BRITPAVE® NEWS

britpave
The British In-situ Concrete Paving Association

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The 2012 Britpave Annual Dinner and Seminar

will be held on Thursday 27th September at the Nottingham Belfry.

Pre-dinner drinks reception sponsored by

GOMACO INTERNATIONAL LTD

For further details contact the Britpave office.

Editor's Note

Welcome to latest issue of Britpave News and, to those Britpave members who I have yet to meet, hello. I am the new General Manager for Britpave appointed following the formation of a separate but linked organisation Britpave Barrier Systems Ltd (BBS) on 1st June 2012.

Britpave Barrier Systems Ltd has been formed to further the success of the Britpave Concrete Step Barrier which is becoming an increasingly common sight on motorways in the UK and throughout the EU. The company will also focus on the development of potential new markets for barrier.

The removal of the barrier business from its core activities will allow the Britpave trade association to concentrate on developing long-term cementitious and concrete solutions for infrastructure with particular emphasis on road, rail, guided bus lanes, airports, soil stabilisation and special applications. This concentration is well-timed as there is a growing recognition of the need for increased investment in UK infrastructure.

As General Manager, I will be working closely with Carol Abbey at the Britpave office to forward the continued development of the trade association as the focal point for the infrastructure sector and as a vehicle to help members to increase their business profile. I will be at the forthcoming Britpave Dinner and Seminar and look forward to meeting many of you there and discussing how we can build upon the successes of David Jones, who continues to be a Director of the Britpave Barrier Systems Ltd, and so move the association forward.

Steve Elliott
Britpave General Manager

Britpave News 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.

Disclaimer: All articles are published in good faith. Britpave will not be held responsible for any errors, misinformation and opinions in articles submitted for this newsletter.

TRANSPORT INFRASTRUCTURE

AT LAST, SOME ACTION?

The Government has made a number of announcements concerning the need for greater investment in the UK's national and local infrastructure. Yet, so far, the words have not been met with action. However, the recent announcement of UK government guarantees for up to £40 billion of infrastructure projects could at last be a sign that rhetoric is being turned into action.

The poor state of the UK's infrastructure has become increasingly apparent. According to the National Infrastructure Plan £400 billion is needed to be invested in the UK's infrastructure between now and 2020 if we are to remain competitive in the global market. The current woes of the banking institutions have meant that long-term bank finance for infrastructure is becoming increasingly rare. Pension funds and other bond-market investors are not interested in construction risks. This has resulted in a growing black hole in the ability to privately finance infrastructure projects and has become a problem that the Government can no longer ignore. It is a problem that is exacerbated by the lack of public spending and by the infrastructure demands of the fourth fastest growing population in Europe.

The Government's intervention could help on two levels. Firstly, the co-lending programme allows government finance to be invested alongside private finance where there is sufficient commercial interest. Secondly, the scheme allows for the application of bespoke Treasury guarantees subject to a Treasury guarantee fee. For projects to qualify they have to fulfil five criteria, including that work can start within a year of the guarantee being agreed. They will also have to prove that the project will have a positive impact on economic growth and will provide good value for taxpayers.

This targets the Government's support at well developed projects already past planning hurdles. However, there is the risk that projects face a lengthy time being scrutinised before getting the support they need and that in the end very few projects actually benefit. Despite this, the guarantee scheme is a much needed safety net that should instil the confidence to develop infrastructure projects in the knowledge that no well structured project will fail for lack of access to private finance.

The guarantee scheme has been a long-time coming. Other countries already have schemes to encourage and ease the use of private finance for infrastructure projects. In Canada, pension funds have invested directly into infrastructure for years thereby reducing reliance on bank finance. In Australia, the government has shared refinancing risk on projects to allow short-term back lending during the construction phase while Germany and Brazil have state-owned infrastructure banks that lend to projects.

The UK Guarantees scheme offers a way to obtain the billions of investment necessary to renew our infrastructure, two-thirds of which has to come from the private sector. With bank lending constrained this scheme should help to plug the gap by reducing risk and making infrastructure investment attractive to pension funds and private investors. It is hoped that the first guarantees for projects will be made in the autumn.

ROADS

Catthorpe Junction Improvement

The use of cement bound granular material (CBGM) subbase and base together with a bituminous surfacing provided real programme benefits for Phase 1 of the Catthorpe Junction Improvement where the M6 meets the M1.

