

VOLUME 3 ISSUE 5

Public Sector **Sustainability**



Healthcare Estates

Exhibition, Conference & Dinner



8 - 9 October 2013 Manchester Central
Putting Positive Energy into Healthcare



Why should you attend:

The biggest gathering of facilities, estates, engineering and procurement professionals from the healthcare sector

- Come and see the latest products and solutions in healthcare
- Over 180 companies displaying over 450 products presented by experts in the exhibition
- Healthcare Estates combines the UK's largest event in healthcare with the highly respected IHEEM conference
- Join other high-level decision makers from across the healthcare sector
- See and hear about the practical application of products in the healthcare environment
- Healthcare Estates exhibition is 'free' to attend and healthcare professionals benefit from complimentary parking on site, complimentary refreshments and a dedicated VIP area in the show

Register now for your ticket.
Visit www.healthcare-estates.com



Event Partner: Event Organised By:



Event Sponsors:



PUBLISHER: Ralph Scrivens
ralph@pssmagazine.co.uk

OFFICE MANAGER: Lucy Drescher
lucy@pssmagazine.co.uk

PRODUCTION: Sarah Daviner
admin@pssmagazine.co.uk

ACCOUNTS:
accounts@pssmagazine.co.uk

PRINT: Mixam Print

PUBLIC SECTOR SUSTAINABILITY
is published 10 times a year by
PSS Magazine.

www.pssmagazine.co.uk

42 Wymington Park, Rushden,
Northants, NN10 9JP
Tel: 0845 680 8618
Fax: 01933 315557
Email: mail@pssmagazine.co.uk



www.twitter.com/PSSustain

REGISTRATION: Qualifying readers receive
PSS free of charge. The annual subscription
rate is £80 in the UK, £95 for mainland
Europe and £115 for the rest of the world.
Single copies £10.

Some manufacturers and suppliers have made a
contribution toward the cost of reproducing some
photographs in PSS.

PAPER USED TO PRODUCE THIS MAGA-
ZINE IS SOURCED FROM SUSTAINABLE
FORESTS.

Please Note:
No part of this publication may be repro-
duced by any means without prior permis-
sion from the publishers. The publishers do
not accept any responsibility for, or neces-
sarily agree with, any views expressed in
articles, letters or supplied advertisements.

All contents © PSS Magazine 2013

ISSN 2046-5920 (Print)
ISSN 2046-5939 (Online)

Cover Story:
Light up the town:
Harvard's LeafNut system

See Page 28
<http://www.harvardeng.com/>



Highlights

4
Brent Civic Centre
Achieves Practical
Completion

6
Portakabin wins
Zero Waste Award

16
Washrooms under
the spotlight

18
Sustainable pest
control

20
A good-looking
block

24
NHS Surrey reduces
carbon emissions
with heating and
hot water systems
upgrade

27
Recycling carpet
helps achieve Zero
Waste targets

30
Good emergency
lighting
maintenance is
crucial for safety,
while testing is
more cost-effective
using automated
techniques



Conference extended to provide more opportunities to share flooring best practice

A packed line-up of best practice technical presentations and case studies means the second annual commercial flooring conference will run for two full days (2-3 September 2013) alongside the Flooring Show at Harrogate International Centre.

Following the success of last year's first ever national commercial flooring conference, organisers Wendy Adams Associates and Media Generation have extended the conference and put together an enticing programme of presentations and demonstrations from the industry's top names.

Presentations will showcase high profile projects include The St Pancras International Hotel by Brintons, the award-winning new offices of York City Council by So Vibrant and the new Leeds Arena by Populous and Leeds City Council.

In addition, there will be a special panel presentation and discussion on flooring for football stadia. Facilities managers from top football clubs have been invited to explain how their facilities utilise the various flooring options for a diverse range of activities and requirements other than sport – z from conferences and banquets, to retail and museums.

Sectors covered by the conference programme will include education, healthcare, sport, health & fitness, hotels & restaurants, office, entertainment & leisure, and housing including social housing. In addition, there will be a special focus on the important areas of BIM (Building Information Modelling) and Sustainability.



Last year's hugely popular Demo Zone returns, with flooring installation innovations and techniques demonstrated by top names and spearheaded by the Contract Flooring Association (CFA), The Flooring Industry Training Association (FITA) and the National Institute of Carpet & Floorlayers (NICF). There will also be a parallel series of CPD workshops relevant to the CPD needs of surveyors, interior designers and architects.

The Flooring Show exhibition, taking place 1-3 September, is the perfect industry networking event, and this year boasts an impressive line-up of exhibitors and "show-stopper" speakers.

New for this year, the Business Enrichment Theatre will host a series of inspirational speakers hoping to provide guidance, suggestions and support designed to help with a wide range of business issues. Delegates will be able to hear from The Society of British Interior Design President, Vanessa Brady; Sian Astley, Channel Five's presenter of Half Built House; Scarlet Opus Trend Forecaster, Victoria Redshaw; and Google's Industry Manager Flooring, Finlay Clark. www.theflooringshow.com

• news • news • news • news • news • news • news •

BRENT CIVIC CENTRE ACHIEVES PRACTICAL COMPLETION

The landmark new Brent Civic Centre has achieved practical completion in the north London borough of Brent. The multipurpose development allows the Council to realise its vision for a consolidated facility that houses their civic, public and administrative functions under one unified roof, providing office space for 2000 staff. Located on a prominent site next to two well-known civic icons, Wembley Stadium and Wembley Arena, it will streamline all aspects of the Council's activities and has been designed to become the new hub and heart for the community where residents can meet, shop and eat.

The building's spaces are arranged around a soaring, naturally-lit foyer and atrium

which houses a large public amphitheatre and staircase that will host a programme of high-quality arts and cultural experiences that will enhance the building. A circular Drum clad in timber fins features prominently in this space and houses a multi-purpose community hall, library, one-stop shop and civic chamber. Behind this, glazed office wings are open-plan and flexible to provide a future-proofed solution to the diverse community's administrative needs. The building also includes space for retail outlets and a landscaped garden to help it to connect further with the surrounding Wembley Regeneration Area.

The project has been awarded the coveted BREEAM 'Outstanding' rating, the highest possible, and is the first project in its category to have achieved this. As such,



Photograph copyright 2013 Monley von Sternberg
www.vonsternberg.com

it features a 33% reduction in carbon emissions thanks to a combination of solar shading, natural ventilation, high-performance façade, and combined cooling, heating and power which utilises waste fish oil. It is the most sustainable local authority building to be completed in the UK.

The project team included Brent Council as client,

Hopkins Architects as architect, Skanska as design and build contractor, URS for town planning, engineering design, environmental and sustainability services including the BREEAM assessment, and Turner & Townsend as quantity surveyor and project manager.

www.brent.gov.uk/your-council/brent-civic-centre/

SOLAR ENERGY UK

The NEC, Birmingham, UK
8 – 10 OCTOBER 2013

THE UK'S LARGEST B2B EVENT FOR THE SOLAR INDUSTRY

Solar Power UK has been renamed **Solar Energy UK** this year to reflect all sectors committed to the generation, storage, use and transmission of solar energy.

The exhibition will include **Distributed Energy UK** where you can find out more on technologies such as Energy Monitoring Controls, Smart Grids and Metering, Energy Storage, Heat Pumps, Microgeneration and EV Infrastructure.

WHY ATTEND:

- Discover ground-breaking products
- Hear about the latest research & developments
- Learn new skills at four feature areas
- Network with your supply chain
- Develop new business and contacts
- Gain insight at our half-day seminars

NEW FEATURE AREAS – Solar Thermal and BIPV/Whole Building solutions – will be there alongside Practical PV and Large-Scale features highly popular in 2012.



NEW
SOLAR POWER PORTAL AWARDS UK

Visitor registration opens in July. Visit our website for regular updates.

uk.solarenergyevents.com

@_SolarEnergy

Supported by



PORTAKABIN WINS ZERO WASTE AWARD

Portakabin has received the highest accolade at the Zero Waste Awards in recognition of its achievements in sustainable waste management.

Portakabin was awarded a prestigious Gold Award – only the 5th time this accolade has been presented since the awards began.

The awards, organised by letsrecycle.com, recognise excellence in waste prevention and re-use, recycling and energy recovery and are open to all organisations in both the public and private sectors.

Commenting on this latest success, Derek Carter, Chief Executive of the Portakabin Group, said, "We are absolutely delighted to receive this award which is a fantastic testament to our staff across the business and at every level – from facilities management to design, building engineering and manufacturing.

"We have seen very significant reductions in waste over the past three years as a result of our strong commitment to re-using and recycling materials and by engineering waste-generating operations out of the manufacturing process. To achieve national

recognition for this work and our achievements to date gives our customers, staff and suppliers even greater confidence in the sustainability of our approach and our accommodation solutions."

The Zero Waste Gold Award was presented to Portakabin for its many

recycling initiatives and achievements which include:

- Succeeding in its objective of zero waste to landfill at its manufacturing centre in York a year ahead of its December 2013 target
- Setting up 18 different waste streams for recycling materials from metals and timber to vinyl flooring, batteries and cabling
- Using new materials in the manufacture of Portakabin buildings that have a recycled content of 35 per cent
- Designing out the use of painted components, reducing airborne solvent emissions by 20 per cent
- Increasing awareness among staff of the importance of recycling and waste minimisation using 'tool box talks' to encourage new ideas, internal newsletters, monthly staff briefings, and training to instil the discipline to recycle
- The recovery of extracted air from the wood working unit and its re-use for heating
- Sawdust and chippings collected and bagged for direct re-use as animal bedding and chipboard production
- Plasterboard off-cuts re-used as soil conditioner
- Cooking oil waste to fuel food delivery vehicles
- The launch of the new Energy-Saver range to enable Portakabin customers to reduce energy usage by more than 60 per cent, and benefit from some of the UK's best-performing sustainable buildings.

The Zero Waste Awards are sponsored by SAICA NATUR and Wastecare.

For further information about modular buildings for permanent and interim applications, visit www.portanews.co.uk, email information@portakabin.co.uk or call 0845 401 0010.



• news • news • news • news • news • news • news •

'GREEN' HAT-TRICK FOR UNIVERSITY IN NATIONAL ENVIRONMENTAL TABLE

Environmental efforts at the University of Derby have seen it awarded a First Class ranking in an influential UK universities 'green' table – for the third year running.

The University has been awarded a First in the People and Planet Green League table, which annually awards degree-style rankings (such as a First or 2:1) for universities' ethical and environmental activity.

Derby has been ranked among the top 50 universities in the rankings every year since it first appeared in 2007.

Derby's major green activities this year have included:

- increasing recycling rates to over 65% across all

University sites

- increased student participation in the WildVolunteering Bursary Scheme

- greater levels of engagement with staff and students at both our Derby and Buxton campuses during and following this year's Go Green Week in February
- achieving 'Bronze' standard in the Soil Association's Food For Life accreditation scheme
- increased the amount of staff pool car mileage travelled in typically lower emission vehicles.

The University of Derby's longer term environmental strategy includes a commitment to a 27% reduction in its carbon emissions (linked to global warming and climate change) resulting from energy usage,

transport, water, waste and procurement, by 2020 (based on its 2005 levels).

Lynn Richards, Environmental Manager at the University of Derby, said: "We are delighted to have achieved a First Class award again this year. There are still some areas where we know improvements can be made, and we are working hard with our students and staff to ensure that we make progress year on year.

"Anyone interested in finding out more about the University's environmental activities can log onto our website at www.derby.ac.uk/environment."

Louise Hazan, who compiled the People and Planet Green League, added: "The University of Derby thoroughly deserves its First Class ranking this year. It is helping to drive up



Lynn Richards

environmental and ethical standards for the higher education sector as a whole.

"We congratulate it on listening to its students, who are quite rightly demanding greener degrees and that the University tackles issues like climate change head-on."

RETROFIT

ROADSHOWS

Focused events at the heart of the UK energy efficiency market

LIVERPOOL - 4 July

£50bn Project Viridis to Retrofit 100,000 Merseyside Homes

BIRMINGHAM - 9 July

Carillion lands £600m BES contract

NEWCASTLE - 5 September

£200m to retrofit the North East

CARDIFF - 17 September

Arbed scheme drives retrofit of 7,500 Welsh homes

LONDON - 29 November

London RSLs share £232m ECO funding

Places are limited – book online now to avoid disappointment

NOTE: MORE LOCATIONS TO BE ANNOUNCED



Retrofit: the time is NOW - www.retrofit-roadshow.co.uk

To discuss exhibiting call 01743 290 001 or email info@retro-expo.co.uk

Event Partners:



ECO2SOLAR SECURES £0.7M ORDER BOOK FROM LINDEN HOMES

Renewable energy company Eco2Solar has secured a £0.7m order book to provide solar PV to 323 new homes and four large apartment blocks under its Preferred Supplier Agreement with Galliford Try's housebuilding division Linden Homes. Kidderminster based Eco2Solar is working with Linden Homes to install solar PV systems on new build homes throughout the UK - made up of houses, apartments and affordable housing.

Eco2Solar will help Linden Homes meet the BRE AAM code 4-6 for sustainable homes which will guarantee energy savings for future residents who will qualify for the government's Feed-In-Tariff (FIT) incentive – which pays householders for every kWh of electricity they generate and export back to the national grid.

One of the biggest projects is at Evolution Quarter, Orpington in Kent which will see the installation of 53 solar energy systems on two and three bedroom homes.

It comprises systems of up to 1.5kWp and is expected to produce more than 45,028 units of 'green' energy every year – equivalent to 24 tonnes of carbon. All electricity generated will be used on site by individual homeowners, helping to reduce energy costs and provide a sustainable energy source.

Installations will also be completed at the multi-award winning Kingston Mills, The Island riverside development of 171 new homes in Bradford-on-Avon, regeneration scheme Evolve named 'Best

Brownfield Site' by What House (2012) in Plymouth and luxury living apartments at Seventy Nine, The Park in Cheltenham.

Other projects include Wilmington Way in Sussex, Cholsey Meadows in Oxfordshire, Somerset Road in Teddington, The Mews in Bartley Green, Noble Park in Epsom and Watermill Lane in Enfield.

Eco2Solar signed its Preferred Supplier Agreement with Linden Homes in June last year, taking on its existing solar PV contracts and all its new solar energy contracts from Galliford Try's dedicated energy company Regeneco.

Part of Eco2 Solutions Group, the multi-award winning renewable energy specialist was appointed for its experience and competitiveness.

Stephen Teagle, Linden Homes' managing director affordable housing and regeneration commented: "We have been applying measures such as solar PV to reduce carbon emissions on a number of our developments for some time now, and having Eco2Solar's expertise in renewable technologies is of real benefit. Particularly, when working on more complex developments or redevelopment sites."

Galliford Try is a FTSE 250 house building and construction group delivering industry leading performance in the construction of a sustainable future. Their brands include Linden Homes, its award-winning housebuilding division which is the fifth largest residential developer in the UK, specialising in high quality, individually designed schemes across the country, and Morrison Construction.

For more information visit www.eco2solar.co.uk or visit www.lindenhomes.co.uk



SOUTHERN HOUSING GROUP CELEBRATES AWARD FOR BUILDING 1076 SOCIAL HOMES

Southern Housing Group has scooped BRE's award for the housing association that has developed and constructed the highest number of social homes through BRE since the Code for Sustainable Homes became operational in March 2007, with a total of 1076 homes certified at post construction.

BRE runs the scheme on behalf of the Department for Communities and Local Government, and presented the award to Dale Meredith, Southern Housing Group's Development Director, and Environmental Sustainability Officer, Will Routh, at a ceremony on Monday 3 June 2013.

Dale says: "The Code for Sustainable Homes has really driven the development of environmentally sustainable housing over the last six years. It has helped Southern Housing Group to focus on the fabric of the building as well as trying out new technologies."

