

BRITPAVE NEWS

ISSUE 30 - SUMMER 2015

Industry welcomes
Highways England

New HMB guidance

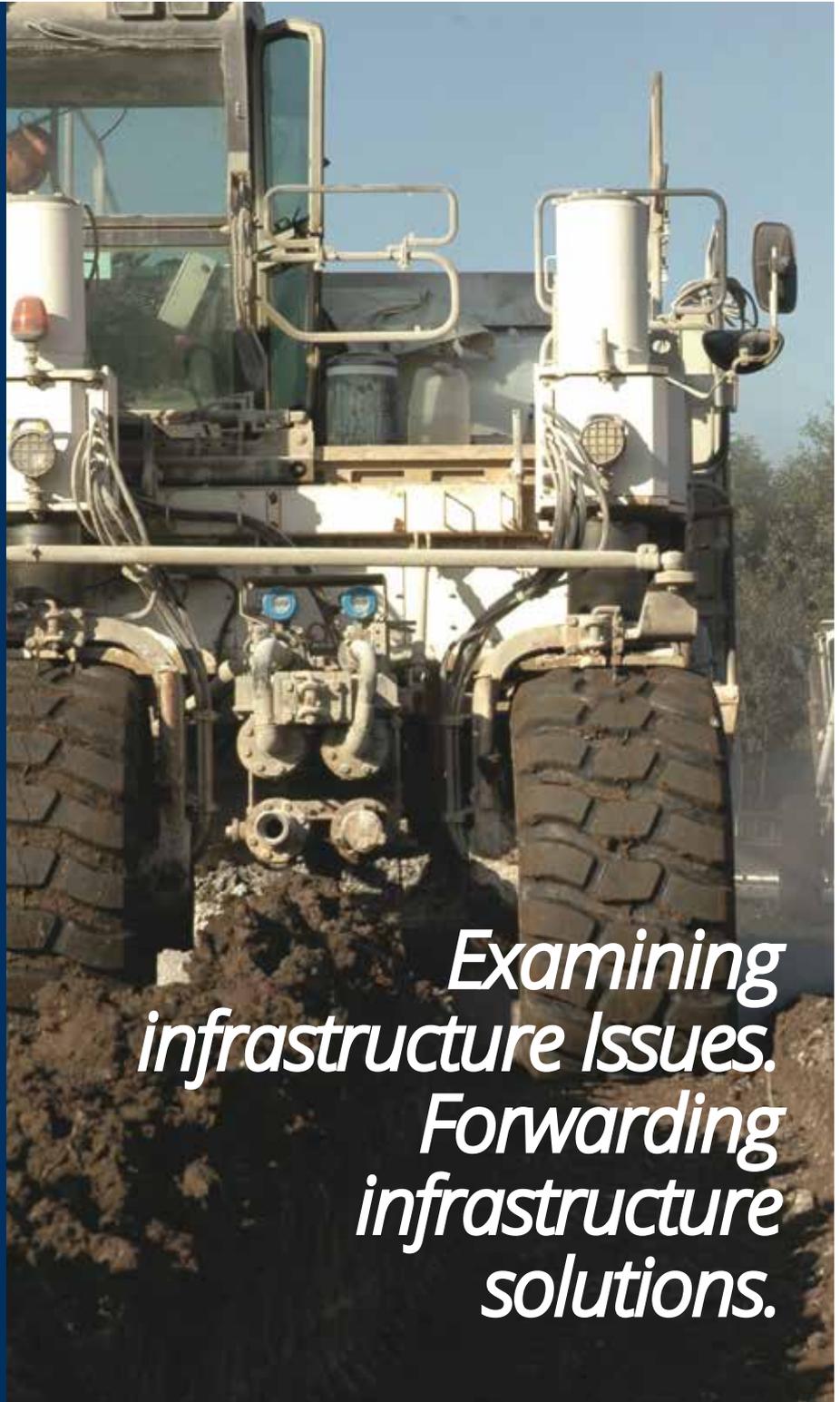
Britpave at
Plantworx 2015

Port expansion offers
concrete growth

Airport passenger
numbers grow

Investing in skills

Business benefits of
Britpave membership



*Examining
infrastructure Issues.
Forwarding
infrastructure
solutions.*

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EDITOR'S NOTE

Welcome to the new look Britpave News. A new look that reflects the growing confidence of the infrastructure sector.

Such confidence often stems from clarity and assurance and these have certainly been provided by the Five Year Plan of Highway's England, the evolution of Highways Agency into a government-owned company. The plan provides a real programme of action with the necessary investment to support its delivery. This is a very welcomed step forward.

Growth in the infrastructure sector does present challenges, not least of which is the development and training of a skilled workforce. Britpave members are rising to this challenge by implementing programmes for apprenticeship training, closer links with colleges and staff training initiatives. Several Britpave members have underlined their commitment to investing in skills by announcing their programmes as part of the recent National Apprenticeship Week. Their commitment serves as a positive example to us all.

