The Hazards Forum Newsletter

Issue No. 63
Summer 2009
Hazard Forum Newsletter

Issue No. 63 - Summer 2009

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Edited by Dr John Bond

Views expressed are those of the authors, not necessarily of the Hazards Forum

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Hazards Forum Secretary – Brian Neale

June 2009
HAZARDS FORUM AGM

2009

The Annual General Meeting this year was held on Tuesday 10th March at One Great George, London, the home of the Secretariat of the Hazards Forum and also of the Institution of Civil Engineers, commencing at 17.00 hrs.

The meeting was chaired by the Hazards Forum chairman, Sir David Davies, who welcomed the members attending.

The Annual Report of the Trustees for the Forum for 2008 was available. Sir David began by explaining that at the start of 2008, there had been a meeting to discuss the Hazards Forum’s objectives. Following this discussion, it was agreed that no change should be made, and that these would remain as they stood in the Annual Report for 2007. It was added further that the Hazards Forum was established to bring professionals together. Hazards Forum did not claim to be an expert body itself, but more as a Forum for well informed professionals brought together to discuss and disseminate experiences for the mutual benefit of the professions.

He continued with a brief summary of some of the highlights from the year, including mention of the evening events and giving an outline account of the Forum’s finances for the year. He stated that details were, of course, in the report. The independent annual reviewer (or examiner) of the accounts, Alexander Bierrum, had stated that from his review he was satisfied with the accounts and was duly thanked in his absence. The meeting signified it’s satisfaction with the accounts. The Chair added that the signed report would be sent to the Charity Commissioners with the annual return for 2008.

Mentioning staff changes, he thanked Alison Brown in her absence, who had left the Secretariat towards the end of the year. In her place he welcomed Adam Kirkup and took the opportunity to thank Jason Simpson who had just completed his first year looking after the accounts.

The Chairman continued his report by mentioning the Executive Committee. He explained that although his term had expired, a suitable successor had not been found, and it was therefore proposed that he should continue in his post for another year. This was put to the membership with the Notice for the AGM and no alternative suggestions were received, hence the Executive Committee were pleased to agree in their meeting prior to the AGM that he should continue in post. One of the key tasks for the next year would be to identify a potential future Chairman.

It was reported that Paul Thomas had been asked to serve on the Committee as a co-opted member. Patrick McDonald would also be joining the Executive Committee as the HSE representative.

Stepping down from the Committee would be Tony Bandle and Ernest Shannon all of whom were duly thanked. Scott Steadman was thanked when he stepped down during the year because of other commitments.

To conclude his report, Sir David expressed the Hazards Forum’s appreciation to Dr John Bond for agreeing to take over the editorship of the Newsletter which he did with the Summer 2008 edition (No. 60). Dr Bond has a long association with the Forum, as does his wife. In addition Sir David acknowledged all the work that the outgoing editor, Dr Ian Lawrenson, had put into the role during the many years he was in post and wished to express the Hazards Forum thanks. For those who may not be aware, said Sir David, Dr Lawrenson was previously secretary of the Hazards Forum and we are pleased to let you know that he will still be involved in Forum activities through both his membership and his continuing link with the Parliamentary & Scientific Committee.

Before a brief discussion, Sir David thanked the remaining members of the Executive Committee for their work during the year and also thanked the Hazards Forum Secretary, Brian Neale, for his continued support and hard work.

The next Annual General Meeting was proposed for 16 March 2010. The meeting closed at 17:30 and was followed by refreshments which were in turn followed by the evening event on Safety when road meets rail: trams, trains and level crossings.

Brian Neale – Secretary, Hazards Forum
SAFETY WHEN ROAD MEETS RAIL: TRAMS, TRAINS AND LEVEL CROSSINGS

This Hazards Forum evening event was held on Tuesday 10th March 2009 at the Institution of Civil Engineers in London and sponsored by Institution of Civil Engineers and Bombardier Transportation. Sir David Davies, Chairman of the Hazards Forum and former Chair of the Rail Safety and Standards Board, welcomed everyone as chair of the event. He then introduced the speakers.