"By using CSH, Southern Housing Group is reducing carbon emissions while providing warm homes that are affordable for our residents to live in."

The objectives of our Environmental Sustainability Strategy include, "Delivering affordable warmth and reducing fuel poverty". Central to this is constructing new homes to CSH level three and above, employing a fabric-first approach to ensure that the homes are well insulated and airtight.

Leanna Twell, BREEAMS Domestic Sector Manager from BRE says: "Southern Housing Group's achievement in the social housing sector shows that sustainability can be achieved cost effectively at volume. The Group should be proud of all it has achieved so far."

"BRE is pleased to recognise Southern Housing Group's significant efforts within the social housing sector over the past six

years as they would have had to overcome many challenges in order to deliver their homes to the Code for Sustainable Homes standard."

SUSTAINABLE HOMES CASE STUDY: VEGA, HOVE

Southern Housing Group has completed the construction of 40 apartments for rent in Hove, East Sussex. The striking new 'Vega' building on Kingsway, echoes thirties architecture and includes a light feature linked to the changing tide.



The development achieved CSH Level 4, with high levels of natural light and a highly efficient centralised heating system that includes two micro CHP units. Photovoltaic panels provide power to communal areas, including lighting for the columns at the front of the building.

The flats are a mix of affordable rent, intermediate market rent and open market rent. One-to-one car parking is provided in a secure basement. Four of the apartments are designed as wheelchair accessible.

Find out more about Southern Housing Group at www.shgroup.org.uk

• news • news • news • news • news • news • news • news •

• news • news • news • news • news • news • news • news •



NEW SUSTAINABILITY WEBSITE LAUNCHED

The environmental benchmark for the furniture industry is launching a new website.

The Furniture Industry Sustainability Programme, widely known as FISP, is launching its own dedicated website – www.fispfurniture.com – updated with fresh information and new areas.

FISP was launched in 2006 to support and promote sustainable development in the furniture industry. Today, FISP is the standard

of sustainable excellence for companies across the furniture supply chain. Supported by all the furniture associations, it is internationally recognised as the industry's environmental benchmark.

New and improved areas on the website include up to date news and information, meet the team, features and benefits, how to join FISP and a case study on one of the oldest and most active members of FISP, Senator.

James Bell, Environmental Consultant at FIRA, said: "The new improved website will be easy to navigate and contains up-to-date information for potential and existing FISP members. FISP membership clearly demonstrates your sustainability credentials when tendering for contracts and helps you to stand out above your competitors. It can improve your competitiveness

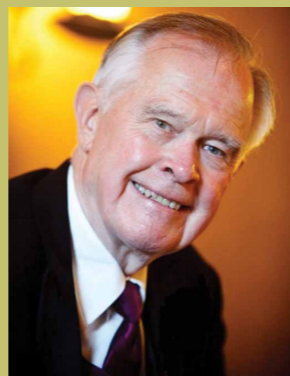
through production efficiencies and cost savings. The service is tailored to your business and all organisations within the furniture industry are eligible for FISP membership."

FISP membership demonstrates that a company is taking its environmental and corporate social responsibility obligations seriously.

For details about how FISP can benefit your business, please contact James Bell, FIRA's Environmental Consultant on jb@fira.co.uk or call +44 (0) 1438 777 700. For more information about FISP, please visit www.fispfurniture.com

SIMPSON STRONG-TIE EU TEST LAB DEDICATED TO VISIONARY

Simpson Strong-Tie has renamed its ISO17025 accredited world class EU



testing facility in honour of the man who was responsible for the growth of the company in Europe.

The purpose built testing site, which was opened in 2009 and conducts around 5,000 product tests each year, was recently renamed 'The Andris Peterson EU Test Laboratory' at a special ceremony attended by European branch managers and technical engineers.

Ian Harrison, SST's

European Technical Director said: "When Andris Peterson came to the UK to launch Simpson Strong-Tie operations in Europe he was the only employee. Over a number of years he made many acquisitions in the UK, Germany, France and Denmark. He amalgamated and grew those businesses to make SST the European market leader in connectors that it is today."

"It was the vision and support of Andris which enabled us to grow the small testing facility we had back then into the world class facility we have now."

In 2005, Andris retired and returned home to Portland in the USA but sadly, just over a year ago, he passed away.

"In his memory and in honour of everything he achieved for Simpson Strong-Tie, the business in Europe is

proud to re-name the facility 'The Andris Peterson EU Test Laboratory' in dedication to a larger than life character who cared passionately for all people in the organisation and without whom many of us might not be part of the Simpson Strong-Tie family," added Ian Harrison.

For further information about Simpson Strong-Tie please visit www.strongtie.co.uk or telephone: 01827 155600.

INTERSERVE RENEWS £40M FM CONTRACT

Interserve has had the option to extend its £40 million total facilities management contract with the Home Office taken up for a further two years.

The extension reflects the partnership that has developed between Interserve and the Home Office since

it started delivering facilities services in 2008. The contract also provides support for the National Offender Management Service, the National Probation Service, UK Border Agency and the College of Policing, among others.

Interserve delivers a comprehensive approach to total facilities management services including, cleaning, catering, maintenance and security services and other more specialist services across 400 buildings and around 450,000m² of property.

Interserve has developed a strategic proposal for the Home Office that will deliver further cost savings and efficiencies through an innovative management approach and a new mobile operating model.

Keith Dorling, Managing Director - Civil Government at

Interserve commented: "This contract extension highlights the strong relationship that has developed between Interserve and the Home Office over the past five years. We have helped the Home Office realise substantial savings and have provided added value by offering innovative ideas. One of

which was to implement a new 'real time' mobile working and scheduling system for both planned and reactive works. This has resulted in an increase in engineer productivity and a reduction in the amount of administration and paperwork.

"We're looking forward to our continued relationship with the Home Office and working with them to help deliver the cost savings and efficiencies required."

www.interserve.com



MITIE wins national partnership award for cleanest hospital

MITIE, the FTSE 250 strategic outsourcing company, has been recognised by the Association of Healthcare Cleaning Professionals (AHCP) for “Working in Partnership” with Hull and East Yorkshire Hospitals Trust.

AHCP is the professional association for healthcare cleaning in the UK and Ireland. Their annual awards, which took place in Bolton, distinguish the best cleaning teams in the healthcare sector.

A team from MITIE’s Facilities Management business, which provides cleaning services to Hull and East Yorkshire Hospitals Trust,

was nominated for the award following an independent patient survey.

MITIE was nominated alongside three NHS Trusts, but stood out for meeting the overall goals of Hull and East Yorkshire Hospitals Trust, which it has worked in partnership with since 2006.

Over that time MITIE has implemented a number of initiatives to improve standards of cleanliness and hygiene.

With the added risk to patients of healthcare acquired infections like MRSA, MITIE has focused on investing in new technology and cleaning equipment, performance monitoring, training, and infection control to ensure that high standards of cleanliness and hygiene are maintained.

Pauline Lewin, Chief of Infrastructure and Development for Hull and East Yorkshire Hospitals NHS Trust said: “The cleanliness of our hospitals is something which patients and visitors notice straightaway and, quite rightly, we are judged on our performance in this respect.”

“It’s really encouraging to see the AHCP recognise the joint efforts from our staff at the Trust and the MITIE team. We hope this, along with the fantastic survey results, will help reassure patients about the standards they can expect when coming into one of our hospitals.”

Martyn Freeman, managing director of MITIE’s Facilities Management business, said: “We’re proud to have built up an award-winning partnership with Hull and East Yorkshire Hospitals Trust. Over the last seven years we’ve continually challenged our teams to innovate, and we look forward to working further with the Trust in delivering a world-class service.”

MITIE has been providing facilities management in healthcare for over 20 years, to clients such as Great Ormond Street Hospital for Children, St George’s Hospital in London, and Hinchingsbrooke Hospital in Cambridgeshire. www.mitie.com

GRAPHIC DESIGN STUDENT WINS RSA GONG FOR WATER POLLUTION SOLUTION

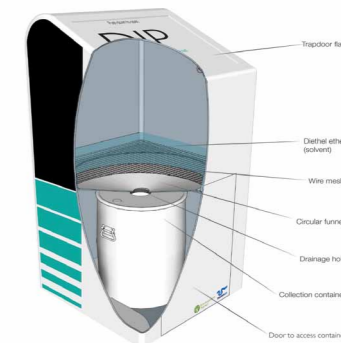
An eco-friendly Kingston University student is gearing up for an internship with the Environment Agency after devising a solution to tackle the scourge of polystyrene waste. Charles Anderson will take up the post after being named one of the winners of the Royal Society for the Encouragement of Arts, Manufactures and Commerce (RSA) prestigious annual Student Design Awards.

The young designer from Sutton, Surrey, set to work on the project for the awards’ improving water environments category after discovering a lack of recycling opportunities meant enormous amounts of polystyrene were going straight to landfill. He was astounded to find that the waste also accounted for up to 80 per cent of floating debris in rivers. “I’ve been sailing since I was seven and have always enjoyed being out on the water, but I hate seeing litter floating along or washed up on the banks. Animals mistake the smaller pieces of polystyrene for food and it clogs up their digestive systems which can cause them to starve,” he said. “Polystyrene may be 95 per cent air, but this doesn’t stop it causing a significant problem for the environment.”

Charles came up with a concept called Dump in Polystyrene, which demonstrates how the bulky material, often used in packaging, could be reduced back to its raw state. His work outlined a process in which the polystyrene could be put into a recycling bin – similar to the bottle and shoe banks found all over the country – containing a solvent to break it down. The solution would then pass through a mesh filter and down a circular funnel to be collected in a drum before being able to be reused in new products such as flower pots.

Once reduced, polystyrene only occupies five per cent of its original volume meaning it is easier and more economically viable for local councils to recycle, Charles explained. “The process was designed to tackle the main problem that councils face trying to deal with this waste – its size and the sheer amount thrown out. At the moment, it ends up going straight to landfill where it seeps slowly in to the soil. This process of degradation can take up to 1,000 years. My approach would mean it could be collected as a liquid, transported and recycled much more quickly and easily.”

As part of the project, Charles even created a swan made from 1,400 waste polystyrene cups in tribute to some of the wildlife on the River Thames which flows through Kingston. He also took advice from academics at Kingston University’s School of Pharmacy and Chemistry to help him work out the science behind how the system could work. www.kingston.ac.uk



DUMP IN POLYSTYRENE



• news • news • news • news • news • news • news •

ANGLIA RUSKIN WINS INTERNATIONAL GREEN AWARD

Anglia Ruskin University’s green credentials have been recognised after it was presented with the Excellence in Integration award at the International Sustainable Campus Network’s annual conference in Singapore.

The ISCN connects people and ideas relating to campus sustainability and this year’s conference – and the fifth annual ISCN Sustainable Campus Excellence awards ceremony – was hosted by the National University of Singapore, a founding ISCN member and a forerunner in campus sustainability.

Anglia Ruskin has placed sustainability at the core of its corporate vision. As well as carrying out internationally-recognised research in sustainability and striving to

exceed benchmarks for the sustainability of buildings and processes, it aims to make sustainability a key part of every student’s experience.

To underpin these commitments, Anglia Ruskin was the first UK university to sign the Rio+20 Declaration of Higher Education Institutions. Anglia Ruskin was also one of the first UK universities to achieve ISO14001 in 2009 and has been recognised for its innovative approach to integrating research and education with physical environmental management.

In 2011 Anglia Ruskin established the Global Sustainability Institute (GSI), which has already built an international reputation for its research focusing on behaviour change, resource scarcity, policy and climate finance.

The GSI has established partnerships with business, not-for-profit organisations, the UK Government, the EU Commission and the United Nations, as well as participating in UK research council-funded projects. Earlier this year Anglia Ruskin launched a Masters Degree in Sustainability with the Eden Project, the first time the educational charity and visitor attraction has partnered with a university on an academic programme.

Dr Alison Greig, Director of Education for Sustainable Development, said: “This has provided us with an opportunity to showcase our work on an international stage. This Excellence in Integration award also provides a strong platform for us to develop further.”

The awards are open to any college or university

worldwide that has developed outstanding planning, construction, or educational projects that promote sustainability on campus and in the surrounding community. Other awards were won this year by the University of Gothenburg (Sweden), Zhejiang University (China), Chatham University (United States) and Lappeenranta University of Technology (Finland).

ISCN Members commit to sustainability principles and report their performance according to the ISCN-GULF Sustainable Campus Charter which was jointly developed with the World Economic Forum’s Global University Leaders Forum. More information can be found at <http://www.international-sustainable-campus-network.org/>

Earlsmann

innovators in lighting

COMMERCIAL LIGHTING SOLUTIONS
For reduced maintenance, energy usage and carbon emissions

Earlsmann’s new LED tube with external driver allows straightforward replacement of the existing magnetic/HF ballast with the LED driver. Two-ended connection simplifies rewiring of the fitting. Low voltage (< 50V) ensures it is completely safe and compliant.

The LED tube can be supplied with emergency function and is suited to almost any application, particularly where older fluorescent tubes are still in use - e.g. car parks, schools and offices. The tubes are dimmable and compatible with 1-10 or DALI control and Building management systems. The LED driver is freely cooled, providing increased reliability and reduced maintenance costs.



Need a quick and easy solution to fluorescent tube replacement?

www.earlsmann.co.uk
08456 434 740
sales@earlsmann.co.uk



MITIE wins national partnership award for cleanest hospital

MITIE, the FTSE 250 strategic outsourcing company, has been recognised by the Association of Healthcare Cleaning Professionals (AHCP) for "Working in Partnership" with Hull and East Yorkshire Hospitals Trust.

AHCP is the professional association for healthcare cleaning in the UK and Ireland. Their annual awards, which took place in Bolton last week, distinguish the best cleaning teams in the healthcare sector.

A team from MITIE's Facilities Management business, which provides cleaning services to Hull and East Yorkshire Hospitals Trust,

was nominated for the award following an independent patient survey.

MITIE was nominated alongside three NHS Trusts, but stood out for meeting the overall goals of Hull and East Yorkshire Hospitals Trust, which it has worked in partnership with since 2006.

Over that time MITIE has implemented a number of initiatives to improve standards of cleanliness and hygiene.

With the added risk to patients of healthcare acquired infections like MRSA, MITIE has focused on investing in new technology and cleaning equipment, performance monitoring, training, and infection control to ensure that high standards of cleanliness and hygiene are maintained.

Pauline Lewin, Chief of Infrastructure and Development for Hull and East Yorkshire Hospitals NHS Trust said: "The cleanliness of our hospitals is something which patients and visitors notice straightaway and, quite rightly, we are judged on our performance in this respect.

"It's really encouraging to see the AHCP recognise the joint efforts from our staff at the Trust and the MITIE team. We hope this, along with the fantastic survey results, will help reassure patients about the standards they can expect when coming into one of our hospitals."

Martyn Freeman, managing director of MITIE's Facilities Management business, said: "We're proud to have built up an award-winning partnership with Hull and East Yorkshire Hospitals Trust. Over the last seven years we've continually challenged our teams to innovate, and we look forward to working further with the Trust in delivering a world-class service."

MITIE has been providing facilities management in healthcare for over 20 years, to clients such as Great Ormond Street Hospital for Children, St George's Hospital in London, and Hinchingbrooke Hospital in Cambridgeshire. www.mitie.com

Moves to be environmentally sustainable have gained the University of Bedfordshire a First in the People & Planet Green League 2013

Several initiatives have helped propel the institution to number 20 – a leap of 16 places from last year's 36 – out of 143 universities in the league, published in The Guardian on Tuesday 11 June. They include:

- Harvesting rain water
- Installing solar panels on new buildings
- Using electric cars for campus to campus journeys
- Buying renewable energy
- Recycling 80 per cent of waste

Vice Chancellor Bill Rammell said: "We have been making huge efforts to be more environmentally sustainable including investing more than £250,000 in carbon reduction projects.

