

# Newsletter

**br / tpave**

The British In-situ Concrete Paving Association

Spring 2003 | 6

## Proactive PRESS RELATIONS

Britpave has a policy of launching press releases not only to publicise its own activities, but also to comment pro-actively as appropriate on matters of national concern. This is part of our policy of repositioning Britpave as a transport infrastructure group rather than the 'concrete roads group' as we were known only a few years ago. Recent press releases have included two on the rail industry.

Late last year there was an offer by the Japanese to help restore the reliability of the UK rail network. This received publicity in the national press and we issued a statement welcoming this offer. It gave us the opportunity to comment on how concrete slabtrack, in widespread use for over 40 years now, has dramatically reduced unplanned maintenance as well as contributed to the efficient running of the Japanese rail network. Several specialist rail magazines picked up on this and articles have now been placed with them.

Another opportunity to make the case for slabtrack was afforded by the Strategic Rail Authority's announcement on the shelving of most of their network upgrade work because of the spiralling cost of track maintenance. Again, the technical press has picked up on our proposition that slabtrack offers a way out of this continuing haemorrhage of resources. (For more see page 3.)

Britpave used the occasion of the Transport Minister's announcement on widening long stretches of the M1 and M6 to highlight the advantages of concrete safety barriers in the widening situation. Often the land freed up in the central reserve when concrete safety barriers are installed means widening can take place without requiring extra land take. Our arguments were again taken up by the technical press.

## Keeping Britain Moving



Typical view on Britain's roads - industry and lives on hold

A House of Commons reception hosted by the Rt. Hon. Andrew McKay, MP, has been arranged for 25 March. Together with MPs, members of the House of Lords and key industry figures, the national and technical press will also be in attendance.

Entitled *Keeping Britain Moving*, the main message is that Britpave members can provide products and services that offer long life, good value for money and are safe and environmentally acceptable.

This message is also the theme contained in a new CD ROM pack, which will be launched at the reception (see page 5).

The event is an important milestone in Britpave's development into a true transport infrastructure group. The Commons reception is another example of our proactive stance in promoting solutions to many of the country's transport and infrastructure problems.



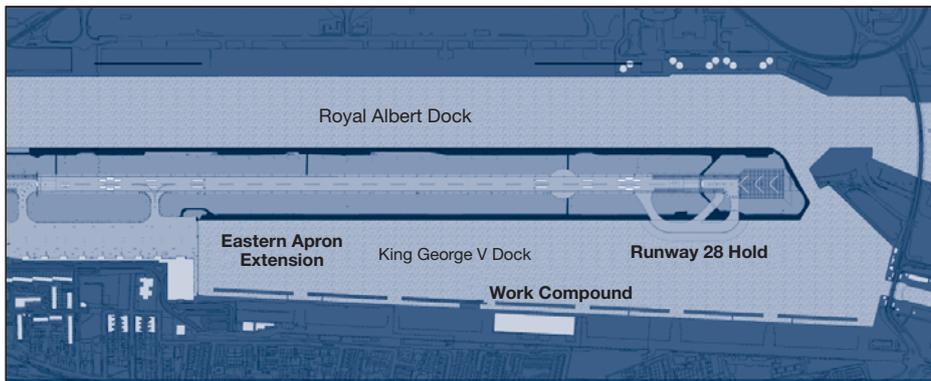
### Diary Dates

**Commons Reception**  
25 March  
Westminster

**Britpave Conference 2003**  
29 & 30 September  
Tortworth Court Hotel,  
Wootton-under-Edge, Glos  
(J14 on M5)



# Increasing Capacity at LONDON CITY AIRPORT



London City Airport is being modified to increase the frequency of flights. Currently only one aircraft at a time can operate on the single runway. The modifications will create a hold and turning loop at the eastern end for up to three aircraft.

Without the hold, aircraft have to taxi the length of the runway, turn and prepare for take off individually. The hold will enable aircraft to perform this operation in sets of three, reducing the time that the runway is used as a taxiway.

The runway lies between two of the London docks and space restrictions mean that the hold bay cannot be constructed on existing ground. To overcome this the new airfield pavement is to be constructed as a suspended slab over the King George V Dock.