The first speaker was Aidan Nelson, a Director of Community Safety Partnerships Ltd, and international expert on level crossing safety who spoke on “Applying a partnership approach to level crossing risk, a strategic opportunity”. He gave some headline statistics of the problem:

Road deaths (2006, source ETSC):
- France 4,709 / 75 per million population
- Germany 5,091 / 62 per million population
- United Kingdom 3,300 / 57 per million population
- Sweden 445 / 49 per million population
- Netherlands 730 / 45 per million population

Level crossing deaths (2004-5, source ERA):
- Sweden 14 / 1.54 per million population
- Netherlands 18 / 1.11 per million population
- France 38 / 0.61 per million population
- Germany 45 / 0.55 per million population
- United Kingdom 7 / 0.12 per million population; 2008 saw 15 deaths on level crossings in Great Britain.

Collisions with road vehicles on level crossings are at or close to being the top train accident risk on railways worldwide and this issue predominates as railways reduce the risks that are within their direct control. Level crossing risks are shared between the transport modes but too often are seen as a railway risk. In the UK there have been a number of catastrophic accidents at level crossings including Hixon (1968), Lockington (1984) and Ufton Nervet (2004). Collisions with road vehicles on level crossings are near the bottom of the risk on the country’s roads and will remain low as the numbers killed on the roads is so high. In the 4.5 years since a train occupant died in a level crossing accident 14,000 have died on the roads.

The key issues are:
- Public attitudes and road user abuse
- Attitude and role of highways authorities
- Attitude and role of planning authorities
- Partnership approaches
- Engineering, Education, Enforcement
- Costs of level crossings / new technology.
- Proportionate & properly targeted recommendations
- International collaboration

There must be clear roles and responsibilities and Sweden has already got it right. It is interesting to note that a train SPAD (Signals Passed at Danger) is news but a road SPAD is not news. There is a differential tolerance of risk, for example, a crossing near a school in the USA is not acceptable but one further away is. The decision making criteria must be clear, must satisfy the law and have a rational basis for going beyond legal duty. It must be risk based, consistent and defensible. These principles when shared are the basis of effective cooperation. There is often a gap between subjective and objective safety both generally and specifically; public agencies, industry and the wider community all have roles to play in closing the gap and achieving a common ground.

At both an institutional level and within society at large, there is an abhorrence of catastrophic rail accidents and particularly accidents which kill young children but there is a societal “tolerance” of common road deaths. This leads to differential investment between road and rail modes and therefore their must be a public policy for investment in both road and rail. Rail has been successful in reducing risk within its direct control but less successful in reducing risk where reduction requires changed public behaviours. In Sweden, there is an equality of treatment of road and rail infrastructure enhancement.

Risk reduction is necessary but there has to be a level playing field with an intermodal agreement between the Rail Authorities, the Road Authorities, the Planning Authorities and the Government. Who pays for any changes has to be agreed with all taking responsibility for their share including training at schools and leaning on those who do not respond.

The next speaker was Simon Fletcher, European Coordinator, of the International Union of Railways (Union Internationale des Chemins de Fer (UIC)), Brussels and was Chair of the Organising Committee, 10th World Level Crossing Symposium, 2008.
He described what UIC did, including their main objectives:

- Facilitate exchange on best practises among members and with other modes
- Support members in their efforts to develop new business opportunities,
- Propose new ways for improving economic and safety performance of the rail network
- Develop Centres of excellence (technology, management and research)

The key issues for UIC in the operational field involving risk were Signals Passed at Danger and Level Crossings. There were new challenges as rail was a vital component of a healthy economy and we needed to understand why level crossing accidents being 28% of rail incidents but are only 2% of road incidents. Collisions with road vehicles generally were the largest or 2nd largest precursor of catastrophic rail accidents. They attract media coverage with potentially substantial impact on the railway. Some 95% of risk at vehicular level crossings arises as a function of road user behaviour with a risk to passengers and public as pedestrians. In 2006, 30% of all the accidents recorded in the UIC’s Safety Database were at level crossings. In 2006 of approx 41,300 road deaths in Europe only 2% occurred at level crossings; but is this a rail issue or a road/rail issue?