The project was carried out by Bardon Composite Pavement (BCP) on behalf of Skanksa Civil Engineering for the Highways Agency. A 340mm thick layer of CBGM A C8/10 was specified in accordance with IAN 73/06 Restricted Foundation Design. BCP paved the CBGM in two 170mm lifts monolithically, maintaining tight control over the length of each rip to comply with the specified temperature related construction period. This method of monolithic paving offered a number of programme advantages as the ability to pave in one single layer speeds up the pavement progress and a monolithic pavement offers improved structural properties. The CBGM was mixed, paved and compacted within the specified construction period which is related to the ambient temperature.

BCP performed pre-contract laboratory trials prior to the main works using IBA as the main aggregate element of the CBGM subbase. The CBGM base comprised crushed rock aggregate in order to meet the HBM Category D classification for the material's coefficient of thermal expansion. The CBGM was mixed on site using a high output continuous mixing plant and was placed using a heavy-duty tracked paver with a dual high compaction screed. Crack inducing joints were wet formed in the CBGM at 3m centres and longitudinal joints were also formed using BCP's bespoke joint cutter. Early age cubes, cured in the same conditions as the pavement, were crushed to determine when trafficking for construction of the following layers could take place. BCP were thus able to optimise progress on bituminous surfacing layers.

The use of a CBGM subbase and base provided real programme benefits

The CBGM was mixed on site

Winter paving guidance updated

The Britpave Roads Task Group has revised and updated the 'Concrete Paving in Winter' guidance document.

The guidance covers the practicalities of concreting pavements in ambient temperatures around and below the freezing point of water. In particular, it covers planning , temperature records, mixing and placing, protective, protective materials, curing requirements and methods and setting and strength developments. The guidance has been endorsed by the Highways Agency.

- Concrete Paving in Winter is available as a download from the Britpave website: www.britpave.org.uk

ROADS

Slipform Success for M25 DBFO Major Improvement Scheme

The £1bn construction Highways Agency contract for the widening 62km of the M25 motorway from three lanes to four in each direction involved significant slip forming. Skanska Balfour Beatty commenced construction on in May 2009, completing in advance of the London 2012 Games in July 2012.

A section of completed motorway and slip road, incorporating most of the slip-formed concrete components used on the M25 project.

Slip formed concrete pavement was used to extend the existing concrete pavement. A C12/15 concrete with a typical thickness of 200mm formed the base with the structural pavement layer being typically 330mm of a C35/45 concrete. Gravel coarse aggregate was used in the pavement concrete mixes to match the thermal expansion of the existing pavement. The existing carriageway had a variety of construction details ranging from continuously reinforced with dowelled expansion joints at 25m centres to unreinforced slabs with contraction joints at 5m centres. The new slabs are tied to the existing with 600mm long 10mm HT tie bars at 600mm centres.

The slip-formed retaining walls were developed as a lower cost and quicker alternative to sheet pile or precast concrete retaining walls. The walls have a structural design life of 120 years and although it is not reinforced, guide wires were put in place. A minimum verge width of 2.5m was required with lighting located in the verges. A steel vehicle restraint barrier was also necessary to protect vehicles from collision with the lamp columns and gantry bases. The steel safety fence was therefore omitted, enabling the verge width to be reduced. This also reduced the height of the retained cutting slopes contributing to a further reduction in cost. This was the first time that slip-formed retaining walls had been used in this manner or at a height of 2.4m. Before the start of the project a series of trials were carried out. Designing for a consistent wall height reduced time lost in mould changes, with the optimum maximum height being around 2m.

Slip-formed concrete step barrier (CSB) was installed for the full length of the central reserve. Historically a narrow CSB has been used, however in this instance the width was increased to 1m when lighting was on top of the barrier was required. CSB was also used at emergency access routes behind existing bridge piers. The CSB concrete base was also slip-formed.

For the drainage, slip-form was used extensively for surface water collection due to the limited space. Successfully slip-forming the slot drain has required some development, with particular attention to the mix design and the quality control on site. Carrying out camera surveys promptly ensured that any defects could be identified and repaired quickly.

In all some 360,000m^3 of concrete was produced for the project by dedicated site batching plants. Modifications to the plants were made with additional aggregate bins to accommodate the varying mixes required. The plants were weather protected with hot water facilities installed with a capacity of 20,000 litres maintained at 60°C. The onsite laboratory team tightly controlled the mix for consistent paving with close control of air content allowing for transit between batching plant and site. During periods of cold weather working hot water was added to the mixes. Insulated blankets and heaters were used to maintain curing temperatures of the fresh concrete with temperature monitoring through the initial and early curing period.