Atkins developed the concept design and as Project Manager and Cost Consultant invited tenders under a design and build contract.

Mowlem Civil Engineering and their design consultant Jacobs were awarded the project in October last year. Work has recently commenced on site with concrete piling and precast activities.

A precast beam and slab arrangement is used to create the suspended surface with an in-situ concrete topping as the running surface.

The hold is supported by three rows of piles, at approximately 10 m spacing, with a total of 54 piles, each 1 m in diameter. Foundation for the piles is a clay strata, which lies beneath the dock bed.

To minimise disturbance all work is undertaken at night and at weekends when the airport is closed, under the supervision of Atkins.

Taxiway links to the existing runway are to be in Pavement Quality Concrete in keeping with the airfield's existing pavements. Designed for a Boeing 717-200, the heaviest aircraft that could in theory be certified for operation at London City Airport, the make-up consists of 300 mm PQC on 150 mm dry-lean concrete.

The project follows Atkins successful EPC contract to extend the runway last year and their ongoing term maintenance contracts with London City Airport.

## Future development

In addition to the aircraft hold, the airport has planning permission to extend the apron area to the east of the terminal building. This will increase the aircraft parking at the terminal, allowing the full potential of the hold bay to be utilised.

- For further information contact Jeremy Blades at Atkins on **01372 726140**, email [jeremy.blades@atkinsglobal.com](mailto:jeremy.blades@atkinsglobal.com)

## CONCRETE SLAB TRACK ENHANCES WORKER SAFETY

Britpave has recently funded a study by Ove Arup and Partners to identify existing research into issues related to the safety of slab track versus ballasted track, and determine areas where further research could be of benefit to Britpave in their promotion of slabtrack in the UK.

The study found that, although it is generally accepted in the rail industry that slab track provides benefits in terms of worker safety when compared with traditional ballasted forms, little research or evidence is available to support this.

The report recommended that a risk-based structure is adopted as a framework for the safety case for slab track. The developed case could be supported by evidence and research into slab track safety. The following areas for further work have been identified by Arup:

- The principal strength of slab track that could promote its application as a safer alternative to ballast lies in the reduced on-site maintenance time and risk to workers.
- An analysis of UK track faults, to identify what proportion would be preventable by the use of slab track.

To further both these arguments, the study recommended that a case model study should be developed, which would use an existing UK line to illustrate the potential safety benefits of slab track installation.

*The full report is currently being published and will be distributed to members.*





# Call for **NEW THINKING** on UK's failing rail network

Britpave is calling for an end to the vicious circle where billions of pounds are being wasted on patching up a railway network that is well past its sell-by date at the expense of investing in improvements and new lines.

Made in a press release, the call followed the announcement by the Government's Strategic Rail Authority that the high cost of simply maintaining the network means that many of the upgrades that the Government had promised would be completed by 2010 will now be shelved.

## Rail running costs up

The Strategic Rail Authority has revealed that the running cost of the rail network has risen 50 percent in the last three years from £6.1 billion in 1999-2000 to £9 billion this year. The high cost of administering and maintaining the network means that many improvement projects will be postponed or cancelled.

Schemes to increase capacity on the heavily crowded South Central and South West train networks have been put back indefinitely. A £3.5 billion plan to modernise the London-Scotland East Coast main line by 2009 has been reduced to £800 million worth of minor improvements. For the second year in succession SRA has offered no timescale or completion date for the upgrade of the Great Western route or for Crossrail, the South East's other long-standing rail capacity expansion project.

SRA has blamed the higher than expected cost of track maintenance and the wear and tear imposed on the network on increases in the number, weight and speed of trains. Britpave believes that this should come as no surprise when the UK's rail network is based on a 150 year old ballasted track system. Faster and heavier trains and increased usage mean that there is an urgent need to take our rail network out of the 19th century and bring it into the 21st century.



Concrete slabtrack in use for high speed trains in Japan

## Maintenance no longer an option

Trying to maintain the existing network is no longer a real option. Extensive maintenance and ballast replacement work can only be undertaken during restricted night-time and weekend working. As the latest report from the Strategic Rail Authority shows, it is a losing battle.

