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NHS could save £100m by taking to the stairs, new research finds

NHS hospitals across England could save more than £100 million a year and significantly reduce their carbon footprint simply by encouraging staff to use the stairs.

The savings would be achieved if just 15% of England's 350,000 NHS hospital nurses stopped using hospital lifts and used the stairs instead.

The analysis by StepJockey - a Department of Health seed-funded start-up - uses high quality energy and time saving data from published studies to calculate the gains, which include:

- reduced lift energy consumption
- staff time saved
- improved staff wellness and absence

The savings could make significant inroads into the £2 billion deficit NHS trusts are expected to have by the end of the 2015/16 financial year.

Last September, NHS England's Chief Executive Simon Stevens repeated calls for hospital CEOs to invest in staff wellness, pointing out that NHS absence costs a massive £2.4bn a year.

Mr Stevens told hospital bosses: "NHS staff have some of the most critical but demanding jobs in the country," and "when it comes to supporting the health of our own workforce, frankly the NHS needs to put its own house in order."

A recent report by The Health Foundation also highlighted room to improve efficiency in the NHS by nudging individuals to make healthier, more efficient choices, without resorting to so-called 'Nanny State' interventions.

The NHS, like all major employers, also has challenging targets on energy savings and carbon emissions. The research, using the Carbon Trust's Empower energy savings calculator, shows increased stair use would save nearly 25 tonnes of CO₂ saved over five years.

Huntsville Hospital Health System - the third largest hospital group in the US - has already increased staff engagement with their health by implementing StepJockey Smart Signs and Challenges.

Helen Nuki, a behavioural economist and co-founder of StepJockey, said: "Sometimes it is the simplest of changes that can make a difference. A switch to the stairs would not just generate significant time, health and energy savings for the NHS, but would free-up hospital lifts for patients who most need them."

"It is the scale of the NHS and its centrally run property portfolio that make these significant savings not just possible but very much achievable".

More information and a detailed breakdown of the analysis is available at www.stepjockey.com/blog/nhs-savings

How the savings break down in the StepJockey analysis:

Savings generated per year for all NHS Hospitals in England	
Efficiency (time) savings	£95,324,532
Sickness savings	£7,161,773.56
Energy savings	£77,943
Total gross savings	£102,564,249
Five-year carbon savings	24,938 kg CO ₂

VMWARE RESEARCH: UK PUBLIC SECTOR UNPREPARED FOR CHANGING EU LANDSCAPE

VMware, a global leader in cloud infrastructure and business mobility, has just announced research into the UK public sector's readiness for a changing business landscape in Europe and its impact on its data.

The research reveals that:

- A third of UK public sector data is stored outside the UK
- Moving it back to the country may cost an average of almost £1.4 million for each public sector organisation
- Only 60% of UK public sector organisations know exactly where their data resides geographically, while almost two thirds (60%) have at least some business critical data residing overseas.
- With so much data stored offshore, more than seven in 10 public sector organisations (73%) are concerned they may need to move their data in line with any regulatory, compliance or customer requirements.

About the research

The research of 250 UK IT decision makers, including 29 UK public sector respondents, was conducted in September 2015 by Vanson Bourne and sponsored by VMware.

Despite the potential upheaval, half (59%) said they are yet to start making contingency plans while just 3% are fully prepared to move their data located overseas to UK soil, if necessary. All organisations admitted it would cost them a significant amount to move their data to a different location if needs be, with the average cost being estimated at almost £1.4 million[1], with an average timeline of two months.

Andy Tait, Head of Public Sector Strategy at VMware, comments, "Many organisations in the public sector have rightly turned to the cloud for its flexibility, scalability and security. Knowing that British people's data is definitely residing in the UK means that a need for change is far less likely, no matter what societal and regulatory changes happen across Europe. However, 40% of public sector organisations couldn't say

with complete confidence where all their data is stored, so it will be difficult for them to assess whether it is compliant in any eventuality. The best approach is to be prepared for change well ahead of the new directive. This includes clear visibility into where public data is stored when using a cloud provider, and having the ability to move it from one location to another if necessary within a short timescale."

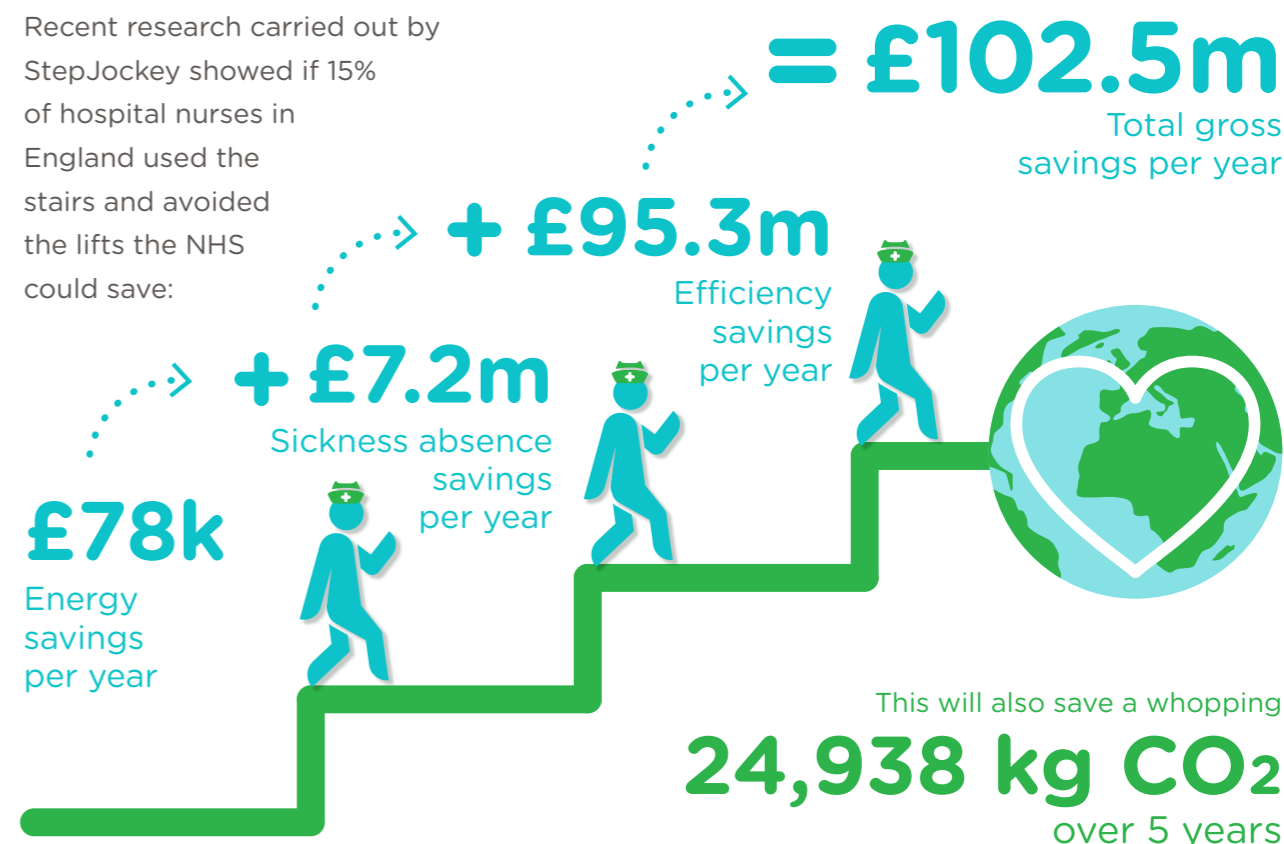
Roy Illsley, Principal Analyst, Infrastructure Solutions at analyst house Ovum commented: "The challenges surrounding the location and protection of data are not new - but are more relevant than ever to the government and other public sector bodies in the UK. Organisations should ask their provider where their data is stored and whether facilities exist to store data in the UK - and also how their data should be categorised to ensure it is stored in the right location. Vendors who enable third-parties to build local cloud services within a region will become critical support to these customers."

www.vmware.com

If just 15% of nurses used the stairs ...



Recent research carried out by StepJockey showed if 15% of hospital nurses in England used the stairs and avoided the lifts the NHS could save:



Some facts you should know ...



£2.4 billion a year
Cost to the NHS due to absence



15 minutes a day
spent climbing the stairs boosts personal fitness and productivity



500% increase in stair use
implementing StepJockey stair prompt signage and challenge platform

To read the full story and how these figure were calculated go to www.stepjockey.com/blog/nhs-stair-savings

Needs some more motivation to get climbing stairs?
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RESOURCE POLICY AT A CROSSROADS: VIRIDOR CALLS FOR ENGLISH RESOURCE NETWORKS

A paper launched today by leading resources and renewable energy company Viridor identifies that current waste management systems in England are no longer fit for purpose. The paper calls for systems to be replaced with a new and ambitious model that moves resource management beyond local authority boundaries, realising the economic potential for British business, manufacturers and public sector bodies.

The paper, launched simultaneously at the Remunicipalisation and Resourceful conferences in London today, argues that an aggregated services model is a necessity if we are to build progressive policies in recycling and resources and realise the business, productivity and employment benefits of a developing circular economy.

England's recycling policy remains largely based on assumptions about resources which reinforce expensive resource management contracts and waste collections based on authority boundaries that are not representative of the value of resources to the national economy.

The report highlights the steps needed to be taken to address England's current flatlining recycling rate of 44.8% and move to a more circular economy.

Viridor finds that:

- England stands at a crossroads – current waste management systems are no longer fit for purpose.
- Collection and processing systems will need to operate in a more aggregated manner to meet the needs of quality-focused reproducers and manufacturers.

- Fully-integrated Resource Networks should look to Europe's largest public/private resource partnership in Greater Manchester which has attracted inward investment from manufacturers and contributes significantly to decentralised energy provision.
- Resource Networks would see local authorities, business and regulators working at scale to deliver efficiencies in real resource management. They have the potential to offer fresh impetus for England's resources policy, aligning with better regulation, productivity and investment agendas across the UK, and taking advantage of an emerging EU circular economy framework.

To achieve a resource management system that is fit for purpose and available now and in the future, the Government should prioritise the development of fully-integrated English Resource Networks focused on the availability of consistently collected, high quality materials by councils and businesses, and the planning and delivery of infrastructure at city/regional scale.

Chris Jonas, Director of Business Development at Viridor said: "Resource policy in England stands at a crossroads. Whilst progress in recycling has been a real UK success story up to a point, we now face a future with the potential for significant success or substantial failure.

"Ambitious Resource Networks hold the prospect of boosting British business, building better regulation, improving productivity and creating up to half a million

jobs. By contrast, retaining outdated policy and systems based on outdated assumptions will do little other than reinforce linear waste management systems that were designed for a bygone era when collections were based on geographic areas and an overall objective of reducing transport and disposal costs.

"Even now decisions about collections, contracts and infrastructure are still often based on arbitrary political boundaries by authorities and organisations not focused on the value of resources to the UK economy. This situation is made worse by the current pressures on local authority funding which mean that even existing recycling systems are being undermined. There is therefore no doubt that the current resource management systems are no longer fit for purpose.

"Our paper calls for decisive action and illustrates how fully-integrated Resource Networks, focused on the availability of high quality materials rather than local authority boundaries, would have a huge impact in delivering a truly circular economy.

"There is a significant opportunity for England's politicians to commit to the adoption of Resource Networks that would boost British business, productivity and jobs and position the country as a leader in resource stewardship."

With the next steps of the Circular Economy policy currently under review in the UK, England is well placed to realise the opportunities of an aggregated services model.

mgrey@viridor.co.uk

'NEW DAWN FOR RECYCLING IN SCOTLAND' – ZERO WASTE SCOTLAND COMMENTS

The Scottish Government has announced a 'new dawn' for recycling in Scotland, with the news today of an agreement with COSLA on a consistent new system of recycling for Scotland.

Cabinet Secretary for the Environment Richard Lochhead announced that the new system will make it easier for people to recycle, improve the quality of recycling and help local communities reap the benefits of a more circular economy.

Councils can sign up to the voluntary

Charter from January. After signing the charter they will receive support from Zero Waste Scotland in developing plans to introduce the new system.

Commenting on the announcement, Iain Gulland, Chief Executive, Zero Waste Scotland, said:

"Today's announcement marks an important stage in Scotland's commitment to increase recycling. We must make best use of the materials we have, for strong environmental and economic reasons.

"Adoption of the Charter by councils will help provide clarity and consistency for householders and the resource management industry. Zero Waste Scotland will be ready to support councils who sign up to the new Charter."

www.zerowastescotland.org.uk

G4S Heartlands Hospital FM team partners with NHS Trust to win top award

A national award celebrating the contribution of organisations working in and alongside the NHS has been won by Heartlands Hospital in partnership with G4S Facilities Management.

The Birmingham hospital won the Health Business Awards 2015 Estates and Facilities Innovation category earlier this month in recognition of critical work to prepare for potential Ebola patients. The award was achieved jointly by the hospital's facilities and emergency planning teams working together with G4S FM, who delivers cleaning, security, portering, ward hostess and car park management at the 700 bed hospital. The teams competed against the North Bristol NHS Trust and the Royal United Hospitals Bath NHS

Foundation Trust as finalists for the coveted award.

This industry accolade tops off an exceptional year for the Heartlands team, which has seen them shortlisted as finalists for three other prominent industry awards: the British Institute for Facilities Management (BIFM) 2015, the Kimberley-Clark Professional Golden Service Awards 2015 and the PFM Partners in Healthcare Award. They also recently won the Teamwork & Collaboration award at G4S's own annual UK & Ireland Regional Excellence Awards.

Helen Moreland, G4S FM Healthcare Operations Director added: "I am really proud of our Heartlands Team and the close working relationship we have established with the Trust. Working in

partnership and having effective plans and procedures means we can together respond professionally to all routine and emergency situations within the hospital."



£1.2BN CONSTRUCTION PHASE OF MILITARY ACCOMMODATION PROJECT COMPLETED

The construction phase of a £1.2bn project to improve the living accommodation of single service personnel has just completed after 12 years.

The Single Living Accommodation Modernisation project, better known as Project SLAM, has been one of the largest new build and refurbishment projects in the UK and has delivered successful renovations and constructions on 52 locations from Scotland to Cornwall. 121 separate projects have improved or created more than 22,000 bedspaces in this time.

Project SLAM has placed or employed over 150 graduates and trainees and has won numerous awards, including more than 20 Considerate Constructor Gold, Silver or Bronze awards. Feedback from soldiers, sailors and airmen and airwomen has been positive:

Speaking about new accommodation at RM Chivenor, Lance Corporal Smith said: "They are much better facilities as you have a rest room and communal area so the lads are not just stopping in the rooms on their own. There is an amazing kitchen and drying room, we really have everything we need."

The contract was awarded in 2002 to Debut Services Limited, a joint venture between Lendlease and Babcock Support Services. 12 sites, including Woolwich Barracks and Cavalry Barracks in Hounslow have had accommodation refurbished to

modern standards, while others have had entirely new accommodation blocks built – a total of 319 new blocks over the term of the project. These are a mixture of traditional and modular construction and examples include Gaza Barracks in Catterick Garrison and HMS Nelson. Over the course of the project, one bedspace was delivered every normal working hour on average.

Air Vice Marshal Elaine West, DIO's Director of Programme and Projects Delivery, said: "Project SLAM has been an undoubted success for a number of reasons, not least the firm intent from military chiefs to prioritise funding investment into accommodation for our people. Further, the quality of build across the programme has been well received and provides a lasting legacy of modern living accommodation for highly deserving occupants. Well done to all involved!"

Brian Johnson, Debut Service Limited, said: "Over the last 12 years Project SLAM has consistently delivered first class single living accommodation for

the Armed Forces across the UK. We are delighted to have completed over 22,000 beds, dramatically raising the bar for living accommodation for Britain's servicemen and women and improving the built environment in which our Armed Forces live and work. We look forward to continuing to work with the DIO in the years ahead."