In France at Bourg-en-Bresse in December 2007 the vehicle driver was killed and 34 people injured as a result of human error.

In Australia at Kerang (Victoria) on June 2007 human error was again the cause of an accident when the vehicle driver and 11 people were killed and 14 injured in a level crossing accident. Was it a rail or road accident? The UIC Safety database illustrates the scale of the risk but, generally, level crossings are very low down on the road safety agenda. Risk at this public highway interface has to be managed as a shared bi-modal issue. The principle was recognised in December 2003 in the ‘Safety at Level Crossings’ report published by the EU’s High Level Road Safety Group. How can we as the railway community (or family) cause the necessary joined-up thinking so that level crossings move from being a rail issue to becoming a road and rail interface issue?

There are some bright spots with real evidence of strategic cooperation. For example Swedish national rail and roads administrations – OLA model, Direction 2006 in Canada, National bi-modal group in Great Britain, Australia’s Railway Level Crossing Behavioural Coordination Group and Action Group and the Development of a pan-European strategy and action plan. The European Level Crossing Forum (ELCF) meets twice yearly in plenary format and has recently created a steering committee to foster development of the pan-European strategy and action plan.

There must be a focus on relationships and processes to build alliances with other sectors, industry, government, road, rail and law enforcement. The EC roads unit are now getting interested with links to those agencies, authorities and other bodies concerned. One of the core objectives of ELCF is to generate visibility of current sector activity, as well as developing relationships with other sectors such as the insurance sector; such an approach could envisage the development of joint improvement initiatives that demonstrate significant risk reduction and thus encouraging improvement in vehicle insurance premiums to reflect this state. ELCF plan to benchmark community attitudes and behaviour at level crossings in the Member States and identify areas where ground rules have been established to aid development and implementation of education and enforcement. The benefits of joined up programmes to improve safety at all railway level crossings is now seen as value for money. UIC has recognised this and have a resource in place to engage with a range of players from other sectors.

The next step is the date of 25th June 2009 as a European Day of Awareness of Level Crossings. Can we count on you, even if it is to issue the planned joint press release – www.levelcrossing.net for more information?

The final speaker was Brian Brennan of Veolia Transport, Dublin Light Railway Ltd who described the tramway system which carried 80,000 people on average each day. There was 60% off road with 43 road junctions on the Red Line but the Green Line had 90% off road with just 7 road junctions. All works taking place in and around the system, LUAS, requires an authorised work permit from Veolia Transport Dublin. The permit ensures that applicants are aware of the risks of moving trams, contact with the 750V overhead power cables and the risk of diverting pedestrians or motorists into the path of trams.
The frequency of road traffic accidents are:-
- 2004: 17 Events 1 RTA every 58,000 Km
- 2005: 36 Events 1 RTA every 69,500 Km
- 2006: 24 Events: 1 RTA every 100,000 Km
- 2007: 28 Events: 1 RTA every 92,000 Km
- 2008: 32 Events: 1 RTA every 84,000 Km
95% of instances occur on the Red Line with one fatality, but seriousness was decreasing.

Emergency braking has been the main reason for the accidents:-
- 750 in 2006 Cars breaking red lights
- 540 in 2007 Pedestrian walking in front of tram in urban area
- 435 in 2008 Road vehicle on street

Training of our drivers in defensive driving is the key where:-
- they should never anticipate a signal or anticipate that a person or car within the swept path will clear the line, always be prepared to stop.
- speed in the city has to be adapted to take into account high pedestrian density.
- signage should be obeyed

Education of the public is vital with a number of passenger and road safety campaigns. Safety improvements to reduce black spots include:
- Intelligent road studs
- Flashing red light
- Change of traffic management scheme to reduce interaction with Tram as reversing the direction of traffic flow or vehicles restriction
- Yellow box road markings were renewed or extended at critical junction
- LED signals for road vehicles traffic light to increase visibility, installation of louvres for traffic lights
- Anti-skid surface treatment installed
- Flexible bollards installed
- Additional traffic signals and poles
- Regular liaison meetings with the police - An Garda Siochana

Looking forward we have a Safety Forum every six months with the Aim – To put forward all ideas from all parties.