Performance pavement concrete containing silica fume (microsilica)

The new Concrete Society Publication, 'CSTR 74 Cementitious Materials' details the effects of supplemental cementitious materials on the properties of concrete, detailing benefits on fresh concrete properties; strength, durability, physical properties, environmental impacts and special applications. Of note is the inclusion of silica fume (microsilica).

With over a million tonnes of silica fume being used globally every year there is strong support for its use to increase service life, reduce maintenance costs in infrastructure and civil engineering projects.

In the UK, one of the main applications for the addition of silica fume is to improve the performance of concrete against abrasion, and is used in flat slabs for waste transfer stations, pavements and sea defences. The potential for use in highway applications should not be overlooked. Abrasion resistance is associated with increased bond to aggregates and a stronger denser concrete. The addition of silica fume improves both these aspects. In particular, the aggregate-cement interface is improved, so that the weak transition zone is eliminated. The strong bond to the aggregate then resists the 'ripping out', where aggregate particles are torn from the surface of the concrete. This benefit is used to advantage in thin concrete toppings that are installed either monolithically or bonded to provide a tough abrasion resistant wearing course. Silica fume is already used in many formulations for high quality pump screeds and repair mortars.

Environmental benefits include use of less concrete due to very high compressive and tensile strengths obtained coupled with the use of less high CO_2 CEM1 cement in mix designs.

SEMINAR PROGRAMME

Seminar to examine key infrastructure issues

Key issues facing UK infrastructure will be addressed at the annual Britpave industry seminar to be held at the Nottingham Belfry on Thursday 27th September 2012. The programme includes:

- Is it now the time for the return of concrete as the pavement material of choice?
  Mr John Donegan, Commercial & Technical Director, Aggregate Industries – representing the Britpave Roads Task Group
- Highways Agency procurement – supply chain strategy, development and cost reduction
  Mr David Poole, Procurement Director, Highways Agency
- The implications of CE Marking
  Mr Gavin Williams, Head Vehicle Restraint Systems Team, TRL
- The case for slabtrack on HS2
  Mr Joe Quirke, Paving General Manager, VolkerFitzpatrick – representing the Britpave Rail Task Group
- Carbon Calculators
  Dr Tony Parry, Associate Professor, University of Nottingham
- The use of concrete solutions in highway and pavement construction in the USA
  Mr Corey Zollinger, Cemex USA

Following the Seminar there will be a Drinks Reception, hosted by Gomaco, which will be followed by the Annual Dinner complete with after-dinner entertainment provided by world-class magician Jamie Raven.

STOP PRESS:

A few tickets for the Annual Dinner and for the Industry Seminar remain.

Contact the Britpave office to ensure that you don't miss out.

Tel: 01344 393300
email: info@britpave.org.uk

BRITPAVE EXHIBITION

Accompanying the Seminar and Dinner is a Britpave members' exhibition. On show will be new developments in products and services for the UK infrastructure sector from key industry players. The exhibitors will be at-hand to explain how project requirements can be met and to advise on cost-effective solutions.

Exhibitors at the 2012 event include:

GOMACO WORLD
The Worldwide Leader In Concrete Paving Technology

GOMACO Corporation is a leading provider of concrete construction equipment with headquarters in Ida Grove, Iowa, USA, and offices in England, Bolivia, Singapore, India, China, and Australia. GOMACO equipment facilitates the slipforming of concrete streets and highways, rail, airport runways, curb and gutter, sidewalks and recreational trails, safety barrier, bridge parapet, and irrigation canals. Support equipment includes grade trimmers, concrete placers, concrete placer/spreaders, and texturing and curing machines. The company also offers equipment to finish flat slabs, bridges, and slopes.

- For further information visit: www.gomaco.com

BRITPAVE BARRIER SYSTEMS

Britpave Barrier Systems has long-standing expertise in barrier design dating back to 1991 when its parent company, Britpave trade association, was formed. They develop, promote and license a wide range of steel and concrete barriers for highways (CSB Highway Barrier) and a range of security barriers (BsecB) to protect the perimeter of buildings and infrastructure. Both CSB and BsecB are supplied via a network of independently audited Licensees. The barriers are fully compliant with relevant UK and European standards including EN1317 and CE marking for the highway barriers and PAS68 for security barrier.

- For further information visit: www.britpavebarriersysems.com

Ballast Phoenix
A sustainable source of aggregate

Ballast Phoenix is the UK's leading producer of incinerator ash aggregate (IBAA), a sustainable recycled material which contains glass, brick, stone, concrete, ceramics and fused clinker. The company produces around 600,000 tonnes of recycled aggregates annually. IBAA is an extremely cost efficient material compared to primary aggregates. A further benefit is that its low density allows for fewer vehicle movements due to its volumetric advantage over primary materials. Ballast Phoenix is working towards a PAS 2050 compliant carbon footprint.