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BRISTOL INCREASES ITS AMBITION AND AIMS TO BE CARBON NEUTRAL BY 2050

This year's European Green Capital – Bristol, UK – has pledged to accelerate its already ambitious targets and pursue carbon neutrality by 2050.

Mayor George Ferguson made the commitment alongside local political group leaders following the city's role co-hosting the Cities and Regions Pavilion at the COP21 climate talks in Paris.

Bristol has so far reduced carbon emissions per person by 24% since 2005 and under its most recent climate strategy the mayor committed to future CO₂ reductions of 40% by 2020, 50% by 2025, 60% by 2035 and 80% by 2050. Now, inspired by other cities and what is required to deliver the agreement at COP21 he now seeks to update the target to 100% by 2050.

Bristol is a member of the Compact of Mayors, launched by UN Secretary-General Ban Ki-moon and Michael R. Bloomberg. It is the world's largest global collective effort to date by cities to tackle climate change, proactively prepare for its impacts, and regularly track and feedback on progress. Bristol is also a signatory to several climate pledges, including two issued during COP21 – the Paris City Hall Declaration and the 'Under2' Memorandum of Understanding.

George Ferguson, Mayor of Bristol said: "Cities and regions played a major role at COP21, marking the first time they've been included at the event. In recent years whilst nations have talked, cities and regions have acted. We pledged to do all we can to pursue a future where unavoidable climate temperature increases are limited to no more than two degrees Celsius from pre-industrial levels. We made this pledge at a time when the outcome of COP was

unclear, but now the world's nations have reached their historic agreement there's an even better chance of success.

"To succeed requires greater ambition, investment and dedication across all sectors. Bristol is once again taking a lead amongst UK cities. We are saying we shall take on board what has been agreed at COP21, we shall accelerate our ambition and work with partners at home, abroad and across any and all sectors to try and achieve our goals.

"When it comes to climate change we are a politically united city. Also our Green Capital Partnership includes over 850 member organisations, a key element of the city's success as European Green Capital this year, and crucial to the success of our new carbon zero target date of 2050. Working with them, with our dedicated Energy and Futures services, with our international networks and many others, I am sure we can rise to the challenge."

Bristol City Council itself is working towards a new 50% reduction target for its own emissions by 2020 after meeting its 40% goal five years early. It has also made large strides in renewable energy. In a few years, it is forecast to produce 1GW of electricity from solar panels. Since 2005, Bristol has reduced energy use by 18%.

Cllr Helen Holland, Leader of the Labour group on Bristol City Council said: "It was a Labour-led Council that first applied to Europe for our city to be European Green Capital, so I am delighted to take part in this pledge to commit Bristol to become a Carbon Free City by 2050. This ambitious commitment will have to be matched by bold actions, but I am sure that everyone – residents, community organisations, business – will all play their part in helping Bristol meet that challenge, joining

worldwide efforts to rescue our planet."

Cllr Mark Weston, Leader of the Conservative group on Bristol City Council said: "My group is supportive of efforts to move to a lower carbon economy as we end energy generation from high carbon fuels such as coal. We need a diverse energy mix including both renewables and nuclear generation. We would urge city planners to look carefully at how we can both reduce energy usage and improve micro generation in the future as we rise to meet the challenges ahead."

Cllr Ani Stafford-Townsend, Leader of the Green group on Bristol City Council said: "Greens have been campaigning for decades on carbon reduction to avoid devastating climate change. In 2006 Cllr Charlie Bolton used his first motion as councillor to call for more ambitious carbon reduction targets. We welcome the firm commitment for Bristol to lead the way and become carbon neutral by 2050. We have the technology and vision to tackle the greatest challenge of our generation, all we need now is the political will from across the board to make zero carbon Bristol a reality."

Cllr Gary Hopkins, Leader of the Liberal Democrat Group on Bristol City Council said: "Bristol has for many years been leading the way and should sign up to ambitious targets. Declarations though must be matched by actions. The Liberal Democrats would look to get to grips with our public transport by investing in urban rail and bus services and ensuring the highest environmental standards, we would prioritise sorting out waste and importantly, would prioritise investment into the hydrogen economy."

public.relations@bristol.gov.uk

Vienna calling to meet the challenges of Passivhaus standards

CONSTRUCTION and architectural professionals looking to advance their knowledge in Passivhaus standards can take advantage of a training programme in Vienna that delivers the latest thinking on the subject.

The study programme, conducted in English, will provide professionals and students alike with a level of understanding that will single them out as pioneers in sustainable construction within the UK.

And as the industry in Britain looks to deliver substantial improvements in sustainability – reinforced by the Government's 'Construction 2025' strategy – those with the skillset to offer a constructive viewpoint on the subject will be well-placed to meet the challenges ahead.

Austria has been working to the Passivhaus standard for decades, creating environments that balance environmental, economic and comfort factors in both new-build and refurbished properties.

Each year, this expertise and knowledge is shared through the OeAD-Housing Office's summer university Green Building Solutions (GBS), which is gaining increasing recognition as a leading source of training and insight into the subject.

The programme is run by the OeAD-Housing Office, which offers Passivhaus accommodation for students across Austria, alongside Vienna's BOKU University of Natural Resources and Life Sciences, which advocates the use of natural resources by connecting natural, engineering and economic sciences.

It addresses subjects including Sustainability in Building and Urban Planning, Principles of Passivhaus Planning and Renewable Energies and Business Concepts.

The programme concludes with a collaborative project where participants use the knowledge and experience gained from the course to design a 'green' building.

GBS takes place over a three-week period and is designed to appeal to, but is not limited to, those working and studying in architecture, construction management, project management, building engineering and surveying.

Registration is now open for the next GBS summer university, which takes place from July 23 to August 14.

Günther Jedliczka, chief executive of the OeAD-Housing Office, said: "GBS offers a unique opportunity to study skills which will become increasingly in demand in future.

"It enables participants to strengthen their CV and work both individually and as part of a team in a collaborative and informed setting.

"There's the opportunity to build and develop international relationships and enjoy the very best tuition in sustainable construction techniques."

The OeAD-Housing Office, which won the Austrian Climate Protection Award in 2013 and the Environmental Award of the City of Vienna in March 2015, operates the GBS course under a not-for-profit arrangement.

GBS has been conceived as a modular university course, with seven ECTS points awarded after successful completion.

The cost of GBS is €2,490 for professionals and €2,000 for students. This price includes all social activities as well as accommodation, which is based in OeAD's Passivhaus student properties in Vienna. Early booking is advised and more details can be found at www.summer-university.net

More details about the Government's 'Construction 2025' strategy can be found at https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/210099/bis-13-955-construction-2025-industrial-strategy.pdf



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Would you like to be a
Sustainability Champion
of 2016?

BE IN IT TO WIN IT!

25-YEAR WELSH RESIDUAL WASTE DEAL SECURED BY VIRIDOR

Viridor has secured a contract to transform 95,000 tonnes of residual waste annually into low carbon energy and recycled aggregates from Tomorrow's Valley – a group of four Welsh local authorities, led by Rhondda Cynon Taf Council.

The 25-year contract, which may be extended for a further five years, will begin in April 2016 and is backed by funding from the Welsh Government. It will mean that residual waste from across four councils will be diverted from landfill and processed at Viridor's £223m Trident Park Energy Recovery Facility (ERF) in Cardiff. The deal will allow the authorities to build on their successful recycling records, and give resources new life.

The initial procurement was by Rhondda Cynon Taf and Merthyr Tydfil, with Blaenau Gwent and Torfaen Councils joining to realise the benefits of scale in working with Viridor. In addition to the recovery of energy, the recycling of residues from Trident Park will help the four authorities towards achieving the statutory recycling targets set by the Welsh Government.

Trident Park ERF, officially opened in June 2015 by the Rt. Hon. Carwyn Jones AM, First Minister of Wales, diverts residual waste

away from landfill, generating 30MW of electricity for the National Grid. The addition of material from the Tomorrow's Valley authorities to that already managed on behalf of the five-council Prosiect Gwyrdd partnership will mean that the ERF is securely managing some 267,000 tonnes of waste from nine Welsh local authorities.

Mr. Ian McAulay, Chief Executive of Viridor, commented: "The announcement by the Tomorrow's Valley is good news for

Viridor, partner councils, their local environments, economies and communities. Through our £223m investment at Cardiff, Viridor is helping nine Welsh authorities deliver a low-carbon vision for transforming what once was 'waste', generating renewable energy from what remains."

mgrey@viridor.co.uk



HALFORDS OFFERS 10% DISCOUNT TO MEMBERS OF SMARTGO TRAVEL NETWORKS ACROSS THE UK

New, exclusive offer for Smartgo member employers and their 98,000 employees as Halfords are offering a 10% discount on Halfords gift vouchers redeemable on over 10,000 cycling and non-cycling products in-store.

Smartgo has been developed and is co-ordinated by specialist sustainable travel consultancy, Go Travel Solutions and there are over 207 employers signed up to existing Smartgo networks in Leicester, Milton Keynes, Stevenage and other locations across the UK.

The new promotion with Halfords will enable around 98,000 staff from these employers to benefit from a 10% discount off Halfords gift vouchers redeemable in over 470 Halfords and Cycle Republic stores and accessed via a unique portal.

Also under the agreement with Go Travel Solutions, Halfords will also provide the following:

- New Cycle2work scheme members - a free can of GT85 bike lubricant to maintain and protect your bike + a

free Bike Build & 6 Week Safety Check + a Free 12 month Bike Care Plan (Halfords sourced bikes only) + a 20% off Halfords Cycle Accessories Discount Card* (valid for 12 months). Offers are available for all new Cycle2Work scheme members only who are employed by a Smartgo member employer. Scheme members can shop for their Cycle2work bike from over 800 independent cycle retailers and 470+ Halfords and Cycle Republic stores

- Fleet bikes: Halfords is the preferred choice for bespoke branded bikes to the Emergency Services and will extend its discounted packages to Go Travel Solutions members
- Exclusive offers throughout the year on cycling and other products

Lucie Cherrington - Head of Halfords Cycle2work said: "We are delighted with our growing partnership with Smartgo. Together we are supporting companies in local communities with their sustainable

transport policies and at the same time we are making green transport affordable and accessible to their employees through Cycle2Work and exclusive offers."

Robin Poynton, Managing Director of Go Travel Solutions added: "As the largest bike retailer in the UK, this partnership with Halfords is an excellent opportunity to encourage more Smartgo members and their staff to cycle to and from their workplace for the financial, health and sustainability benefits that it provides."

To find out more about the Smartgo programmes in the UK, call 0116 216 8326, email info@smartgo.co.uk or visit www.smartgo.co.uk

To find out more about these exclusive Halfords/Smartgo offers please contact Halfords Business Services on 0345 504 6444 or via <https://cycle2work.secure.force.com/sitecontactus>

*The discount card will be made available to the employee for the duration of the initial hire period and cannot be used in conjunction with a cycle2work letter of collection. Excludes action cameras and cycle GPS.

PUTTING THE SOCIAL INTO BUSINESS SUSTAINABILITY

Traditional sustainability definitions often focus on 'green issues' but can overlook the critical importance of social issues. Responsible business is fundamentally about people and how we behave, our relationship with each other and with the environment. Following COP21, it is clear that 'green' or environmental considerations remain high on the sustainability agenda, but we also need to focus on social responsibility and how business can have major impacts at a local level, within the communities in which they operate.

The UK's Social Value Act put the issue firmly on the agenda, requiring local authorities and the commissioners of public services to consider how they can improve the social impact of their contracts. Last year's review of the Act identified barriers to practical implementation, including varying levels of awareness, understanding, use and measurement of social value. It is clear that many of us are still working out what social value actually means and our role in delivering it.

As behaviours change within the business and within the wider industry, the private sector can start to shape more positive outcomes or 'social value' with and for communities. Positive change is best achieved by acting early and through regular commitment. If we can show people in communities and business that opportunities are available – and that they can make a difference – we can begin to build positive relationships between business and the public.

Now, more than ever, sustainability is not a nice-to-have, it is critical for long-term business success. That critical nature extends to adopting a strong, balanced approach across the 'triad' of environmental, social and economic responsibilities. Businesses should be ambitious, setting challenging goals and inspiring others to join them, such as our goal to establish Community Needs Plans across all of Carillion's contracts, projects and regional teams. This approach requires all managers of big projects to find out what clients and communities actually need before offering services.



We set targets for supporting local economies and last year we recorded an average of 51% local spend – well above the government's 25% target. We engage with young people, the unemployed and hard to reach groups – this year we will achieve our 1000th work placement for disadvantaged individuals via our partnership with Business in the Community. We actively encourage staff to volunteer, offering six paid days every year for community activities. Last year, 14% of staff took up the offer and we plan to make this 50% by the end of the decade.

Together, we can do even more, so we are now exploring and interpreting a different triad – the roles and interactions between community, business and government. We need a better understanding of how we can work together, what drives us and what we need, so we can engage more effectively with each other.

We are looking to widen the conversation and generate more ideas for ways that responsible businesses can contribute to society. In December last year, Carillion launched a six month

Community Collaboration Programme to build the evidence base and help determine what adding social value actually means in practice. We kicked off the programme with a survey to research and understand different perspectives from across business, community groups and government. The results will be out in March and will help inform the next stage of the programme.

If you are interested in receiving a copy of the results or being involved in the next stage, please register your interest at Carillion's Sustainability Talk and News portal at <http://www.stnlive.info/>

About the author:

David Picton is Carillion's Chief Sustainability Officer, leading the development and delivery of its 2020 sustainability strategy. Integrating business objectives with corporate social and environmental responsibility, Carillion's sustainability programme seeks to deliver six positive outcomes – for its people, for the environment and for successful, sustainable business across the UK and in its overseas markets.

"COP21 - WHAT NOW?"

What is COP 21? By now most of you are familiar, but to recap 196 parties have reached agreement to limit global warming to less than 2°C, to review each country's contributions every 5 years, and to provide climate finance to help poorer nations adapt to climate change. Within COP 21 an entire day was dedicated to buildings – the first time this has happened and a good indicator of the importance of buildings in reduction of carbon emissions. Buildings are said to be responsible for between 30% and 50% of global carbon emissions, depending on the accounting.

The agreement reached at COP 21 in Paris is a great achievement, and an excellent lesson in international negotiation – the introduction of Intended Nationally Determined Contributions (INDCs) has been widely credited with achieving agreement between parties, with each party bringing to the table what they think they can achieve to cut carbon emissions, meaning far less wrangling over quotas. Unfortunately, it's not going to be a planet saving agreement in itself and its success will be highly dependent on the 5 year reviews which are intended to act as a ratchet mechanism to tighten the targets over successive years. [The currently committed INDCs do not achieve sufficient reduction in carbon emissions to achieve the limit of 2°C global warming].

The UK, for its part, has committed along with the rest of the EU to achieving at least a 40% domestic reduction in greenhouse gases by 2030 compared to 1990 levels.

What does this really mean for the UK property sector?

The UK desperately needs policy which sets out a clear path to delivering this target, along with the existing legally binding Climate Change Act. It is critical that this INDC is turned into action -

particularly at a time when the policy space around green issues is being deliberately dismantled. The UK needs clear, long term policy that isn't changed by each successive government in order to give businesses the confidence to invest.

Given that such a strong policy position seems unlikely at present, and the Paris agreement does not come into effect until 2020 – businesses in the UK property sector will need to act in advance of such certainty. Many businesses are looking at their portfolio and weighing up the risks and costs associated with climate change in a post 2°C warming world, and finding that investment in reduction in carbon emissions as well as climate change mitigation makes good business sense.

So where should we as a property and construction sector focus our energy?

Climate change should be firmly on the agenda for every organisation; each organisation needs its own targets to for reducing emissions at corporate level. We all have a responsibility to review and identify what parts of our businesses are responsible for the majority of our emissions, and setting out a path to reducing those emissions.