As members know, Britpave champions the use of concrete slabtrack, which has been successfully used in Japan for over 40 years and is increasingly being adopted in the USA and throughout Continental Europe. Britpave is calling for new long-term vision in the UK rather than short-term make-do-and-mend reactions.



## Japanese slabtrack approach

The Japanese approach is to mount the rail on a precast concrete slab which rests on a resilient cement asphalt interlayer which in turn overlays a slipformed concrete base slab. The result is the elimination of unplanned maintenance, high levels of performance, accuracy and buildability, and unsurpassed levels of ride, comfort and safety. In addition, the Japanese have found that the concrete slabtrack installed over 40 years ago continues to offer impressive whole-life cost savings.

This issue of whole-life cost savings is important. At first cost, concrete slabtrack is more expensive than ballasted systems. However, the considerable benefits of low maintenance and minimum disruption to operations means that in whole-life terms both train operators and rail providers soon realise significant long-term cost benefits. In Japan, the breakeven point for slabtrack has been found to be 6 - 10 years compared with equivalent ballast systems.

Britpave's view is that the proven low maintenance, high punctuality and safety levels of concrete slabtrack proves that there is a way to break the circle of excessive but necessary maintenance expenditure undertaken to the detriment of essential capacity improvement.

- For more information see Britpave's Technical Guidance Note, RL1 *Slipformed track bed*



# 'Keeping Britain Moving' – this year's conference theme

Following the theme of the Parliamentary Reception held on 25 March, the theme of this year's seminar is how concrete solutions can go some way to help in easing Britain's transport problems, be they road, rail or air.

A strong programme with an international flavour is being put together, and all the main areas of Britpave's activity will be featured on 30 September. An invitation has been extended to Ginny Clarke, Chief Highways Agency Engineer, to present the keynote speech.

This year's event is being held at a new venue, Tortworth Court in Gloucestershire. The hotel is conveniently located at Junction 14 on the M5 and access by motorway is particularly easy. This is a newly opened hotel with excellent leisure facilities and the management is keen to impress us. So we expect a particularly good dinner and networking event on Monday 29 followed by a stimulating conference on Tuesday 30 September.

Following last year's procedure, the booking of accommodation must be made directly with the hotel (01454 263 000) mentioning Britpave to get the special room rate.



*This year's Britpave Conference and Dinner are being held at Tortworth Court, a magnificent hotel set in 30 acres of parkland. Created from a grade II\* Victorian mansion, it has a full range of leisure facilities, including a golf course just a few miles away (see below).*



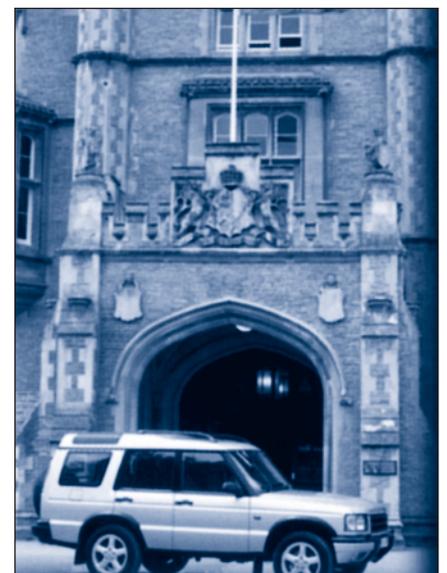
**The Britpave Cup**

## Britpave Golf Day

A Golf Day has been arranged for Monday 29 September before the Annual Dinner and Conference. You will be competing for the magnificent new Britpave Cup, which has been generously donated by SIAC UK and Burks Green. Individual winners in 2002 were John Donegan and Adrian Erwee representing those companies.

The competition will take place over at Thornbury Golf Centre, which is a short drive from the Tortworth Court Hotel where the dinner and seminar are being held. Tee-off times from 10.20 on the 18 hole Main Course have been reserved. Teams of two will play a four-ball better-ball competition.

- Any interested members or teams should contact John Donegan of SIAC at [john.donegan@siac.co.uk](mailto:john.donegan@siac.co.uk)





# Keeping up-to-date with **Britpave**.....

## ROLLER COMPACTED CONCRETE



## New CD-ROM 'Keeping Britain Moving'



Targeted for production in time for the House of Commons Reception in mid-March, this new CD ROM makes a strong case for Britpave's activities. It demonstrates how many of our techniques and products offer sound, long-term value for money and give very long, virtually maintenance-free service.