Increased confidence is also due to the positive growth in transport sectors such as sea ports and airports and by the launching of industry trade exhibitions such as Plantworx and Highways UK. On behalf of its members, Britpave will have a strong presence at both events. The opportunities of such events to raise business profile and to industry network are indicative of the business benefits of being a Britpave member. Such benefits include the development of industry guidance such as HBM in Winter, the DIO Specification 033 and Roller Compacted Concrete – the progress of all are reported in this issue.

I hope that you enjoy the clarity and assurance of the new look Britpave News as an indication of not only the sector's confidence but also of the Britpave trade association.

Steve Elliott

Britpave General Manager

Britpave, the British In-situ Cementitious Paving Association, promotes the better and greater use of concrete and insitu cementitious infrastructure solutions. Its members include major contractors, specialist equipment and material suppliers, consulting engineers and interested trade associations. Together, they provide a single voice for the insitu concrete paving industry.

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.

INDUSTRY WELCOMES HIGHWAYS ENGLAND'S FIVE YEAR PLAN

Britpave has welcomed the publication of Highways England's five year plan as being a positive long-term plan for the future. Highways England, the government-owned company launched on 1st April 2015, plans to invest over £11 billion over 2015-2020.

This represents the biggest investment in major roads since the 1970s and will lead to fundamental changes to the way that motorways and major A roads are maintained and operated.

The planned improvements over the first five years of operation include 112 major improvements, including 15 smart motorway projects providing 280 extra miles of capacity, and resurfacing the majority of the network. In addition, Highways England proposes to develop a new standard of A roads to be known as expressways that will provide a similar standard of journey as expected on motorways and to address traffic noise pollution using low-noise surfacing at 1,150 locations.



"The availability of a five year plan is welcomed as it provides a real programme of action with the necessary assured investment to support its delivery" said James Charlesworth, Britpave Chairman. "This is a significant step for the UK's road network and Britpave and its members look forward to collaborating with Highways England, as we have done with the Highways Agency, in the development and provision of long-term, low maintenance and low noise road solutions that will enable Highways England to deliver its ambitious plan."

GUIDANCE FOR HBM IN WINTER

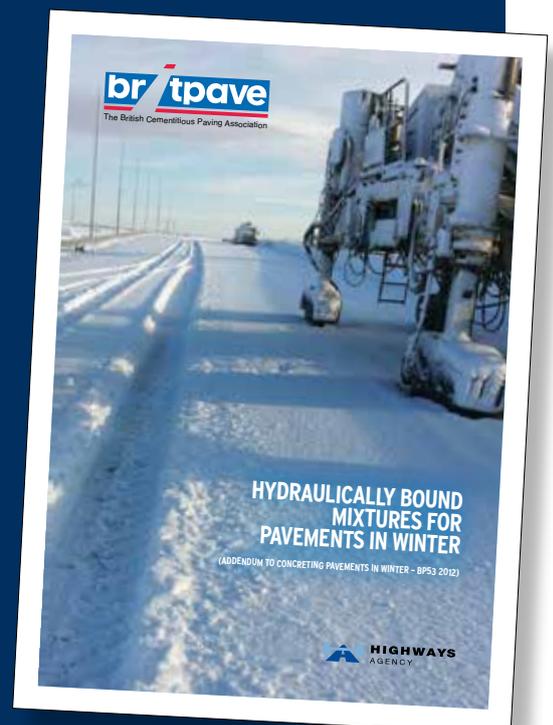
Britpave has published an updated guide, 'Hydraulically Bound Mixtures for Pavements in Winter'. The guide addresses the practicalities of mix-in plant production and laying hydraulically bound mixtures (HBM) in ambient temperatures around and below the freezing point of water. The guide is a companion document to **Concreting Pavements in Winter**.

Portland cements stop reacting at sub-zero temperatures and pulverised fuel ash (PFA) and ground granulated blast furnace slag (GGBS) at around 2°C. Water, however, freezes at 0°C and then expands. This expansion can result in disruption to newly placed HBM, despite the low moisture content of these mixtures. Setting and hardening will happen at a later stage, upon thawing, but the material may contain more voids and consequently have lower strengths particularly at exposed surfaces.

The updated guide explains how to take full account of these issues and so successfully lay HBM in winter temperatures.

In particular, the guide sets out current UK specifications and requirements, planning, binder selection, HBM temperature at mixing and placing and pre-paving preparations. It then provides guidance on post-laying including protection materials and methods, curing requirements and methods and immediate overlay of HBM.

'Hydraulically Bound Mixtures for Pavements in Winter' is available as a download or hardcopy from www.britpave.org.uk



➤ GOMACO - MAKING WISHES COME TRUE

U.S. contractor Manatt Inc had a long wish list for its slipforming project on Highway 71 not least of which was to slipform the smoothest road possible, achieve full bonus incentives and not have to use a straightedge behind the paver.

The use of a Gomaco four-track GHP-2800 with G+Connect, a 5400 series mold, two paver-mounted GSI units with a Leica Geosystems 3D guidance system made these wishes come true.