We should also focus on what our sector can support others to achieve, around enhancing the performance of the existing building stock and continuing to drive down emissions associated with new buildings. Schemes such as ESOS and MEPS provide a space for consultants to engage with owners and managers of existing property, and these schemes should be used as a springboard to improve the existing stock as far as technically possible, not just as far as financially viable. Performance of existing building stock should be considered part of corporate social responsibility – to give organisations another incentive to push further. Whole life carbon assessment should be used to support decisions about demolition or refurbishment – the construction of new buildings is hugely carbon intensive, and the decision to demolish and rebuild should not be taken lightly but following a detailed review including environmental costs and benefits.

We also need to continue to drive forward better design of new buildings, and use the forums available such as CBx, UKGBC, etc. to continue learning from past projects, to understand energy consumption in use, and to provide case studies to demonstrate to clients that there are successful precedents in order to



reduce the perceived risk of going greener. We also have a duty to push clients to truly enhance their building sustainability, not just hit the minimum requirements, and to stop designing all glass buildings. We need more precedents that go beyond the norm, PassivHaus and net zero carbon developments, and to make the information about those projects widely available to give developers confidence that these types of projects can be done. We need to continue to support renewables, despite the reduction in subsidies and the recent fall in oil prices, and we need to understand, interrogate and push the supply chain further, to truly understand the impact of our purchasing, and to encourage use of low impact materials. The circular economy and how it fits with your business model should be high on any construction company agenda, as should demand side management and local energy storage, which give opportunity to adjust energy demand so it can better work with intermittent energy supply. At BuroHappold we are developing compelling business cases for client action based on basic compliance, enhanced performance, resilience, and the ability of buildings to enhance occupant health, wellbeing and productivity.

If each organisation was to take a good hard look at what barriers are stopping us from delivering lower impact buildings, and take steps to remove just one or two of those barriers, we would be able to make great leaps forward as an industry. There is no shortage of tools to get us where we want to be in terms of building design, we need to understand why we are not going further already.

To read our full summary report put together following the CBx breakfast event "COP21 – What Now?" in February 2016, please visit <http://cbxchange.org/category/knowledge/>

For more information, or to browse our library of documents relating to the performance gap, please visit our website: <http://cbxchange.org/>



OPEN CELL VERSUS CLOSED CELL POLYURETHANE FOAM: IS THERE A DIFFERENCE?

The application of closed cell polyurethane foams for building insulation has been around for over 30 years, but recently the availability of an open cell option has come onto the market. Architects, specifiers and building consultants may well be confused as to the merits of these different systems.

The British Urethane Foam Contractors Association, the trade association representing installers of polyurethane foam, has predominantly represented the closed cell industry but recognises that the open cell alternative has different benefits.

A closed cell sprayed, or injected polyurethane foam material provides one of the highest insulation values commercially available. It also helps to achieve excellent structural stability for a building, adhering to the building substrate and setting quickly to form a rigid layer. For this reason, it is widely used for roof insulation and strengthening as well as cavity wall insulation and stabilisation, which is particularly important where the wall ties are failing.

Air leakage through the cavity can be reduced to zero. With greater thermal performance and reduced air leakage, polyurethane foam outperforms all other forms of cavity fill.

The polyurethane foam moulds itself to the fabric of the building, sealing out draughts and reducing air leakage. It is increasingly important to provide structural integrity to buildings, particularly as weather patterns are becoming more erratic.

Closed cell foams are resistant to driving rain meaning that the material stays dry with no loss of thermal properties. The insulant can help act as a barrier to prevent flood waters from entering the building through the walls. The British Board of Agrément certification approves this insulant for cavity walls in all exposure zones.

Sprayed and injected closed cell polyurethane foams are also ideal for marine applications. They have high insulation properties with low insulation thicknesses with little impact on the useable space within the boat. Because the material is closed cell it will not

absorb water and bonds directly to the substrate with no voids or joints for condensation or cold bridging. Closed cell foams which achieve a Class 1 fire rating when tested to BS476 Part 7 are available. Or, where non-Class 1 materials are used on internal applications these must be covered by plasterboard, or a similar thermal barrier.

Conversely, open cell polyurethane foams which have entered the market in recent years do not have the high insulation properties associated with the closed cell materials, which is a distinct disadvantage if trying to save space. They do not have the same fire performance as closed cell, so they should never be left exposed; they have no structural strength to stabilise roofs or walls and are widely marketed to be applied directly onto non-breathable membranes. This practice should be treated with a high degree of caution as interstitial condensation could occur in the foam, next to roof timbers.

However, they are better suited for their enhanced sound attenuation properties. Open cell foam is also useful in situations which require more air and vapour into a building's interior.

When choosing a BUFA registered installer, customers can be assured of the

highest standards of quality and service. Installers are required to abide by the Association's Code of Professional Practice which aims to further good technical and professional conduct and promotes sound relationships between members and their customers. A survey is carried out before installation to check that the building fabric is sound, with any necessary rectification works carried out.

There is a twenty-five year insurance warranty which BUFA installer members can offer for domestic injected polyurethane cavity wall insulation projects. The warranty offers reassurance to customers and becomes effective if there is a fault with the installation or the product and the installer or product manufacturer has ceased to trade.

The BUFA warranty is available for installations funded as part of Energy Company Obligation or Green Deal Home Improvement Funded work. Other domestic and commercial jobs can also be considered, subject to prior approval by the insurers.

Further information on the use of sprayed or injected polyurethane for building insulation and stabilisation is available from the BUFA website at www.bufoa.co.uk



BSRIA LAUNCHES WHITE PAPER ON FUTURE BUILDING TRENDS - IMPACTS - SOLUTIONS

BSRIA is delighted to have launched its White Paper on 'Future Building Trends - Impacts - Solutions', specifically asking: what do you think are the biggest, most relevant changes in buildings now and over the next 10 years?; what will be the impact on our industry?; and what products and services will be required in the future?

Although there were a small number of participants from Europe and Asia, the majority were from North American organisations, so it can be assumed that the findings presented in the next chapter, have a North American slant or bias.

The paper examined: how buildings can improve productivity and wellbeing – touching on all aspects of building design, construction, use, and maintenance. Also, the relationship of buildings with their immediate environment as well as their connection to the wider world.

It considered: the changing landscape around the design and use of buildings, their evolution, and to uncover how the heating, ventilation and air conditioning (HVAC) and building controls industry should be shaped in future in order to best respond to client. It was written by Jeremy Towler, Senior Manager, Energy & Smart Technologies, BSRIA Worldwide Market Intelligence.

What do you think are the biggest, most relevant changes in buildings now and over the next 10 years?

In relation to drivers and trends – green construction and sustainability of construction will increasingly affect the planning and design of buildings within the next few years. While green design will be easiest to implement for new construction, it is the retrofit and refurbishment of 4.6 million existing buildings that represents the biggest challenge, the most pressing need and the biggest market potential.

Julia Evans, Chief Executive, BSRIA, said: "Buildings that adapt to people (rather

than the other way around) will be a major evolution and will lead to more productive environments, a higher level of satisfaction and comfort for occupants and the ability, for example, to avoid conditioning unoccupied spaces.

The advance of the Internet of Things (IoT) is a major trend in building management. A growing abundance of data will lead to new services and solutions; however there is a risk that the speed of change may create uncertainty – which can lead to hesitation and false starts.

There is a trend towards home-working which will cause a reduction in the demand for commercial building space. More remote working and desk sharing to accommodate the way people will work in the future will result in the need for more flexible work space and an increase in the occupied density of commercial buildings."

What will be the impact on the HVAC equipment and controls industry?

New challenges will undoubtedly appear, not least the need to understand how new building designs work and to understand the challenge of more complex building systems. There is a need for smarter, integrated construction practices and the industry needs to develop new partnership ecosystems to address this.

Regarding new technologies – there will be increased uptake of building data capture, energy data analytics and an increasing proportion of applications going to the "cloud". The trend toward equipment suppliers offering smart products is expected to increase rapidly with eventually most products connected to, or residing in, the "cloud", but it may be akin to a "Betamax vs VHS" war between suppliers, software houses; different systems and solutions – until winners emerge and the market eventually settles down.

There is a growing need for devices to be interconnected and converged on to common platforms and networks. This is driving demand for new skills, particularly



in the area of IT and communications. Cybersecurity needs to be improved and has moved rapidly up the agenda. It represents both a threat to development of the building controls industry and a new business opportunity.

What products and services will be required in the future?

Julia added: "With increasingly complex buildings and the use of more technology to run them more efficiently, the whole service and maintenance of buildings could change and a new type of company evolve. The whole life cycle cost approach will become more popular. Building controls suppliers must have professional knowledge and competency in energy management, being able to predict building energy expense and remove risk.

Smart technology, in the form of self-learning and self-diagnosing products is emerging as well software based analytics, all of which are setting the industry on the path towards increasing artificial intelligence and new business opportunities.

Clearly, there is a lot changing in this industry and "the players" need to be aware of this and decide how they will respond. They need to evolve, move up the value chain, embrace new technologies, develop the necessary processes, and build the necessary skills."

The paper was developed for BSRIA's Diamond Group Forum NAM 1/2015 in a parallel to the AHR Expo in Chicago in January 2015. BSRIA's Diamond Group consists of a BSRIA network of senior executives.

www.bsria.co.uk

CASE STUDY: GRANTHAM COLLEGE LEARNING DEVELOPMENT CENTRE

The new, purpose-built Learning Development Centre at Grantham College, Lincolnshire has revitalised a 1950s building and provided a bespoke teaching space for those with learning difficulties or disabilities. Here, architect James Badley of rg+p Ltd discusses the design considerations given to complete such a scheme and how his brief was to seamlessly blend academics with accessibility...

"There is an ongoing masterplan to upgrade Grantham College's facilities and consolidate efficiency across three campuses to enable the continued delivery of top class, inclusive education to the community. One of the first phases in this masterplan was to create a dedicated suite of facilities for students with learning difficulties or disabilities and allow them to continue their studies in an integrated environment. To achieve this, a £934,000 grant was secured from the Education Funding Agency and work could begin remodelling part of the existing college.

"The space earmarked for the new Learning Development Centre was the ground floor of a larger building, meaning its design had to adapt around existing structures and retain a sense of connectivity whilst also providing the degree of separation necessary to suit specific learning requirements – a delicate balance.

"Initially consideration was given as to how to create the best learning environment for students. Externally, the landscape was designed to avoid an imposing or institutional feel and from the inside, we ensured the provision of as much natural light as possible to overlook the rural, green aspect together with a rear courtyard area for use in summer months.

"Accessibility and inclusivity were the next points. With its close proximity to the main hub of the college, the Learning Development Centre had to create a welcoming environment to encourage crossover between the students whilst also providing adequate physical space for disabled access. The key for this part of the design was to be discreet; ensuring corridors and door frames would be wide

enough for example, yet retain a similar flow and features to the main college learning spaces – the colour palette was significant in achieving this. In addition, we also ensured the more practical elements such as lifts and ramps were designed into the landscape and overall structure, meaning there would be no retrofit requirements or unsightly 'add-ons' that could appear as a careless afterthought.

"The result of these considerations, alongside those of safety and security, has been the creation of a homely, pastoral environment which is conducive not just to academic learning but also for life skills, confidence and friendship. In addition to its specialist classrooms, IT suite, first aid and physiotherapy rooms, the Learning Development Centre also features a personal care area, multi-sensory room and adapted training kitchen to teach independent living. A dedicated care service, Day Break, now operates throughout the year from the Centre, offering leisure activities and support to young people.

"Looking ahead, the next phase for this state-of-the-art facility, which was officially opened by the Minister of State for Skills, Nick Boles MP, is to create a sensory garden for students. Incorporating kinetic sculptures and wind chimes to help stimulate the different senses, it is hoped this area will complement the overall learning experience. For the College, the masterplan has been approved by South Kesteven District Council and the next stage is to discharge the reserved matters for phase 1 of the development, which is due to start on site in April 2016. So, all in all, a very bright future ahead."

rg+p has over 30 years' experience delivering award-winning schemes across the UK from its offices in Leicester and London. James Badley leads the practice's education division, of which the Grantham College masterplan is the flagship scheme.

www.rg-p.co.uk



One of the specialist classroom spaces at the Learning Development Centre.



Entrance to the new Learning Development Centre at Grantham College.

KEEPING YOUR THIS WINTER

The winter not only brings darker mornings and longer nights, but an unfortunate rise in crime and burglaries. Luckily, there are a number of simple solutions that facilities managers can apply to ensure their buildings remain safe and secure. Paul Barrows, demand creation leader at specialist security manufacturer Allegion, offers his top tips for staying safe this winter.

In research undertaken in 2015, Aviva insurance found that burglaries increase by 20 percent during the winter months, which makes sense when you consider the additional protection that the cover of darkness provides. Eight out of 10 burglaries are committed by opportunist thieves – in fact, in 20 percent of cases, the burglar enters through a door or window that has been left open or insufficiently protected.



In addition to the obvious cost from property damage and loss of assets, criminal activity can cause further logistical headaches for facilities managers. For example, the need to change all the locks, provide new keys and replace any damaged doors and hardware will take time as well as impact your finances. Insurance claims can also be impacted if there's lack of evidence regarding forced entry.

Prevention is, of course, better than a cure. The good news is there are a number of effective solutions that can make all the difference for long-term, as well as seasonal, protection.

First, consider simple behavioural changes that can be put in place instantly. Make it part of the daily routine to check all access points (doors, windows and gates) and look for any obvious weaknesses that might encourage more opportunistic criminals. This includes making sure anything that could be used as a potential weapon or used to get through an entrance is removed – for instance, any tools or ladders.

Don't underestimate the value of a high-quality padlock. There's a broad range of models and designs that cover all levels of security for both commercial and residential use. Look for a brand that offers additional benefits, such as CISA padlocks available through Allegion. They can, for example, be supplied individually keyed or keyed alike for additional convenience.

A strong, lockable gate fitted across a side passage will prevent a thief getting to the rear of a property. These can be secured using a rim lock or padlock and hasp. Any connecting doors to the building should be treated as external doors and fitted with padlocks.

When selecting your padlock, it's also worth considering the distance that you will have to secure the shackle into the lock. As a general rule, the shorter the shackle, the more difficult it is to damage and compromise the lock.

Also consider hidden parts of the doors, themselves. For instance, the door should be fitted with at least three 100mm-hinges, selected to suit the weight

BUILDING SAFE

and thickness of the door. The hinges should be in accordance with BS EN 1935, and it's also worth fitting two or three hinge bolts. These are essential if the door opens outwards, as it prevents it being opened by cutting or through the grinding of the hinge knuckles.

In addition to these smaller scale changes, there are some long-term solutions that will provide effective security all year round. These are also worth considering as part of the buying process if you're in the market for new door hardware.

Lock bumping and snapping have become some of the most common means of burglary in the UK and are still on the increase. After all, you can find descriptions and demonstrations online, as well as purchase bump keys and snap tools. This type of entry can also cause problems for facilities managers, as the signs of forced entry are so minor that insurance claims become difficult.

With two-thirds of all burglaries being attempted through a door, there's a tendency to attack the cylinder first. As a result, it's a good idea to check whether you need to upgrade the cylinders and lockcases in your doors to heavier-duty models. If they're unsuitable, your doors will be more vulnerable to picking, bumping and drilling.

Again, there are solid solutions that are readily available. CISA Astral S and AP3 cylinders offered by Allegion are fabricated with a patented laminate, snap-resistant steel core to provide flexural snap-and-pull resistance. The core is also made visible from both ends to act as a deterrent. Choosing a 10-pin cylinder system will provide more than 1.6 million different key combinations to provide protection against all forms of unauthorised entry. Plus, a BKP bump resistant device is built-in as standard, in addition to hardened steel pins and drivers to protect from drilling.

A good quality automatic deadlocking nightlatch should be fitted approximately a third of the way down a door.

Traditionally, front doors are fitted with a nightlatch, which latches automatically when the door is closed, but can be opened from inside without a key. These provide a measure of security but can be forced by thieves, so shouldn't be relied upon on their own.