If more widely adapted, these solutions will significantly help reduce congestion by lowering the need for regular maintenance. In turn, this can mean improved safety on our roads and railways. These arguments have been well appreciated by military and civil airfield clients and operators, but the messages are only now trickling down to road operators, and are largely unheeded by the rail industry, despite its massive and increasingly unsustainable maintenance burden.

Using a professional presenter, the first part of the CD is an overview of our proposition. Then, as the viewer is led into the presentation, the format changes to an interactive series of chapters which deal with the four main areas of road, rail, safety barrier and airports.

All members will receive a copy of this major presentation and it will also be available for downloading from the website.

Britpave's Technical Guidance Sheet on roller compacted concrete is complemented by a video about the new Twelve Quays Project in Birkenhead (see page 8). They both explain the benefits of roller compacted concrete (RCC) and its advantages of speed, ease of construction and cost savings when used for hardstandings and running surfaces at distribution centres, container handling areas and other similar installations.

The video includes interviews with key players in the Ro-Ro terminal at Birkenhead and gives details of the techniques used in this major new freight facility linking the North West with Ireland.

### Guidance on recycling concrete pavements

With the growing pressures to increase recycling, this new Technical Guidance Sheet explains how recycled concrete aggregate from crushed construction, demolitions debris and old concrete roads can be used as the coarse aggregate in cement-bound bases and even in pavement quality concrete layers.

Members will already have received copies of this new Guidance Sheet, which is also freely available from the website.



## Britpave contributes to international symposium on concrete roads

This major international event, held every four years, is taking place in Istanbul from 27 to 30 April. Britpave members have had two papers accepted. The first, authored by John Donegan, describes the development of concrete safety barriers in the U.K. The second paper, by Peter Metcalf, draws upon Atkins' and Fitzpatrick's experiences on the M25 at Clacketts Lane. It goes on to show how concrete in lanes one and two, the so called truck lanes, offers a long term cost-effective solution to maintenance problems in those two lanes caused by heavy goods vehicles.

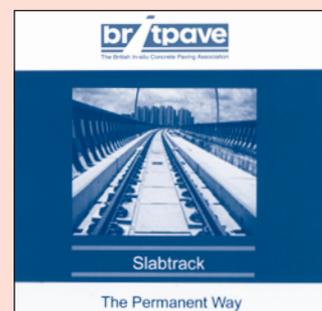
David Jones, along with J. P. Christory of France, has been asked to be a General Reporter on theme 3 of the conference, which covers the topics of construction, maintenance and performance. Their task will include the review of all papers in this section, the selection of two to be presented, and the chairing of the session.

## STOP PRESS...

• This Conference has been postponed for one year.

## NOW OUT ON CD

Following its success as a video, *Slabtrack, the permanent way* is now out on CD-ROM. Contact the Britpave office for a copy.





# News from the industry

at home and abroad

## Ejector trailers speed up M6 Toll



A fleet of six 19 m<sup>3</sup> French Pomier ejector trailers is being used to supply the concrete slipform paving machine that is building the continuously reinforced concrete basecourse for the new M6 Toll. Britain's first toll motorway is under construction by the consortium CAMBBA to relieve the motorways north of Birmingham.

The paving team leader is pleased with the new trailers that have twice the capacity and are about 25% more efficient than the old ones. They provide a controlled discharge onto the paver's conveyor and, with three axles, they are legal for use on roads.

The trailers are filled with two loads of C40 concrete from Alfred McAlpine's 7m<sup>3</sup> Rex tilting drum batching plant. The loaded trailers are reversed up to the paver's integral side-mounted transverse conveyor, which pushes the fully laden tractor and trailer forward at the same speed as the slipform paver.

A banksman with a remote radio-control unit operates the trailer tailgate and ejector mechanism to slowly push the 14m<sup>3</sup> of concrete onto the conveyor that deposits it across the front of the paver.