"Rain water harvesting and solar panels will become common features on all our future buildings at both Luton and Bedford campuses.

"Our aim is to make our premises as energy efficient and sustainable as possible.

"In doing this we are very much responding to the wishes and demands of our students."

The solar panels in the £20 million Continuing Professional Development (CPD) and Postgraduate centre has already generated more than 100,000 KW of electricity in the few months it has been open, since March 2013.

Rainwater harvested in the building is being used for flushing toilets, and its external insulation cladding allows the building to

retain its heat.

The £34m Campus Centre at the Luton campus is also built to sustainable standards.

Adam Higgin, Head of Environmental Sustainability said: "The move up in the league table

is a result of many initiatives including buying renewable energy from npower, mechanically sorting and recycling our waste and encouraging recycling across campuses by peppering the premises with paper, plastic and tin collection bins.

"All these initiatives are down to the environment policies and sustainable development strategies of the University."

People and Planet is the largest student network in Britain campaigning to protect the environment. The student-led movement empowers young people with the skills, confidence and knowledge they need to make change happen, at home and globally.

The full league table is available at:

<http://peopleandplanet.org/green-league-2013/tables>



• news • news • news • news • news • news • news •

RICARDO-AEA PROVIDES KEY DATA TO SUPPORT NEW GREENHOUSE GAS REPORTING REQUIREMENTS

The UK Government's Department for Food and Rural Affairs (Defra) recently launched its online greenhouse gas conversion factor repository website. This will be of use to companies based in the UK as well as international organizations fulfilling their requirement for environmental reporting of carbon emissions

Ricardo-AEA has been responsible for providing the emissions factors – a crucial element of the new mandatory reporting requirement – on which the new online system is based

In order to report the greenhouse gas emissions associated with a UK

organization's activities, users must convert 'activity data' such as distance travelled or litres of fuel used into carbon emissions. The new online tool provides the values that should be used for such conversions, provides step by step guidance on how to use the factors and helps users to select the categories and types of greenhouse gas emission factors they use during their reporting process.

Ricardo-AEA has been responsible for compiling and developing the annually updated set of UK government greenhouse gas conversion factors since they were originally provided for company reporting in 2005. The new website will allow users to download the conversion factors relevant to their operations, and provides guidelines for environmental reporting, making it easier for

companies to calculate their greenhouse gas emissions for upcoming regulations which require mandatory carbon reporting.

"This update to the way UK greenhouse gas emission conversion factors are presented and calculated is much more user friendly," commented Ricardo-AEA's carbon management knowledge leader, Christine St John Cox. "Organizations will now be able to use a Q&A prompter to select emissions factors, or search an updated comprehensive spreadsheet which still includes over 4,000 factors collated annually by Ricardo-AEA. The new website is designed to support users with a range of experiences of calculating carbon footprints."

The launch of the website supports yesterday's announcement of reforms to company reporting which

include a requirement for UK quoted companies to report on their annual greenhouse gas emissions. It has been confirmed that from 30th September this year, organizations that are UK incorporated and listed on the main market of the London Stock Exchange will be required to report on their greenhouse gas emissions performance. Emissions to be disclosed will be those currently captured within Scope 1 and 2, including transport, gas and fuel usage, electricity and process emissions.

Updated guidance on environmental reporting, including a link to the greenhouse gas conversion factor website, is available at: <https://www.gov.uk/measuring-and-reporting-environmental-impacts-guidance-for-businesses>

The easiest way to collaborate with business energy professionals online



How ENERGicloud Works

- 1 View special interest groups, forums and events and browse Ec-EXPO the virtual exhibition.**
- 2 Complete the easy sign up form and activate your FREE membership account.**
- 3 Interact with 100's of members by posting topic replies, starting new discussions and making new contacts.**

To get started just point your browser to: www.energicloud.com

ENERGicloud is a free independent networking site for business energy professionals working in both private and public sectors. For more information email: robin.hale@energicloud.com

www.energicloud.com

info@energicloud.com

0844 310 5940



THE WORLD OF BIOMASS MET IN COPENHAGEN

For one week Copenhagen hosted the global biomass community at the 21st European Biomass Conference and Exhibition. More than 1800 attendees from 66 countries discussed the status and the future of biomass for energy, materials and further bioeconomy applications in 360 keynote, plenary, oral and 400 visual presentations. These figures, compared to last year, show an increase of 15% in total attendance and a 20% increase in exhibition space making the EU BC&E 2013 once again the most important and stimulating international key platforms in Europe for knowledge exchange on the latest scientific and industrial results, developments in policies and deployment in the biomass and bioenergy sector

“The bioeconomy offers a unique opportunity for growth and job creation through the use of knowledge in many fields such as clean energy and biotechnology”, said Anders Eldrup, Conference General Chairman speaking at the closing session of the conference.

“Maximizing the efficiency of utilization of our biomass resources is fundamental in order to achieve a sustainable bioeconomy”, stated David Baxter, Technical Programme Chairman of the conference while introducing the main highlights of the EU BC&E 2013.

Forest carbon stock in the US and EU have increased over recent



European Biomass Conference and Exhibition

decades providing additional biomass resources. Furthermore, developments in traditional markets such as that of pulp and paper create more opportunities for bioenergy. The biomass potential is still largely untapped, however the actual availability of biomass feedstock might be much lower than the theoretical potential and some questions still remain open mainly concerning environmental sustainability.

Many advanced conversion processes are now in the stage of a large industrial demonstration phase or even an early commercial phase, i.e. 2nd generation biofuels, bio-oil from pyrolysis and torrefaction. Now that confidence to reach a commercial size has been achieved the main challenge is reducing costs factors. For this reason strong policy support at a European level will be crucial. www.conference-biomass.com

Winners of British Renewable Energy Awards 2013

CHAMPION AWARD

Winner: Peter Fraenkel. For longstanding commitment to the promotion of not just tidal energy, but also solar, wind, hydro and biomass. Peter is currently progressing a radical new energy storage concept.

COMMUNITY AWARD

Sponsored by Infinis
Winner: Repowering. The Judges were particularly impressed by the skills and employment opportunities Repowering created for Brixton residents, and its role in bringing energy awareness to hundreds of social housing tenants.

Commended: Westmill Solar Farm

COMPANY AWARD

Winner: Good Energy. This Award acknowledges the marriage of bright ideas, a passion for renewables, and an unrelenting commitment to excellent customer service.

INNOVATION AWARD

Winner: Oxford PV – Solar Glass. A technology with the potential to turn iconic glass buildings into powerhouses, with no compromise to building performance.

Commended: 3sun Group – RFID wind turbine health and safety inspection system

INSTALLER AWARD

Winner: Ecohill. Ecohill is a family company with an impeccable customer service record, and a worthy winner.

Commended: Feed It Green

LEADERSHIP AWARD

Winner: J V Energen. The Poundbury project was incredibly complex. J V Energen and partners had to overcome challenges which no company had encountered before, and showed tremendous leadership.

PIONEER AWARD

Sponsored by Blue & Green Tomorrow
Winner: Lancashire County Pension Fund. This Award acknowledges LCPF's bold move into infrastructure debt – hiring new staff along the way – and bucking the trend of conservatism.

PROJECT AWARD

Sponsored by reNews
Winner: Solarcentury – Blackfriars Bridge. The Judges recognise the truly iconic status of this world-famous project, which has done much to raise the profile of the UK as a destination for renewables investment.

Commended: Clearfleau – Dailuaine AD plant

SKILLS DEVELOPMENT AWARD

Winner: NatWest. The Judges applaud NatWest for training up their staff in response to the growing demand for renewables funding, when there are many other more established sectors equally hungry for credit.

REA JUDGES' AWARD

This year goes to Andrew Garrad, Chairman of GL GH, and also the President of the European Wind Energy Association.

<http://www.r-e-a.net>

• news • news • news • news • news • news • news •

PARSONS BRINCKERHOFF WINS THREE NEW STRATEGIC BUILDING AND ENVIRONMENTAL FRAMEWORK AGREEMENTS ACROSS SCOTLAND

Parsons Brinckerhoff, the global engineering consultancy, has strengthened its position in the Scottish building and environmental consultancy markets with the award of three new frameworks that will see it provide a range of specialist multi-disciplinary services across the country and, in particular, in Fife and Argyll & Bute.

In Fife, Parsons Brinckerhoff has been selected under a multi-disciplinary framework for Fife Council to promote the development of brownfield sites. A multi-disciplinary team led by the company has also

been chosen by Argyll & Bute Council to support the £30 million CHORD regeneration programme across the coastal towns of Campbeltown, Helensburgh, Oban, Rothesay and Dunoon. The Council has awarded the first work package to come out under the framework to Parsons Brinckerhoff. The company will deliver the £8.6m Dunoon Waterfront project involving refurbishment of the Queen's Hall and improvements to the road layout and public realm around the building.

For Scotland Excel, the umbrella body owned by all Scottish local authorities, the company has also been selected to provide project management, cost management, environmental engineering and geotechnical assessments to local authorities across Scotland for a wide range of projects.

“Selection on these three frameworks has given a very strong boost to our activities in Scotland,” explains Brenda Jones, Associate Director at Parsons Brinckerhoff's Glasgow office. “Although we are already working on a number of public sector building projects in Scotland, these new frameworks provide an opportunity for us to contribute to the sustainable development of Scotland's infrastructure.”

The company is currently working on a range of building sector projects across Scotland including the refurbishment of Leys Castle in Stornoway; new schools for The Highland Council and Fife Council; and various projects for Strathclyde University, Edinburgh Royal Infirmary and the Riverside Inverclyde Urban Regeneration Company. These new frameworks also build

on the company's existing portfolio of environmental consultancy work in Scotland for private sector clients and local authorities.

THE FRAMEWORKS:

Fife - the Planning and Protective Services Consultancy Framework will last for two years, extendable to four, and be supported by local property agents, Ryden, for property market advice. Services provided will include project management, environmental and geotechnical engineering, masterplanning, civil engineering, quantity surveying and CDM Coordination.

Argyll & Bute – under the CHORD Programme Consultancy Framework, Parsons Brinckerhoff will provide port engineering, highways design, planning

advice, environmental engineering, transport planning and project management. The company's team of sub-consultants includes, Malcolm Fraser Architects, ERZ (Landscape Architects), David Narro Associates (Structural Engineers), Harley Haddow (Building Services Engineers), David Adamson (QS and CDM Co-ordinators) and Ekos (Economic Advice)

Scotland Excel – the Engineering and Technical Consultancy Framework covers a two year period and can be extended up to four years. Parsons Brinckerhoff will provide project management/quantity surveying, environmental engineering and geotechnical testing services.

www.pbworld.com

LATEST DEVELOPMENTS FROM BSI:

Sustainable procurement – Football Association (FA) /Wembley

Ian Fenwick, Procurement Manager for the FA/Wembley and John Devaney, Committee Manager, Sustainability for BSI spoke at the Sustainable Business Responsible Procurement and Supplier Engagement conference on 27 June, introducing the FA/Wembley implementation of BS 8903, Principles and framework for procuring sustainably – guide. The standard provides guidance on embedding sustainable procurement principles and practices.

New Guide to ISO 50001

Implementing and Improving an Energy Management System is the practical companion to the international standard for energy management, providing detailed guidance on how to meet all of the requirements set out in ISO 50001. This new book provides detailed interpretation as well as hints, tips and guidance on all of the clauses of ISO 50001. Find out more and download a free sample chapter at <http://shop.bsigroup.com/>

New greenhouse gas emissions guidance

The newly published BS ISO TR 14069 gives guidance

on the quantification of greenhouse gas emissions within the boundaries of an organization. This latest document in the ISO 14000 series of environmental standards has been developed to support BS EN ISO 14064-1, Guidance at the organizational level for quantification and reporting of greenhouse gas emissions and removals. Both documents help to develop best practice on quantification and reporting of greenhouse gases for organizations.

Please contact kasha.vansant@bsigroup.com with any questions or if you would like to speak to a BSI expert.



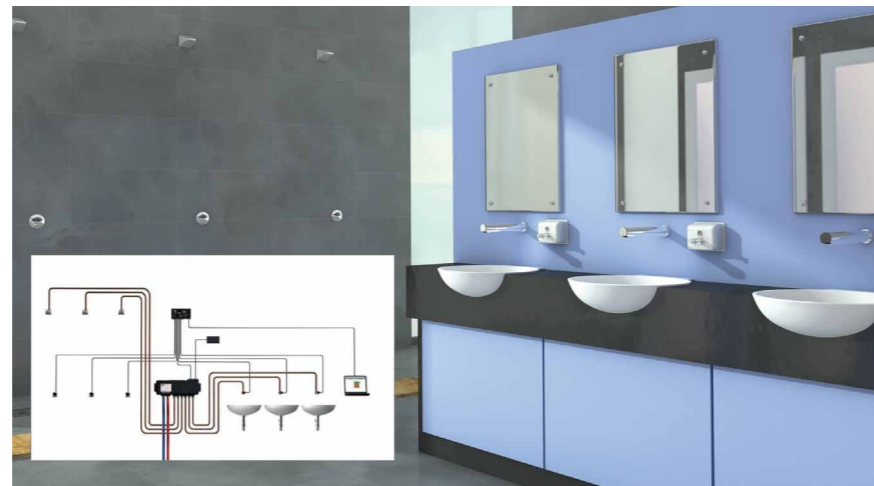
When it comes to public washroom facilities, user safety, water and energy conservation and ease of maintenance are critical considerations for building management teams. Dave Merriman, Commercial Specification Manager at Rada, guides us through some of the latest advancements in commercial washroom products and the benefits they can offer to new build and refurbishment projects.

As building management teams will be acutely aware, washrooms, changing rooms and showering facilities are not areas of buildings that you can simply 'fit and forget' – particularly as these areas are likely to see heavy use by members of the public.

They must be properly managed and maintained on an ongoing basis to ensure the day to day safety of users and prevent the outbreak of serious waterborne infections such as Legionella.

Given the broad nature of public sector buildings, from administrative offices to leisure centres, schools and care homes to name a few, the washroom requirements of each can vary considerably.

However, certain fundamentals apply throughout. The key is to begin by specifying the most effective products for their intended uses. Looking past the basics of complying with appropriate



WASHROOMS UNDER THE SPOTLIGHT

legislation and meeting the required budget, it's important to take the time to consider the makeup and volume of users of these washroom stations.

Commercial shower valves, for example, may have to put up with some of the heaviest use of any washroom fixture. An estimated 15 hours per day is not unusual for a busy leisure centre, meaning they have to be correspondingly robust.

It's not just regular use that ensures a need for robust solutions. Facilities open to the public for long hours can be a target for vandals. Destruction of property can be expensive, as can factoring in the repair and replacement of damaged items and the potential loss of revenue caused by closing facilities to allow for essential repairs. Products with special vandal resistant features are available, such as Rada's VR shower head range, which is designed to be vandal resistant and can also be built within the property's wall structure for extra security.

Those tasked with maintaining washrooms are likely to focus on the practicalities, such as easy access for servicing. Conversely, those responsible for maintaining multiple buildings and sites may be concerned with how much personnel time is spent walking around manually flushing these systems and updating records, and how much water and energy is wasted by products left running.

Using a digitally controlled valve, Rada Outlook offers precise control of 6 showers or taps in any configuration, automatic duty flush, supervised thermal disinfection and data download for L8 compliance. Using an Outlook system in this way can

eliminate the need for manual flushing, allowing staff in buildings with multiple systems to focus their energies (and thus add value to the organisation) by undertaking other tasks. Multiple Outlook systems can be linked together and programmed via a Building Management System.