- For further information visit: www.ballastphoenix.co.uk

Tarmac

Tarmac is the UK's largest quarrying company and supplier of construction materials to the construction industry. Tarmac are a market leader for aggregates, ready mixed concrete and asphalt. Other parts of the business include; Tarmac National Contracting and Tarmac Buxton Lime and Cement. The company has been involved in some of the UK's biggest construction projects including the M1 widening, M25 resurfacing and most recently London 2012. Tarmac has a clear focus on providing an ever expanding range of innovative, cost effective and sustainable products to the market.

- For further information visit: www.tarmac.co.uk

Beach Soil Stabilisation Ltd provides a specialist service to the construction industry, carrying out insitu treatment of unsuitable and unworkable ground using combinations of Lime, Cement, GGBS and PFAs. Benefits include lower landfill costs, less imported granular material, reduced aggregate levy, reduced construction traffic by up to 95% and a faster solution for haul roads and construction compounds. The company has a prestigious portfolio of experience including infrastructure contracts such as Manchester Airport 2nd Runway, M6 Toll Service area, A66 Temple Sowerby Bypass, Silverstone Race Circuit re-development, Snetterton Race Circuit, Sports City Manchester Football Club, M&S, Sainsburys, Morrison,Tesco,ASDA distribution centres and stores.

- For further information visit: www.beachstabilisation.com

WIRTGEN GROUP
Close to our customers

Wirtgen Limited offers a broad range of services in all areas of road construction. With passion and dedication, the company's highly motivated team aims to ensure client success on the construction site thanks to market-leading products and excellent service. They aim to be more than just a machine supplier. The delivery of a machine marks the beginning of a long-standing service partnership. Their team of service experts is always on hand to answer any questions concerning the machine and its operation. The service specialists at Wirtgen Limited guarantee short response times and fast solutions.

- For further information visit: www.wirtgen.co.uk

AIRPORTS

Case grows for increased airport capacity

The publication in July by the Government of its 'Aviation Policy Framework Consultation' and the delay of the call for evidence on aviation capacity until later this year is disappointing.

The delay means that the long-awaited and long-needed consultation on south east England airport capacity has been postponed. Options to be examined in extra runways at Heathrow, Gatwick and Stansted and the two proposals for a new airport on the Thames Estuary – 'Boris Island' and the £50 billion project forwarded by architect Lord Foster.

The delay has frustrated many key UK businesses leaders. Adam Marshall, director of policy at the British Chambers of Commerce, said: "Ministers can't tell businesses to look for new opportunities in emerging markets like Brazil and China and then fail to provide the basic infrastructures needed to get there". His comments were echoed by John Cridland, CBI director general, who said: "We have no time to lose in getting on with solving the UK's aviation capacity issues…. Political deadlock is getting us nowhere and every day the UK is losing out to its European rivals on new routes to growing markets."

Other business leaders and trade union bosses condemned the Coalition for delaying the consultation on airport capacity needs. In a letter to The Times, they argued that the indecision over expansion to airports in the south east was leaving the UK lagging behind international competitors.

Eight signatories including Simon Walker, director general of The Institute of Directors, the TUC's general secretary Brendan Barber and John Longworth from the British Chambers of Commerce, wrote: "If we stand still then our international competitors will sweep up business opportunities and overtake us....It is beyond doubt there must be some sort of expansion in our airport capacity."

Meanwhile, members of the Tory party are increasingly questioning the lack of investment in new runways at Heathrow. The Free Enterprise Group of Tory MPs is pressing Prime Minister David Cameron to drop opposition to a third runway at Heathrow. In a recent report the group called for a new third and fourth runway: "The government should grant planning permission for both a third and fourth runway at Heathrow. Britain's hub airport, Heathrow, is currently at 99% capacity and London's other airports are nearly as full….If new airport capacity is not found, London's position as a world business hub will be damaged."

Birmingham Airport has welcomed the delay to the government's future strategy on aviation as an opportunity to examine the potential of regional airport expansion. Birmingham is pushing for increased capacity that would see it offering direct flights to major cities in the Far East such as Guangzhou, Shanghai and Hong Kong. Birmingham currently handles around 9 million passengers a year and believes it could increase this to 36 million by 2030.

Go-ahead for Carlisle airport development

Carlisle City Council has granted planning permission for a Stobart Group scheme for a £25 million development of Carlisle airport.