For timber doors, a kitemarked BS 5 lever mortice lock or a sashlock certified to BS 3621 are great options. A door fitted with one of these can only be opened with a key, so a thief can't smash a glass panel or climb in through a window to open it from the inside. To be completely secure, extra measures, like rack or tube bolts, can be fitted at the top and bottom of all exterior doors.

For additional security, standalone electronic and digital locks can be used to reduce the risk of intrusion. They offer an increased level of security without the price tag of high-end alternatives, making them a great option for modest budgets. The great thing is many of these locks can be installed, up and running in as little as five minutes and without a huge amount of technical knowledge.

Ultimately, providing a solid level of security during the darker months is all about preparation. The added benefit for both facilities managers and the building occupants is that high-quality hardware will not only provide peace of mind during the winter months, but bring long-lasting performance that can reduce the need for future maintenance whilst being beneficial to less able users. Therefore, it's worth considering the possibility of all security threats at the time of specification as well as considering an upgrade when the longer nights arrive.

www.allegion.com



BEST REFURBISHMENT PROJECT -

CITY & COUNTY OF SWANSEA



City and County of Swansea (CCoS) supports the view that the Public Sector needs to "lead by example" and fully aligned our social and moral obligations and the principles of Sustainability, Collaborative Procurement and Best Value. CCoS focuses on "outcomes" through a range of initiatives and good practice and an open and transparent approach. CCoS identified that it is critical to promote innovation and success and continue to learn as an organisation by continuing to develop a collaborative culture.

Comprehensive Rebuild was a pioneering process that aimed to be more than a building project. Whilst it specifically supported continuous improvement, it was by its very nature, a culmination of best practice/lessons learned from almost a decade of shared experiences over a number of education initiatives.

The aim was to re-build the school around existing buildings and plant rooms maintaining business continuity and making sure it was safe for the school to remain open during construction. An integrated phased programme was developed allowing safe use of the existing school facilities whilst a wraparound solution was developed and delivered in two phases within time and budget. Morriston has gone on to be accepted as an exemplar project and was also shortlisted for project of the year at the CEW awards.

We have ensured that innovation has underpinned engagement with the industry over a series of major capital building

MORRISTON COMPREHENSIVE SCHOOL

projects since 2006. This has been demonstrated in the Morriston re-build by the following:

- Pioneering a process to capture innovation in teaching and learning to "future proof" the new facilities.
- A step change in council procurement strategy which has ensured a more collaborative approach to project delivery.
- The formal and well-structured use of Key Performance Indicators (KPI's) from the outset of the project to support the Council's approach to continuous improvement.
- Careful management and selection of supply chains by the delivery team to help meet the client's aspiration to maximise contract spend with locally based suppliers.
- Identifying specific resources and expertise to become responsible for incorporating whole life cost considerations into the project to ensure that the long term performance of the asset provides value for money and minimises operational costs and carbon impacts.
- Minimising the energy consumption of the building through careful attention to design to ensure that future revenue and carbon implications for the end user are reduced.
- Designing the school with a clear focus on the end user and a desire to improve teaching and learning experiences and to raise educational standards.
- Creating opportunities for young people and socially and economically disadvantaged groups to gain employment and training experiences.
- Innovative piloting of new initiatives e.g. first to pilot Project Bank Accounts (PBAs) in Wales, signed up to Welsh Government's Client commitment charter, WRAP Waste Commitment and delivering on the councils Beyond Bricks and Mortar strategy which has been successful in developing improved outcomes via targeted

recruitment and training initiatives. Use of project processes which have shown the benefits of early contractor engagement, integrated teams, focussed use and engagement of local supply chains. The Council has overcome traditional challenges with exceeding project budgets by adopting a "new client" base and approach to up-front cost certainty based on a two stage process, acknowledging the need to invest in up front "pre-construction" timelines and processes to save resource further down the line.

To maximise the social and community benefits the CCoS Procurement Strategy for the contract also included:

- Participation in the Welsh Government's community benefits approach and toolkit submissions.
- Alignment to CCoS's Beyond Bricks and Mortar outlines Swansea's baseline requirement for community benefits clauses for targeted recruitment in all works contracts which links to its corporate priorities including addressing poverty, inactivity and social exclusion.
- Swansea is part of the regional arrangement for a South West Wales Shared Apprentice Scheme which has created a pool of apprentices to be developed through the work to be let from the regional Framework.

Stakeholder Engagement & Communication

Morriston Rebuild was delivered within budget and timescales by agreement with all stakeholders through proactive communication. It became clear that the architect's vision for the scheme could only be delivered with early contractor engagement due to a key stakeholder requirement for the school to remain on the site during construction. The Project was an exceptional example of stakeholder engagement and communication evidenced by the following:

- A comprehensive, evidenced and repeatable end user engagement

process underpinning the whole of the design process. Key stakeholder consulted included pupils, staff, community, local councillors, neighbouring schools etc. Consultation methods included meetings, questionnaires, interviews all of which were documented in the project consultation document which has been described as "a shining example of best practice". A particular success was the inclusion of 85% of 6th form requests in the new build.

- A structured engagement of stakeholders throughout the construction process giving excellent considerate contractor scores across the board. As previously described the operational relationship with the school was second to none and community "drop in" sessions ensured that the project was always open and visible.

Key project achievements

KPI's considered in identifying which actions took place at key stages of the project led to successful outcomes which can be adopted on other projects. The use of industry standard metrics to back up / achieve best practice taken into consideration, including economic, social & environmental factors, to ensure the exemplars on the programme deliver a good all-round project.

The total budget cost was £21,985,659.00 and using Welsh Government's Community Benefits Measurement tool the additional social and community benefits in the local area equate to over £40million. Our target of 52 person weeks of training per million pound of contract spend was achieved, resulting in over 1150 weeks' worth of training for local people.

Future Community Benefits include:

- Community room being used by local community groups.
- The School has its own theatre for forthcoming productions.
- External companies also enquiring to use school facilities.

The re-build achieved BREEAM Excellence when it was completed.

The energy consumption of the building was reduced through careful attention to design to ensure that future revenue and carbon implications for

the end user are minimized. The development was designed to minimize energy use through the specification of u-values significantly better than the Part L minimum and very good air tightness. The building benefits from passive design features to optimize energy efficiency, including solar control glazing and shading. The design incorporates combined heat and power which satisfies the base heating load of the building whilst also producing electricity for use in the building. A PV array on the roof provides further electricity.

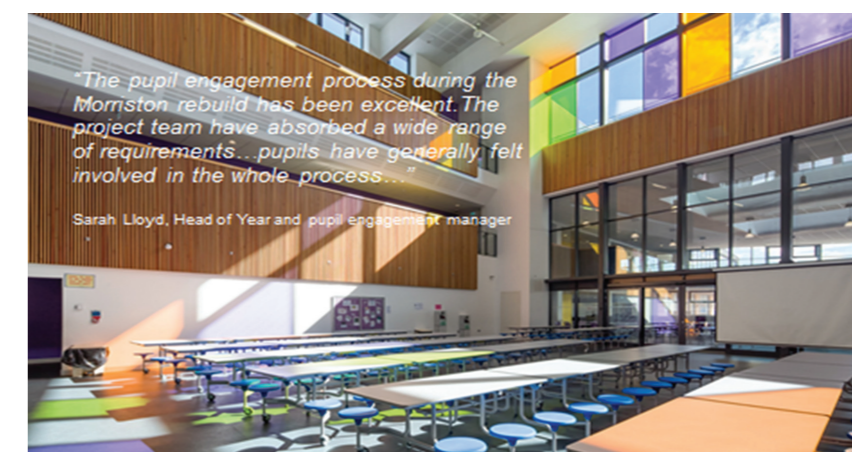
The building also benefits from natural ventilation with automatic controls to ensure occupant comfort whilst minimizing energy use. Where natural ventilation was not suitable, mechanical ventilation will be provided under automatic control, including temperature and CO2 control to optimize efficiency. Lighting controls were provided with automatic absence detection and day lighting control. Metering and sub metering with remote monitoring via the Building Management System has been included for electricity, gas and water to enable monitoring of energy use and target setting.

The development has achieved an Energy Performance Certificate of B and has achieved a reduction of energy use against a 30% increase in floor space and 30% reduction in CO2 emissions due to the use of Low/Zero Carbon Technologies. The construction achieved 4.43 tonnes waste removed/100m2 of GIFA off site against BREEAM exemplar target of less than 4.7 tonnes/m2. Diverted 97.44% waste off site from landfill against CEW

exemplar target of 95%.

Most importantly, the project has achieved some impressive educational outcomes:

- Attendance up 2.1% on the academic year; a significant achievement of an extra 4268 days/21340 hours taught.
- Fixed term exclusions down by 65% (no permanent).
- No child left school without qualifications last year. Level 2 up by 10% in Q2. CSI in Q1. L2 performance up 13%. Capped Points Score up by 29. (KS4).
- At KS3 all National Reading Test Scores in either Q1/2. National Numeracy Test Scores 5/6 in Q1/2.
- At KS3 a noticeable improvement at L5+ with all subjects except 2 in Q1/2. Performance at L6+ excellent with most subjects in Q1 and the others bar 2 in Q2.



HERADESIGN BRINGS VISUAL ORDER TO THE MESS

Heradesign ceiling rafts were specified by HLM Architects for the new Junior Ranks Mess building at Beacon Barracks in Stafford. The architects were attracted to Heradesign because they wanted "a ceiling solution that would perform acoustically and enhance the modern, high quality design."

The Junior Ranks building is part of a £150 million pound redevelopment to turn Beacon Barracks into a vital hub for the

UK's armed forces. This large, multi purpose project houses catering, retail, leisure and sports facilities, and medical services to provide service personnel with necessary amenities on site.

The Mess is a light, open space with moveable walls, exposed roof apex and double height spaces in many areas. David Greig, of HLM Architects, explains how Heradesign helped him realise his innovative vision for the interior. "I wanted a contemporary look for the ceiling. I chose

Heradesign because I liked its unique wood-wool texture which helps make the rafts visually appealing. I was impressed by how well the individual panels could be matched to complement the chosen colour scheme and by how the rafts integrate successfully with the ventilation system and lighting."

The rafts are suspended from the ceiling. Each raft consists of individual Heradesign panels fitted to a concealed grid to give an almost continuous appearance. The rafts create a striking feature thanks to their distinctive woven surface, which in this case is matched to two RAL colours. Heradesign can be specified in an unlimited number of colours – enabling true design freedom.

The Mess has a number of potential sources of noise: from the kitchen as well as activity, speech and movement in the dining areas. The rafts are located around or above these areas to absorb sound and minimise disturbance in the quieter areas of the Mess. Heradesign has the highest level of sound absorption, Class A, helping improve speech intelligibility and creating a relaxed atmosphere.

Thermatex Antaris ceilings from Knauf AMF are fitted in the shop and other communal areas. Antaris is a white mineral tile with a very high light reflectance of up to 88%. The light reflecting capacity of Antaris helps improve lighting conditions which contributes to a reduction in energy bills. The surface of the tiles diffuses the light coming into the room, reducing glare and providing a comfortable environment in which to work and concentrate.

Antaris offers high sound absorbency (Class A), helping control the noise level inside these areas. The surface of the tiles acts as an outstanding sound absorber to help maintain a comfortable level of ambient sound.

If your project has a complex mix of acoustic and aesthetic challenges, Knauf AMF can provide a solution that will work for any interior.

To contact a sales manager, order samples or view more case studies visit www.amfceilings.co.uk/heradesign or email info@knaufamf.co.uk



£44 MILLION OFF-SITE SCHEME STARTS ON SITE IN EAST LONDON

The £44 million Riverside Schools off-site project – the largest ever in the education sector – has started on site in Barking. The scheme for the London Borough of Barking and Dagenham was awarded to the Portakabin Group and is using a Yorkon off-site solution to deliver an innovative three-school campus.

Now under construction, the 23,000sqm Riverside Schools campus will provide places for 2,645 children from 0-19 years on a six hectare site. The development will integrate provision for nursery, primary, special needs, secondary, and sixth form pupils, and will be operated by the multi-academy trust, Partnership Learning.

The Portakabin Group is the main contractor for this pioneering project. The contract was procured and awarded by the London Borough of Barking and Dagenham via the Council's local education partnership, Thames Partnership for Learning. It is funded by the Education Funding Agency.

Commenting at the ground breaking, Councillor Evelyn Carpenter, Cabinet Member for Education and Schools at the London Borough of Barking and Dagenham said, "I am very proud of the team for progressing the project so robustly. The off-site solution will help us to very quickly meet the urgent need for school places and deliver more outstanding schools in a good quality and modern educational environment. This will add to our ongoing work to help every child in Barking and Dagenham realise their highest aspirations."

Simon Ambler, Director of the Portakabin Group said, "This is our seventh project for the London Borough of Barking and Dagenham and follows on from the two earlier phases on the City Farm site near to the Riverside Schools campus, that are now in use. The scheme is one of the largest school projects now under construction in the UK and will create much needed additional school places for one of the fastest growing school-age populations in the country."

He added, "We are delighted to be part of a major development that will be at the heart of a vibrant new community with



design-inspired public places and amenities."

Designed by Surface to Air and constructed using a Yorkon off-site solution for the curriculum areas, the scheme comprises an 1,800-place secondary school, a 630-place primary school, a special educational needs (SEN) school, and a 55-place nursery.

The use of off-site construction will significantly reduce the programme time. The structure is now in production in York at the same time as the major ground works are progressed on site in East London.

The project has been scheduled to complete the primary and SEN facilities at an earlier stage, in time for the start of the 2016/17 academic year to meet the urgent

demand for places in the borough. The rest of the campus will be completed late Spring 2017.

The Riverside Schools scheme is being developed in the Barking Riverside regeneration area, which is close to Barking town centre and part of the Thames Gateway development. Early phases of substantial housebuilding have already been completed with further plans for 12,000 new homes increasing the need for education provision.

For further information about off-site building solutions from the Portakabin Group for primary and secondary education, call 0845 2000 123, email info@yorkon.co.uk or visit www.yorkon.info

KNAUF AMF PROVIDE CLASS A SOUND SOLUTIONS FOR SWANSEA UNIVERSITY

“Bay Campus is among one of the most ambitious projects in the UK higher education sector.” Announced University Vice-chancellor at the opening of a new £450m campus which has transformed Swansea into a dual campus university. Knauf AMF Ceilings played their part in this pioneering development by providing ceilings with the highest standard of acoustic control to help enable the university to offer world-class learning, teaching and research facilities. Ceiling contractor B.C.D.L. Ltd were appointed to install the ceilings. Quantity Surveyor, Colin Toshack explained why Knauf AMF was chosen for the project: “The campus is a modern building and Knauf AMF’s products met the demanding requirements for sound absorption and were the most competitively priced. Knauf AMF’s ceilings systems are simple to fit, helping complete the 17,000m² installation on time.”

The large library and resource centre has designated spaces for quiet study and tutorials. Acoustic comfort was a key consideration here and Thermatex Antaris A ceilings were fitted to reduce the amount of intrusive background noise. The tiles offer outstanding Class A sound absorption to help maintain a comfortable level of ambient sound, enabling students to concentrate.

The aesthetics of the ceiling tiles were important to the interior design of the library. Antaris tiles have a bright white surface, creating a pristine, unobtrusive finish and helping the architect realise their vision for a clean, minimalist look.

Sound control continues in the lecture theatre, where the ceiling performs two different acoustic functions. The area above the lecturer’s platform is fitted with Fine Stratos micro-perforated tiles which offers Class C sound Absorbance to reduce reverberation, and to improve speech intelligibility around the room. Fine Stratos Non-perforated tiles are installed in the remaining area, which offer a lower level of absorbency to help reflect sound, ensuring students at the back of the room can hear what is being said.

The Great Hall, located at the centre of Bay Campus, was designed for human voice presentations, acoustic and electronic music concerts and other large events. Thermatex Alpha ceiling tiles have a high sound absorbency and were installed in

the adjacent service corridors to prevent sound passing through the walls into the auditorium, helping to create a comfortable acoustic environment for the audience to enjoy.