Rada can also offer a range of push button time flow taps and shower controls that are specifically designed for high usage environments and have been tested in controlled environments over 250,000 cycles to prove their durability. This popular range blends high performance and style, featuring an all-in-one cartridge for easy maintenance and adjustable flow rates, for maximum water and energy savings.

The Rada V12 shower valve also incorporates Insutech™, a safe-to-touch technology, which ensures that the surface temperature on the hot side of the valve is kept at a safe level, eliminating the risk of accidental contact scalding – particularly important if facilities are likely to be used by young people and the vulnerable.

Whatever the sector or scale of your project, it pays to take on board free expert advice at the earliest possible opportunity. Here at Rada we have dedicated specification and after sales teams to ensure that your chosen solution works to the optimum benefit of your organisation, meaning we will be there long into the future should you require maintenance or spares.

Dave Merriman is a Commercial Specification Manager at Rada, the experts in commercial showering and washroom controls. www.radacontrols.com

Government Progress in Mainstreaming Sustainable Development

The report's executive summary, below, outlines the Government's continuing work towards fully embedding sustainable development in its policies and operations.

Sustainable development considers both the impacts and opportunities for driving improvements across the economy, environment and society for current and future generations. In February 2011, Government published its Vision for Mainstreaming Sustainable Development across its buildings and estates, the goods and services that it buys and the policies it makes. It made it clear that sustainable development is the responsibility of all departments. This report sets out the progress made towards the achievement of this vision.

Over the past two years Government has developed a range of policies that are contributing towards a sustainable economy, thriving communities and an improved environment. One of the key principles underlying the Government's approach to sustainable development is that growing the economy and improving the environment can be mutually supportive.

Sustainable development across government departments

Departmental business plans set out the structural reform priorities and the policy and implementation actions departments will undertake to achieve them. All departments have been asked to include sustainable development commitments within their departmental business plans. For the first time in 2011/12 departments were also asked to report on progress meeting these in their Annual Report and Accounts. Many of the reports provided little detail in relation to sustainable development within policy development. To rectify this, revised guidance has been issued for the current reporting year.

Impact assessments are a formal part of the policy development process that requires policymakers to set out the environmental, economic and social costs and benefits of any policy or regulatory proposals. Improvements and revisions to guidance and the impact assessment process in relation to sustainable development were made in August 2011. Government has commissioned a review of how effective these changes have been and therefore how well sustainable development has been incorporated into impact assessments. The initial results indicate that while many assessments

are proportionate and reflect sustainable development impacts well, there are still many that miss important impacts or have not applied sufficient rigour in their analysis.

Improvements have been made to departmental capability. From April 2013 assessment of staff performance can include whether they have demonstrated professional behaviours that support sustainable development. Many departments have been driving improvements to their staff's understanding of sustainable development through training, sharing of good practice and the development of tools.

International efforts towards sustainable development

In summer 2012, the United Nation's Rio+20 summit tackled the critical issue of how countries can grow their economies without destroying the natural resources on which they depend. On 22nd June 193 countries signed up to the outcome document The Future We Want which included commitments to develop Sustainable Development Goals and a global sustainability reporting framework for businesses. The UK is a member of the UN Open Working Group that is tasked with making proposals on Sustainable Development Goals by September 2014.

Greening Government

Government published its first Annual Report on Greening Government Commitments in December 2012. These are high level Government commitments for reducing the environmental impacts of its estate and operations by 2015. The first year showed good progress had been made, but with more work to be done. Government continues to press Departments to deliver against their targets.

Government is also working with Departments to ensure that sustainability is factored into how they buy their goods and services to ensure that value for money is reflected over the lifetime of products and services. Several government departments are championing sustainable procurement. The Coalition Programme set an aspiration that 25% of government spend would flow to small and medium sized enterprises (SMEs), directly and through the supply chain, by 2015. There has been a steady increase in central government's direct spend with SMEs from just 6.5% in 2009/10 to 10% in 2011/12. SMEs also benefitted from a further 6% in indirect spend through the supply chain.

In February 2011, the Government launched its Vision for Mainstreaming Sustainable Development. Defra has now published Government Progress in Mainstreaming Sustainable Development, a report on behalf of the Government on what has been achieved so far.

Enabling scrutiny

A key element of mainstreaming is to enable scrutiny of Government progress. The Department for Environment, Food and Rural Affairs (Defra) has consulted on a package of Sustainable Development Indicators. These can be used to consider trends in economic, societal and environmental measures together and are intended to provide high level transparent measures of whether the country is developing on a sustainable path. The revised set of indicators will be published in summer 2013. The House of Commons' Environmental Audit Committee has held a number of hearings with Defra and Cabinet Office (CO) to review Government's progress in mainstreaming. The National Audit Office (NAO) has provided briefings on sustainability reporting, appraisals and sustainable procurement to support the Committee's work. The Committee has now indicated that it intends to widen its scrutiny to consider individual departments.

Progress on mainstreaming sustainable development

There has been good progress in mainstreaming sustainable development since the launch of the vision in 2011. This can be seen in the range of policies being developed by departments and the work to drive improvements across estates and procurement. The Business Planning and Annual Report and Accounts cycle will continue to form a central part of the mainstreaming approach and there are a number of tools available to support departments. At the same time it is only two years since the vision launched and it will take time to embed sustainable development fully across government. This can be seen in relation to gaps in sustainability reporting and the continued efforts required to meet Greening Government Commitments. Government will consider the outcome of its review of the effectiveness of sustainable development appraisal guidance and whether further improvements will be necessary. Departments will need to continue to work together to share good practice in mainstreaming sustainable development.

<http://sd.defra.gov.uk/author/sdap-team/>

SUSTAINABLE PEST CONTROL

Simon Forrester Chief Executive of the British Pest Control Association looks at public health pest control and asks; can it ever be sustainable?

Pest control is vital to eradicate and prevent infestation from species that have a detrimental effect on the health of humans, are the cause of damage to structures or foods, cause negative public reaction and loss of goodwill, breach legislation, and ultimately increase fear among the population.

Pesticides have a vital role in controlling pest species. Millions of lives have been saved across the world through the control of disease spreading insects and rodents. Mosquitoes can transmit potentially deadly diseases like West Nile Virus, Yellow Fever and Malaria, and rats spread Weils Disease (Leptospirosis) that can cause liver failure. And it's not just damage to human health – millions of tons of food are rendered useless by insect damage; studies suggest not using pesticides reduces crop yields by 10%.

Pesticides are not perfect, they can cause severe adverse effects on human health themselves if misused. The World Health Organisation estimate 3 million people in the developing world each year suffer from severe poisoning from pesticides, resulting in 18,000 deaths. Also there are significant environmental problems caused by pesticide drift or spills which contaminate air, water and soil.

Use of pesticides is therefore a balancing act between the harm caused by the pest, and the potential harm from the use of the pesticide. Over the years there has been a constant push towards

safe, sustainable, but effective pest management and control. EU legislation is risk-based, and provides a high level of protection. Chemical companies wishing to introduce new pesticides must spend millions of Euros on detailed research data on chemistry, toxicity and fate in the environment before products can be launched, and then every formulation must also go through a lengthy (and costly) registration process to ensure the risk is acceptable. Product registrations have a 5 or 10 year life span, so for manufacturers, the decision about whether to produce new active ingredients always comes down to commercial concerns, and at present new products seem unlikely to surface.

The latest EU legislation is leading to the loss of around 80% of active ingredients, often those products which a pest controller might have turned to in the event of a problem infestation. The loss of these 'get out of jail free cards' coupled with restrictions on the use of products that we retain is changing the way pest control is carried out. For example permanent baiting outside for rodents is almost a thing of the past due to environmental risk to non-target species. Control of infestations requires targeted use of rodenticides coupled with close monitoring. This results in a move away from the traditional eight visits per year to a more intense programme, which add up in terms of staff time on site, travel costs and the like.

SO CAN PEST CONTROL BE GREEN?

Yes it can, but again, research, development and implementation will involve a cost. A number of new and innovative systems are being introduced to the pest industry e.g. electronic monitoring systems for rodents, steam to eradicate bed bugs, and pheromone traps to control food moth.

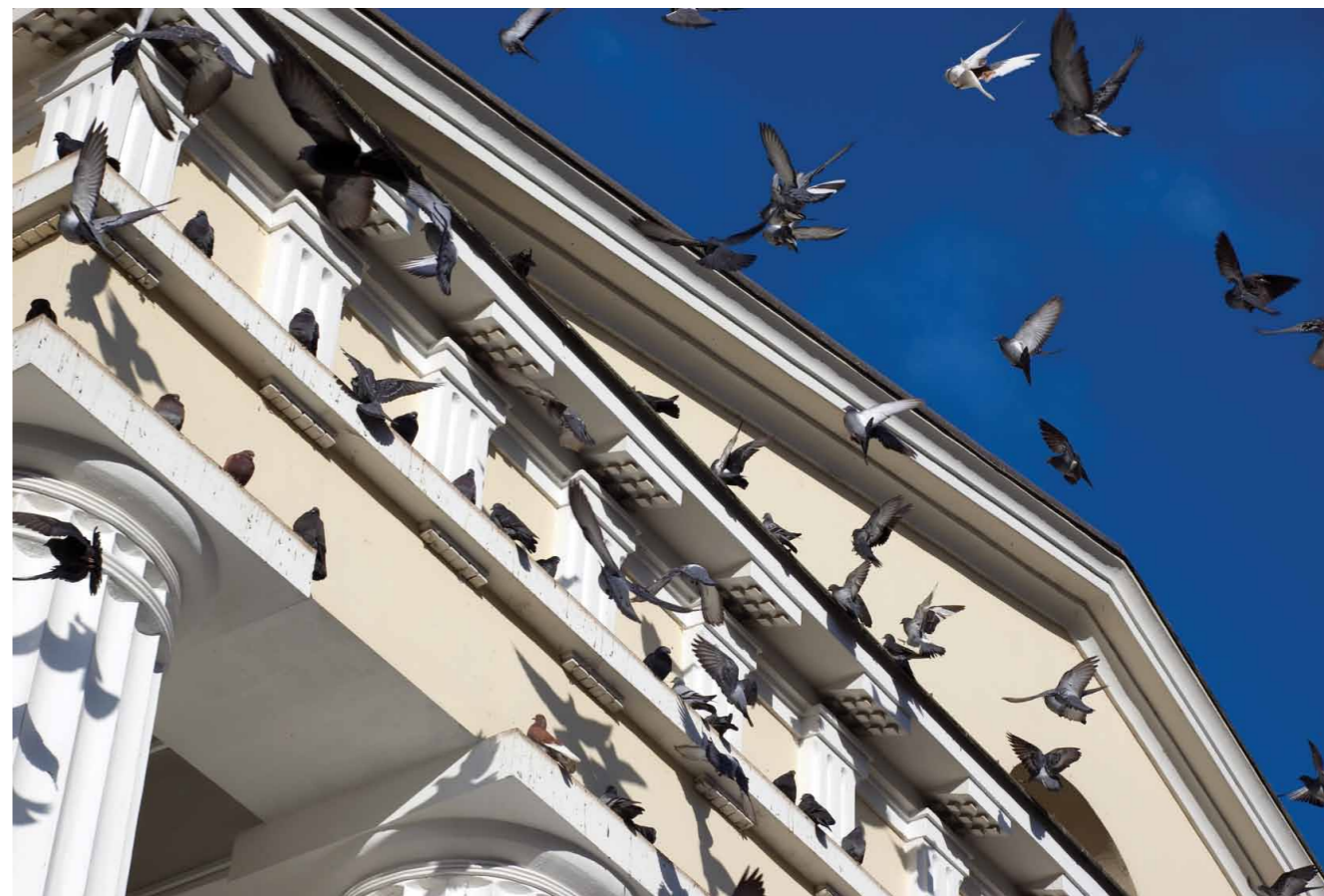
Such developments are 'green' (i.e. use no toxins) and also more sustainable, but they will require a modern pest management specialist who is trained and competent in the use of new technologies.

The professional public health pest industry can meet the challenges of providing a safe, responsible and sustainable pest service – but only with the support of the customers.

If your pest controller is the stereotypical 'ratman' you may need to reconsider your choice of pest control contractor. While a flat cap and whipper may be endearing, you should demand a professional, skilled in new techniques. Similarly, if you constantly choose the cheapest contractor, your organisation is effectively involved in a race to the bottom, not the top. This race may prove costly – it could end in infestation, prosecution and negative publicity. Choose a pest control contractor through a proper tendering process, and get specialist advice, or you may find you under or over-estimate what should be in the contract, wasting money and/or storing up long term problems.

Integrated pest management (IPM) is the process of integrating the use of inspection, physical and chemical control to achieve a pest free environment. You need a competent contractor to achieve these principles. The use of inspection tools such as non-toxic monitors and pheromones is an essential aspect of an IPM program – a great deal of planning is required for a comprehensive IPM scheme. IPM does not mean you cannot use a pesticide – it requires the targeted use of pesticide to control infestation as and when it occurs.

You cannot defer your responsibility for pest control to the contractor – you need to take an active role in the prevention of pests at your site. Sustainable pest control requires you carry out the recommendations that are given to you by your contractor – hygiene, proofing,



BPCA can assist PSS readers with free advice on tendering for pest control contracts. Readers are also encouraged to subscribe to alexo magazine, BPCA's free publication for end users who place pest control business. To find a local pest management professional visit www.bpca.org.uk



good storage regimes. You are not paying for how much pesticide the contractor can spread around your site – you are paying for the knowledge and experience of your contractor to keep you pest free.

THE PERFECT PEST CONTROL PARTNERSHIP

Pest management (i.e. not just control) requires a professionally trained and suitably qualified pest control technician who is committed to the principles of Continuing Professional Development. You may have done your due diligence with the company you chose, but who's on your site spraying pesticides about? Look for the BASIS PROMPT card – over 2,000 UK technicians have one.

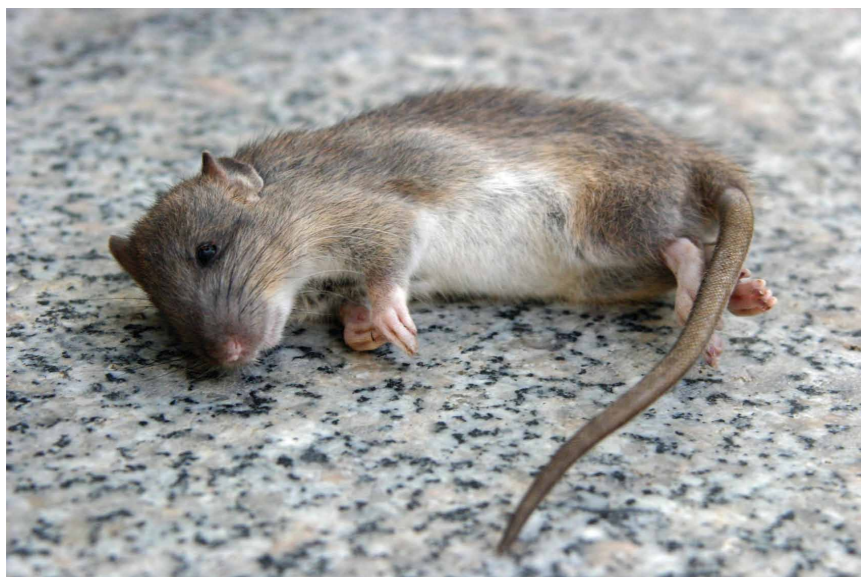
The key aspect of control needs to be the thorough use of inspection principles to define the potential risks before pest activity develops. This is proactive pest control – as access to pesticide becomes more restricted it is essential that we

embrace these principles. The days of blanket spraying with insecticide and perimeter baiting with rodenticide are numbered – hence you no longer need a 'ratman', you need a professional.