They plan to build a 394,000 sq ft freight-distribution centre and to resurface the runway for passenger flights and air freight. However, permission is only agreed in principle and is subject to a string of legal conditions being met. The council decision is subject to an Appropriate Assessment by Natural England and a Section 106 agreement including obligation on Stobart to keep the airport open and the runway maintained, various travel plan obligations, and the payment of £100,000 in order to enable the undertaking of a habitat enhancement scheme to benefit breeding waders. Objectors could yet seek a judicial review of the council's decision.

Redhill Aerodome proposal

Owners of Redhill airfield, RAVL, have submitted a revised application for a hard runway after their first bid failed. They want to replace the 3 grass runways with a one concrete one, giving it potential to increase flights from 60,000 to 85,000 a year and for larger planes.

Tandridge and Reigate councils turned down the original bid last year. The new application has addressed the reasons for refusal in 2011. It includes reduced noise impact and proposals to improve road safety and public transport connections and the planned hard surface area has been reduced by 25%. The councils are to carry out consultation and a decision is not expected before November.

RAIL

Station visits for HS2 phase 2 must not be distraction

The tour undertaken by the Transport Secretary of proposed train stations for the second phase of the high-speed rail work linking London with the North may be premature. What is needed is greater confirmation of the start date for the first phase to the Midlands. However, the tour of Manchester, Sheffield and Leeds was welcomed by Britpave as it cast doubts on reports that Transport Secretary Justine Greening was growing cold on the proposed HS2 rail link following opposition from Conservative MPs whose constituencies are affected.

The delay in completing the necessary legislation for the start of the first phase of H2 means that it might not be constructed until 2030, four years after the original date. Legislation for HS2 failed to be included in the Queen's Speech for this year's Parliament. Consultation on the compensation scheme has been delayed and the routes north of Birmingham have yet to be published. Despite being in office for over two years, the Government has made very little real progress on HS2.

The Government must also ensure that HS2 is built right first time. HS2 promises significant economic and environmental benefits. However, unless it is built using 21st century technology rather than a ballast track system based on the 19th century these benefits will not be fully realised.

In France they opted for traditional ballast when the high-speed TGV network was developed. They have managed to make it work – but at a cost. One some lines the rails have to be swept clean and the ballast replaced and repacked every night. The French are now reported to be examining replacing ballast with concrete slab track having found that the use of ballast tracks undermines the speed, efficiency and safety of high speed trains.

Concrete slab track, as used by the high successful Japanese rail network and increasingly throughout mainland Europe, is the way forward. It maximises operating efficiency by eliminating unplanned maintenance, provides high levels of safety and comfort and impressive long-term performance.

Concrete slabtrack has been used in the UK for tunnels and for short stretches of the Heathrow Express, Stansted airport links and at the Eurotunnel terminal. Initial cost has always been given as the reason why slabtrack is not more widely used in the UK but this is short-sighted and a false economy and, thanks to ongoing slabtrack development, incorrect. The maintenance costs of slabtrack are dramatically less that for ballasted systems and the long-term performance is significantly superior which means that over the whole life of the slabtrack its cost is considerably less than that for ballast.

HS2 is a major project that has the potential to provide considerable benefits. This potential must not be mired by a lack of commitment to drive it forward nor by the use outdated technology for its construction.

On the right track

In order to forward the understanding and use of concrete slab track, Britpave has produced a number of key documents that explain the application and benefits of this 21st century rail track system. They are available as downloads from www.britpave.org.uk and include:

Concrete Slab Track: on track for the future
A definitive guide to slab track that examines both generic slab track construction and benefits and specific slab track systems. The guide examines the three main construction types: in situ cast-in; precast; slipformed. An explanation of each type is provided together with a range of project case studies. The guide is accompanied with two supporting marketing documents: 'Concrete Slab Track – engineered for a lifetime' and ' Concrete Slab Track – 5 compelling reasons to choose slab track'.

Slab Track: the commercial case
Report on the findings of a scoping exercise for a slab track commercial case study carried out by Ove Arup. The report found a wide acceptance that slab track offers a long-term cost-effective alternative to ballasted track when using life cycle cost criteria. The report identifies several potential markets including new build projects, tunnels, viaducts and major upgrades carried out in blockades and explains how the business case to use slab track can be progressed as either as a speculative case or as a project-specific case.

Slab Track: safety
Report on the findings of a scoping exercise for a slab track commercial case study carried out by Ove Arup. The report underlines the safety benefits of slab track compared with ballast track and recommends that a risk-based structure be adopted as a framework for the safety case for slab track to further this a case study model should be developed that, using an existing UK line, would illustrate the safety benefits of a slab track installation.