Antaris A was also fitted in the stairwells and other circulation areas around the campus to provide excellent sound insulation.

Aquatec was chosen for the campus washrooms. Thanks to Aquatec’s high moisture resistance of up to 100% RH, the tiles can withstand high humidity conditions and regular cleaning without sagging or warping, making them ideal for areas with strict hygiene requirements including kitchens, changing rooms and swimming pools. Aquatec offers superior sound absorbency.

Knauf AMF really does have a solution for every need of a complex, large scale education interior.

The team is ready to help you find the best acoustic and design solutions for your project. Visit www.amfceilings.co.uk or email info@knaufamf.co.uk



RETAIL LEGEND PROTECTED BY ADVANCED PANELS

The UK’s newest Harvey Nichols, which recently opened in Birmingham, is protected by industry-leading intelligent fire panels from Advanced.

Advanced’s benchmark MxPro fire panel range has been specified for its flexibility, reliability and ease of use. The fully integrated 4 loop MxPro 4 panel covers the entire Harvey Nichols store, which is located in the famous Mailbox development, and the complete installation comprises 555 components including an MX4010 repeater unit, 123 heat and smoke detectors and 88 sounder beacons.

Andy Lyall, spokesperson for Fire Bright Solutions, the project installers, said: “It was an easy choice for us to use the MxPro 4 control panel on such a prestigious project. We have always found the Advanced range to be of high quality and easy for our engineers to configure”.

The store is set across 45,000 square feet, organised as an ‘all in one floor’ retail layout combining women’s and men’s fashion, beauty and hospitality on the ground level and a mezzanine for the beauty treatment rooms.

Barry Tallintire, Group Property and Facilities Director at Harvey Nichols

commented: “The new Birmingham store represents a big investment in the nation’s second city for Harvey Nichols and we needed to ensure that our staff and customers are provided with the best fire systems on the market. The Advanced panels installed by Fire Bright Solutions can be easily programmed and monitored by technical staff in the store.”

MxPro is the fire industry’s leading multiprotocol fire solution, offering customers a choice of two panel ranges, four detector protocols and a completely open installer network that enjoys free training and support. MxPro panels can be used in single loop, single panel format or easily configured into multi-loop, high speed, 200 panel networks covering huge areas and thousands of field devices.

Neil Parkin, sales manager for Advanced, commented: “We’re delighted that MxPro has been specified for such a high profile store. Harvey Nichols is one of the world’s most recognisable, prestige retail brands and it’s great to have them part of the Advanced world, so we can ensure the store continues to enjoy the

best protection. MxPro the ideal choice, combining proven reliability with innovation and ease-of-use.”

MxPro 4 is fully compliant with EN54 Parts 2 and 4, and backed up with Advanced’s renowned customer care and technical support. MxPro 5, the highest performance analogue panel offered by Advanced is also EN54 Part 13 approved and is backwards compatible with MxPro 4, offering long-term upgradability for all MxPro customers.

Advanced is a world leader in the development and manufacture of intelligent fire systems. The legendary performance, quality and ease-of-use of its products sees Advanced specified in locations all over the world, from single panel installations to large multi-site networks. Advanced’s products include complete fire detection systems, multi-protocol fire panels, extinguishing control, fire paging and false alarm management systems.

More details can be found on the website at www.advancedco.com



ADVANCED HELPS US INSTALLER MEET LOCAL FIRE CODES AND REDUCE COSTS

8,600 square metre International Peace Education Center protected by Advanced's fire systems

Using equipment from global fire systems business Advanced, AM Fire & Electronic Services (AMFES), a Nevada, USA based contractor, was able to meet the unique challenges of installing a code-compliant fire system at the International Peace Education Center (IPEC) in Las Vegas.

The three-story IPEC facility houses a mix of large open spaces, like its 900 square metre ballroom and smaller contained areas for offices and hotel-style bedrooms. Covering 8,600 square metres in total, AMFES was challenged to meet Nevada state fire codes efficiently and cost effectively in the different spaces. These codes require that a notification appliance be present in every room – offices, bedrooms, bathrooms, and even closets – to attain a consistent 80 dBA sound level without relying on wall penetration. AMFES also had to meet the new UL464 requirement for a low frequency 520Hz tone.

As an additional challenge, the building's unique layout called for a large

number of smoke dampers to be installed, each of which requires a separate smoke detector for activation. While a conventional design would have a duct-mounted smoke detector for every damper, the facility's size would result in a high number of detectors to maintain. The hot, dust-heavy environment of Las Vegas causes a high failure rate, adding to the maintenance burden.

To address these challenges, AMFES turned to its primary fire system product supplier, Advanced.

AMFES installed Advanced photoelectric detectors with Gentex speakers and speaker/ strobes throughout the building, and Advanced duct detectors in rooftop air handlers. Advanced Axis AX fire panels were used to incorporate the detectors into a networked system.

"Several key features made the decision easy," said AMFES VP of Engineering, Daniel Miller. "The cost-effectiveness of Advanced equipment, the flexibility of the programming to support individual suite detectors, and the strength of the network."

The combination of Axis AX panel, amplifier, sound file and Gentex speakers produces the 80 dBA required and is NRTL listed to comply with low-frequency mandates. Advanced photoelectric detectors provide full area smoke detection, which allowed AMFES to eliminate all damper duct detectors. Only two rooftop units required duct detectors. The detectors are tested as part of the overall fire alarm system, with no individual 9-volt batteries to test and replace. The network ability of the Advanced equipment allowed AMFES to install a single fire alarm control panel on each floor, reducing cabling, cost and space requirements.

"Having installed and maintained a number of fire alarm systems over the years, it's quite different to see a networked system completely synchronized – both speakers and strobes – throughout the building," added Daniel. "It's certainly impressive to see and hear, even from the outside."

sales@advancedco.com
www.advancedco.com



ADVANCED SAVES ARIZONA SCHOOL £14,000 ON FIRE SYSTEMS UPDATE

Axis AX fire integration panel allows retrofit with older systems

The high level of integrity and diagnostic tools on its systems have helped an Advanced systems integrator save a client school £14,000 on a retrofit installation.

Alarm Electronics & Communications was contracted by the Flagstaff Unified School District in Arizona to update the fire detection system at Coconino High School, which opened in 1967. Having experienced two massive remodels and several lightning strikes over the years, school officials noticed during the latest remodel that the fire systems were unstable, with obsolete parts that made repairs difficult.

The job posed several unique challenges as the current system was a non-addressable 30 zone hardwired system, with some elements almost 30 years old.

"To keep track of wire length impedances and device current draws, we couldn't just go out and replace each device, connect it to a panel and auto program," said Alarm Electronics & Communications owner, Marc Forman. "Most fire panels have limitations based on the age, type and length of wire. This campus had over 60,000 feet of traditional building wire, and besides the high cost of a complete tear-out and reinstall, we also had to keep the fire system partially running during installation because classes were

in summer session."

To address these issues, the company used Axis AX intelligent fire panels from Advanced. The panel has four fully filtered, voltage regulated SLC addressable circuits that would accommodate the old wiring types and methods, as well as the sheer length of wire in the school's current system. Using the Axis AX panel, Alarm Electronics & Communications could engineer and commission the upgrade on the go. After some modifications to the 25 year-old duct smoke detectors, new equipment was retrofitted to the current hardwired system. This saved the school district approximately £14,000 (\$20,000) over a new installation.

In addition to its ability to work with older fire systems, Axis AX also provided school officials with enhanced functionality and visibility over the older model fire system. The panel's diagnostics and function buttons allow complete system interrogation and control. If a problem in the system occurs, the panel can indicate the location so a technician can quickly address the issue and get the system back online.

"The Axis AX panel is one of the most – if not the most – powerful platforms for fire integration available, with outstanding diagnostics and features needed today," added Marc.

About Advanced

Advanced is a world leader in the development and manufacture of intelligent fire systems. The legendary performance, quality and ease-of-use of its products sees them used in prestigious and challenging locations all over the world, from single panel installations to large multi-site networks. Advanced products include complete fire detection systems, multi-protocol fire panels, extinguishing control and fire paging systems.

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www.advancedco.com



POLISH NURSING HOME PROTECTED FROM FIRE AND FALSE ALARMS BY ADVANCED

One of Poland's premier nursing and care establishments, Dom Seniora Willmanowa Pokusa in Krzeszow, is now being protected with an industry-leading Axis EN fire system from Advanced also running its AlarmCalm false alarm management software.

The exclusive nursing home is a private resort located in close proximity to the historic Basilica Krzeszowska, in the province of Lower Silesia. The establishment, which offers one, two and three bedroom accommodation, is protected by Advanced's Axis EN fire system which is fully approved for use in Poland.

Krzysztof Dembinski, spokesperson for Advanced partner Zeto Projekt, said: "We chose the Axis EN system because it's very reliable and it can be configured specifically for each installation. The system is also very stable, which helps to avoid false alarms,

something that's especially important in this type of establishment. With the AlarmCalm false alarm management configuration options, we were able to create a cause and effect strategy for the installation with detailed options for alarm verification."

Axis EN can be used in single loop, single panel format or easily configured into high speed, 200 panel networks covering huge areas. The Axis EN system includes a high performance device and module range, including a complete wireless solution. It enjoys key approvals including EN54 2,4&13 and is sold in over 60 territories worldwide.

Etienne Ricoux, Export Sales Manager for Europe, North West Africa and Latin America, said: "Advanced products enjoy a reputation of real quality and performance and are easy to use. We are pleased to have gained CNBOP approval for the Axis EN range in Poland and delighted that this installation features our leading false alarm

management solution, AlarmCalm."

Advanced's high performance networking allows the Axis EN system to be accessed via web browser using a bespoke ipGateway module. It can be monitored and controlled by a graphics packages and is easily integrated into third party building management systems.

Advanced is a world leader in the development and manufacture of intelligent fire systems. The legendary performance, quality and ease-of-use of its products sees Advanced specified in locations all over the world, from single panel installations to large multi-site networks. Advanced's products include complete fire detection systems, multi-protocol fire panels, extinguishing control, fire paging and false alarm management systems.

More details can be found on the website at www.advancedco.com



SPP Regions website launched to showcase regional networks' experience on sustainable public procurement of innovation

The SPP Regions project has launched its website, hosted at the URL www.sppregions.eu, to showcase the creation and the strengthening of networks of

public authorities on sustainable public procurement (SPP) and public procurement of innovation (PPI) in seven European regions. The networks in Barcelona (Xarxa de Ciutats i Pobles cap a la Sostenibilitat), South West England (PIPEN), Bulgaria (Bulgarian SPPI Network), Copenhagen, Torino (APE), Metropolitan Region Rotterdam- The Hague, and West France (RGO) are co-operating directly on tendering for eco-innovative solutions and building capacities on the implementation of sustainable and innovative purchasing practices.

The seven regional SPP networks will publish a total of 42 eco-innovative tenders focused on energy use in public buildings, vehicles and transport, and food and catering services. The goal is to achieve 54.3 GWh/ year of primary energy

savings and trigger 45 GWh/year of renewable energy.

By becoming early adopters of new eco-innovative solutions and technologies, local public bodies can bridge the gap between supply and demand of these products and services, and bring economic, social and environmental benefits to their cities. SPP and PPI can trigger employment creation, boost the establishment of SMEs, reduce water and energy consumption, decrease GHG emissions, encourage more efficient use of natural resources, and contribute to the improvement of air quality. Regional networks can help increase the capacity of public bodies for SPP and PPI, and send a stronger signal of demand for sustainability to suppliers.

In addition, the project aims at increasing the capacities and skills on energy issues of 460 market stakeholders. In-depth research will be conducted into European good practice relating to a series of key SPP and PPI topics such as market engagement, life cycle costing, output or performance-based specifications, and

circular procurement. These resources will be made available from the project website.

Given the importance of replicating the SPP Regions initiative, the participating regions and the expert partners will identify another 10 regions that may be interested in developing their own network.

The SPP Regions project is coordinated by ICLEI – Local Governments for Sustainability, in partnership with the Agenzia Regionale per la Protezione Ambientale del Piemonte (Italy), Diputació de Barcelona, Réseau Grand Ouest commande publique et développement durable (France), City of Rotterdam, Città Metropolitana di Torino, Bristol City Council, Gabrovo Municipality, EcoEnergy (Bulgaria), The Danish Environmental Protection Agency, University of West of England (Bristol), The Capital Region of Denmark, and Ecoinstitut SCCL (Barcelona).

The project is funded by the European Union's Horizon 2020 research and innovation programme.

ESPO BANKING FRAMEWORK HELPS PUBLIC SECTOR ORGANISATIONS SAVE OVER £800,000

Framework created to give the public sector a compliant route to market for buying banking services

A framework offering banking services to the public sector has already saved local councils over £800,000 reveals professional buying organisation, ESPO.

Launched last year the framework, has so far seen 32 organisations access it for general banking services, credit and debit card payment processing and bill payment systems. The organisations which have used the framework have on average made savings of £26,197.

In addition to the financial benefits the framework enables, it also gives organisations a fully EU/UK compliant route to market for banking services with the terms and conditions already in place, underpinning all contracts placed under the agreement.

Barclays Bank, Lloyds Bank and Royal Bank of Scotland are the three banks

especially selected for the framework and have all been assessed by ESPO based on past performance, experience, technical and professional ability and compliance with the FCA and PCI DSS standards.

Michelle Brankovic, category manager at ESPO said: "We are delighted to see our customers make such significant savings through this framework. Following the announcement last year that the Co-operative Bank was pulling out of providing banking services to the public sector, we were keen to ensure that we could provide local authorities with a viable alternative."

"As a result, we established a national framework offering general banking services to the public sector including councils, schools and health care trusts. All contracts made via the framework can be customised to meet our customers' specific needs.

"All the banks selected to go on the framework have been through a fair, transparent and compliant public procurement process that we have undertaken. It removes the need for public sector organisations to conduct a pre-qualification stage and assess the banks against a range of quality standards as we have already done this."

Tendring District and North Tyneside are two of the councils benefiting from ESPO's banking service framework and both councils have reported both time and cost-saving efficiencies as a result.

With over 30 years' experience in public sector procurement, ESPO has specialist buying teams with expertise in providing high quality procurement solutions to the public sector on a nationwide basis. It works with a strong and varied supply chain to deliver best value procurement solutions.

The John Lewis Partnership's journey towards LED Lighting

Before the end of 2015 the John Lewis Partnership will have installed over 110,000 LED lights into its estate. Working with Philips, GE and Edge Lighting, the engineering and sustainability teams have helped to shape and drive progress in LED lighting for the retail sector over the past four years.

"At first it was about ensuring that LED could perform to the same level as traditional lighting" says Tony Jacob, Head of Construction, Engineering and Environment for the John Lewis Partnership, "But now we've reached a place where LED outperforms traditional lighting at every level, so it's about what next? What are the opportunities and possibilities for LED that traditional lighting could never offer us? That is what's exciting".

LED Lighting is evolving at a rapid pace, the like of which is unprecedented within the lighting industry. The output and quality of the light is increasing exponentially whilst the energy consumed to power these lights is reducing. The John Lewis Partnership, in a unique collaboration with LED suppliers and manufacturers, has played a leading role in the practical application of this fast-moving technology to a retail business.

LED

The Light Emitting Diode was invented in the 1960s, and by the 1970s LED displays were being used commercially in calculators, digital watches and test equipment. But the applications were limited until the first high brightness white LED was developed in the 1990s.

Since then the technology has rapidly advanced further and LED lighting has now become widely accepted for commercial and domestic applications.

This is not surprising, given the advantages of LED. The lifespan and electrical efficiency of LED lighting is significantly better than lamps and a vast improvement on fluorescent lighting. Furthermore, with technological advances, the best LED technology is now better quality than traditional lighting systems.

As a result, the LED market is forecast to grow by more than twelve times during the next ten years – a compound annual growth rate of 25%.