• For further information email [info@castellan.co.uk](mailto:info@castellan.co.uk)

## FRANCE URGES PROGRESS WITH FREIGHT RAIL

The French Government has intervened in an attempt to rescue plans for a 400-mile freight railway from Liverpool to the Channel Tunnel. Costing some £9 billion, the proposed Central Railway would be funded entirely by private investors, and would run mainly on little-used or abandoned track.

The trains would pull 55 wagons, each carrying a lorry trailer, and the system could take 10,000 lorries a day off motorways, helping relieve Britain's most congested motorways of lorries heading for the Continent.

Britain had expressed support for the scheme because of its potential for relieving congesting without costing the taxpayer. But ministers are wavering after a critical report from the SRA that said it would disrupt the existing network by requiring work to bridges, tunnels and platforms to accommodate taller, wider trains.

The French Planning Minister is apparently worried that the UK will prevaricate as it did over the Channel Tunnel Rail Link. The French railways, SNCF, have already approved the scheme, which could begin in 2005, with the first trains running in 2010.

Transport Minister, John Spellar, has now ordered his officials to arrange a meeting between the SRA and the private investors in an attempt to resolve their differences.

## Darling revives road schemes

Alistair Darling, the Transport Secretary, recently revived some motorway and trunk road widening schemes that were shelved by John Prescott when he was Minister. Widening a 58 mile stretch of the M6 in Staffordshire and Cheshire, and a length of more than 30 miles of the M1 between Leicester and Sheffield are among the improvements announced recently.

Mr Darling's endorsement of the schemes, which were already in the roads programme under the Tories, is an attempt to breathe life back into the government's 10-year transport plan that is already well behind schedule. This comes following a year when not a single A-road or motorway improvement scheme was completed, the first nil return for half a century.

## Turkey loves concrete roads

Speakers from four EU countries gave presentations at Turkey's national meeting on concrete roads organised by the Turkish Cement Manufacturers Association.

Britpave was represented by Dan Willis who joined representatives from Belgium, France and Germany at this event held in Ankara and attended by 250 delegates from all over Turkey.

The visitors discussed the ongoing research into concrete roads being undertaken in their countries, and Dan Willis followed with an account of CRCP and the composite design currently being promoted in the UK.

From the lively question and answer session, it was evident that there was a very genuine interest in concrete roads in Turkey that ran

from top to bottom of the government. It was very clear that they had taken on board the issue of whole-life costing.

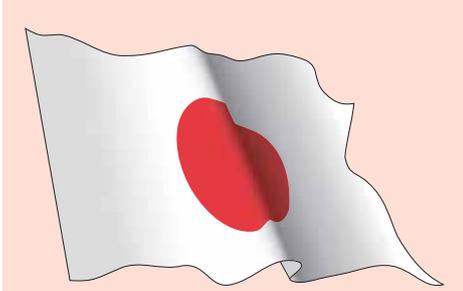
The Turkish government has recently announced a 15,000 km road programme that is designed to improve the general mobility of the nation particularly regarding distribution. This assumes great significance in the light of Turkey's wish to join the EU coupled with its ability to grow and distribute fruit and vegetables to the European market.

Dan also gave a full account of Britpave and its current activities. This aroused great interest, and revived the idea of a European-wide network.

• For more information about the conference, contact [danwillis@lineone.net](mailto:danwillis@lineone.net)



# Greener flood control from Japan



A Japanese road contractor is currently testing its new patented concrete mix for use as ecologically friendly flood control slopes. Called Permeacon, it is a very porous no-fines mix with 25% air voids. Laid on a slope by the contractor's Gomaco RC Conveyor and SL-450 paver, it is then covered with soil and planted with grass and other vegetation that grows through the concrete into the soil below.

The green cover provides an attractive finish to the flood control slope. The new porous concrete will replace the existing precast squares currently used to line Japan's flood protection slopes.

Other Japanese advances are described in the report of Britpave's visit to Japan – *Lessons from Japan*. For a copy contact the Britpave office.

- For more information on green slopes e-mail [kkrueger@gomaco.com](mailto:kkrueger@gomaco.com)

## NEW Task Group formed FOR SOIL STABILISATION

Brian Heron of McArdle and Jonathan Smith of Geofirma are jointly heading up a new Britpave Task Group. Soil stabilisation has, until now, been a part of the Environment Task Group, but this is an exciting new market, with potentially several new members to be gained for the organisation, so it has been agreed that it should now be a 'stand alone' topic.