Sir David Davies then called for questions and comments. There was a discussion on related points raised with a number of contributions being with many questions being answered by speakers. The chairman thanked the speakers for their contributions and also those who contributed to the discussion session. He also thanked the co-sponsors. Chris Elliott then made his concluded remarks, thanked all the speakers, closed the meeting and invited those present to join in the networking session which was to follow.

THE ‘SAFETY MOVEMENT’

Today we experience health, safety and risk as a routine part of our lives, whether at home, on the roads or at work. Often the administrative requirements of work safety – risk assessments, safety cases, reports and the like – are seen as an imposition and are disliked. But other aspects of safety are perhaps less intrusive: in particular, safety education, like posters, newsletters and training films. This article will examine the origins of safety education in Britain, a little known but interesting story. It is also highly pertinent to the Hazards Forum, as it deals with what has become the most prevalent methodology for dealing with risk in modern society – providing people with information and then allowing them to decide whether or not to follow the advice.

This is part of my ongoing research into the history of safety, which started with a focus on the Great Western Railway Company (GWR) between approximately 1900 and 1939, and the occupational safety education campaign known as the ‘Safety Movement.’ Given the nostalgia surrounding steam railways today, it is very easy to lose sight of the realities of manual work on the railways – it was dirty, physically demanding, and dangerous. The systems and procedures that workers followed on the steam-age railway have largely disappeared from routine practice. These now-defunct procedures were often written down at the time, so that everyone knew what they had to do: the rule book. Of course, written procedures were not always followed – sometimes there was a quicker or easier way of doing a task.

One excellent source for understanding how workers might have carried out some of their
day-to-day tasks is the Great Western’s ‘Safety Movement,’ introduced in 1913 and intended to show workers safe and unsafe practices. It is interesting for many reasons, not the least of which is that it tells us not only how the management wanted the work to be done, but also how the workers found other ways of doing things. The ‘Safety Movement’ was a pioneering approach to the dangers of railway work, and the GWR led not only the railway industry but the whole country.

So what happened before the ‘Safety Movement’? The situation was pretty grim. In 1900 alone 1,457 GWR employees were injured or killed. The Great Western was not exceptional in this – across the railway industry as a whole, 16,329 workers were injured or killed (this represents approximately 30 injuries and 1.25 deaths per 1000 employees). Clearly railway work was extremely dangerous at the start of the twentieth century. The most dangerous jobs were the manual ones – those working in amongst moving trains (shunters, goods guards, and permanent way men) were particularly vulnerable. The Great Western – as with all of the companies at this time – believed that these deaths and injuries were a result of worker ‘carelessness’ and that workers should look after themselves: the ‘blame culture’ was well established on the railways by 1900.

The GWR did not leave workers entirely to their own devices, however. It issued the rule book, which at least superficially addressed safety: Rule 24(a) told employees: ‘The servants of the Company … must not expose themselves to danger’. Circulars dealing with safety were issued occasionally, often after a severe incident. Neither of these methods were particularly attractive to the workers, though – they had to pay attention to them (continued employment depended upon it). There was no need to make the rule book or circular something that the worker would want to read. Signs were also placed at points of danger – in the engine sheds, or in locations that were too narrow to allow someone to pass between rolling stock and a fixed item like a wall. And of course supervisors, stationmasters and foremen would formally have warned employees about dangers of work and the necessity for safety.