We may have to accept that sustainable control and legislation may require more regular inspections with restricted use of pesticides. When you do have pest issues comprehensive monitoring can flag it early and allow targeted control. IPM principles such as good hygiene help improve the efficacy of any insecticide treatments – insecticides and rodenticides tend to succeed better in clean conditions, and pests will look elsewhere if there is no food for them. And any reduction in the use of toxic chemicals on your premises must be better for the health and wellbeing of your staff and the contractor himself – he is in contact with pesticides every day.

Targeted use of insecticides will lengthen the operating life of the active ingredients we have access to – misuse encourages resistance amongst pest species.

In conclusion, sustainable pest control will need to move away from heavy reliance on pesticides. Control will require partnership between you the customer and your professional contractor to create a pest free environment. Cost should not be the only consideration when considering which pest contractor to use – we are no longer 'ratmen', BPCA members are trained operators who provide a skilled service. So use a professional – the best way to 'get out of jail' is to avoid it in the first place. www.bpca.org.uk



A GOOD-LOOKING BLOCK

The importance of aesthetics in social housing

Most Housing Associations and social landlords care a great deal about how their blocks of flats look, and for good reason.

Providing a clean and tidy block can only have a positive impact on the wellbeing and happiness of tenants. A recent New Economics Foundation (NEF) study* confirms this by showing that high housing quality, measured in terms of structural quality, maintenance and upkeep, is positively associated with wellbeing. Conversely, living in a house with problems reduces people's life satisfaction.

When considering the aesthetics of a block, the most obvious areas to focus on are the communal spaces and gardens. Clean and tidy hallways and corridors, and well kept gardens are a must, as is the prompt removal of bulk refuse. However, social landlords are also mindful of the external appearance of their buildings, and whilst measures such as the removal of graffiti can help considerably, other factors such as excess cabling and a multitude of satellite dishes, can also have a negative impact on the 'look' of a block.

The installation of a communal TV system is often key to improving or maintaining the aesthetics of a social sector block. It negates the need for multiple mini-dishes on the exterior of a building and can considerably reduce the amount of cabling required.

Brendan Hegarty, head of Sky Communal TV comments: "Whilst mini-dishes are perfect for individual properties, and the odd one or two on a block are fairly unobtrusive, we would usually recommend a communal TV system for blocks where the uptake of satellite services is likely to be high.

"The joy of installing a Sky communal

TV system is that every flat in a block has access to digital satellite services, without the need for multiple mini-dishes."

Sky offers a range of communal TV systems suitable for the social sector. An Integrated Reception System (IRS) for example, works by feeding a digital signal from a single multi-purpose reception unit to faceplates fitted in each flat. With it, tenants can access a wide range of digital TV services and, being 'platform neutral', IRS gives tenants a choice of TV suppliers, such as Freesat, Freeview or subscription services. It provides access to FM and DAB radio, as well as supporting alternative satellite providers such as Turksat and Arabsat.

IRS is a good option for 'future-proofing' properties, with potential access to the UK's largest number of HD channels and Europe's first ever 3D channel. It also provides the opportunity to access foreign language channels if required. The system typically comprises a satellite dish of about 78cm across and two aerials on the roof (one for TV and one for radio), and an indoor cabinet for switches and cabling.

An alternative for smaller blocks of flats is Sky's Shared Dish system, which delivers digital satellite TV signals to flats from a single discreet rooftop dish, so residents don't need their own mini dishes. It comes at a very competitive price and includes a dedicated project manager to guide landlords and tenants through the entire installation process.

Crucially, as part of the package for both systems, Sky will help with communication to residents, provide a quality guarantee and offer a variety of maintenance options, and remove existing mini-dishes.

Seven accommodation blocks at the Diana, Princess of Wales Hospital in Grimsby, recently benefited from the installation of a Shared Dish system, and as a result, the appearance of the blocks has greatly improved. The original communal TV aerial had not been upgraded prior to the Digital Switchover due to lack of funding, which had led to an untidy proliferation of mini-dishes.

In August 2012, approved Sky Installer, New Channels, installed a single Shared Dish system to each of the seven blocks in just one week, making subscription to Sky+HD services or



alternatively Freesat digital TV, available to all tenants. The contract included the removal of existing mini-dishes to tidy up the blocks.

North Lincolnshire and Goole Hospitals NHS Foundation Trust were delighted with the quality of the work and the aesthetic improvements to the accommodation blocks.

Following installation, Sky held a small event in the staff canteen to offer advice and information to any residents interested in Sky subscriptions or the availability of a Freesat connection.

To help social landlords understand their options and requirements, Sky has developed a free, downloadable Sky Homes Specification guide which details all the elements needed to install an IRS or Shared Dish system. It has been developed to aid agreements between landlords and installation contractors and is intended to help during preliminary planning and tendering. It also provides an infrastructure for local security and information systems, as well as describing the procedures required for planning the individual systems.

The Sky Homes Specification PDF can be downloaded for free from www.sky.com/social or call 08442 410331.



Turn to the secure networking hub for environmental issues in the public sector

The Public Sector Sustainability Association (PSSA) brings together a wide group of people working across all parts of the public sector – who have a common interest in the field of sustainability.

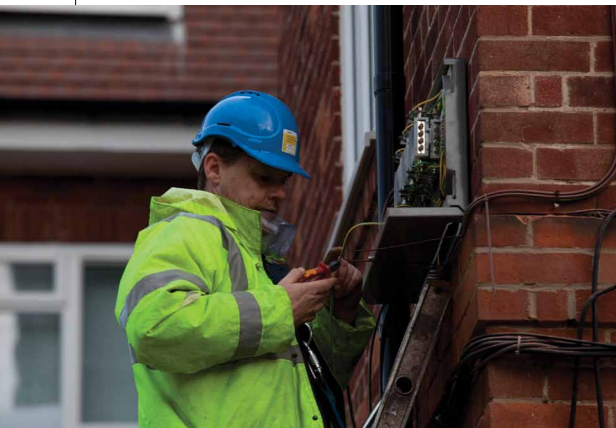
We provide up to date information to help members develop and deliver sustainable solutions in their organisations.



Public Sector Sustainability Association

Free to join public sector only network

www.pssa.info



*Ref: 'Well-being evidence for policy: A Review' – 03.04.2012

LOOMING ENERGY CRUNCH IN NEXT FIVE YEARS

Shamir Jiwa, Managing Director of MAXIM Eyes energy consultants

A looming energy crisis will hit the UK within the next five years, warns energy regulator Ofgem, and businesses and households can expect a series of price hikes as demand outstrips local resources.

With the demand for gas soaring, supplies are dwindling and the UK's dependency on imported energy products will affect the consumer across the country, unless action is taken soon. The looming energy crunch is fuelled by the need for many of our polluting coal fired power stations to close, due to their inability to meet stringent energy and environmental targets, with the only real alternative, nuclear, being far from in favour.

With four Power Stations due to be shut and disconnected from the grid, demand is still flat out, showing no signs of slowing down. With fewer Power Stations to rely upon in severe winters when demand spikes, the capacity safety margins are feared to shrink from 15% now, to 4% within 3 years. It is further feared that the UK may miss out in the race to secure imported stocks, struggling against the growing demands from countries like China. Ofgem also warn of the continued threat of price rises and by 2015/2016 one in twelve businesses will potentially be affected by blackouts, with the larger manufacturing companies being affected first.

Electricity in the U.K. will cost twice as much as in Germany by May 2015, as Britain lags behind in building solar and wind plants, with UK power being 85% more expensive than in Europe's energy market by that date. Whilst Germany is the largest European producer of wind

and solar power, boosting its share of renewably sourced energy to 35% in 2015, from 22% last year, the UK is failing to keep up, showing only an increase from 11% to 15% over the same period. It is anticipated that power in the UK will cost as much as £53 (\$83) a megawatt-hour by early 2015, whilst in Germany a mega-watt hour will cost €33 (\$44) by comparison.

With the UK building less renewable methods of producing power than that of our European neighbours, what does the future hold? Has the government's u-turn on the Feed In Tariff (FIT) on Solar caused a widening of this energy gap? Is the UK able to close that gap in the coming years?

Many of the larger energy companies are energy producers and sustainable power from sun, wind and wave is very much part of their future plans. Solar without doubt is the cleanest and purest form of generated power, however the cut back in the FIT means it is less attractive as a way of generating revenue, but it is still a sound alternative for producing power for own use. Creating power for own consumption it is still a strong alternative to being dependent upon the grid and with payback on investment coming in 6 to 10 years, solar can form an integral part of any future-proof energy strategy.

Entrepreneurs and business leaders are the types of visionaries the UK needs to lead the charge to close the energy gap between the UK and Europe. Green power and new technology projects will work and can make a difference. Energy projects such as wind farms, tidal farms and solar farms can create the increase in power generation that the UK needs. The technology is available and is very

efficient, the skills and the contacts in the energy sector are second to none. What is missing is funding and entrepreneurs to make a leap of faith and see that these are the next options for British business.

What other measures can be taken to reduce costs? The first measure is to be less dependent upon the grid, which is where the major cost increases will come from. Generating power for own consumption is the second most proactive step one can take, with packages available for most sizes of businesses in the UK. Managing waste and how energy is used is crucial to reducing overall costs, with every business in the UK capable of making reductions, whilst putting measures in place to be more efficient consumers. Creating a long term purchasing plan is vital in ensuring energy prices are fixed and immune to price rises. Energy brokers are capable of securing 5 year fixed price tariffs and many at the similar rates as one year fixed tariffs. Working towards being carbon neutral is another consideration and in many cases businesses or institutions in the UK can achieve this comfortably within 10-15 years.

What are the possibilities in the UK for new energy sources such as shale gas? The conservative estimate is that the natural gas reserves on Planet earth are expected to last 63.6 years (Reserves to Production ratio according to BP) but those figures could be significantly improved with the introduction of Shale Gas. While many see this as a silver bullet solution, nobody quite knows what the cost of extraction is going to be and, more to the point, what the cost to the consumer will be. And whilst fracking, the extraction of gas from shale is seen by many as being disruptive to the environment, already 50% of BP's gas extraction uses fracking techniques.

Such is the appeal of Shale Gas, Centrica, the owner of British Gas, is investing £160 million into the exploration

and development of Shale Gas fields at Bowland in Lancashire, just miles from Blackpool. A recent report from the British Geological Society has estimated that there could be as much as 1,300 trillion cubic feet of gas trapped in rocks under Lancashire and Yorkshire, twice as much as previously estimated. However, it is not yet certain if extraction is viable and only 10% of the overall resource may be recoverable. A report from the Institute of Directors in May estimated that natural gas from shale could reduce the amount of gas the UK has to import in 2030 from 76% to 37%, with UK investment reaching £3.7bn a year and providing 74,000 new jobs across the industry.

Energy from waste is one of the most exciting new developments that could see the UK reduce the gap with Europe. Combined Heat & Power (CHP) can take waste destined for landfill and incinerate it producing power and heat. With the landfill tax of over £80 per tonne being introduced in 2014 this presents a real alternative to conventional power generation. One such private enterprise is the new CHP plant in Runcorn, Cheshire. This Solid Recovered Fuel Thermal Power Station is part of a Private Finance Initiative waste management project driven by the Greater Manchester Waste Disposal Authority. Capable of treating up to 810,000 tonnes of solid recovered fuel derived from household waste, delivering 174,000 MWh and exporting 100MW of electricity and 500,000 tonnes of steam per year to the local networks. To better understand the efficiency of the plant, a similar facility is planned for construction in Beddington, South London which will recover heat and electricity from up to 60,000 tonnes of organic waste per year, generating renewable electricity to power around 3,500 homes in the area.

In terms of the future, the answers are out there and all we need is a little bit of faith in new technologies. New entrants into the energy sector bring new ideas and a will to make a difference; that's what we need and with the proper backing we can close the energy gap on Europe.
www.maximeyes.net
Email: info@maximeyes.net
Tel: 0844 871 7711



Potterton Commercial Boilers show major energy savings at Wigan Town Hall

Baxi Commercial Division has supplied five floor standing condensing boilers for a refurbishment of Wigan Town Hall's heating system which has shown a 22% energy saving over the year to May 2012, compared with the previous year's usage. This saving was made despite the heating remaining operational until the end of May 2012 compared to 2011 when it was switched off in early April. The Town Hall is home to the Council Chamber, the Mayor's Parlour, offices, as well as home for a number of civic functions and popular events. Consequently, it was important the heating system should be extremely flexible as well as energy efficient, in order to accommodate a number of functions which take place outside of normal business hours, in a cost-effective manner.

The five Potterton Commercial Sirius 160kW floor standing condensing boilers were selected by consulting engineers NPS North West Ltd. in a joint venture with Wigan Metropolitan Borough Council. The NPS Group specialises in providing property design and management services to both public and private sectors and is wholly owned by the public sector. A spokesman commented: "These boilers replace units which had reached the end of their operational lives and so had become less efficient and less reliable.

"As access to the plant room was via weight restricted stairs and lifts we needed boilers that had low individual weight and had compact dimensions. The Client was very pleased with the project and especially the 22% saving in gas use over a measured 12 months."

The boilers were installed in the third floor plant room at Wigan Town Hall by Hayman Mechanical Services Ltd. This floor also provides office accommodation, so the Sirius FS range's low operating noise level makes it a good choice for such locations. As well as being quiet in operation, this range is perfect for refurbishment projects as each boiler is compact and lightweight for its output, fitting through a standard doorway and, importantly in this case, fitting in a small lift. The boilers serve both constant and variable temperature circuits, running fan convectors, air handling units and radiators. New pipework was installed



to each of the boilers, with the headers connected to existing pump circuits. The heating system is connected to a Building Energy Management System which provides monitoring and control functions including zone control. A spokesman for Hayman Mechanical commented: "We had excellent support from Baxi Commercial Division's Area Sales Manager if any issues arose that we needed their help with.

Potterton Commercial's Sirius FS is a technically sophisticated range of floor standing, stainless steel condensing boilers, backed by a comprehensive five year warranty. Using the latest stainless steel heat exchanger technology in conjunction with a sophisticated controls system, the range delivers maximum condensing boiler performance. Sirius FS is easy to handle and install and, with ample internal space providing easy access to key components, is simple to service and maintain.

The Sirius FS features include a modulating pre-mix burner adjustable between 30% and 100%. The boilers provide energy efficiencies up to 107% net at 50°C flow and 30°C return and Part L2 seasonal efficiency of 96% gross. An in-built weather compensation facility optimises seasonal efficiency and encourages the boiler to condense whenever possible. The range offers a full fault diagnostics system and in-built time controls as standard with system controls options available and, as in this case, BEMS connectivity. The boilers were supplied via Baxi Commercial Division's Agents, COMPHeat Ltd.
Tel: 0845 070 1055 Email: Jeff.house@baxicommercialdivision.com www.pottertoncommercial.co.uk

Shamir Jiwa is founder and Managing Director of MAXIM Eyes (UK) Ltd – Energy Consultants & Connections Specialists. An entrepreneur and philanthropist with a keen interest in the well being of global society, the Maxim Eyes concept is to take a 360 degree view of any company's energy strategy, identify where the gaps may be and create solutions to collectively fill the gaps. MAXIM Eyes works with corporate clients in over 4000 locations across the UK.



NHS SURREY REDUCES CARBON EMISSIONS WITH HEATING AND HOT WATER SYSTEMS UPGRADE

With the aim of reducing carbon emissions and improving efficiencies, NHS Surrey embarked on a programme of upgrade to their heating and hot water systems across more than twenty sites. Many of the boilers and water heaters were coming to the end of their economical lifespan it was an ideal time to review their heating and hot water plant.