The Highway 71 project involved slipforming 14.5km north and south bound at Spencer, Iowa. It was an overlay project of 152mm thick with a 7.3m wide mainline and 1.8m and 1.2m wide flying shoulders. All of this was paved in one 10.4m wide pass.

The flying shoulders were one of the challenges of the project. The Iowa Department of Transportation required that four percent shoulders should be maintained at all times, regardless of how much the super elevation changed. To address this, the GHP-2800 was equipped with three power transition adjusters (PTAs) – one for the centre crown and one each for the shoulders. The 5400 series mold features self-supported TAs hydraulically driven with the transitions controlled by the G+. Kevin Hogan, Manatt

Paving Superintendent explained: "Much like your centre PTA crown, the difference we've got to figure in the cross slope of the mainline and the shoulders through the super elevated curves and take those calculations and translate them into the PTA controller. The new 5400 series mold with all three PTAs is very advanced. The name of the game is to keep the roadway as smooth as possible and we couldn't do that by manually manipulating any PTAs."

Smooth and easy PTA transitions are one of the G+ benefits. It also seamlessly integrates with the on-board GSI units to determine optimum travel speed, vibration, mix design and variations in ambient temperature to achieve a high level of rideability. "With this G+ you can really zero in on items that can the smoothness down fast and everything fine tuned", said Hogan.

On the first section of Highway 71, the southbound two lanes, Manatts earned 93% of its incentive pay. Then, when they turned the GHP-2800 around to start the northbound 14.5km, the crew really hit their stride. Production reached 1737m in a 12 hour working day.

"When doing a job like this there are so many things that you always wish for... I wish that I could change this a little bit or tweak that a little bit more. With the G+ all those wishes came true," said Hogan. "The GHP-2800 with G+, GSI and the 5400 series mold is the complete package that gave us smoothest road possible with no straight edges."



'Production reached 1737m in a 12 hour working day.'

Whitetopping Success with GOMACO G+® Controls and 3D Guidance

G+ Connect™



Contact your GOMACO representative for assistance in determining which concrete paver model best fits your concrete overlay specifications.



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Once you experience G+ controls, you won't be satisfied with anything else. It's a control system that is both easy to learn and easy to operate. G+ expresses itself in easy to understand international icons and full script explanations. It operates in all the major languages of the world in either imperial or metric numbers. It has a lightning-fast processing speed and features two-way communications between paver accessories and G+. Its instant digital feedback combined with the tight closed-loop electronic and hydraulic control creates a G+ paving experience that is smooth, efficient, and accurate. There is nothing on the market that can compare, because G+ was designed by our in-house team from what we have learned from years of experience in the field and from what we have learned from you, our customer. Isn't it about time you had the world's most revolutionary control system on-board?

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BRITPAVE AT PLANTWORX 2015

Britpave has an exhibition stand and is to hold two soil stabilisation industry briefings at Plantworx – the UK's largest 'working' construction equipment machinery exhibition (2nd – 4th June, Bruntingthorpe Aerodrome, Leicestershire).

The Britpave stand, being held jointly with the British Lime Association, will be in the Pavilion at PAV H8. The soil stabilisation briefings will be held in the morning and then repeated in the afternoon of Wednesday 3rd June. Entitled 'Shining Light on the Dark Art of Soil Stabilisation', the industry briefings will explain the science and practicalities of soil stabilisation and will cover the responsibilities of the project designer, manager, stabilisation contractor and testing laboratory, and provide a breakdown of the process from ground investigation, laboratory trials and determination of design properties to site works, control and testing. Project case studies will be presented by Britpave members Pryor Stabilisation, Combined Soil Stabilisation and Geofirma Soils Engineering Ltd.



Stabilising land with the use of lime, cement or other binders offers an extremely cost effective and environmentally friendly way of making weak or contaminated soil viable for construction use. However, to the uninitiated using cementitious binding materials such as cement, lime, fly ash or ground granulated blast furnace slag (GGBS) to render potential contaminants immobile and unleachable is more magic than science.

Given the drive by government to build more homes on previously used and derelict brownfield land the seminar provides a timely and informative insight on a growing construction sector.

Plantworx 2015 will span over 135,000sq m and will see the very latest plant and machinery operating in 'real site' conditions with compact plant featuring alongside mid-range equipment, tools and services. At the last count the show has 311 exhibitors and will cover an area equivalent to all of the Premiership football teams' pitches added together!

HIGHWAYS UK

Highways UK
ROADS FOR A MODERN BRITAIN

Highways UK is a major new event bringing together the people responsible for planning, developing, managing and maintaining the UK's road network. It will be held at London's ExCel on 25/26 November 2015 and will combine a high-level conference, with industry and innovation briefings and a major exhibition.

With the formation of Highways England, government is promising unprecedented levels of investment and a long-term delivery plan, structured to remove the stop-start work pipeline we have become accustomed to. The quid pro quo is the highways sector is expected to deliver long-term efficiency savings, a better quality service for road users, and an improved network that supports jobs and growth up and down the country.