These methods did not seem to have much of an impact on numbers of casualties. In 1913 the GWR suffered 3,415 injuries or fatalities; likewise, across the industry as a whole, nearly 30,000 workers were injured or killed. The railway unions had grown in strength by this point, and were applying pressure to the companies and the government over the safety issue, particularly after 1910. During 1913 there was talk of a Royal Commission to investigate railway worker safety, such was the concern at the casualties. In the end, a Departmental Committee (a lesser body) was appointed, in 1914, but it never reported because of the First World War. Nevertheless, to the GWR and other companies it appeared that the government was getting ready to impose tighter regulation. This was anathema to the railway companies, as they valued their independence highly and saw the management of the workers, in particular, as an area that was their, and only their, business.

In order to convince the government that they could look after their workers and improve safety, the GWR took the lead and introduced a new approach to workplace safety: the ‘Safety Movement.’ It was adapted from the American ‘Safety First’ campaign, which had started in 1910. This was the first time that safety education had been seen anywhere in Britain: in this the GWR was innovative – quite a contrast to the picture that is sometimes painted of a conservative organisation. So, what did the ‘Safety Movement’ involve?

Broadly speaking, the GWR used various media to try to persuade workers to change their behaviour. Making the items visually attractive was central to this, and photographs were a key feature of the safety campaign. From August 1913 the Great Western Railway Magazine ran a series of safety articles

Illustration 1: A sample page from the ‘Safety Movement’ in the Great Western Railway Magazine: November 1913, p. 356.
Posed photographs showed workers ‘safe’ and ‘unsafe’ ways of working; rather than just plain old text, as in the rule book, these articles looked exciting. They offered hints and tips, laid out in interesting ways, and they used examples where workers had been killed or injured to try to draw lessons for everyone else. Rather than dry, official language, according to Felix Pole (General Manager of the GWR, 1921-29), “It was recognised that the propaganda, in order to grip the readers, should be of a novel and distinctive nature, and, therefore, the magazine articles were written in homely language and an arresting style.” The tone was conversational and extremely informal: ‘Here’s a wrinkle that’s worth knowing. ... Stands to reason when you think of it, doesn’t it? ... Cheap lives. Made cheap by taking risks. Needless risks. Is yours to be cheap? Answer that. ... Be straight. Don’t have a hand in hole-and-corner, risk-taking, regulation-breaking jobs. Play the game.’ All of these features were intended to make workers want to read and remember the safety advice – very different from the rule book!

The articles, and all safety materials, were written by members of the GWR management – primarily Edward Hadley, who, after 1919, edited the Magazine. For the first four or five years, the safety articles in the Magazine were relatively regular – not every month, but most months. After approximately 1919 there were fewer articles; by the 1930s there were very few safety pieces in the Magazine. Instead, the safety campaign tried other techniques – particularly important as not all workers read the Magazine.

In June 1914, the first 10 Magazine articles were reprinted as a booklet, The “Safety” Movement.

**Illustration 2: Cover and a sample page from The “Safety” Movement (1914).**

Running to 48 pages, the booklet was issued to each member of staff – over 80,000 people – at a cost of £240 to the Company. Between 1914 and 1948 the GWR issued eight booklets to the staff, mainly aimed at men who worked on the railway lines, as casualties here tended to be most severe. For the 1928 Accident Prevention for Permanent Way Men booklet, Hadley spent a week working with a permanent way gang on the mainline out of London in order to gain direct experience. All of these booklets used photographs and drawings to show workers what the management thought were ‘incorrect’ ways of doing their work and how they were supposed to be working.

The GWR did not simply use paper and print to encourage safety. It introduced a number of competitions, trying to get employees to compete with one another to be safe or to think of safety slogans. In 1925 – just after crosswords had become an international craze – the ‘Safety Movement’ featured four crosswords, with safety messages spelt out in the blank spaces.

**Illustration 3: Safety crossword from the Great Western Railway Magazine: April 1925, p. 148.**
In the early 1920s, two ‘automatic safety’ competitions were run, rewarding workers for coming up with safety slogans based on the initials of the railway companies painted onto freight wagons. Every time thereafter that they saw one of these wagons, the idea went, they would recall the safety slogan – and carry it out. Most significantly, in 1927 the ‘Freedom from Accident’ campaign was started. Teams of employees were assigned a ‘risk value,’ according to the danger of their jobs, and then awarded extra points for each month of the year that they avoided injury. If a team member was injured, then the team lost points; at the end of the year the team with the greatest number of points won – a gold watch for the captain and certificates of merit for everyone else.