With a strong economic and sustainable case already proven over many contracts, the Stabilisation Group

aims to represent a centre of excellence within Britpave and intends to forge links with the academic world as well as with similar groupings internationally.

If you are a supplier, consulting engineer, or contractor or have any interest in developing this area of our business, speak to Brian or Jonathan direct, or contact the Britpave office.

- Telephone Brian Heron on **020 8903 2624** or Jonathan Smith on **01787 224532**

## Slipforming for the M6 Toll

Specialist slipform contractor, Extradakerb, is working on the M6 Toll project. Their contribution includes:

- A high vertical concrete barrier to provide separation of existing M42 Southbound motorway from new M6 Toll Road slip road.
- A reinforced barrier wall, 1400mm/1500mm high, slipformed on top of a reinforced concrete base constructed with conventional formwork.
- Surface water channels, slipformed after barrier construction immediately adjacent to the toe of the barrier base using a single-sided mould.



*The cage reinforcement for the barrier wall was set in advance of the slipform paver and an open-fronted mould was used.*



# THE AUSTRALIAN CONNECTION

## Pre-blended cement used for **ROLLER COMPACTED CONCRETE** at Birkenhead

Amec has constructed parking for 500 trailers from roller compacted concrete as part of their contract to construct the new ferry facility at 12 Quays in Birkenhead. Here the company is working on a 28-hectare site to include a berth large enough to take two ships at once. The project involved infilling part of Wallasey dock to contain the trailer parking areas.

Castle Cement was asked to supply 6,000 tonnes of a blended cement containing 72% OPC and 28% PFA (CEM II/B-V 42,5N) for use in the roller compacted concrete in the external pavement, car parks and thoroughfares for the £27 million freight terminal linking Birkenhead with Ireland.

The cement came from Castle's specialist plant at Ribblesdale, which first came into use in 1987. It uses a continuous process, suitable for long-run production of special blends.

Amec benefited from the convenience of being able to order a ready-blended product, rather than investing in additional silos. The only request from Castle as a supplier was for an early involvement in the supply chain as blended materials have to be planned into the production schedule.

- For further information contact [stuart.pepper@castlecement.com](mailto:stuart.pepper@castlecement.com)

For more about roller compacted concrete, see Britpave's new Technical Guidance Sheet and video on page 5.



*Tim Gibbs and David Jones welcome Australian members Brain and Lindsay Kennewell from Perth, Western Australia. Their company, Kerbing West, is the only slipform contractor in the state. They joined Britpave to keep in touch with technical developments and market opportunities in Europe and elsewhere.*

## World Road Congress, Durban

This event, which is held every four years, is taking place in Durban, South Africa from 19 to 25 October 2003. Organised by PIARC, the World Road Association, the conference is expected to attract some 2000 delegates including ministers and senior government officials from over 90 countries. The event showcases the work of some 20 Technical Committees and is now acknowledged as the leading world event in providing information on roads and road transport practices in an integrated transport context. There are also two half-day airfield sessions.

- For further information on the conference visit the website at [www.wrc2003.com](http://www.wrc2003.com)

## Gatwick in the running

Following a High Court ruling that said it would be 'unfair and irrational' not to consider Gatwick along with other sites, the Minister for Transport, Alistair Darling, has said that the best value option for expanding Britain's airports would be to build two new runways at Gatwick and one at Heathrow.

This would make Gatwick the busiest airport in the world, and would require improvements to the infrastructure. The Gatwick Express rail link would be improved and the M23 would be widened between junctions 8 and 10. The A23 south of the airport would be realigned and put in a tunnel.

Mr Darling also said that he had 'not closed the door' on considering a scheme to put an offshore airport in the Thames Estuary.

The consultation period will run until the end of June and a White Paper will be published by the end of the year.



The British In-situ Concrete Paving Association

*Britpave Newsletter* is published regularly by Britpave with the aim of keeping members up to date on Association matters, industry developments and member company news and views. Please help keep us in the picture on all of this by sending us any relevant information that you feel may be of interest to the membership.

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