Gary White, programme manager at Surrey Primary Care Trust (PCT) said, "As well as needing to replace plant that was coming to the end of its life we were looking to lower energy bills and reduce carbon emissions across all sites in line with the NHS Carbon Reduction Strategy for England. The Trust Estates Department wanted to standardise boilers and equipment across the different sites and due to the diverse range of products that Hamworthy Heating offer we were able to choose the most suited boiler and water heater for each application."

One of the sites, Molesey Hospital, a 20 bed hospital part of the NHS Surrey PCT required a full plant room refurbishment. Southampton based ARB Mechanical Engineering Ltd, the contractors for the project, replaced three gas fired atmospheric boilers with two Purewell VariHeat 70kW gas fired condensing boilers. Two Dorchester DR-FC Evo 30 direct fired condensing water heaters were also installed to provide highly efficient hot water generation.

Hugo Jimenez, Senior Mechanical Designer at MCA Consulting Ltd specified the equipment and commented, "We chose to separate the heating and hot water for this application due to the 24/7 demands placed on the system and the requirement for critical hot water to get to temperature very quickly. The condensing water heaters provide exactly what we needed for this project and the robustness of the Purewell VariHeat boilers means they are more than capable of dealing with the demands faced by the system over a long period of time."

The three atmospheric on/off boilers that were removed gave a total output of



Molesey Hospital

123kW, with a 3:1 turndown ratio and seasonal efficiencies of 78%. Compare this with the two new fully modulating condensing boilers that provide a total output of 140kW, 7:1 turndown ratio and seasonal efficiencies of 95% and you can clearly see the efficiency improvements and consequential carbon reduction. Take into account the corresponding reduction in service and maintenance costs from lowering the number of boilers plus the fully modulating operation that allows accurate load matching and you have a very attractive proposition for the life of the boiler.

The hot water for the hospital is now provided by two condensing water heaters with a total continuous output of 1,260l/h, thermal efficiencies of 98% – that far exceed the requirements of Part L Building Regulations, low NOx levels and superior controls in a compact unit. Each water heater is fitted with a top-to-bottom recirculation kit for operating during the legionella protection cycle to reduce the likelihood of legionella bacteria forming particularly in this application where occupants are more susceptible to the harmful effects of legionella.

For advice on making the right choice



Two Dorchester DR-FC Evo condensing water heaters and Chesil pressurisation unit installed in the compact plant room at Molesey Hospital

for your heating and hot water systems, talk to Hamworthy; Tel: 0845 450 2865, Email: sales@hamworthy-heating.com or visit www.hamworthy-heating.com

New technology turns waste into energy to offer a cleaner and lower cost alternative to incineration

A new compact energy from waste solution, which turns clinical, hazardous and troublesome waste streams into heat, has been unveiled by green technology specialists DPS Global. The pioneering development offers a commercially viable and an environmentally sustainable alternative to incineration and landfill.

The ST Series technology involves staged and separated pyrolysis and gasification of industrial, clinical or hazardous wastes to produce small amounts of ash and heat. This enables hospitals, commercial operations and industrial plants to utilise their waste as a substitute for fossil fuels thereby reducing CO₂ emissions and heating bills by as much as £100,000 per annum, dependent on feed volumes.

The technology also significantly reduces the cost of waste disposal by diverting it from landfill or incineration and through its capability to be positioned close to the source of waste. Destroying waste through incineration can cost between £300-£400 per tonne for contaminated waste and as much as £1,000 per tonne for clinical waste. Comparatively the ST series technology treatment cost is much lower, around £150-250 per tonne for all wastes.

Pyrolysis, which involves the thermal decomposition of organic material by the action of heat alone, separates the energy rich carbon and hydrogen from the waste. This is achieved by feeding the waste through a tube which is externally heated using exhaust gases from the later stages of the process. The heat decomposes the waste to form a synthetic gas (syngas), similar to the natural gas used by a domestic boiler. Additional syngas can be produced from some of the carbon left in the waste (known as char) after pyrolysis. This is achieved through gasification, using a small amount of air and steam to release the carbon from the waste.

Finally, the syngas can be combusted with a controlled amount of air reaching a temperature of 1150°C, as hot as flowing volcanic lava. This ensures that any small pollutant particles, which make their way



Pyrovere DSCF0990

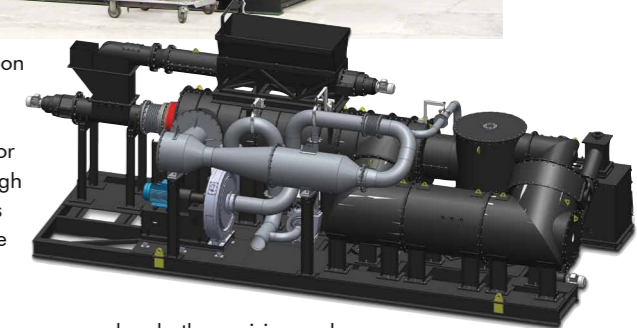
down the process, are destroyed. Carbon monoxide emissions, which lead to smoke and soot, are extremely low.

Says Neil Young, Managing Director at DPS Global: "Most wastes have a high carbon and hydrogen content, which is exactly what fossil fuels contain. It is the reaction of the carbon and hydrogen with oxygen which releases the energy needed for our modern lifestyles."

"However, waste can contain other pollutants which can be released into the atmosphere when processed in a traditional incinerator. However our new pioneering technology is the first economically viable small scale unit to separate the carbon and hydrogen from the rest of the waste, extracting the fuel we need while leaving the pollutants in the ash from the process."

He added: "Incineration has always been the main alternative to landfill when dealing with hazardous and difficult to deal with wastes. However, we believe that there is now a real alternative through the wide scale deployment of compact pyrolysis waste treatment systems, which will help the private and public sectors reduce and control their waste costs, as well as significantly contributing to their Corporate Social Responsibility targets and obligations."

"In short the ST series has been designed to offer a viable, low-emissions alternative, treating waste at source and recovering the energy for use onsite. This turns waste into a fuel source. It provides significant payback in terms of savings on energy and waste disposal costs at a time



Pyrovere back view

when both are rising and hitting the bottom line."

DPS Global's compact model is capable of processing up to 250kg per hour and generating heat output of up to 700kWth. It accepts around 85% of the European waste catalogue of materials with no pre-treatment required and can also be easily integrated into existing healthcare, commercial and industrial infrastructure to provide energy for heating and hot water in these premises.

The size means that it can be easily accommodated within industrial, commercial and residential areas close to the source of the waste and demand for heat. This minimises transport movements and maximises the potential of the heat output from the process as it is appropriately matched to satisfy the needs of the end user. The compact nature of the system also ensures investment risk can be managed through a lower capital outlay, variable feedstock capability and higher location flexibility.

The military have been early adopters of the technology ordering five units, and having one operational for over two years www.dps-environmental.com

ARMSTRONG CEILINGS WINS GREEN AWARD

Armstrong Ceilings has won the 2013 Sustainability award from Willmott Dixon.

Armstrong Ceilings has won yet another award for its recycling schemes, this time for a demonstration trial with the exemplar organisation WRAP.

The leading manufacturer of interior building solutions was presented with the 2013 Sustainability Award by Mike Hart, chief operating officer of major contractor Willmott Dixon Interiors, at the company's annual supply chain conference and awards on HMS Belfast in London on April 24th.

This latest award was in recognition of Armstrong's part in a WRAP demonstration trial during the refurbishment by Willmott Dixon Interiors of the London School of Economics where 3,500m² or 17 tonnes of Ultima mineral tiles were stripped out by Chiltern Demolition and 2,000m² of Metal microperforated planks with acoustic fleece were installed by BPC Interiors.

One and a half loads of the old Ultima tiles were returned to Armstrong's production facility at Team Valley, Gateshead, for 100% recycling into the manufacturing mix, while the new Metal tiles were delivered at the same time to

local distributor SIG Interiors, ready for installation towards the end of the project.

The cost savings were immense. Landfill savings alone were over £2,000 on gate fees and tax while avoiding transporting the waste to landfill saved £720. Raw resource requirement was reduced by 17 tonnes at an estimated average cost of 13p per kilo, saving £2,200 while costs avoided by the construction site at the LSE were over £2,700.

Given the cost of the trial was £1,500 in transport and processing costs, this amounted to a total cost saving of £770. In addition, the gross carbon saving compared with landfill was over 6,000kg of carbon dioxide equivalent (CO₂e), while the net carbon saving – minus the carbon equivalent of additional transport – was over 5,000kg of CO₂e.

A WRAP report on the project said: "The trial demonstrated the benefits and business case for the return of waste ceiling tiles to the manufacturer not only in financial terms but also in environmental terms with CO₂ benefits."

Armstrong Ceilings' business



Armstrong Ceilings' business development manager Roy Gleiwitz (right) receives the 2013 Sustainability Award from Mike Hart, chief operating officer, Willmott Dixon Interiors.

development manager Roy Gleiwitz said: "We were only too pleased to be involved in the WRAP project and to realise the results there and then to be rewarded by Willmott Dixon in such a way is a huge boost for our sustainability programme."

Armstrong installer BPC Interiors also won a Willmott Dixon Interiors' award – for quality. www.armstrong.co.uk

Mini Envirobin Improves Recycling Rates in Student Accommodation

In a quest to improve recycling rates in student accommodation blocks, Loughborough University has installed over 1000 Mini Envirobins from Leaffield Environmental.

Slimline, compact and moulded from tough polyethylene, the 55 litre capacity Mini Envirobin comes with a choice of WRAP colour coded lid options with accompanying graphics that actually encourage the students to recycle. The Mini Envirobin also incorporates a sack retaining feature for secure and discreet fitting of standard refuse sacks.

Poor recycling rates across the student accommodation blocks was the main driving force of the project. Research identified that the existing scheme was confusing and often contradictory from building to building.

"We wanted a scheme that was consistent and a bin that had a very clear message, was robust, functional and easy to use," said Dominic Gregory, Residential Services Manager. "We were also keen to incorporate the University's 'It's better off to Recycle' campaign motif. Having looked at several options and tried different sized bins in different locations



we reached the conclusion the Mini Envirobin was the best option."

Tim Kenyon 'Environmental Assistant' added, "We really liked the look of the Mini bin. It fits in well with the surroundings, it's easy to use and the students like them."

All early indications are that recycling rates are on the increase for Loughborough University.

Tel: 01225 816541 Email: recycle@leaffield-environmental.com

RECYCLING CARPET HELPS ACHIEVE ZERO WASTE TARGETS

Recycling old carpet to help organisations achieve Zero Waste to Landfill targets was a recurring enquiry theme for Carpet Recycling UK at May's Facilities Show.

Facilities managers from diverse business and industry sectors were interested in pursuing responsible disposal options for unwanted carpet materials, according to CRUK, the industry's association for recycling and reusing carpet.

Greater awareness of UK-wide outlets for recycling and reusing carpet materials contributed to more than 60 enquiries, including a number from education providers and construction companies, over the three-day event at Birmingham's NEC.

Afterwards, close collaboration between CRUK, Global Experience Specialists (GES) who laid the carpets and their recycling partners Green Venture UK ensured that 9,500 square metres of show carpet was recycled for use in new polypropylene products.

Using a unique recovery system, Green Venture transferred the uplifted carpets to a recycling plant in France where raw materials were extracted to make a polypropylene resin, which can then be used in the manufacture of a range of products such as car parts and plant pots.

Commenting on the show, CRUK Director Laurance Bird said: "Zero Waste to Landfill objectives and the desire to work with the Circular Economy in recovering resources were frequently cited



by enquirers looking for new disposal options for many types of materials, including carpet."

"As an organisation dedicated to diverting carpet from landfill, we can put FMs in touch with collection schemes, recyclers and outlets offering alternative disposal options and potential savings on disposal costs."

Increasing dialogue with the FM sector is a key priority for CRUK, as Laurance added: "We see facilities managers as key decision-makers in the carpet supply chain, so it's really important to engage with them and gain support as we head

towards our target of 25% landfill diversion by 2015."

Expansion in take-back schemes and the development of more than 30 outlets processing carpet waste for new uses is helping to divert more of the UK's annual 400,000 tonnes of carpet waste from landfill, with a 21.4% diversion rate – or 85,000 tonnes – achieved in 2012.

Carpet Recycling UK welcomes enquiries from all types of organisations interested in finding new outlets for their waste carpet. It can be contacted on Tel: 0161 440 8325 or visit www.carpetrecyclinguk.com

LIGHT UP THE TOWN: HARVARD'S LEAFNUT SYSTEM



With recent legislation calling on local authorities to cut emissions, the pressure is on for councils to significantly reduce their carbon footprint. As a notorious drain on local power supplies, street lights have been posed as one such target for reducing energy; with councils proposing to turn them off completely during twilight hours. The problem with this measure, however, is that this type of carbon reduction is also accompanied by a reduction in service. Fortunately, in the form of Harvard's LeafNut system, there is now a way of cutting CO₂ without sacrificing public service.

Lights are essential to our streets. They ensure we feel safe when we go out and help us navigate around otherwise inaccessible areas. But with 7.5 million street lights in the UK, emitting approximately 830,000 tonnes of CO₂ per year and costing £500 million per year to run street lights carry a huge environmental burden. And recent cutbacks on government spending, as well as the introduction of climate legislation, have meant local authorities are being forced to seek new ways to reduce the impact of street lights on their energy bills, without bringing about a drop in service.

Due to recent innovations in technology, local authorities have found a way to reduce light emissions without switching them off. Control Management Systems (CMS) are a new technology that allow councils to wirelessly and remotely manage street lights. Via a system of 'nodes' placed on each street light that communicate with each other, lights can be dimmed during twilight hours, rather than being shut off completely. This means that energy spending is reduced, while residents have peace of mind that their area will remain well-lit, with less risk from crime.

It is not only CO₂ emissions that control systems like these help to cut, they can also significantly reduce running costs too. At an average of £50 to £70 to run a street light each year for energy, maintenance and lamp replacement, a CMS can substantially reduce these costs by up to 40%. With increasing pressure on councils to minimise spending, 'Invest to Save' schemes and PFIs are increasing in popularity, which can sit in line with this type of technology.

INTRODUCING: HARVARD'S LEAFNUT CMS

At the leading edge of this lighting revolution stands Normanton-based Harvard Engineering. Celebrating its 20th anniversary this year, Harvard has an advanced and robust wireless control, management and reporting system for outdoor lighting, named LeafNut.

Fitted either into an existing lighting system, or a brand new set up, the LeafNut system enables the user to directly control lighting levels. LeafNut uses a TrunkNode central web server to communicate by GSM mobile phone to the BranchNode control units mounted in the light. The BranchNodes are in

wireless communication with up to 256 LeafNodes, which are linked directly to an electronic ballast or driver in each street light. The system manages the light output, allowing the dimming of street lights to match specific requirements of a location at different times of night and uniquely provides light management individually, in groups or as a whole throughout the infrastructure. The programmable two-way process also gathers information regarding energy consumption and maintenance requirements.

With Government schemes such as the Climate Change Act and the Carbon Reduction Commitment Energy Efficiency Scheme in place within the UK, and with legal requirements to make carbon reductions of 34% by 2020, and 80% by 2050, based on 1990 levels, the LeafNut system is more than manageable; it is an investment for the future. The system is capable of saving up to £46 per street light per year and up to 100kg of carbon per street light per year.

To ensure the smooth and effective running of each LeafNut system, every customer is assigned their own System Manager from the LeafNut support team. LeafNut Support are always on hand to deliver training to customers either on site at an installation, in a customer's offices or at our factory. Detailed training manuals are provided that give step by step guides on the entire system so quick reference points to the key areas of LeafNut are always accessible.