LED and the John Lewis Partnership

In 2010 the John Lewis Partnership began a programme to reduce its carbon emissions. At that time store lighting in Waitrose accounted for approximately 25% of the total electricity costs of a branch, so it started to look seriously at LED lighting as a way of increasing efficiency. Following a rigorous four-year programme of research, in-store testing and evaluation the Partnership is now committed to the installation of LED lighting in every new building and the progressive replacement of traditional lighting with LED in all existing buildings. By the end of 2015 it will already have installed over 110,000 LED lights across its entire estate.

LED technology has advanced hugely in recent years and the pace of development continues to increase. To ensure the latest technology can be successfully brought to the retail arena the Engineering and Construction teams at the John Lewis Partnership have worked in close collaboration with Philips, as manufacturers of LED components, and with Edge Lighting as specialist manufacturers and suppliers of luminaires.

Initially the primary focus was on the environmental and financial benefits that should result from installing LED but it soon became clear that the quality of the light from the LED units available then was a major concern too. Although the savings were substantial, the various options meant compromise in too many areas with the potential risk of damaging the brand and the customer's shopping experience.

So the focus moved towards ensuring that the continuing impressive technological developments could be harnessed into efficient and practical installations in the retail stores.

Lighting is an essential component of the customer shopping experience and retailers have their own preferences for lighting design that reflect their brand. From a retail design perspective LED needed to provide the same quality and colour of light as traditional lighting. (Historically best in class for retail has been ceramic discharge metal halide lamps, known as CDM) The engineering and maintenance teams required LED to deliver operational cost savings, whilst being reliable and consistent. Management

wanted reassurance that the capital investment required was appropriate with relatively fast payback.

LED works very well in cold conditions and had been used by the John Lewis Partnership in refrigeration fixtures for some time. But by 2012 technical developments suggested that the design, engineering and management could be met and that LED could be spread throughout a store. Trials were started at a brand new Waitrose store in Bracknell. These demonstrated that in a real store environment LED provided as good, or better, lux levels than traditional lighting in the shopping aisles. The wattage per square metre dropped substantially and energy costs were reduced by approximately 40% versus the energy consumed by traditional lighting.

This gave Waitrose the confidence to roll out LED lighting at all front-of-store areas for the next new store, at Stratford-upon-Avon. The successful results from the Bracknell tests were repeated and it was calculated that the additional capital investment in LED would pay back within two years.

By 2013 it was decided that LED lighting should become standard in all Waitrose stores. It was also agreed that LED should be considered for the John Lewis stores too, but here the requirements were slightly different.

John Lewis stores need greater flexibility in their lighting installations as the store layout has to change during each season, to promote and highlight different products. The team worked closely with Edge Lighting and various styles of light fittings were developed and perfected that could provide the flexibility that John Lewis required.

This flexibility is also important as each new John Lewis store is now designed to be a unique shop. Although there are obviously standard design principles, there should be no rigid standard format. As the shopping environment in a John Lewis store is different from that in a Waitrose supermarket, so it became clear that the ideal lighting requirements are different too. For example, while Waitrose use a cool white 4000K light, it was decided to use a slightly warmer 3000K light in John Lewis.

In 2013 the Partnership opened a new store in Ipswich. This incorporates 3500 square metres of John Lewis at Home and a

2500 square metre Waitrose store. It is the first outlet to be fully fitted with LED lighting, not merely in the public areas but in the warehouse, storage and service areas as well.

Each store had a different type of lighting but through more efficient design and the use of LED technology both branches delivered significant energy reduction and costs savings. In John Lewis the savings were a huge 66%.

However the Partnership is still learning and the John Lewis York store that opened in 2014 demonstrated the need for LED to improve further. The colour palette of the shopfloor was very different at John Lewis York and the store design team had chosen much darker flooring and wall coverings, which pushed the LED technology to its limits. "York is still a great space, customers love it, but as engineers and designers we learnt a lot about the capability of LED when used with darker materials. However, the technology has already moved on and if we were doing York today we'd use a different specification that Philips have developed." Said Toby Marlow, Engineering Manager for John Lewis

There are economies in maintenance too. LED is a low maintenance technology, requiring less replacement of bulbs and therefore saving time, money and allowing the business to deploy maintenance resources elsewhere.

The improvements in LED continue as the technology advances and is refined. The John Lewis Partnership is determined to make use of the very latest versions as soon as they can be proved to be practical. At the time of the opening of the Ipswich stores John Savory, Director of Edge Lighting, said: "The current LED lighting is 40% more efficient than the previous generation – even a year ago this improvement would not have been possible."

"In a relatively short space of the time the LED product has improved massively" says Marlow, "The development that Philips have put into LED has helped us to convince our business that LED should be the preferred option. The light is crisper, the technology is more reliable and the capital costs are now lower than traditional lighting on a like-for-like basis. The commitment that Philips have made to LED means that every business can now afford it and benefit from lower running costs whilst reducing energy consumption."

Customer feedback in Ipswich was monitored closely and has been universally favourable. Shoppers understandably don't comment on store lighting specifically, but they have strong opinions on how the



store looks and feels. 'Lighting makes a big difference to the ambience of a store,' said Ken MacDonald, Duty Manager at Waitrose Ipswich, 'There are very few areas that are shady and the customer offer is enhanced. We've had very good feedback, with people saying the store looks absolutely fantastic.'

The Ipswich project has been a huge success and has confirmed that committing to LED throughout the entire retail estate has been the right decision. The financial benefits are substantial and with the refinement of the LED products there appears to be no downside.

The John Lewis Partnership is planning for further growth and the use of LED lighting is now an integral part of future store design.

The in-house teams continue to work with Phillips and Edge Lighting to develop even more refinements that will bring further efficiencies.

For John Lewis the next steps are the launch of stores in Birmingham, Horsham and Basingstoke as well as rolling LED back into the estate, which started with

Southampton and is now being installed in the flagship Oxford Street branch.

John Lewis Birmingham, which opens later this year, will be the first full line department with LED lighting throughout. "We have been really pleased with results of LED lighting and that's why we are putting our faith in it when it comes to Birmingham which will be our first new full line department store in three years. As always there will be lots of new customer experiences and ways of presenting merchandise and LED has a part to play in that." Says Tim Harrison, Director of Store Formats for John Lewis.

The John Lewis Partnership has already seen financial and energy savings from LED and the new Philips Crisp White LED technology will deliver even greater benefits: 'We've done our test of the Crisp White LED and we believe that delivers 14% more white light than existing LEDs whilst being about 11% cheaper to install and reducing energy consumption by 15%. It's a win, win, win for us.' said Marlow.

UK BUSINESSES THROW AWAY BILLIONS OF REUSABLE PLASTIC CUPS EACH YEAR

Billions are thrown away each year in scandalous and preventable waste, which also destroys companies' green credentials

The average British worker uses – and throws away – around 400 disposable plastic cups every year in what's been dubbed one of the great-unreported waste scandals.

This adds up to billions of cups disposed of every year, with a huge majority only ever being used for a couple of sips of water before being discarded, Britain's BusinessWaste.co.uk's waste management company says.

This preventable behaviour is wrecking the green credentials of companies up and down the country and it costing them money in landfill charges, yet simple ideas could be put in place to stop it, the York-based BusinessWaste.co.uk Company says.

"It is one of the great unreported waste scandals of our time," says Business Waste spokesperson Mark Hall, "And often companies don't even recognise it as a problem."

BusinessWaste.co.uk has found that the average worker, across office, manufacturing and retail sectors will use in the region of two plastic cups every working

day. This works out – subtracting weekends, sickness and holidays – at approximately 400 plastic cups per year.

The York-based waste management company found:

- 82% use plastic cups once, then immediately throw them away
- Only 18% will re-use a plastic cup (and 95% of these will throw it out at the end of the day)
- Of those who throw their cups in the bin immediately:
 - Only 23% will specifically search out a recycling bin
 - 70% will use the nearest bin, regardless of the fact if it is for plastic recycling or general waste
 - 7% said recycling is "somebody else's problem"

Hall says there's a "blindness" in British companies who don't realise there's a problem with this huge mountain of plastic waste.

"We've seen it with our own eyes," he says, "We've worked with companies who have proudly told us of their green credentials while they automatically grab a plastic cup from the dispenser, drink a mouthful of water, and then throw it into the general waste bin."

"And it's not just limited to water – plastic cups from coffee vending machines

are just as bad," Hall says, "while many brands of 'paper' cup are hard to recycle as they come with a waxy lining to keep the water from leaking."

The solutions are simple, and BusinessWaste.co.uk is urging companies to take a look at how they can cut down their plastic waste immediately.

- Encourage workers to drink from glasses, or their own reusable water bottles
- Consider giving workers their own water bottles
- Increase the use of china cups for hot beverages

"These solutions come with their own problems such as washing-up and cleanliness, but this is effectively offset by the huge tonnage of plastic waste that ends up in landfill every year," says BusinessWaste.co.uk's Mark Hall.

If anything, bosses should consider their own bottom line when it comes to wasteful single-use cups:

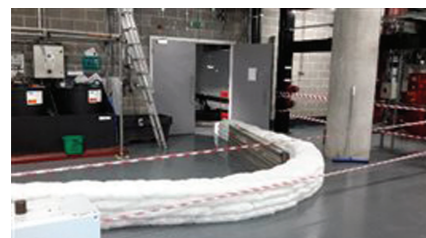
"Using plastic cups costs companies money, and it's a waste of resources that should – by now – be as socially unacceptable as smoking in a kindergarten class."

www.businesswaste.co.uk

It's in the bag! The new fast acting sand bag alternative from Adler & Allan

Leading environmental services provider, Adler & Allan, has launched a new fast-acting flood defence system, SoakBags, which are quick and easy to deploy in flooding or chemical spill situations, leaving no ill effects on the environment post clean-up.

An effective alternative to sandbags, SoakBags are made-up of a gelling polymer which absorbs water, or other liquids, such as chemicals, to become taut in just over three minutes, absorbing up to 20 litres of water.



The bags are lightweight and compact, (weighing just 200 grams before use), enabling far quicker deployment than traditional sandbags, with just one person easily able to carry up to 20 bags at any one time. Completely biodegradable, once full, as long as the water is contaminant free, SoakBags can be safely disposed of without posing harm to the environment.

Alan Scafton, from Adler & Allan, explained: "In any flood or chemical spill situation, time is of the essence, which is where our new SoakBags really show their strengths. Because they are compact and lightweight, the need for vehicle assistance and vast man power is negated, and the fact that they can be activated in such a short space of time is invaluable in an emergency situation."

"SoakBags have already proven their worth helping Scottish communities deal with the recent devastating floods - we donated 200 bags to the Scottish Flood

Forum when their sandbag supplies ran out."

SoakBag attributes include:

- Lightweight and portable
- Highly absorbent
- Take up less storage space than sandbags
- Can be stored for up to five years
- Ideal for diverting water away from a building
- Suitable for chemical spills
- Completely biodegradable when free from contaminants

For more information on Adler & Allan SoakBag flood defence system and how it can help you, visit www.adlerandallan.co.uk or call 0800 592 827.

ALUPRO FIGURES REVEAL AEROSOLS AND ALUMINIUM FOIL "WIDELY" COLLECTED FOR RECYCLING

According to new figures released by the Aluminium Packaging Recycling Organisation, Alupro, 96% of councils are collecting aerosols, and 86% are collecting aluminium foil, for recycling.

Over the past three years, the number of councils collecting aerosols has increased from 87% to 96%, providing almost complete coverage throughout the UK. Meanwhile, foil recycling has also seen a dramatic increase in collection, from just 35% of councils in 2007 to 86% today.

"Alupro provides local authorities with free materials to explain how to recycle empty aerosols, household foil and foil containers. We have also worked with councils and their service providers to dispel some of the myths about these materials being 'difficult' to recycle," says Rick Hindley, Executive Director of Alupro. "We're delighted to see how well councils have responded to this clear messaging, which has enabled more aluminium packaging to be recycled than ever before."

"The latest Alupro statistics on kerbside collections indicate foil is now also eligible for Widely Recycled status," said Jane Bevis, Chair of the On-Pack Recycling Label, OPRL. "We look forward to WRAP confirmation of this in our 2016 guidelines update, since we know 7 in 10 consumers act on this clear recyclability advice when they see it. 500 brands use our labels across hundreds of thousands of products, so that can make a real difference."

Foil currently has 'Widely Recycled at Recycling Points: Check Locally for Kerbside' status under the On-Pack Recycling Label scheme. Once 75% of local authorities collect a material at the kerbside, this message changes to the simpler 'Widely Recycled' that consumers find so much easier to act on.

"Councils collecting aerosols and foil at the kerbside are sending a strong message to residents about how easy it is to recycle many materials from all around the home," continues Rick Hindley. "Alupro has been instrumental in improving the coverage of these aerosol and foil collections, initially through its Aerofoil campaign and more recently the MetalMatters programme, which continues to make an impact up and down the country."

Keeping momentum

Rick Hindley adds: "Alupro's work has proven time and again that regular, clear communication from local authorities on the importance and benefits of recycling is essential. It not only increases participation and capture rates, but contributes towards long-term positive behaviour change."

MetalMatters is a proven and cost-effective approach for councils to communicate with residents about recycling their metal packaging. Alupro partners with local authorities and their waste contractors to deliver the MetalMatters programme, which has now reached half a million households in more than 50 council areas.

"The return on investment for participating councils is one of the key benefits to joining the MetalMatters programme and we are pleased to see interest remaining high. The recycling of aerosols helps capture as much metal packaging as possible from the household waste stream, boosting income for councils whilst helping to keep valuable materials in the loop."

The average household uses 27 aerosols, 280 foil containers and 144 metres of aluminium foil a year.

Recycling tips:

Empty aerosols and foil can be recycled in the home along with metal packaging from food and drink cans.

Aerosols must be empty before they're put in the recycling, but it's important to never attempt to pierce or squash them. Any aerosols that still contain product should be recycled at local authority household recycling centres.

Foil needs to have any residue cleaned off before recycling, to help reduce smells and reduce contamination. Wiping or rinsing foil containers and kitchen foil in the washing up water is usually sufficient. But beware: not everything that looks like foil actually is. Some packs are actually metallised plastic film and can't be recycled. To check just scrunch the pack or foil in your hand, if it stays scrunched it's aluminium and can be recycled. If it springs back open then it's film and cannot be recycled at present.

(www.alupro.org.uk)



LIGHTWEIGHT, DURABLE, RECYCLABLE ALUMINIUM PART OF A SUSTAINABLE FUTURE

As the world comes together in Paris to develop a plan of action to tackle the most significant sustainability challenge of the age, the International Aluminium Institute looks forward to a new international agreement on climate change.

Delivering improved quality of life for all, equitable access to resources and services, food security, mobility and urban development, in a carbon and labour constrained world requires innovative use of materials, with the potential to deliver more for less.

On a full life cycle basis, across its wide range of commonplace applications, aluminium products provide a net benefit to society and to emissions reduction. From transportation, building and construction to food and medical/pharmaceutical packaging, aluminium plays a critical role in both short- and long-life applications.

Reductions in vehicle and cargo/goods container weight across transport modes allows for greater efficiency and reduced energy consumption. Aluminium packaging protects the energy, water and resources invested in producing, growing and processing food. It also ensures the

additional energy used to get that food to us - in transport, retailing, shopping, storing and cooking - is not wasted. Efficient, low loss aluminium cabling is bringing power to more and more communities and the use of aluminium in renewable energy generation, transmission and intelligent control systems is increasing.

Three quarters of the 1 billion tonnes of aluminium ever produced is still in productive use. A positive recycling story and of demand for light, strong, conductive, protective products and the durability of many of the aluminium applications. Much of the aluminium in long lifetime applications has not yet reached the end of the "first life", but will remain available for future recycling. Long lifetime products tend to have high recycling rates, greater than 90%.

The use of 1 kg of aluminium to lightweight a car or light truck can save a net 20 kg of CO₂ over the life of the vehicle. This figure is even higher for more weight sensitive applications (for instance, up to 80 kg CO₂ per kg of aluminium used in trains). The 20+ million tonnes of aluminium used in transport today could save 400 million tonnes CO₂ and over 100 billion litres of crude oil over the vehicles' lives.

