuries reportable to HSE. Firstly, this will emphasise to employers the importance Government attaches to employer action to reduce risk. Secondly, it will result in more complete evidence upon which to base policy and to judge its effectiveness. Thirdly, it will avoid any tendency for HSE staff to treat incidents that are not covered by RIDDOR as "someone else's responsibility". As a minimum, all fatal accidents involving someone who is at work should be investigated by the HSE.

Department of Health

23. The Department of Health, which funds and shapes the work of medical practitioners, needs to ensure that those involved in the diagnosis of sleep apnoea are well briefed about the problem, its symptoms, its serious implications (particularly when the sufferer drives for a living), and on the importance of getting sufferers tested and off the road until their condition has been treated, with consideration given to making it a responsibility of GPs to report on their diagnosis to the Department for Transport rather than this being solely the responsibility of the driver. (The Wrighton case offers an example: on at least two occasions in the years prior to the accident, Wrighton had complained to his GP of tiredness, but sleep apnoea had not been diagnosed.)

[22] http://www.hse.gov.uk/pubns/indg382.pdf last accessed 5/1/2008.

[23] http://www.hse.gov.uk/pubns/indg379.pdf last accessed 5/1/2008.

[24] http://www.hse.gov.uk/foi/internalops/fod/om/2003/103.pdf last accessed 5/1/2008.

[25] In particular, paragraph 3 of the Appendix to this document, which currently states that "HSE inspectors should generally not seek involvement with work-related road traffic accidents arising from driving activities" … and that "inspectors should generally presume that the police have a better locus for dealing with the issue involved".

24. A relatively cheap and now widely available screening tool for sleep apnoea is the pulse oximeter, which can be used overnight at the patient's home rather than in a sleep laboratory. It is estimated that, with experienced interpretation, this tool can identify significant sleep apnoea in 80–90% of cases. Having recently made a recommendation on the availability of treatment, NICE needs now to recommend the general availability of diagnosis for sleep apnoea.[26]

Home Office

25. The Home Office, which oversees the performance and practices of the police, needs to ensure that police forces operate consistently in respect of sleep-related road traffic accidents, and that there is effective liaison between the police, HSE and CPS, in line with the protocol for liaison referred to in the previous paragraph.[27]

Attorney General's Department

26. The Attorney General's Department, because of its responsibility for the policies of the Crown Prosecution Service, needs to ensure: firstly that there is consistency in prosecution policy concerning fatal crashes involving sleep apnoea; secondly that the document *Work-related deaths: A protocol for liaison* (February 2003)[28] is properly followed whenever a work- and sleep-apnoea-related fatal road traffic accident occurs.

Ministry of Justice

27. The Ministry of Justice, which oversees the legal environment in which dangerous driving cases are considered, needs to ensure that cases are, if proven, dealt with severely and consistently with other road traffic law.

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[26] The 26/3/2008 guidance from the National Institute for Health and Clinical Excellence (NICE) http://www.nice.org.uk/media/E5F/1E/2008023SleepApnoea.pdf (last accessed 26/3/2008) on the use of continuous positive airways pressure (CPAP) devices to treat obstructive sleep apnoea goes some way to addressing the problem of treatment, but not the problem of diagnosis.

[27] A Freedom of Information (FOI) request to HSE and CPS (in England and Scotland) has established that there was no liaison between the CPS and HSE or between the police and the HSE in respect of the 4 cases described above. A previous FOI enquiry concerning police/HSE liaison following fatal road traffic accidents involving LGVs and PSVs indicated that HSE retains no paper or electronic records relating to referrals of accidents to the HSE by the police, nor any paper or electronic records relating to investigations by HSE of road traffic accidents involving PSVs or LGVs whose drivers were believed to have fallen asleep at the wheel.

[28] http://www.cps.gov.uk/publications/agencies/wrdprotocol.html last accessed 5/1/2008.

SUMMARY

The problem

28. On the Government's own figures, about 1 in 5 road accidents on motorways and similar roads is caused by falling asleep at the wheel.
29. Accidents caused by falling asleep at the wheel are 3 times more likely to cause death or serious injury than other causes of accident because drivers who are asleep do not swerve or apply their brakes.
30. At least 300 road deaths every year in the UK are caused by falling asleep at the wheel.
31. The medical condition sleep apnoea causes excessive tiredness, which can lead to falling asleep at the wheel.
32. In tests, sleep apnoea sufferers score worse in terms of hazard awareness and reaction times than test subjects who are drunk.
33. As many as 1 in 6 professional drivers may be suffering from undiagnosed sleep apnoea.

The remedy

34. Identification of sleep apnoea sufferers, especially among professional drivers. Achieved by:
    - Compulsory testing for sleep apnoea of all applicants (and re-applicants) for LGV and PSV licences. (Department for Transport action)
    - Requiring employers in the road haulage and passenger transport industries to identify sleep apnoea sufferers among their drivers as part of their responsibilities under the Health and Safety at Work Act. (Health and Safety Executive action)
    - Improved briefing of medical practitioners involved in the diagnosis of sleep apnoea. (Department of Health action)
35. Consistent treatment of prosecutions for causing death by dangerous driving which involve falling asleep at the wheel. Achieved by:
    - Consistent action by the police in dealing with sleep-related road traffic accidents, and effective liaison between the police, HSE and CPS. Work-related road fatalities brought within RIDDOR. (HSE, Home Office, and Attorney General Department action)
    - Consistent prosecution policy by the Crown Prosecution Service throughout the country. (Attorney General's Department action)
    - Consistent sentencing policy. (Ministry of Justice action)

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