REDUCING LIGHT EMISSIONS IN WESTMINSTER BOROUGH

With intelligent design, proven results and comprehensive support, it is hardly surprising then that Harvard's LeafNut system has been successfully adopted by more than 100 users all over the world. Zurs in Austria, Sydney in Australia and Westminster in the UK make up just a few. Not only limited to motorways and residential streets, applications include car parks, walk and bike trails, shopping centres, and car dealerships. In each case, the wireless control system allows users to securely manage and monitor street lighting stocks efficiently, leading to reduced emissions and reduced costs.

Initially rolled out across a number of trials, the LeafNut system has proven its worth to a diverse and demanding clientele. As part of its 'Smart Lights' project, for instance, Westminster City Council trialled the innovative LeafNut

monitoring and control system in 2008 for its street lighting. The council approached Harvard with a view to install a control system that would help them reduce energy, save money, and eliminate the need for frequent maintenance. As a part of its remit, the council also wanted a system in which individual or groups of lights could be specifically dimmed at selected times.

In order to meet Westminster Council's needs, Harvard installed 80 BranchNodes each managing 256 LeafNodes. The system allowed operators to maintain bright lights in 'hot spots' such as main road junctions and in residential areas, with this ability to dim selected lights by 25% in the early hours of the morning, which is barely noticeable to the naked eye. Together with CCTV to monitor light levels, both the client and provider were satisfied that lights could be increased back to full power at a moment's notice should an accident or emergency occur.

Upon finalising the installation of LeafNut, Westminster City Council was able to confirm the following savings: a total of 1.5 million kg reduction of carbon a year and a saving of £420,000 per year, based on current energy prices. With energy prices likely to increase, the installation is expected to reap further benefits by saving approximately £20 million over the next 20 years. In a financial climate where government funding is scarce and legal pressure to make carbon reductions mounting, the LeafNut system protects against an increasingly uncertain future.

FURTHER LIGHT SAVINGS: A DURHAM CASE STUDY

It is not just the capital that has benefited from Harvard's control technology. More recently a similar solution has been installed in Durham. With 86,000 street lights and illuminated traffic signs to maintain, Durham Council asked Harvard for a system that would cut energy consumption in compliance with the Carbon Reduction Commitment (CRC). Since street lighting is one of the council's largest energy costs, it was agreed that the best way to achieve this was by dimming street lights on its main roads during times of low traffic.

Impressed by the potential for Harvard's LeafNut technology, the council decided to pilot the system on a 4.5 mile stretch of the A167. This location was chosen due to its crucial position: the road



often has traffic diverted onto it from the A1 at times of accidents, therefore making it the ideal testing ground for the flexibility of the LeafNut system. The results of the trial were overwhelmingly positive. Lighting levels on the identified section of the A167 were reduced by up to 30% during early hour times of very low traffic volumes, while areas leading onto the A167 were kept at full power.

As a consequence of the trial, Durham County Council now boasts road lighting savings of 100kg of carbon emissions per street light per year. This means that the council could potentially reduce its carbon emissions by over 8 million tonnes and save nearly £4 million in energy costs per year. Together with the additional savings gained by LeafNut's UMSUG compatibility, that dynamically measures actual consumption rather than unmetered supply, the county is well on track to meeting the Carbon Reduction Commitment targets set in place by the government.

FINANCIAL INCENTIVES AND A LOOK TOWARD THE FUTURE

Because of government cuts to the 'Invest to Save' scheme (a loan to help fund environmental projects), Harvard has brought out its own scheme named 'Install to Save' to help other boroughs achieve the same results seen by Westminster and Durham. Under the scheme, Harvard pays the up-front costs necessary to install LeafNut and the local authority pays back the total amount over 10 to 20 years, depending on specific requirements. This ensures councils can set about reducing emissions, and thus pursue future savings, as soon as possible.

Helping authorities meet government emission targets, while also ensuring liquidity amid wide-scale budget cuts, the company has set the standard for future projects of its kind, and set an environmental example in the face of waning government support.

<http://www.harvardeng.com/>

Automatic testing can save significant time and money, especially in large buildings such as this (photo by Orbik).

GOOD EMERGENCY LIGHTING MAINTENANCE IS CRUCIAL FOR SAFETY, WHILE TESTING IS MORE COST-EFFECTIVE USING AUTOMATED TECHNIQUES

Any accident involving injury or loss of life following a building emergency, such as a fire, could result in those responsible being brought before a court of law. Bearing in mind the potential risks to life, business and reputation, it is crucially important to ensure that all installed emergency lighting systems are in full working order at all times. An essential element of this is regular checking, maintenance and testing. ICEL – the emergency lighting side of the Lighting Industry Association (LIA) – emphasises that the automated testing of emergency lighting systems can bring significant safety, maintenance and cost benefits to building owners, as well as peace of mind.

Most people who visit or work in office buildings, retail outlets and public spaces take building safety for granted, including the provision of emergency lighting. This should be justified, as emergency lighting is well understood and carefully regulated, having clearly defined boundaries, well-prescribed procedures and uses high quality accredited products (for example, easily available from ICEL member companies) ready to be specified and installed. Yet, are the installed systems regularly tested and maintained to be both compliant and cost-effective? If they are not, building safety may be compromised.

The answer is usually yes, but anecdotal evidence suggests that a significant proportion of facilities managers and building owners may be confused about emergency lighting test and maintenance regimes. Some may misunderstand changing requirements, while others can see ambiguities, so ICEL recommends that consideration should always be given to installing an automatic emergency lighting testing system conforming to BS EN 62034. These can show payback within two to four years, so are clearly cost-effective as well as safer.

REGULAR CHECKING IS MANDATORY

An emergency lighting system, being a safety related product, is ineffective unless building owners and facilities managers are certain that it will operate as intended if a mains power failure occurs and fast building evacuation becomes necessary. This is crucially important, yet many buildings might not meet this most basic of criteria. Without proper maintenance, emergency lighting will eventually fail to

operate as intended - a lamp or a battery will fail, so the required light output cannot be provided in an emergency. Crucially, if no regular checking, testing or proper maintenance is carried out, facilities managers are very likely to be unaware of the problem, let alone building occupants.

Therefore, the responsible person should always ensure that the building's emergency escape route lighting systems are periodically inspected, tested and properly maintained so that they work as intended when required, and in compliance with regulations. Central systems with batteries and/or generator sets should be regularly checked and maintained – e.g. if vented batteries are used, they must be topped up and terminals kept clean. Ensure that generator fuel tanks are at the right level, and that all coolant levels are checked. The generator itself must be maintained at regular intervals as per manufacturers' instructions. For self-contained emergency luminaires, any battery replacements (such as NiCd or NiHi) must be compatible with existing batteries and with the charging systems.

EMERGENCY LIGHTING TESTING

EN 50172 concerns emergency escape lighting systems, and it specifies the minimum provision and testing of emergency lighting for different premises. Such testing should be carried out on a monthly and annual basis. Every system, and each emergency luminaire and exit sign (whether maintained or non-maintained) should be examined and their function tested, typically for 5-10 minutes at least every month. They should also be tested for full rated duration at least once a year (see BS5266). The test results must

be recorded and reported to the building's responsible person. Any repairs or remedial work identified by the report must be carried out within a reasonable time.

BS 5255-1 warns that during the period of the annual full duration test and afterwards, while the batteries are being recharged, precautions should be taken to protect occupants in case there is a supply failure in that time. This is a problem when manual testing is used as either it requires attendance for three hours while the building is empty, or if this not possible, then alternate luminaires should be tested at times at least 24 hours apart – needing two test visits each year instead of one.

With automatic testing, this is not a problem – if the building is going to be empty, the full duration test can be set and the ensuing results checked at any convenient time within the next month. Conversely, if the building is not going to be empty at any time, the alternate fittings can be tested 24 hours apart and the results for all checked after the last fitting completed its test.

But how can building owners, managers and occupants of public and commercial buildings be certain that the testing has been, and will be, carried out properly, regularly and supported by accurate records provided to the responsible person concerned? Moreover, this process must be cost effective. Testing regimes vary, but are essentially manual or automatic:

Manual testing – A mains failure is simulated using a switch to isolate all lighting circuits, or individual circuits, or individual luminaires. This forces the emergency lighting system to operate and use the battery supply. It can then be determined whether there is a fault or not.

This traditional method can be time consuming, especially as building services and systems become ever more complicated. Several reliable and experienced trained staff may be needed and, especially in very large buildings, this can become very labour intensive, expensive, difficult to manage and disruptive. In addition, people can make testing errors, the process may not be reported correctly, and it can sometimes be forgotten entirely.

Automatic testing – Automatic testing can solve these problems cost-effectively and reliably by regularly checking, without human intervention, that the emergency lighting batteries, lamps and luminaires are working as they should. Such 'self-test' systems automatically advise whether there is a fault that requires remedial action.

In operation, the system regularly checks the luminaire, that the lamp will strike correctly when required, that the battery is connected and receiving charge, and that it can run the lamp for the rated duration.

Since EN 50172 emphasises the need for emergency lighting systems to be correctly tested, and also promotes the use of automated testing to EN 62034 (which specifies the basic performance and safety requirements for individual products and components), this is a driver for the take-up of such systems, which bring peace of mind to those responsible for ensuring the safety of their buildings and occupants.

Building owners will also be interested to learn that automated testing can be more cost-effective than manual testing, especially as EN 50172 requires testing adjacent luminaires at least 24 hours between each set of tests, so manual testing will double the site time needed for full duration testing. The higher capital investment is offset by the need for fewer testing devices and greatly reduced labour; this is especially important in large buildings.

AUTOMATIC TESTING EQUIPMENT

There are two main types:

1) Self-test emergency luminaire – There are systems designed for every operational requirement, but the simplest is the 'stand-alone' form, which is not connected to any other device. Here the

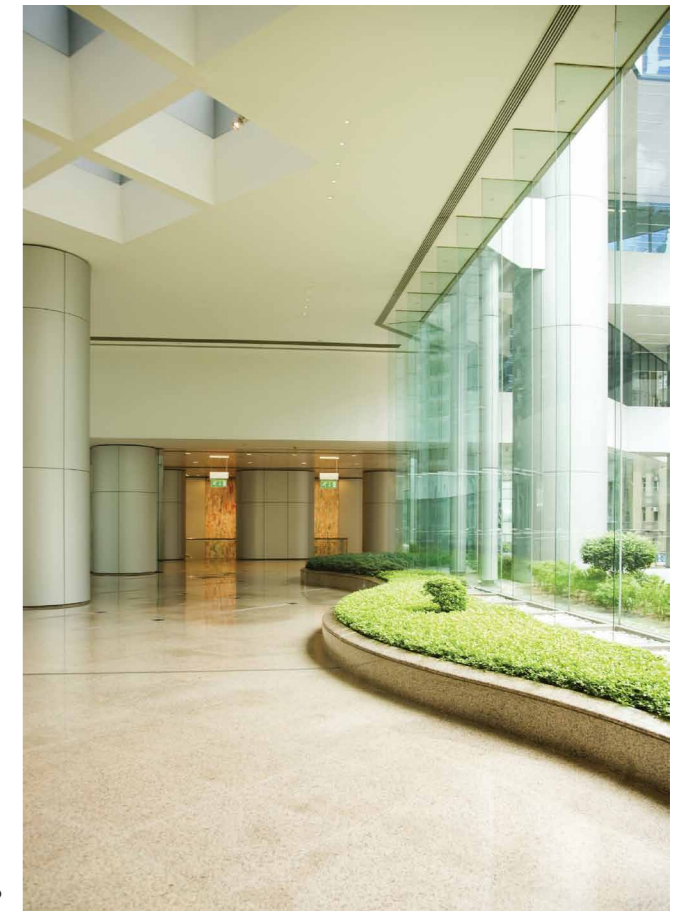
results of automatic tests are typically indicated through a single bi-colour LED on the luminaire. Anyone near an emergency luminaire indicating a fault can report this to the responsible person; corrective action must be carried out within a reasonable time.

However, monthly visual checks will still be needed to monitor any fault indication and to ensure that emergency luminaires are un-obscured and able to work as intended. The test results still need to be recorded manually into a logbook. However, the person recording the information does not need to put installations into test and wait to see whether the rated discharge duration is achieved, and need not be electrically qualified.

2) Automatic Test Systems (ATS) – To avoid manual recording, ATS interconnects to a control panel where the results are collected either via data cabling or wireless link. More complex systems allow the programming of tests from the control panel, or through connection to a PC, on which visual installation representation can be displayed, including that of connected luminaires under test and those showing faults. Luminaire locations can be pinpointed graphically and accurately. Some systems can be monitored and controlled via an intranet or Internet connection. The responsible person can monitor test results status using the remote panel, but the monthly walk-round check is still necessary. Reporting is automatic, which minimises the risk of forgetting or neglecting to do so. All test results are recorded and logged at the main panel, to be stored digitally and printed out when needed. This alone can save much time and worry, as well as making the building safer when the results of the tests are acted upon.

Beyond PC based emergency lighting test systems, fully featured systems that can be monitored and controlled via an intranet or Internet connection are also available.

All such ATS can be invaluable to



maintenance engineers, who can respond effectively, armed with replacement components required.

IN CONCLUSION

Automated testing helps ensure that emergency escape lighting testing is scheduled and carried out in a timely way, without disrupting any other electrical services. It assists responsible persons in managing premises risk, and provides early notification of failures or reduced performance. Even the most complex systems often show payback in two to four years, so are clearly cost-effective as well as being safer. Beyond the payback period, very substantial savings can be shown for building owners and facilities managers, even taking account of the routine replacement of batteries and lamps.

Automatic emergency lighting testing is, therefore, usually the better, safer and more cost-effective option, providing a lower total cost of ownership as well as peace of mind for building owners and occupiers in the knowledge that they have carried out their 'duty of care'. ICEL recommends that consideration should always be given to installing an automatic emergency lighting testing system conforming to BS EN 62034.

Tel: 020 8677 0718

Email: info@icel.co.uk www.icel.co.uk

INTELLIGENT LED GEAR TRAYS CUT THE COST OF CAR PARK LIGHTING BY 75%

As energy costs continue to rise, local authorities and facilities managers everywhere are seeking savings across all their assets. All-night lighting across car parks that are not in constant use can seem inefficient and unnecessary. But leaving areas in total darkness would present unacceptable hazards to the public.

In the face of this challenge, Medway Council has been working with Earlsmann Lighting to develop a new car park lighting solution that balances the need for safety and security with impressive energy savings.

SAFETY VERSUS SAVINGS – THE CHALLENGE

The Council needed to replace the existing fluorescent lighting at the Brook public car park. A simple swap to LED tubes would have achieved a reduction in energy use of around 60%. The addition of sensors would result in further savings, but simple on/off movement sensors would leave areas of the car park in total darkness when lighting was deactivated – creating safety issues for users.

DESIGNING A BALANCED SOLUTION

After consulting the experts at Earlsmann, the Council decided on a solution that balanced the need for safety with significant savings. The new lighting incorporates an automatic pre-set lighting level of 10%, with levels restored to full brightness when triggered by movement sensors.

To achieve this effective variant solution, the Earlsmann team designed a replacement LED gear tray. This avoided the need to remove ballasts and install LED emergency packs, enabling a much quicker installation process. Using these external drivers and mounting the LEDs directly to the gear tray also improves the cooling capability of the equipment, increasing its reliability and cutting maintenance costs.