Slab Track: life-cycle energy study of railway track beds
This publication describes an evaluation of the life-cycle energy use impacts of ballasted track bed and two generic concrete slab track beds: cast-in sleeper and embedded track systems. The life-cycles considered manufacturing, construction, maintenance, dismantling and recycling of the track bed components. The environmental impacts were then indicated by energy consumption and CO2 emission. Comparison between ballast and slab track found that concrete slab track does not have higher life-cycle energy consumption of CO_2 emissions.

Slab Track Development: guidance on relevant standards and sources of information
A summary of available standards and guidance for the design, construction, operation, maintenance and decommissioning of concrete slab track.

SOIL STABLISATION

Stabilisation savings for cold pavement recycling

Cold pavement recycling using stabilisation with binders is saving the Virginia Department of Transportation time and money as it rehabilitates aging roadways. A section of Interstate 81 in Augusta County was rebuilt by recycling existing road material and using it in the new pavement structure.

Using this paving method cut construction time by about two–thirds and saved millions of dollars on the project, earning the transportation agency a national award from the asphalt recycling industry. "Using these pavement recycling methods has the potential to revolutionize how we rehabilitate our aging roads, both in Virginia and nationally," said Virginia Governor Bob McDonnell. "We expect to continue using these processes, where appropriate, to save money and materials as we rebuild older roads throughout the commonwealth."

The I–81 project was the first time cold in–place recycling, cold central–plant recycling and full–depth reclamation were used together on an interstate project in the United States, although other states have used the techniques separately. The $7.6 million project involved rehabilitating a 5.9km two–lane section of southbound I–81 near Staunton, a process that took about eight months for contractor Lanford Brothers Co., Inc. of Roanoke, Va., to complete. Using conventional pavement construction would have cost about $40 million, the Virginia DOT estimated, and taken about two years with the agency would having to widen the southbound lanes, including bridges, to allow two–lane traffic during the reconstruction.

On this stretch of I–81, the right lane required full–depth reclamation, from the asphalt driving surface down through the foundation, because it had suffered more extensive damage from heavy traffic loads than the left lane. The asphalt layer under the driving surface was restored using cold central–plant recycling, in which stockpiled milled asphalt from the road was processed in an on–site mobile plant for reuse under a new hot–mix asphalt overlay. Because damage to the left lane was less severe, it needed work only on the surface and underlying asphalt layers. Cold in–place recycling was used in which a machine pulverized the asphalt layer on the road, then strengthened and recompacted the reconstituted materials on top of the foundation before a new asphalt overlay was put down.

"Savings on the I–81 in–place pavement recycling project go beyond time, money and materials," said Virginia DOT Commissioner Greg Whirley: "It saved fuel because it reduced the need to transport as much new and old materials. It increased safety for drivers and road workers on the project because it reduced work zone congestion. This section of rebuilt pavement also will be stronger from bottom to top, extending its service life and reducing the need for such complex maintenance for many years."

NHBC seeks Britpave's expertise

The National House Building Council (NHBC) is aware of an increasing number of new housing projects where the use of lime and/or cement modification or stabilisation is being proposed to treat existing poor soils in order to support shallow foundations rather than transferring construction loads via more traditional deeper foundations. Recognising their experience and expertise, NHBC has invited the Britpave Soil Stabilisation Task Group to help them develop a comprehensive guidance report on the use and application of lime or cementitious soil stabilisation to provide robust and durable ground improvement. The guidance would be aimed at the UK house building industry. Britpave will be working closely with NHBC on the development of this guidance and has already made a formal presentation explaining the techniques and benefits of soil stabilisation.

Task Group Recognition

The Highways Agency, recognising the authority of the Britpave Soil Stabilisation Task Group, has requested that the Group takes over authorship responsibility of HA74/07 Treatment of Fill and Capping Materials using either Lime or Cement or Both. This is a significant move for the HA and it acknowledges the depth of knowledge and expertise that members of the Britpave task groups can provide.

LinkedIn twitter

Social Stabilisation

The Britpave Soil Stabilisation Task Group is now live on to social website twitter and has set-up a LinkedIn forum in order to promote professional networking and to highlight their outputs and activities.

The forum allows real-world conversations about products, events and issues and the opportunity to ask for project assistance.