Neither did this innovative take on safety stop here. Hadley composed a safety song, which was sung at meetings of the Staff Association; informal two-minute talks were given; and an emblem was devised.

Illustration 4: The Safety Emblem, as featured on a ‘Freedom from Accident’ competition certificate of merit; the central circle was red and the points of the star green.

Unfortunately I don’t have much information about the emblem: it was only recently that I was able to locate an illustration of it. The first reference I have to it appears in 1925, but I think it must have been around before this. It was described in 1929: ‘the centre of the star is signal red, and the seven points are in signal green. The red represents “Danger,” and the green – surrounding it – represents “Caution,” making an appropriate symbol of protection against risks.’ Upon seeing it, employees were supposed to think of safety and avoid danger. The emblem was found on all sorts of things, from matchboxes and cigarette cases, to tie-pins, badges and brooches. It was even made up into adhesive stickers, to be placed at points of danger to remind workers to be safe.

The ‘pocket token’:

Illustration 5: The 1916 pocket token.

was introduced in 1916. It was made of aluminium, and was sent free of charge to GWR employees if they wrote to the editor of the Magazine. Demand ran into the thousands. Like the emblem, it was supposed to work by reminding employees to be safe: ‘A simple and practical plan is to carry in your pocket, with your small change, a metal token ... It is slightly larger than a penny, but thinner and lighter. Every time you take out your money the token will catch your eye and remind you of the question “IS IT SAFE?” which appears on either side.’ The slogan ‘Is it Safe?’ was the GWR’s safety catchphrase, and was used throughout the campaign. I have no idea whether it really did make people think of safety, but it was a very creative means of spreading the safety message, and it is hard not to appreciate the ingenuity involved.

However, we need to ask whether all of these techniques that made up the ‘Safety Movement’ had any impact upon the numbers of casualties.
The evidence is uncertain. Numbers of workers killed and injured did fall – in 1938, the last full year for which we have figures, there were 2,482 casualties on the GWR. The GWR claimed that any decrease in casualties was a result of the ‘Safety Movement’: ‘Every year since 1913, when the Great Western Railway Company inaugurated the “Safety” Movement for the prevention of accidents to railwaymen, the records of injuries to members of the Company’s staff have gone to show that the campaign was attended by very beneficial results’. However, the reduction in casualties was not necessarily a result of safety education: after 1919 employees worked a shorter day (eight hours instead of ten), and the total number of workers employed decreased, for example. Even today it is virtually impossible to say that a reduction in numbers is due to any one effort – usually it is a combination of many factors.

Whilst it might or might not have reduced casualties, the ‘Safety Movement’ ensured that the GWR remained in charge of employee safety. The government was convinced that the Company could take care of the matter, and therefore did not bring in any new regulation or controls; the unions concentrated upon other matters. As a result, the GWR did not have to change the ways it managed its staff; it did not have to change its working methods or increase the numbers of workers employed; and nor did it have to introduce expensive new safety technologies (such as automatic couplings on goods stock, which the unions in particular had been calling for before 1914). At a time when the GWR was facing challenges to its right to manage its staff, the ‘Safety Movement’ ensured that on at least one issue it could continue to manage as it had always done.

For these reasons, safety education was attractive to other railway companies – and beyond. The GWR pioneered safety education in Britain. It allowed other railway companies to reprint its 1914 booklet and distribute it to their own staffs. After 1923, all British mainline railway companies produced material that followed the GWR’s model, particularly using photographs to show workers what to do and not to do. As on the GWR, casualty rates across all of the railway industry decreased – from 46.2 per 1000 employed in 1913, to 28 per 1000 in 1938. Again, it is doubtful that this decrease could be solely, or even largely, attributed to education, as so many other factors were involved in safety.