Highways UK's influential advisory board is co-chaired by industry grandees Steve Norris and Derek Turner. It includes senior representatives from Highways England, Transport for London, ITS UK, Rees Jeffreys Road Fund, Transport Focus, CIHT, Britpave, CECA, AIA, RHA and Campaign for Better Transport. For more information visit www.highways-uk.com.

BRITPAVE JOINS UK PAVEMENT LIAISON GROUP

Britpave has joined the UK Pavement Liaison Group. The Liaison Group, which is chaired by the Highways England, examines technical issues relating to the design, specification and materials used in earthworks, foundations and pavements for UK highways and other paved areas.

The work of the group contributes towards representation on related and relevant Standards and Specifications

Committees, Working Groups and prima facie liaison with relevant responsible agencies.

The primary documents for consideration by the Group are found in the Manual of Contract Documents for Highway Works family including the Design Manual (DMRB), Specification (SHW) and the Notes for Guidance. Britpave is represented on three UK PLG working groups to date:

- › WG2 - Reviewing HD32, HD38, SHW 1000 Series
- › WG6 - Reviewing IAN73/06
- › WG7 - Development of a design standard for Roller compacted concrete in highway pavements.

PORTS EXPANSION OFFERS CONCRETE GROWTH

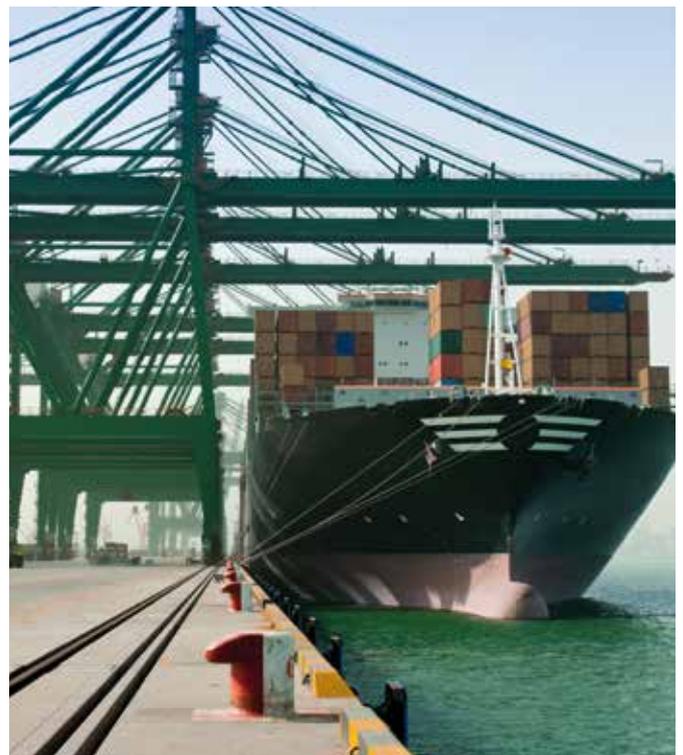
Recognising the potential market growth for concrete pavements due the expansion plans of UK ports, Britpave has established a Working Group to facilitate the wider use of roller compacted concrete (RCC) in the UK by producing a specification which would allow the use with confidence of RCC into both mainstream ports and road applications.

The specification will address issues, such as multi-lift paving and joints, that are encountered with cement bound granulated mixtures (CBGM) paving. As part of the specification's development, the Working Group, is liaising with like-minded groups involving the Mineral Products Association and Highways England.

An example of UK ports expansion is Felixstowe which has announced plans to build 33 hectares of warehousing. Hutchinson Ports UK has announced that the warehousing would be developed within the port boundary near Berths 8 and 9. The port expects to have completed extending Berth 9 by 190m next year. Felixstowe handles about four million TEUs (twenty foot equivalent containers) a year.

Associated British Ports (ABP), owner and operator of the Port of Swansea, has announced it will be investing £2.1 million in upgrading the outer lock gates at the Port of Swansea. This marks the first in a series of investments, which will total around £7 million over the next four years, which ABP is making to improve infrastructure at the Port of Swansea. The Port of Swansea currently handles around 600,000 tonnes of cargo annually, primarily for the coal, paper, agricultural and recyclable sectors.

Meanwhile, plans to build a rail freight link between the Port of Sheerness and Liverpool could create 1,250 new jobs and gross added value (GVA) of £156million by 2034, according to a master plan by operators Peel Ports. Their master plan sets out the physical improvements needed at the Port over the next 20 years. Sheerness is already a significant commercial port for the South East of the UK, handling around 1.3million tonnes of cargo every year, with industry forecasts suggesting that this figure could increase by as much as 130% over the next 20 years, enabling the Port to handle 3.1million tonnes of cargo a year. The rail freight link, which would connect Sheerness and the Port of Liverpool, would be for the transportation of new motor vehicles for export and import.



▶ INVESTING IN SKILLS

From April 2015, contractors bidding for major government infrastructure projects have to prove their commitment to training and developing skills. Initially this applies to projects over £50 million but will eventually be rolled out to smaller jobs.