- To join and become part of the Britpave Soil Stabilisation Task Group visit: www.linkedin.com

EUPAVE

Seminar Examines Parisien Public Transport

EUPAVE and CIMbéton (Centre D'information sur le Ciment et Ses Applications) held a seminar on "Dedicated Bus and Tram Lanes" on 7-8 June 2012 in Paris. During the seminar, today's public transport policies examined and three major projects in the Paris region were highlighted. The seminar was well attended by approximately 65 participants from 8 nationalities.

The technical session provided the audience with information "From a policy of streets to a policy of public transport" starting with a broader approach in a European context on the dedicated lanes to the situation in France and the Paris region. The vision of the public transport authorities in the Paris region Ile-de-France was presented by Mrs. Catherine Le Gall, Project Manager- Direction of I Investment Projects, Public Transport Union of Ile-de-France.

Currently, three major public transportation projects are in progress in Paris region:

- **Extension of the tramway T3 at Porte de la Chappelle ;**
- **The project T6 connecting Chatillon with Viroflay, guided system on tires;**
- **The project Tzen connecting Sénart with Corbeil, high quality service bus BHNS.**

These projects were presented by the project managers in collaboration with the related public transport administrative departments.

Forthcoming events

7th Symposium on Pavement Surface Characteristics
September 19 – 22, 2012
Norfolk, Virginia, USA

- For details visit: www.surf2012.org

5th International Congress on Sustainability of Road Infrastructure
October 29 – 31, 2012
Rome, Italy

- For details visit: www.siivroma.it

UKIERI Concrete Congress: Innovations in Concrete Construction
March 5 – 8, 2013
Jalandhar, Punjab, India

- For details visit: http://ukiericoncretecongress.com/1/

High EUPAVE Profile at International Conference

The International Society for Concrete Pavements (ISCP) held its 10th International Conference on Concrete Pavements "Sustainable Solutions to Global Transportation Needs" in Québec City, Québec, Canada from July 8-12, 2012 in collaboration with Transports Québec and Holcim. The conference presented the latest information on economical and practical aspects of concrete pavement design, construction, materials, maintenance, performance, evaluation and structural rehabilitation, which are essential for achieving long-lasting, high-performance concrete pavements.

A strong EUPAVE delegation participated actively in the Conference with Managing Director Luc Rens gaving a speech during the Plenary Session as a keynote speaker on "Sustainability Policies in Europe – Challenges and Opportunities for Concrete Pavements". Wim Kramer, Cement & Beton Centrum, on behalf of Aniceto Zaragoza, EUPAVE President, gave a speech on EUPAVE activities during the Welcome Reception. Fabio Miseri, AITEC – Italian Association of Cement Producers, gave a presentation on "Evaluation of the Positive Impact on CO_2 Emission and Safety Using Concrete Pavements in the Italian Tunnels" during the Technical Session titled Sustainability, which was moderated by EUPAVE Technical Manager Özlem Aslan.

Eupave members Holcim and Wirtgen were present in the exhibition in addition to sponsoring the Conference.

The conference, attended by 300 people from all continents, provided a great opportunity for EUPAVE to participate actively on the international scene and to strengthen the relationships with organizations such as the ISCP and ACPA (American Concrete Pavement Association).

BRITPAVE MEMBERS

Fjøri joins Britpave

Established in 2011, Fjøri Limited is a specialist infrastructure planning and design company, serving customers with a vested interest in airports, ports, highway networks and industrial facilities. The company has recently joined Britpave to capitalise on the experience and expertise of the wide Britpave membership.

At Fjøri the mantra is to always keep it simple and keep it clever. And it is this focus on efficient and effective planning and design that is creating joint successes for Fjøri and its clients. It is also important to bring value to projects and that means remaining technically astute, tuned in to the emerging needs of clients and their markets and above all having a practical sense of how clever ideas can be translated into buildable schemes and deliverable business cases. Fjøri's experience from around the world and across multiple sectors is what many of its clients require.

It's for this reason that joining Britpave was so important to Fjøri who's founder, Alex Lake, has had a long relationship with Britpave. Alex, who was previously part of the European management team at the world's largest transportation consultants, explains: "As advisors on technical issues, it's so important to keep at the forefront of thinking in our specialist areas. From sector to sector in our industry that cutting edge thinking is usually vested in just a handful of people and you're either with them or you're not. So if you want to stay in contact with the concrete paving industry then becoming an active member of Britpave is vital for us".

Fjøri also wants to bring its knowledge and experiences to Britpave, gained from project work around the world, including projects not just across Europe, but also in Brazil and southern USA as well as Finland, Russia and Canada.

■ For further information visit: www.fjori.com

Britpave welcomes Ground Developments

Britpave welcomes new member Ground Developments, a soil stabilisation and civil contractor based in Livingston, Scotland.