Depending on the source of electricity used in the electrolysis (smelting) stage of production, the aluminium greenhouse emissions footprint can be as low as 4kg CO₂-e per kg of aluminium ingot (from renewable energy), with a global average of 12kg CO₂-e per kg of aluminium ingot for all energy sources.

The International Aluminium Institute, through its Aluminium for Future Generations programmes collects and publishes transparent, timely and representative data on the global industry's sustainability performance, in order to demonstrate that:

- it produces responsibly, by mitigating environmental impacts and contributing to the communities where it operates
- its products bring a net benefit to society through reduced environmental impact; improved quality of life, health, safety & wellness and economic growth;
- at the end of product life, the value of the metal, the energy and resource inputs used in its production are retained and realised as other products, through collection and recycling or energy recovery.

NEW SUDSTECH PAVING OFFERS UNRIVALLED POROSITY

Sudstech is one of the latest porous paving products introduced to the SUDS (Sustainable Urban Drainage Solutions) market, with the impressive ability to transfer up to 50,000 litres of water per square metre per hour.

The highly porous, low-maintenance material is created using sustainable products and is designed to allow the natural infiltration method of the water cycle for an easy and environmentally friendly drainage system.

Suitable for all private and public applications, including domestic driveways, public footpaths, golf clubs and car parks, Sudstech can be used as an alternative to standard asphalt hard landscaping materials, whilst offering the same aesthetics and durability as some of the most established products in the market, with the added benefit of a cost-effective water management service.

The porous material is created using natural stones sourced in the UK and can be specified in a wide range of colours and finishes, offering a solution to complement or contrast with any architectural colour

scheme. The coloured stones are combined with a specially developed resin, which allows rainfall to evenly saturate through the surface into the ground and eventually finding its way to the water course. The material also uses three recycled car tyres per square metre to form the sub base layer of the surface. This not only makes the product an environmentally-friendly solution, but it can also be taken up and reused to form a base layer for future projects.

Sudstech uses varying grades of angular aggregates to deliver maximised strength and durability for a sleek, porous surface that can withstand all usages without compromising the quality of the material. Sudstech is also unaffected by severe weather conditions, with the rubber sub base layer designed to allow any expansion and contraction caused by the constant freeze/thaw process of water within its voids, so eliminating delamination that can occur in other porous paving.

Following many years of research, development and testing, Sudstech conforms to the latest SUDS legislations created alongside the Water Management

Act 2010, which requires porous materials to completely prevent surface water run-off and build up. With its large water capacity, Sudstech can contribute to the control of flooding caused by climate change in domestic areas and other environmental impacts of hard paving water build up.

Sudstech has been used for many commercial and domestic schemes, including the new Canary Wharf Crossrail Station's 'Living Roof', as well as sites for the London 2012 Olympics, housing associations, NHS properties, golf courses and landscapes for World Heritage sites.

All applications of Sudstech can be modified to meet each specification requirement, such as colour variation and weight loading capacity and can provide up to 9 BREEAM accreditations. Due to its SUDS compliancy, applications of Sudstech do not require planning permission.

Further information on Sudstech is available from Langford Direct Ltd. on 0161 2121617, by emailing: info@sudstech.co.uk or by visiting the company's website at www.sudstech.co.uk

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BEST WASTE/RECYCLING PROJECT - OXFORD CITY COUNCIL

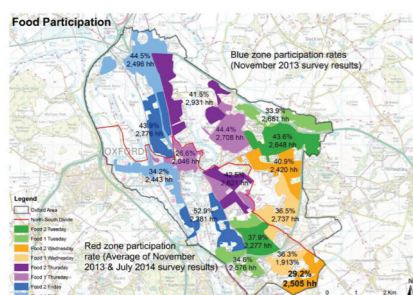


Background

Oxford City Council first launched its weekly food recycling service to the 40,000 houses across the city back in 2010. Unfortunately at the time, residents were given an 'opt out' option if they were not willing to participate, and as a result 1,000s of delivered caddies had to be collected. Since then, other than introducing the service to new residents, acting on daily requests and promoting the scheme at community events, we have never re-launched food recycling through a dedicated campaign. With this in mind, it was agreed that the team were to pilot a re-launch of food recycling.

Establishment

Firstly, we had to determine an appropriate location to launch a campaign. With an assigned budget of just £10,000, we were fully aware that it could not target the entire city. As a result, we agreed to target one specific collection round in order to be able to fully analyse the impact of the initiative. To help establish which round,



FESTIVE FOOD RECYCLING CAMPAIGN

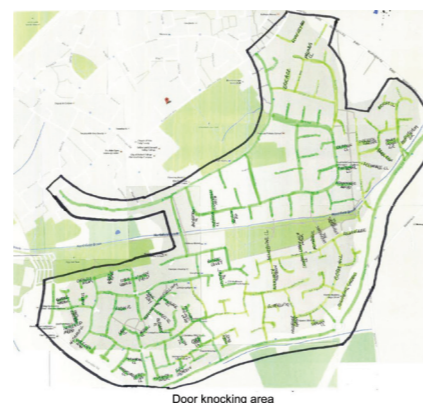
each of the sixteen food collection crews completed a participation survey to determine how many residents were currently taking part in the service. We then compared the results against collected weights in order to highlight a specific area with high refuse weights and low food recycling participation. This identified one particular low performing area, with a refuse rate of 54% and food recycling participation of just 29% across 2,505 households. This clearly indicated that food was not being recycled and our opportunity to improve performance was high.

Planning

With an area agreed upon, we thought that with Christmas coming up it would be best to introduce residents to the service at the time of year when food waste is at an annual high. The budget was enough to cover two temporary members of staff to door knock part time for two months, a supply of 5,000 compostable liners and new caddies for all households. However the majority of the budget was to be assigned to communications. With this in mind, we worked closely alongside our internal Communications team and an external designer to produce a festive leaflet focusing on reducing, reusing and recycling food. This was in support of new Agripa panels, bus shelter posters, bin stickers, a double page newspaper spread, a radio advertisement and an online social media launch. We also planned a free live Love Food Hate Waste cookery demonstration event at a local community center and a recycling roadshow at a community market.

Implementing

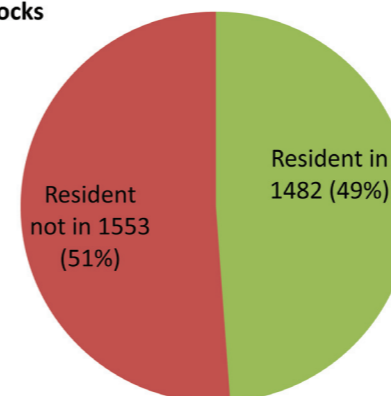
The campaign launched on 1st December 2014. Whilst door knocking, residents whom were already participating were thanked and provided with two free rolls of compostable liners, in addition to new



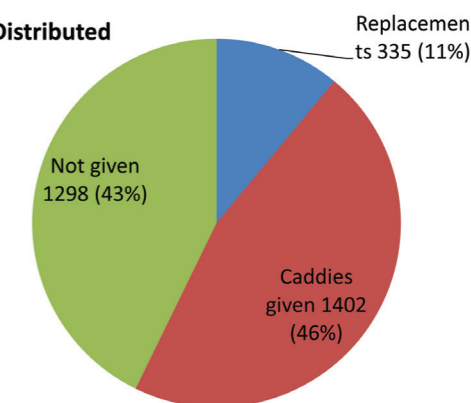
caddies if desired. For those properties not currently on board, an encouraging starter pack was delivered and a 'no food' sticker placed on their refuse bin. For properties where the resident was not home and we were unable to determine whether they were recycling their food, a calling card with a colleague's direct contact details was posted. Each door knock and each individual scenario was fully recorded, ready to incorporate revisits. The campaign was also launched at a local community market on Saturday 6th December, where local residents started to recognise the campaign. This was followed by a local community newspaper double page spread



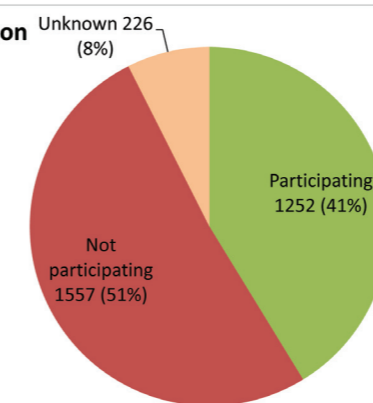
Door Knocks



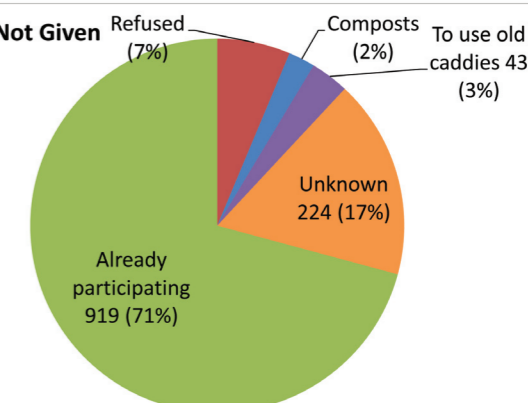
Caddies Distributed



Participation



Caddies Not Given



on Wednesday 17th December, which advertised the free cookery demonstration event on Thursday 18th December.

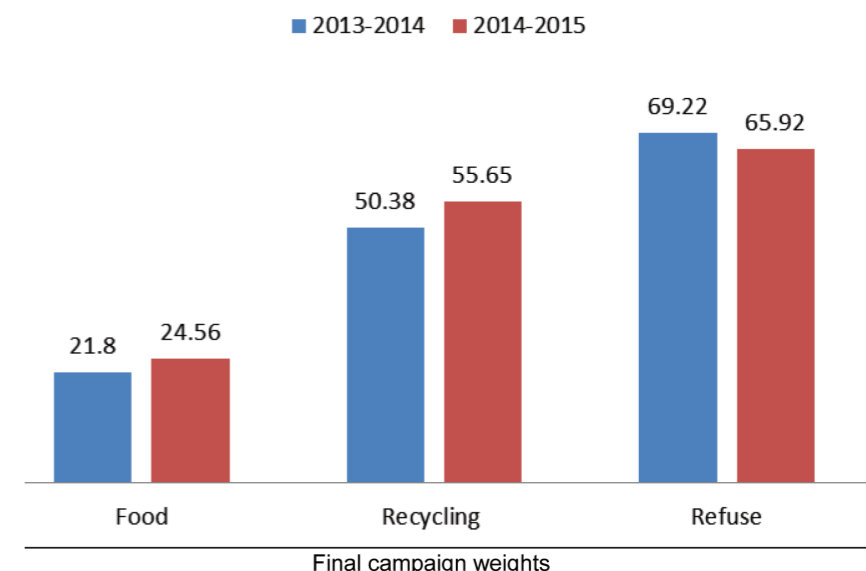
Analysing and Evaluating

Each individual door knock was recorded on paper and then processed digitally the following day. In total, 3035 houses were approached (500 more than the round as we finished earlier than expected), with residents being home 48.83% of the time. From this we calculated that 51.30% of residents were not currently participating and as a result 1737 caddies were provided.

In addition to analysing door knocking, the ultimate means of determining success is to monitor the amount of weight collected. All in all, over the two month period, the food collected from the area increased by a huge 2.76 tonnes, compared against the same period the previous year. This is in addition to an increase of 5.42 tonnes of comingled material collected and a decrease in refuse by 3.93 tonnes.

Replicating The success of the campaign is believed to be from the ongoing residential interactions. As a result of the increased performance, the campaign has been included in our yearly financial budget for 2015-16, where we plan to mirror the scheme across two

other collection rounds in the city. We plan to continue these localised schemes until we have covered the entire city and re-launched food recycling to all residents.



OFFICE DESIGN EXPERTS REVEAL KEY TRENDS FOR 2016

The dynamic and ever-shifting nature of the modern world is presenting organisations with new and evolving challenges that they must address with all of the tools at their disposal. At the heart of this complexity is the physical workspace. Its design touches on every aspect of the changing nature of employment and the workplace.

Area Sq, office design, refurbishment & fit-out specialists, have identified seven key trends in workplace design and management that businesses should take advantage of in 2016.

Organic, biophilic and biomimetic design

Businesses have begun waking up to the idea that the relationship between people and nature is worth exploring. Simple offerings, such as natural light and fresh air, can have a dramatic effect on employee wellbeing. Access to such necessities will not only improve morale, but also concentration. Any office interior that reflects an element of nature in its design can expect to yield instant results.

Agile working, co-working and the gig economy

'Work' is no longer a fixed place. Work is everywhere. Organisations are no longer bound by the restrictions of traditional hours and a cellular office setting; and nor are employees. Along with this new approach to work, a 'gig economy' is emerging. The idea of a 9-5 working day has been replaced by a culture that embraces an individual's need to work whenever, wherever and however to get the job done. This is driving the boom in co-working spaces where employees can consume rather than occupy an office for a set period of time.

Wellness and wellbeing

The health and safety of employees has always - and will always remain of paramount importance. However, the idea of 'wellness and wellbeing' is now taking over; it's not as simple as ensuring the workforce is safe. Office design can have a profound impact on employee health, happiness and productivity and

organisations that seek to help staff improve their physical and psychological wellbeing will reap the associated benefits.

Inclusive design

For the first time in history, many organisations now have four generations of people working in the office. It's imperative that the workplace reflects and meets the needs of people at different stages of their life. In addition to thinking about general access, organisations must design a space that suits a wide range of occupants, regardless of their physical abilities.

Convergent design

A few years ago, the word 'office' would probably conjure a particular image - perhaps a cellular grey space, filled with fluorescent lighting and row upon row of cold and clinical desks. These days, you would be hard pressed to tell the difference between a coffee shop and a workspace. The lines between our various worlds - family, work, and social - are blurring. The design of a workspace should reflect the fact that modern employees are used to working in all sorts of environments.

Beyond ticking the green building box

More organisations now consider a wide range of factors when assessing

environmental performance - it's not just about meeting the minimum requirements anymore. Companies are beginning to look at the supply chain, the wellbeing and environmental strategies of suppliers - and, despite the complexity of embracing Standards and Accreditation, organisations that utilise these effective tools when it comes to meeting the specific objectives of a building's design and management can expect to save money and reduce their carbon footprint as they do so.

Zonal design

By creating different types of space within an office and empowering people to make decisions about how to use them, organisations are able to meet the needs of groups of people who work at different times and in different ways depending on their job function, age, personality, working relationships and personality.

The office isn't just a place to work; it is also a driver of competitive advantage. By embracing these current and future trends, business leaders will be able to meet the varying demands of the millennial workforce.

www.areasq.co.uk



Seven Myths

About Work That Are Bad for Your Brain

Near-constant distractions have become the norm in workplaces around the world. Workers are struggling to get more done and focus harder with little understanding of what attention is or how to attain or manage it productively. Steelcase research revealed seven myths (and their truths) about how to manage your attention at work.

1 I can pay attention from the back of the room.

Attention depends on how close we are to sensory stimuli. To create new ideas, we have to work in spaces where people can hear well, have eye contact with one another and can easily view shared documents and materials.

2 Sitting down all day will help me focus more.

Static sitting sabotages our ability to concentrate, but movement stimulates production of the protein BDNF (brain-derived neurotrophic factor), which helps brain areas vital to learning, memory and concept thinking. Get up, take a walk or encourage your workplace to add a treadmill desk.

3 Drawing is only for creative types.

People think in shapes, pictures and patterns—not in numbers and letters. Using digital and analog tools to visualize information can support better thinking and increase focus. Help your brain organize information by sketching out your ideas or projecting what you are working on.

4 I will be more productive if I respond to email during this phone call.

We cannot consciously keep more than two things in our brain at one time. When we think we are multitasking, we are really switching our attention rapidly between things—and the more we do it, the worse we become at prioritizing. Create workspaces away from distractions to encourage focusing on one task at a time.