The railway companies also produced safety education for passengers and railway users, although I have only found a few examples of posters or items aimed at passengers, so I am uncertain how widely used it was. Education was undeniably attractive, and it appeared to offer a viable solution to safety concerns; as a result education spread from the railways into other walks of life. The London General Omnibus Company started its own safety campaign late in 1913; Lord Leverhulme followed suit at Port Sunlight in 1917, and – encouraged by the government – the factory, mining and petrochemical industries gradually adopted safety education in the 1920s and 1930s. As I am now broadening the focus of my research beyond the railways, I would be keen to hear from members of the Forum if they have any information about safety education in the past, particularly if it deals with work and worker safety.

Beyond industry, the London Safety First Council was started in 1917, becoming the National Safety First Association in 1924, and then the Royal Society for the Prevention of Accidents in 1941. This organisation took safety education and widened it to include all of society – safety in the home and road safety were two key areas it promoted. Since the Second World War the Central Office of Information, amongst others, has produced safety education for the nation, including films, posters and leaflets.

I hope that this brief run through of the ‘Safety Movement’ and safety education has been of interest to readers. Although it has concentrated upon the history of safety education, I am sure that readers will be able to see the connections with current practices in industry and beyond. We can see that from its origins in Britain on the GWR, the idea of safety education has spread a very long way. It has changed the ways in which we try to influence people and get them to change their behaviour, and is clearly of lasting significance. Knowing the history of safety education can only be an advantage to those working on safety today. I look forward to hearing about any discussion of safety and safety education that this article opens up.

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Thanks are given to the GREAT WESTERN ECHO and the author for permission to publish this article. Ed.
NATURAL HAZARDS UPDATE

Natural Hazards is a service of NASA’s Earth Observatory.

FIRES IN EASTERN RUSSIA
In late April 2009, widespread fires burned in the Amur River region of eastern Russia.

AGRICULTURAL FIRES IN WESTERN RUSSIA
Widespread agricultural fires were burning across western Russia in mid-April 2009.

DUST PLUME OFF LIBYA
Dust blew off the coast of Libya and over the Mediterranean Sea on April 28, 2009.

DUST STORM IN CHINA AND MONGOLIA
A day before dust settled over eastern China, dust storms blew through northern China and southern Mongolia, on April 23, 2009.

PLUME FROM DUKONO
Dukono, a volcano on the Indonesian island of Halmahera, released a plume of ash and steam in early May 2009, continuing a pattern of intermittent activity.

PLUME FROM BATU TARA
Batu Tara, a tiny volcanic island in the Lesser Sunda Islands, released a plume of ash and/or steam in late April 2009.

ERUPTION ON ISLA FERNANDINA
In early April 2009, La Cumbre Volcano on Isla Fernandina in the Galapagos Islands erupted.

PLUME FROM SHIVELUCH VOLCANO
Shiveluch Volcano on the Kamchatka Peninsula released continuous plumes of ash and steam in late April 2009.

CYCLONIC CLOUDS OVER THE SOUTH ATLANTIC
Two polar cyclones circled gracefully over the cold waters of the South Atlantic Ocean in April.

John Bond

NOTES BY THE EDITOR

Some new developments have been noted on the HSE Website.

HSE’s website is changing and as they have indicated they are “Taking our first steps towards improvements”. You can find out more at:


The Adventures of the Safety Inspector

The Black Hole
Said the Safety Inspector “I learn
That unless you have money to burn
You’ll never control
A single black hole
As they do in that tunnel at Cern.

“So you’ll have to persuade Number Ten
To fund a collider for when
There’s a lot of dark matter
That someone must scatter
To avoid a Big Bang at Big Ben

NEWS OF THE HAZARDS FORUM WEBSITE - from the Secretary

The “new” website has now been operational for over a year so it seems time to remove the word “new” from the heading of this Newsletter piece. Had anyone spotted that? The site continues to be updated and is thus worth visiting from time to time. As well as seeing developments in the events programme as mentioned below under Calendar of Events, the site has now been updated to show the Executive Committee following the AGM in March under “Who Are We?”.