The company specialises in both residential and commercial land development projects and has been involved in the earthworks and civil engineering industry for a number of years and it is recognised as being one of the leading providers of quality earthworks and civil engineering solutions across Scotland and Northern England.

Ground Developments are committed to extensive, ongoing development of soil stabilisation and it is for this reason that they have joined Britpave. "The work of the soil stabilisation task group of Britpave is widely recognised for its pertinence and authority. We believe that we can add to that knowledge bank and in return can benefit from Britpave's network of industry contacts and commitment in forwarding the benefits of soil stabilisation", said Andy Warneford of Ground Developments.

Ground Developments have gained approval from the National House-Building Council (NHBC) for end product specification on stabilised/solidified material. Clients also have the added benefit of Professional Indemnity Insurance that covers all works, including brownfield sites, thus mitigating potential risk.

The company has a core focus on the provision of engineered solutions that are tailored to meet client needs and expectations. All work is independently tested and verified and results are fully guaranteed.

■ For further information visit: http://www.grounddevelopments.co.uk

Britpave Members at 31 August 2012

Accumix Concrete Ltd - www.accumix.co.uk
Ove Arup & Partners Ltd - www.arup.com
Atkins Ltd - www.atkinsglobal.com
Balfour Beatty Ltd - www.balfourbeatty.co.uk
Ballast Phoenix Ltd - www.ballastphoenix.co.uk
BAM Contractors - www.bamcontractors.ie
Bardon Composite Pavements t/a Aggregate Ind - www.aggregate.com
Barton Plant Ltd - www.barton-plant.co.uk
Beach Soil Stabilisation Ltd - www.beachstabilisation.com
Birse Civils Ltd - www.birsecl.co.uk
British Lime Association - www.britishlime.org
Carillion Group - www.carillionplc.com
CEMEX UK - www.cemex.co.uk
Combined Soil Stabilisation Ltd - www.combinedssl.co.uk
Complete Design Partnership Ltd. - www.cdpbroms.co.uk
Costain Ltd. - www.costain.com
Dublin Airport Authority plc - www.dublin-airport.com
Elkem Materials Ltd - www.concrete.elkem.com
Enterprise Mouchel Ltd - www.enterprisemouchel.com
Extrudakerb Ltd - www.extrudakerb.co.uk
Ferrovial Agroman (UK) Ltd - www.ferrovial.com
Fixing Centre Ltd - fixingcentre@btconnect.com
Fjøri Ltd - www.fjori.com
Geofirma Soils Engineering Ltd - www.geofirma.co.uk
Gill Civil Engineering Ltd - www.gillgrouphouse.com
Gomaco International Ltd - www.gomaco.com
Ground Developments Ltd - www.grounddevelopments.co.uk
Halcrow Group Ltd - www.halcrow.com
Hanson UK Ltd - www.hanson.biz
Interface Développement - www.interface-dvlpt.com
Interserve Construction Ltd - www.interserveplc.co.uk
Joe Roocroft & Sons Ltd - www.roocroftfencing.co.uk
Kerbing West Slipform Ltd - www.kerbingwest.com.au
Lafarge Readymix Ltd - www.lafarge-aggregates.co.uk
Lagan Construction Ltd - www.laganconstruction.com
McArdle Stabilisation Ltd - www.mcardlegroup.co.uk
Mesta AS - www.mesta.no
Morgan Sindall plc - www.morganest.com
Norder Design Associates Ltd - www.norder.co.uk
P J Davidson (UK) Ltd - www.pjd.uk.net
Rapid International Ltd - www.rapidinternational.com
RJT Excavations Ltd - www.rjtexcavations.co.uk
RPS Group plc - www.rpsgroup.com
SIAC Construction Ltd - www.siac.ie
Skanska UK plc - www.skanska.co.uk
Smith Construction (Heckington) Ltd - www.smithsportscivils.co.uk
Tarmac Ltd - www.tarmac.co.uk
TRL Ltd - www.trl.co.uk
Tyrolit Ltd - www.tyrolit.com
University of Nottingham - www.civeng.nottingham.ac.uk
UK Quality Ash Association (UKQAA) - www.ukqaa.org.uk
VolkerFitzpatrick Ltd - www.volkerfitzpatrick.co.uk
Wirtgen Ltd - www.wirtgen.co.uk

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Corrections and Clarifications

It is the policy of Britpave to correct significant errors as soon as possible. Readers may contact the office on: info@britpave.org.uk. Please quote the issue number and page.

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