It is expected that more than 224,000 jobs in the construction industry will be created by 2019 and so the move is aimed to ensure that the industry invests in training and has the necessary skilled workforce.

Britpave members are already fully committed to programmes of apprenticeships and high quality training as was demonstrated by their support of this year's National Apprenticeship Week held in March.

Balfour Beatty marked the event with the announcement of a range of new commitments that include creating 150 apprenticeships in civil engineering, construction and business disciplines, encouraging companies in its 7,000 strong UK supply chain to join The 5% Club – companies who are signed up to having 5% of their UK workforce over the next 5 years being young people on structured training schemes - and partnering 12 universities and colleges to deliver the new Trailblazer Higher and Degree Apprenticeships. In addition, Balfour Beatty plan to recruit a further 80 young people by the end of 2015 in the new Higher and Degree Apprenticeships Employers' Consortium.

Leo Quinn, Balfour Beatty's Group Chief Executive and founder of The 5% Club, said: "There is a skills shortage, our industry needs talent and this is our biggest ever commitment to recruit apprentices. It's a great sector to work in because we develop, build and run the infrastructure we all depend on in our daily lives.

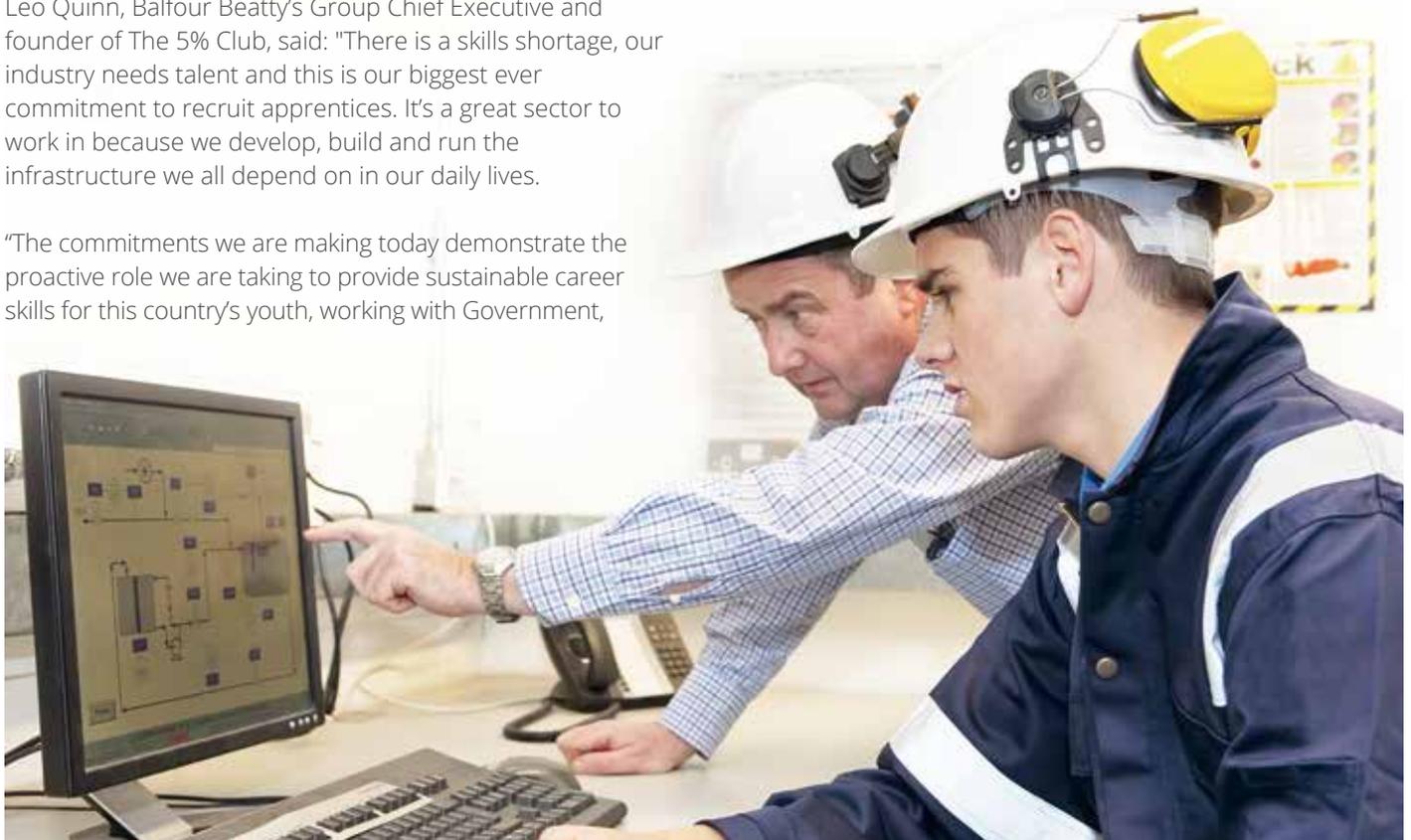
"The commitments we are making today demonstrate the proactive role we are taking to provide sustainable career skills for this country's youth, working with Government,

universities and our supply chain partners to ensure that we attract young people into this growing infrastructure sector."