Brian Neale
HAZARD FORUM CROSSWORD PUZZLE No. 4 by Miss M. Bond

ACROSS
1. Slimming dangers can be of benefit. (8)
5. Was undoubtedly jettisoned overboard. (6)
9. Mary twice over was quite perverse. (8)
10. Useful for dating footprints. (6)
12. Lag, for example, with nothing up in the air. (5)
13. Hogs run in the style of a surging tide. (9)
14. See 3 down
18. Not sufficiently antique - delay changes to an equity deal. (12)
21. A neglected structure falls easily into it. (9)
23, For safety’s sake always be on this. (5)
24. Studious young man wears one. (6)
25. Smoking disinfectant. (8)
26. Part of a greater whole begun by Government department. (6)
27. Data destroyer. (8)

DOWN
1. Remember to make another visit. (6)
2. Many do become producers of electricity. (6)
3. and 14 across. Company official’s mirth. (9, 12)
4. A nearer miss. (6, 6)
6. In varying degrees they follow lessons learnt. (5)
7. Boy tries to give up drinking. (8)
8. Chap gets older around right supervisors. (8)
11. Fracture by means of a major advance. (12)
15. Explosive squishy stuff to set fire to. (9)
16. For energetic agriculture. (8)
17. Dad’s dagger will protect your database. (8)
19. Difficult to hold compact alphabet, dangerous too. (6)
20. Some need it organised by the media boss. (6)
22. First ever postage without stamps. (5)
Solution to Crossword Puzzle No. 3

Across
1. Floodproof
7. Gaff
9. Insecure
10. Rashly
11. Ofsted
13. Apple-pie
17. Compensation.
20. Car phone
21. Perils
22. Adjust.
23. Oil sands
25. Knee.
26. Detonators.

Down
2. Landfill
3. Ore.
4. Pound.
5. Overall.
7. Gas detector
8. Fillip
12. Time capsule
15. Composted.
17. Compensation.
18. Eye-bolt
19. Garden
24. Aft

CALENDAR OF EVENTS

Please check the Hazards Forum website at www.hazardsforum.org.uk under the Events section for more information and to see any updates in the calendar. These may include additional events or perhaps amendments to the Events shown below which are being proposed and developed, including possibly the dates.

Please note that attendance is by invitation.

<table>
<thead>
<tr>
<th>Date 2009</th>
<th>Event</th>
<th>Venue</th>
<th>Contact/further information</th>
</tr>
</thead>
<tbody>
<tr>
<td>JUNE 16</td>
<td>HF Evening Event: Joint meeting with Ergonomic Society - How ergonomics improves patient safety</td>
<td>Institution of Civil Engineers, One Great George Street, Westminster, London, SW1P 3AA</td>
<td>Adam at <a href="mailto:hazards.forum@ice.org.uk">hazards.forum@ice.org.uk</a></td>
</tr>
<tr>
<td>SEPTEMBER 22</td>
<td>HF Evening Event: Joint meeting – First of Three in Energy Series</td>
<td>Central London</td>
<td>Adam at <a href="mailto:hazards.forum@ice.org.uk">hazards.forum@ice.org.uk</a></td>
</tr>
<tr>
<td>NOVEMBER 24</td>
<td>HF Evening Event: Second of Three in Energy Series</td>
<td>Central London</td>
<td>Adam at <a href="mailto:hazards.forum@ice.org.uk">hazards.forum@ice.org.uk</a></td>
</tr>
<tr>
<td>2010 MARCH 16</td>
<td>HF Evening Event: Third of Three in Energy Series</td>
<td>Central London</td>
<td>Adam at <a href="mailto:hazards.forum@ice.org.uk">hazards.forum@ice.org.uk</a></td>
</tr>
<tr>
<td>16</td>
<td>Also, advance notice for the AGM</td>
<td></td>
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</tbody>
</table>