5 My brain is easily distracted and cannot change.

Mindfulness—keeping your mind tuned in to the current moment—can train the brain. The practice has proven to increase gamma activity in the brain, indicating intensely focused thought. Consider identifying a place for moments of mindfulness and peace in the workplace.

6 If I work more hours, I will get more done.

Brains get tired. The brain's capacity is limited and complete focus isn't usually possible for longer than 45 minutes. Do your brain a favor and take breaks throughout the day. Move to a café or social area for rejuvenation after an extended period of focused work.

7 I can sleep when I'm dead.

Sleep plays an important role in our ability to focus and hold attention. When we are sleep-deprived, our ability to learn, focus and regulate our mood decreases. Consider adding nap rooms or taking short breaks to rejuvenate and refresh the brain.



Learning from these myths can help us change our existing habits and gain more control of our brains and our lives. The workplace can help, too. In a work environment designed as an ecosystem of different zones and settings, workers can appropriately select spaces that match their brain modes and needs, helping them Think Better.

PLANNING AHEAD AND UTILISING SPACE FLEXIBILITY IS KEY TO FUTURE OFFICE DESIGN

- Companies look to refresh current premises rather than invest in larger offices
- When space is at a shortage utilising it effectively is key
- Flexibility and planning is essential for future-proofing
- Space-pod increases existing client's space eight-fold with layout re-work

2016 is predicted to continue 2015's trend for high quality refurbishment projects in the office sector due to the continued shortage of new build office space on the market.

Space-pod, a leading office design agency, is recommending that utilising space differently is essential to re-work offices to suit current and future needs. Recently space-pod increased the capacity of a clients' office to enable them to employ 380 additional staff and create over 650 further meeting spaces without the need to move to larger premises.

"We cannot predict that office needs will not change for the next 10 years. Quite the opposite, we are now certain that they will. Therefore space needs to be flexible and the key to future proofing is intelligent, creative planning," says Kevin Parker, CEO, space-pod.

Planning is key

It used to be that an internal office refurbishment would only take place every decade or so. Needs therefore were pretty static. Right now, commercial space management is more difficult with the shortage of office space and the cost attached.

Today's needs are for break out areas, eroding the concept of a desk or work area personal to an individual. However, predicting future needs can be more difficult. What does this mean for someone planning an office refurbishment?

"At space-pod, we have experience of how to design and execute these spaces. Whilst the specific design will be bespoke to any organisation there are specific concepts that work and can be applied, so looking at what other businesses have found successful, and what has not worked, would be essential homework," continues Parker.

"This all works well for today's needs however, it is harder to determine what the near future will hold and whether the office needs will continue to serve the business over the next decade. Thus, the returns on the investment in office space can be short term unless some flexibility is built into the design. It is essential to cater for

change in the use of the space over time. This means that any structures need to be adaptable, allowing changes in use that can be adapted easily.

It is best practice to ensure flexibility of the finished design in order to adapt over the long term. If the use of AI and off site cloud based computing prevail, the work space will need to be a more transitional environment, suitable for more human interaction and inspiration."

<http://www.space-pod.co.uk/>



CONNECTED ENERGY AND RENAULT TO COLLABORATE ON ENERGY STORAGE AND EV CHARGING TECHNOLOGY



- Renault will provide used EV batteries to Connected Energy Ltd for second-life application in its E-STOR product
- E-STOR is a revolutionary energy storage system that can reduce costs and enable more flexible and efficient use of energy – including high capacity fast charging
- E-STOR will be available in the UK from July 2016

Renault and Connected Energy are partnering to develop sustainable and efficient ways of using electric vehicle batteries at the end of their useable in-vehicle life in order to supply innovative and more affordable vehicle charging solutions.

At the end of their useful in-vehicle life, Renault EV batteries still have considerable remaining capacity, which means that they can continue to give great service in other applications before they are ultimately recycled. And with rapidly increasing EV sales – 97,687 EVs were sold in Europe in 2015, up 48 percent on 2014 – so is the requirement in energy to charge them.

E-STOR: a flexible and environmentally friendly energy management system

Through its award-winning E-STOR technology, Connected Energy is offering a highly innovative solution to this conundrum through use of 'second life' EV batteries.

This can be used, for example, to store energy generated from on-site renewable generation resources such as solar panels and wind turbines, and then release it as it's needed at a later time. The system also allows the batteries to be charged via low-cost off-peak electricity tariffs, enabling users to reduce their energy costs.

The batteries used are Renault EV batteries, chosen by Connected Energy because Renault, as EV market leader with 23,000 units sold in Europe in 2015, has expertise in the technology, its lifecycle and impact on the environment.

The first E-STOR product is nominally rated at 50kW/50kWh which could typically be used to support one rapid charger or a

cluster of fast chargers but the system is fully scalable and higher capacity units will follow.

In practical terms, as well as allowing more efficient use of energy, the system can also enable installation of rapid electric vehicle charging in sites where electricity supply would traditionally only allow slower rates. Instead of charging vehicles via a high-capacity supply directly from the grid, E-STOR allows multiple batteries to be charged at a slower rate over a period of time, ready to release their energy and charge a car when an EV driver needs it.

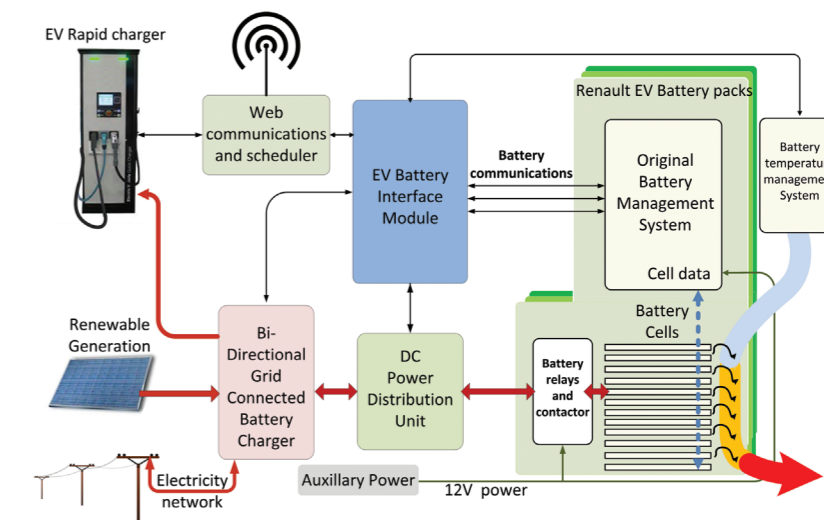
Renault offers two concrete solutions with its electric vehicles and their batteries through E-STOR. First to the grid, by providing energy storage that prevents power grid overload and balances supply and demand. Second to the environment, because batteries not fitted for automobile use, but that still have considerable remaining capacity, can have a longer life and lower carbon footprint before they are actually recycled.

In June 2015, E-STOR was named

winner of the innovation category in the prestigious British Renewable Energy Awards 2015, hosted by the Renewable Energy Association.

Matthew Lumsden, Managing Director, Connected Energy, said: "E-STOR will enable the more cost-effective roll-out of electric vehicles in commercial and industrial settings, thus increasing the overall sustainability of this clean form of transport. With Renault we have secured the supply of second life batteries for future E-STOR installations."

Eric Feunteun, Electric Vehicle Program Director, Renault, commented: The second life application of Renault electric vehicle batteries supports Renault's commitment to the energy transition in the automotive industry. Through E-STOR, EV owners can charge their car at reduced costs with electricity that is less carbon-dependent. It makes driving an EV a smart and even more sustainable transportation solution. With this energy management technology, EVs and their batteries become an asset for the grid rather than create overload."



NEW CONSORTIUM DRIVES FORWARD CONGESTION-BUSTING PROJECT FOR EXETER

A UK Smart City initiative led by NTT DATA puts Exeter at the heart of intelligent use of data to cut traffic jams

Exeter City Council and Devon County Council, working with a consortium led by NTT DATA, a leading global IT services provider, today unveiled a ground-breaking, two-year intelligent transport project for the area. Through the project, the group aims to identify solutions that will alleviate traffic congestion in and around Exeter, a historic city in the county of Devon, in south-west England.

The Engaged Smart Transport project will use real-time traffic and weather sensor data, combined with other data sources such as eyewitness and behavioural information to better understand the factors affecting people's travel behaviour. It will reveal where and why congestion happens and identify solutions to address these problems. The consortium has been awarded match funding by Innovate, the UK Government's innovation agency.

NTT DATA will lead the consortium of traffic experts and specialist providers that will deliver a mix of local knowledge, capability and technology. The consortium members and their areas of expertise include:

- smart transportation expertise and technology, along with programme management and customer experience capabilities from NTT DATA
 - intelligent transport systems from Imtech Traffic & Infra
 - environmental sensors from Vaisala providing information on local weather and road conditions
 - leading behavioural research into real time travel decision making from the University of Exeter
 - trend analysis, prediction and citizen engagement through social media from Black Swan
- These capabilities will be teamed with

traffic control innovations pioneered within NTT DATA's research and development labs in Japan, and new UK research investment. Cllr Andrew Leadbetter, Devon County Council's Cabinet Member with special responsibility for Exeter, said: "We are pleased to be involved in this exciting project that will benefit Exeter commuters and residents. Technology is rapidly changing and this is a great opportunity to work with industry experts making best use of the vast amount of data various organisations hold to help manage our transport network."

Exeter is setting out a growth plan for the city that will deliver 12,000 new homes, 60 hectares of new business land and 40,000 square metres of new retail space by 2026. Increased population and commuter movement will add to pressures on infrastructure and public transport services. Exeter has a central population of 120,000 that already experiences daily congestion as well as one-off spikes caused by events. Exeter has active football and rugby union teams, and hosted three matches as part of the recent Rugby World Cup 2015.

"Cities around the world are suffering from the same congestion problems, so I'm delighted that we can apply NTT DATA's proven technologies from Japan to drive innovation in the UK," said Anna Price, head of public sector at NTT DATA. "The Engaged Smart Transport project is a first-time investment by NTT DATA's R&D department here in the UK and I'm really thrilled to be applying our Japanese smart transportation expertise to helping the people of Exeter."

"We already use a range of traffic management measures across Exeter. However, traffic levels and journey times remain unpredictable," said Cllr Rachel Sutton, lead councillor for Exeter City Development. "The Engaged Smart

Transport project will see the Council engage with NTT DATA and the consortium members, as well as the citizens of Exeter, to help traffic managers cut congestion and enable citizens to make travel choices which save time, are better for the city and the environment. The project outcomes will enhance the lives of residents and commuters and help the local economy to thrive, while supporting our public health efforts to reduce avoidable vehicle emissions."

Dr Stewart Barr, from the University of Exeter's Geography Department and part of the project said: "This project provides the University with a unique opportunity to work with some of the world's leading data and logistics providers to find ways to reduce traffic congestion in Exeter and to make the city an even healthier and environmentally friendly place to live, whilst becoming more efficient and economically competitive. Through working with the people of Exeter, the research will develop ways to help people use smart technologies in their everyday lives that could have benefits for everyone".

Understanding how existing road capacity can be managed more effectively is critical for Exeter to deliver this growth. Taking an innovative approach to the use of existing and new data from a range of sources such as sensor technology, social media feedback and the latest traffic algorithm technology, the Engaged Smart Transport project will deliver insight into population movement and provide answers to real-world traffic issues.

www.nttdata.com
www.blackswan.com
www.exeter.ac.uk
www.vaisala.com

LASER BRIGHT BENEFITS FOR YORK ST JOHN

One of York's outstanding centres for higher education has invested in an upgrade to its teaching systems, designed by technology specialist Saville Audio Visual.

The award winning York St John University is located in the centre of the city. The campus has undergone a £100 million transformation over ten years, ensuring students benefit from the state of the art facilities and environment.

The university has now installed NEC lamp-free laser projection technology in a multi-purpose teaching space with high ambient light conditions, achieving a major reduction in total cost of ownership.

Acting for the university, NEC premium partner and systems integrator Saville Audio Visual opted for the NEC PX602WL laser projector. The projector has up to 20,000 hours of operating life, equal to nine lamp changes in a traditional lamp-based projector.

With 6000 lumens brightness, even with 3-metre wide screen images, the projector's performance eliminates the need to close window blinds, retaining a comfortable, natural environment for the students. The new AV system also includes a bespoke presentation lectern, accommodating a visualiser, Saville pro audio system and simple, touch-screen operation using Extron HDMI control technology.

The project was designed and delivered by Saville display product manager, Steve Gore-Browne, who said: "The university required a solution that performed to the highest standards, with no compromise on image quality, whilst negating the need for regular maintenance and the replacement of expensive lamp modules. The NEC P602WL meets these criteria perfectly and we were delighted to integrate it as part of a premium lecture space upgrade."

Martin Couchman, digital media manager at York St John University, said:

"We needed a solution that could perform well in conditions of high ambient lighting. It also had to be capable of delivering a 'user friendly' experience, coupled with rugged performance and low maintenance costs. I'm pleased to report that this particular solution has exceeded our expectations and is a worthy addition to our teaching arsenal."

Jodie.sabin@saville-av.com



HAPAS-approved reinforcing bar couplers are another first from Ancon

Ancon is pleased to announce its MBT mechanically-bolted couplers are the first reinforcing bar splicing system to be approved by HAPAS, the Highway Authorities Product Approval Scheme. This approval provides independent assurance of the product's suitability for infrastructure work.

Ancon MBT ET-type couplers have been independently proven to have 100% strength of the bars being joined and exceed 'Class D' fatigue strength requirements (BS 5400-10C:1999).

The HAPAS certificate confirms MBT ET-type couplers meet the necessary requirements for proprietary mechanical joints in reinforcing bars given in the Manual of Contract Documents for Highways Works (MCHW)(1), Volume 1 Specification for Highways Works (SHW), Series 1700 Structural Concrete and Standard BD 24/92.

MBT-ET couplers are ideal for use when cutting out and replacing corroded reinforcement as part of a highway maintenance contract, where bar end threading or rotation would be impossible. They are available in sizes from 10mm to 40mm and join straight

deformed high-yield carbon steel bars (grade 500) of the same diameter.

The two bar ends are supported within the coupler on two serrated saddles and are locked in place by a series of special lockshear bolts, the heads of which shear off when the predetermined tightening torque is reached to provide a visual check of correct installation.

The MBT-ET range has been rigorously assessed to a pre-agreed national approval arrangement that removes the need for individual UK highway authorities to carry out their own assessment of the product. The in-depth approval process involved laboratory testing, performance trials, material assessments and audits of Ancon's manufacturing processes and quality controls.

Contact Ancon on 0114 275 5224 or email info@ancon.co.uk with details of your individual project requirements.



BRYSDALES' NEW WEBSITE GOES LIVE

Brysdales, one of the UK's leading providers of shelving and storage solutions to the public sector, has launched a new website as part of its continuing investment strategy.

The website, www.brysdales.co.uk, is packed with product information, inspirational case studies and guidance.

There is a full breakdown of the company's accreditations and memberships to notable industry bodies including the Storage Equipment Manufacturers Association (SEMA), SEMA Distributor Group, Storage Equipment Installers Registration Scheme (SEIRS) and SAFEcontractor.

It also includes product information on the huge range of racking, shelving, archive storage solutions and partitioning, mezzanines, material handling equipment and associated ancillary products available from Brysdales.

With options to request a catalogue, submit an enquiry, meet the team, sign up to the e-newsletter and contact the

company direct for more information and advice, the website is a mine of useful information.

Elizabeth Porter, Managing Director at Brysdales, said: "We are experiencing a period of huge growth here at Brysdales and this new website is the latest exciting development."

"Brysdales has been providing innovative, quality storage solutions to a huge range of varied sectors for more than 40 years and we work hard to continuously improve our products and services, including how customers and potential customers engage with us."

"The website is phase one of a fully integrated digital strategy that we have been working on and I am delighted with the results."

www.brysdales.co.uk





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