Carillion announced a partnership with National Citizen Service and became the first UK company to offer construction apprenticeship interviews to graduates of NCS – the country's flagship youth programme. The announcement follows Carillion's commitment to creating 5,000 apprenticeships over the next five years, opening up career opportunities for young people across the UK at its training centres.

NCS graduates interested in applying for apprenticeship roles in construction will be offered a fast-track pass to an interview. Carillion will also be encouraging apprentices who have not yet taken part in NCS, to enrol on the programme before beginning their apprenticeship. Open to 15-17 year-olds across England and Northern Ireland, the NCS programme takes place over two to three weeks and brings teenagers from a range of backgrounds together where they will face outdoor challenges, learn skills for work and life, learn to be self-sufficient and make a mark on their community through a social action project that they design and deliver.

Ray Wilson, Director and General Manager, Carillion Training Services, said: "We recognise that many of the young people who have been on the NCS programme possess exceptional life skills and are highly motivated. By opting to take part in the programme they have shown that they are willing to step outside their comfort zone and as a result are a step ahead in developing key workplace skills such as problem solving, leadership and teamwork.



There is increasing competition for apprenticeship roles and therefore, young people need much more in terms of skills and experiences to stand out. We believe evidence of NCS gives applicants the edge over other candidates."

National Apprenticeship week saw Atkins launch its search for 86 engineering apprentices to kick-start their career in the transportation, water, energy or built environment sectors. The new apprenticeship opportunities will sit across a number of design and engineering disciplines. Each will provide a wide range of opportunities to gain invaluable, on-the-job work experience, skills development and professional qualifications. Nick Roberts, Atkins' chief executive officer for UK and Europe, said: "We believe we have a responsibility to help move the world forward, and for us this includes providing the next generation with an opportunity to start earning and continue learning. It's vitally important we continue to develop the breadth and depth of UK talent, not only for them as individuals, but for the success of our clients, the UK economy and our global competitiveness." In February 2015 Atkins released a report: 'The skills deficit: consequences and opportunities for UK Infrastructure' which highlighted apprenticeships as one of the most impactful mechanisms for solving the current engineering skills shortage.

Lafarge Tarmac used the Week to launch its annual recruitment programme to find 75 new apprentices. As part of the company's commitment to supporting skills, inspiring young people and helping the UK construction industry develop a talented and diverse workforce, Lafarge Tarmac will offer apprenticeship opportunities to youngsters across many of its 330 UK sites. Commenting on the launch of the apprenticeship recruitment programme, Cyrille Ragoucy, CEO of Lafarge Tarmac, said: "We're passionate about creating a lasting skills legacy. I believe that our commitment to learning and innovation means we are well placed to offer expert support and guidance to nurture skills and kick-start successful, high quality careers. Our apprenticeships are a great opportunity for candidates to

gain a nationally-recognised qualification and develop practical experience in a dynamic industry."

Apprenticeships at Lafarge Tarmac last for between one to four years with all recruits undertaking vocational training at a network of leading higher education colleges across the UK. They will also receive expert technical training in their chosen discipline and will be paid while they learn. Following successful completion of the programme, there is the option of attending university. This is the second year of Lafarge Tarmac's apprenticeship programme and forms part of the company's wider recruitment focus, with a commitment to recruit up to 120 apprentices and graduates each year.

To mark the beginning of National Apprenticeship Week, CH2M HILL held a round table business event on March 9 at its London office with guest speaker and ardent supporter of apprenticeships, Sir Peter Luff MP. The event brought together apprentices just entering the industry, as well as senior directors, recruitment specialists and the project manager from industry body, the Technician Apprenticeship Consortium, to discuss the importance of apprenticeships in the engineering industry. CH2M HILL has been a leader in its sector on apprenticeships and is one of the six original members of the Technician Apprenticeship Consortium (TAC). Since its creation in 2010, CH2M HILL has played an active role in the organization, which was set up to increase the number of young people taking up apprenticeships and to provide a work-based route for aspiring engineers.

Commenting on the need for skills investment, Mark Thurston, CH2M European Regional Managing Director, said: "With the UK in the midst of an infrastructure boom, there are fantastic opportunities for young people to get involved in some of the most iconic projects our country has ever seen and develop for themselves distinguished and varied careers. I look forward to seeing the sector come together to tackle the skills shortages we have seen in recent years through placing investment in apprenticeships at the very centre of this."

➤ CROSSRAIL 2 ROUTE DEVELOPMENT

Britpave members, Atkins and CH2M HILL, have been named as route developers for Crossrail 2 programme. They have been appointed by Transport for London (TfL) as part of one of the major consulting groups tasked with developing the detailed plans for Crossrail 2, the proposed major new rail line which would deliver much needed extra transport capacity in the capital. Atkins and CH2M HILL will provide strategic transport modelling, route development, transport planning, economic appraisal and evaluation for the development of the new route.

Linking key growth areas in south-west and north east London, Crossrail 2 will serve destinations in Surrey and Hertfordshire using the existing National Rail network. Initial proposals have been consulted on publicly and the Department for Transport is currently consulting on safeguarding along the route.

> FUTURE OF HIGHWAYS

Britpave member, Arup, has looked into its crystal ball to predict what roads may be like in the future.

Its report 'Future of Highways' predicts highways made from solar materials and governed by sophisticated technologies that communicate with cars, road infrastructure and GPS systems. The report also considers the consequences of rapid urbanisation and impact of climate change, resource depletion and changes in human behaviour will shape our roads in the future.



The use of advanced solar panels embedded in roads would generate clean and renewable energy that could be used to wirelessly charge electric cars as they are driving or are parked. The panels would also contain LED lighting and heating elements to melt snow.

Electric cars are anticipated to become commonplace on the roads of the future as the performance of batteries is improved. Fully automated navigation systems will enable roads to be populated by driverless cars as vehicles become increasingly more 'intelligent' and 'self-aware.' In future, drivers may be more likely to purchase access to a vehicle on a when-needed basis rather than buy the vehicle itself.

Tony Marshall, Global Highways Leader at Arup, said: "Anticipating and researching future trends will help us to move towards a connected, low-carbon future, where mobility solutions put users at the heart of design and potential challenges are addressed as early as possible. The changes that this report suggests will provide safer, more reliable and more environmentally friendly highway infrastructure for generations to come".

To download a copy of 'Future of Highways' visit http://www.arup.com/Future_of_Highways.aspx

> CHOCKS AWAY FOR LAGAN CONSTRUCTION INTERNATIONAL

Britpave member Lagan Construction International has secured two contracts at Heathrow Airport worth an estimated £10 million. One contract is with Ferrovia Agroman and will involve works on Alpha Bravo Taxiway the other contract is with Britpave member Morgan Sindall and will involve works on the Sierra Taxiway.

These contracts are part of the ongoing works being undertaken for Heathrow Airport Limited as part of their £ multi-billion investment programme for Q6.

Lagan Construction International will mobilise their in house mobile asphalt batching plant to produce and lay approximately 50,000 tonnes of Marshall Asphalt. The airport team will have to plane off existing surface course and binder course before relaying with new materials. Works will typically be carried out during strict night time possessions. There will also be a full closure of sections during day time works. Works will be fully complete in mid-2016.



Marshall Aerospace and Defence Group have awarded Lagan Construction International a £17 million Airfield Infrastructure project at Cambridge International Airport. The main works will include the refurbishment of an existing apron, construction of a new taxiway, runway resurfacing and an upgrade to the drainage and airfield lighting systems and will require a combination of day time and night time working with over 100 workers engaged in the works.

There will be approximately 25,000m³ of excavation, cut and fill on the project. Approximately 6,000 tonnes of Type 1 stone, 10,000m³ of concrete and 65,000 tonnes of asphalt will be used. The team will re-use all excavated material within the works including the crushing and re-use of 3,000m³ of concrete. Overall the project is targeting a 98% recycling of materials on site and further recycling off site of other materials such as packaging. The project is underway and the works will be continuing until October 2015.

➤ DIO 033 PROGRESS

The working group is making good progress with updating the 2005 version of the PQ spec for airfields (033). Important revisions to mix designs, jointing details and methodology have now been completed. The intention is to have review completed early next year and then leave for DIO to publish later on in 2016.

This review follows the work carried out last year on specifications 51 and 52 and will hopefully lead on to other areas which DIO want to improve.

➤ PASSENGER NUMBERS AT UK AIRPORTS INCREASE FOR THE FOURTH YEAR IN A ROW

New data published by the UK Civil Aviation Authority shows passenger demand at the country's airports is now just shy of the pre-recession boom years. Passenger numbers hit 238m in 2014, just short of the 241m peak reached in 2007. The latest figures show an increase of 4.4 per cent (10m) on 2013.

This growth continues the recovery started in 2011 following three years of falling passenger numbers and figures are now just short of the 241m peak reached in 2007.

The majority of passengers (144m) continue to travel to and from Europe and this area saw a 5.4 per cent rise from

2013. The most popular European origin/destination for flyers is Spain (34.3m), which saw a 4.7 per cent year-on-year increase. Spain has now topped the origin/destination charts for more than 25 years. The biggest percentage rise in Europe was seen by Greece, up by 13.2 per cent to 5.6m passengers. However the European country that experienced the largest fall in passengers was Poland, falling by 2 per cent or 0.1m to 5.2m. Outside Europe there was a 2.3 per cent rise in passengers flying to and from North America, now at 21m per year.

During 2014, air transport movements (landings and take-offs of commercial aircraft) at all UK airports totalled 2.1m, an increase of 1.1 per cent on 2013. However, while passenger numbers grew across the UK, the numbers of air transport movements differed sharply when comparing London airports with the rest of the UK. There were 31,000 (3.2 per cent) more air transport movements at the London airports in 2014 than in 2013. In contrast, the number of movements at all other UK airports fell by 4,000.

Commenting on the numbers, Iain Osborne, Director of Regulatory Policy at the CAA, said: "Our latest figures show that while passenger demand is increasing across the UK, flight numbers are growing much faster at London airports than elsewhere.

"This situation highlights both the pressures on airspace in the South East and the need for more runway capacity in London." At the London airports - Heathrow, Gatwick, Stansted, Luton, London City and Southend - the increase was 5 per cent to 147 million passengers. Heathrow, Gatwick, Luton, London City and Southend each handled their highest ever annual totals.

➤ BRITPAVE 2015 INDUSTRY SEMINAR AND DINNER

An important date for your diary is Thursday 1st October 2015 when the 2015 Britpave Industry Seminar and Dinner will be held at Helidon Lakes Resort, Northamptonshire.

The seminar will examine the case for infrastructure investment and the range of infrastructure solutions offered by Britpave members. The seminar will be followed by Dinner with an after-dinner comedian. The day will offer great opportunities for industry networking and for meeting new and old colleagues.

Further details and programme to follow.



BRITPAVE: THE BUSINESS CASE FOR MEMBERSHIP

Established in 1991, Britpave, the British In-situ Cementitious Association, provides an industry focal point for insitu cementitious solutions for soil stabilisation and transport infrastructure. Working through sector task and project working groups – Roads, Rail, Ports, Airfields, Soil Stabilisation and Special Projects – Britpave aims to:

- Provide an industry forum for clients, contractors, engineers and suppliers involved with insitu cementitious infrastructure solutions
- Raise awareness of the range and benefits of insitu cementitious solutions
- Represent members' interests nationally to government departments, public authorities and other appropriate bodies
- Represent members' for UK and international specification and standard development
- Promote and develop best industry practice and technical guidance
- Instigate and implement insitu cementitious infrastructure research.

Britpave members comprise a wide spectrum of clients, contractors, engineers, suppliers and academics. On their behalf, Britpave offers a range of membership benefits that are both incalculable and have distinct financial rewards. Benefits include:

- Joining a collective voice to forward in-situ cementitious infrastructure solutions
- Access to a forum for industry networking and exchange of ideas
- Representation on all Britpave sector task and project working groups
- Representation of industry views to government and key stakeholders
- The opportunity to influence the development of industry guidance and standards
- Development of market opportunities within the infrastructure sector
- Raising of your business profile via Britpave newsletters and website and industry events
- Access to online technical information and guidance library on the Britpave website
- Free receipt of all Britpave publications, technical reports and other outputs
- Study tours of live infrastructure projects.

This positive mixture of business benefits makes a compelling case for Britpave membership.

BRITPAVE MEMBERS

As the focal point for in situ concrete and cementitious infrastructure solutions, Britpave offers its members a recognised industry voice, market sector development and beneficial industry networking opportunities. Britpave members include clients, consultants and engineers, contractors, material and plant suppliers and academia.

Allied Infrastructure Management Ltd - www.alliedinfrastructure.co.uk
Arup and Partners Ltd - www.arup.com
Atkins Ltd - www.atkinsglobal.com
Balfour Beatty Ltd - www.balfourbeatty.co.uk
Ballast Phoenix Ltd - www.ballastphoenix.xo.uk
BAM Contractors - www.bamcontractors.ie
Barr Quarries Ltd - www.barr.co.uk
Bardon Composites Pavements t/a Aggregate Ind - www.aggregate.com
Barton Plant Ltd - www.barton-plant.co.uk
Beach Soil Stabilisation - www.beachstabilisation.com
British Lime Association - www.britishlime.org
Carillion Group - www.carillionplc.com
CEMEX UK - www.cemex.co.uk
Colas Ltd - www.colas.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
East Midlands Drilling - www.emdd.com
Elkem Materials Ltd - www.concrete.elkem.com
Extrudakerb Ltd - www.extrudakerb.co.uk
Fixing Centre Ltd - www.fixingcentre@btconnect.com
Geofirma Soil Engineering Ltd - www.geofirma.co.uk
Gill Civil Engineering Ltd - www.gillgrouphouse.com
Gomaco International Ltd - www.gomaco.com
Halcrow Group Ltd - www.halcrow.com
Hanson UK Ltd - www.hanson.biz
Interserve Construction Ltd - www.interserveplc.co.uk
JP Donegan Consultant - www.jpdonegan.consult@gmail.com
Lafarge Tarmac Ltd - www.larfargetarmac.com
Lagan Construction Ltd - www.laganconstruction.com
Morgan Sindell plc - www.morganest.com
Norder Design Associates Ltd - www.norder.co.uk
PJ Davidson (UK) Ltd - www.pjd.uk.net
Power Plane Ltd - www.powerplane.co.uk
Pryor Stabilisation - www.pryor.co.uk
RJT Excavations Ltd - www.rjtexcavations.co.uk
RPS Group plc - www.rpsgroup.com
Skanska UK plc - www.skanska.co.uk
Smith Construction (Heckington) Ltd - www.smithsportscivils.co.uk
TR Stabilisation - www.trstabilisation.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