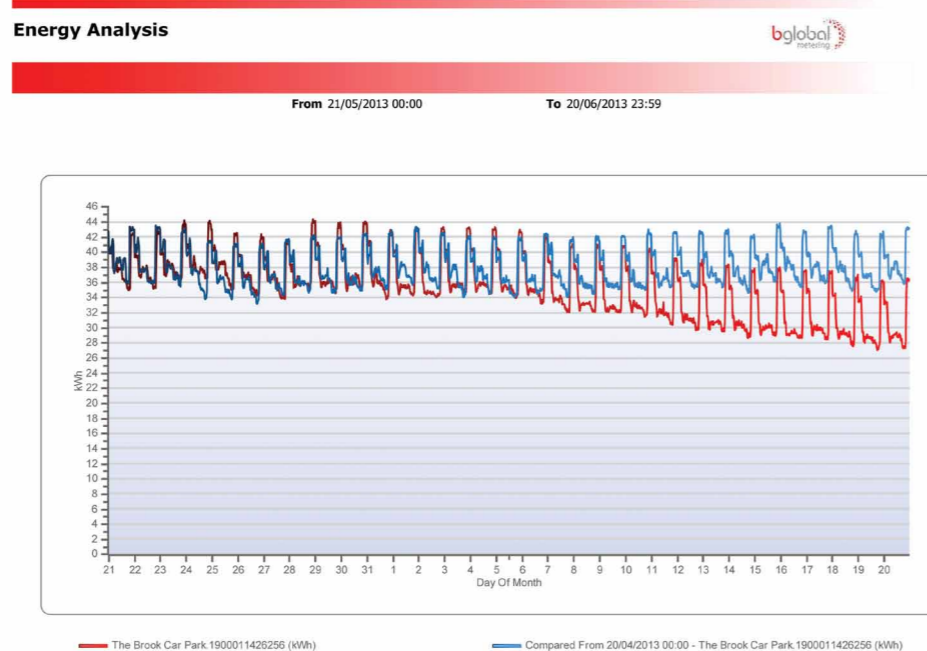


Figure 1: Brook car park already showing reduced energy usage

FASTER PAYBACK, GREATER ONGOING SAVINGS

The project is currently being installed by the contractor NCS Technology. The graph in Figure 1 shows the significant impact the LED lighting has already had on energy usage – with costs reduced by over 75% compared to the old fluorescent lighting.

Although the addition of sensors meant initial investment costs were higher compared to simply replacing tubes, the combination of these intelligent sensors and the 10% preset level will deliver faster payback and provide greater ongoing savings to the Council.

Ashley Baxter, an energy consultant from Hydrostat, was involved in the project and was impressed by the team at Earlsmann. "They are very knowledgeable with regards to LED – they have been with us every step of the way through system design, providing advice and support and assistance during commissioning," said Ashley, also confirming that the gear tray and control system is "performing exactly as required".

LED LIGHTING – THE INTELLIGENT CHOICE

With the option to add sensors and pre-set lighting levels to suit user requirements, LED lighting is the intelligent solution for almost any application – from car parks to stations, factories, retail premises, offices, hotels, hospitals and schools. Making the switch to LEDs has never been easier, and provides instant, measurable benefits in lower maintenance costs, reduced power consumption and improved lighting levels.

Earlsmann manufactures its LED gear tray units in the UK, providing high-quality, reliable products underpinned by a full warranty. The company provides a comprehensive range of lighting solutions for every interior and exterior application. Find out more about Earlsmann's commercial lighting products at www.earlsmann.co.uk, Tel: 08456 434 740 or Email: sales@earlsmann.co.uk

PROCUREMENT LAW ARRIVES IN THE NHS

(20 years after the rest of the Public Sector)

Stephen Pearson, Partner – Freeth Cartwright

I have never, in the last 15 years acting on Public Contracting matters seen such a kerfuffle as that accompanying the mildly named NHS (Procurement Regulations 2013. Given that the UK has been subject to the European Public Procurement Regime since the mid 1990s, why all the fuss?

Well...its politics. Search "NHS Commissioning" and the first entry on Google adds the word "crisis". Organisations such as the media and the BMA seem happy to pour petrol on what is without doubt a tricky issue for the NHS reeling from a post Mid-Staffs duffing up. A key issue is that health and social services have been what are called "Part B" services which means that they have not been subject under EU procurement law to most of the requirements for competitive adverts, contract notices and "lowest price" procedures which other parts of the Public Sector has been subject to when letting contracts for Refuse Lorries, Leisure Services and the like. However, proponents of these processes say that they produce improved value for money and a range of services to benefit the public. So what is the issue with the NHS? Well, GPs are technically private contractors operating through partnerships (just like lawyers), who have, it has been said, been able to exploit their bargaining potential to maximise income and reduce elements of their workload (eg out of hours services) enhancing their position in some of the best paid professional groups.

They are hardly likely to be happy to welcome competitive tenders with open arms.

They would, in their defence, claim to uphold the interests of patients, are part of the NHS "family" and seek to put patients before profit as the gatekeeper to more invasive services.

The other group of service Providers are NHS Trusts. They have spent the last few years gearing up their capacity to reduce waiting lists from 18 months to 18 weeks (a great achievement by any token), in many cases by committing to PFI-funded projects which have produced some magnificent facilities with index-linked unitary charges with a duration of, typically, 25 – 30 years. They also

have a high fixed cost including many thousands of employees and are subject to a number of complex regulatory regimes. Accordingly, even a minor drop in workload could severely affect their finances.

What do the regulations provide?

The legislation seeks to promote competition (good) whilst preventing the "race to the bottom" that has been (allegedly) the result of some competitive processes.

In many ways, the regulations represent "procurement lite" in that they repeat the principles of procurement best practice and European law but create a statutory duty to secure "the needs of the people who use the Services" (reg 2(a)), to consider "the services being provided in an integrated way"(reg 3.4) and to allow "patients a choice of Provider". There is also a duty on the awarding body, eg the Clinical Commissioning Group to record how the contract provides services which are "effective", "efficient" and "improve the quality of services". Under regulation 5, a contract can still be awarded without competition if, for reasons such as technical ones the contract is only capable of going to one provider-say a provider is the only GP in town?

However-there is a general expectation under Section 75 of the Health & Social Care Act 2012 that services are put out to competition and that commissioners procure services in a "non-Discriminatory way, including by not treating a provider... more favourably than any other provider in particular on the basis of ownership". In other words, an NHS Trust cannot be preferred because it is a public body. This is really a restatement of general rules of procurement but seems shocking in the NHS where, in reality the private sector is typically not favoured in being granted contracts and may be regarded as somewhat suspect. This is possibly unfair, as some major providers have a good track record in providing care and treatment, particularly in other parts of the world and may have extremely high standards.

Regulation 7 means that a relevant

body must establish, and apply criteria which are transparent, proportionate and non-discriminatory. This is no more than a statement of the "level playing field" rules that have underlined procurement law across Europe within a directive going back to 1993.

What will the results be?

If CCG's embrace procurement / commissioning properly, they have a real opportunity to enhance both quality and value for money in patient care. The challenge will be whether the entrenched institutional habits of the NHS will get in the way.

Under the 2012 Act Monitor (who have, certainly on economic and financial matters been an effective regulator of Foundation Trusts) have the power to investigate allegations that the NHS or any CCG have failed to follow the requirements for a competitive process. This would seem to come from a lack of confidence that, left to their own devices, CCG would do nothing more than award contracts to the local GP and District General Hospital.

The Department of Health say that the changes will open up provision to "a wider range of health care providers, including independent and charitable organisations" meaning that there will be more choice for patients and a greater range of services.

It is difficult to say. The pressures to achieve savings and the increased use of joint commissioning with Local Authorities may have as much affect as the regulations on producing a wide range of providers. In many areas, the only provider equipped to provide the service will be the local NHS provider, and the rise of the private sector medical provider has, over many years been marginal with some nibbling away in specialised areas such as screening and overflow work only. My view is that progress will continue to be slow and a properly diverse health economy may still be some way off, but the NHS and Clinical Commissioning Groups in particular had better get used to complying with procurement legislation! www.freethcartwright.co.uk

THE ECODESIGN DIRECTIVE: PROMOTING GREEN PURCHASING

As governments, consumers and non-governmental organisations (NGOs) increasingly demand that companies take responsibility for the environmental and social consequences of production and products, more and more organisations are taking a closer look at their supply chains. Many have implemented programs in order both to demonstrate their continuing compliance to new and current EU regulations, and to monitor and report on other environmental targets. The Ecodesign Directive requires organisations to incorporate considerations about their products' energy use at the design stage. It means retailers and distributors have had to work closely with manufacturers on energy-related issues in order to comply. The result has been increased attention to environmental issues at earlier stages of development and has prompted many organisations to take up green purchasing strategies which include both environmental compliance and "beyond compliance" issues.

THE ECODESIGN DIRECTIVE: BACKGROUND AND DEVELOPMENT

The Ecodesign Directive (2009/125/EC) stems from a previous framework directive on the eco-design and information requirements of energy-using products. In 2009 this directive was re-cast to widen its scope, from "energy-using" to "energy-related" products. In summary, an energy-using product is a product which, once placed on the market and/or put into service, is dependent on energy input (i.e. electricity, fossil fuels or renewable energy sources) to work as intended, whereas energy-related products have "an impact on energy consumption during use".

The broadening of this directive has resulted in the inclusion of a wide range of products, and has compelled the European Commission to use a series of Implementing Measures (IMs) to regulate individual product categories. This adds another layer of complexity within the framework directive as each individual IM has its own timeline, scope, eco-design and information requirements. To date there are over 30 IMs in various stages of completion with another working plan introduced for 2012-2014.

In order to ensure compliance,

organisations should be well aware of all the upcoming and current energy using IMs and all the upcoming and current energy related IMs so that they can establish which measures will affect their products portfolio. The Ecodesign Directive applies to all products on the market in the EU, whether manufactured there or imported. Furthermore, retailers should ensure the products they sell are compliant by communicating and working closely with suppliers from an early stage of product development.

The next step is to understand the current and future timelines and requirements. An organisation needs to cooperate closely with its suppliers to understand what their products can and cannot achieve and what changes need to be made in future. Perhaps additions are required, or designs need to be reworked, all of which must be completed according to the relevant IM timeline. Please see Figure 1 for an overview of current and future IMs.

It would be prudent for companies to discuss other environmental factors and issues as well during communications with suppliers. For example, organisations can discuss and then implement any number of green purchasing criteria with suppliers taking Ecodesign as the minimum requirement. These criteria could be applied to new or existing products and either apply to the supplier as a whole or just to individual products.

The Ecodesign Directive is a broad, far-reaching piece of EU legislation that

will increasingly influence organisations' thinking and planning as more IMs are released and proposed. As such, it behooves organisations to be proactive and start early to look at how future IMs may impact their business. Ecodesign can form the basis of a supplier mandate for purchasing and a green purchasing strategy to ensure that all products continue to be compliant. An added advantage to this approach is that it improves an organisation's ability to quickly provide environmental footprint information for products when requested.

GREEN PURCHASING STRATEGIES

Green purchasing (GP) can help meet the demands laid out in legislations such as the Ecodesign Directive and can help reduce the risk of brand/reputational damage from non-conforming suppliers. It can also help businesses achieve a competitive advantage using marketing or promotional activities that highlight features that go beyond standard legal requirements.

Approaches to GP have taken various forms with organizations developing their own internal standards and performance tools to assess their supply chain, as well as public bodies such as the European Union and the UK government providing guidance and policy on their own public procurement.

The overall aim of any green purchasing strategy is to improve the supply chain from an ecological point of view. This can be achieved using any of

a number of dedicated tools to assess products or suppliers on environmental criteria, leading to the identification of measurable ecological benefits that will help in decision making. It can include elements ranging from the very basics of compliance with environmental regulations to measuring a product's environmental footprint.

The first of these general approaches is based on risk management. This method involves evaluating the management practices and legal conformance of suppliers to see whether the organisation is at risk (the risk could be to their brand or environmental claims/credentials). The organisation may wish to know that a supplier has the correct procedures or policies in place to perform to that organisation's standard or to an internal / international standard. This method is useful when exploring large numbers in complex supply chains, since the tools usually are not designed to examine a particular product or material but rather a supply base. This approach can include assessment of a supplier's commitment to an Environmental Management System (EMS), policies, and/or reduction plans for different environmental impacts. This approach is useful for driving improvements down the supply chain.

The second method often used is one that is designed to add value to a particular product or product range and is becoming more common in eco-aware brands. It relies on a more product-based approach where an organisation concentrates on one or more of its products or services and assesses the environmental credentials of that product from an environmental and economic perspective. This approach is used when the goal is to better understand a specific product or product range for a marketing or improvement campaign/strategy. It can also help more thoroughly evaluate a particular supplier's processes. This approach could include a customised eco-calculator tool based on Life Cycle Assessments and concentrates on assessing the supply base from the bottom up.

Similar terms that organisations use when developing comparable strategies include "sustainable procurement" and "sustainable purchasing". The main difference is that these approaches

include social and economic criteria as well as environmental in any assessment of the supply and procurement chain. Guidance on setting up systems for this can be found, for example, in the British Standard on sustainable procurement "BS 8903:2010 Principles and Framework for Procuring Sustainably". This provides guidance to any size and type of organisation on adopting and embedding sustainable procurement principles and practices.

Green purchasing can be a very useful

tool to organisations looking to protect their brand, enhance environmental protection and ensure product quality and value. However, each individual organisation needs to assess its values and goals before deciding on a green purchasing strategy. Once this has been decided, objective support from an external expert ensures organisations achieve their goals.

www.sgs.com/pages/consumer-testing/sgs-consumer-goods-and-retail.aspx
Email: cts.media@sgs.com

CAPITA'S CONSULTING BUSINESS SECURES PLACE ON CONSULTANCYONE FRAMEWORK

Capita's consulting business has secured a place on the Government Procurement Service's ConsultancyONE framework, which has been introduced to streamline procurement practices and promote value for money across the public sector.

The framework provides UK public sector bodies with access to approved suppliers of business and management consultancy services, for contract values ranging between £100,000 and £2million. It has replaced the Management Consultancy and Accounting Services, Multi-Disciplinary Consultancy, and Cipher frameworks. Capita's consulting business has qualified for eight lots of the ConsultancyONE framework, and has been approved to provide consultancy relating to:

- multi-specialism programme delivery
- policy development and advice
- organisational strategy
- change management
- procurement
- information and communications technology
- finance operations support
- internal audit and advice

Mark Wyllie, executive director, Capita's consulting business said: "As suppliers have already been tendered and approved, this will reduce costs, speed up the process of engaging with suppliers and will save money, which can be re-deployed into projects to improve frontline services."

Capita plc is the UK's leading provider of business process management and integrated professional support solutions. With 52,500 people at more than 350 sites, including 70 business centres across the UK, Europe, India and South Africa, the Group uses its expertise, infrastructure and scale benefits to transform its clients' services, driving down costs and adding value. Capita is quoted on the London Stock Exchange (CPI.L), and is a constituent of the FTSE 100 with 2012 revenue of £3.3 billion and profit before tax of £426 million.

Further information on Capita plc can be found at: www.capita.co.uk

IM	Implementing Measure	Status
Transition I	1 Boilers and combi-boilers	Draft
	2 Water heaters (WH)	Draft
	3 Personal Computers	Draft
	4 Imaging equipment	Market Agreement
	5 Televisions	Complete
	6 Standby and off-mode losses of EUP's	Complete
	7 Battery chargers and external power supplies	Complete
	8 Office lighting	Complete
	9 (Public) Street lighting	Complete
	10 Residential room conditioning appliances	Draft
	11 Electric motors	Complete
	12 Commercial refrigerators and freezers	Draft
	13 Domestic refrigerators and freezers	Complete
	14 Domestic dishwashers and washing machines	Complete
Transition II	15 Solid fuel (small combustion installations (in particular for heating))	Ongoing Study
	16 Laundry dryers	Draft
	17 Vacuum cleaners	Draft
	18a Simple converter boxes for digital television (Simple STBs)	Complete
	18 Complex set top boxes (with conditional access and / or functions that are always on)	Market Agreement
19 Domestic lighting (Phase I)	Complete	

IM	Implementing Measure	Status	
Transition III	20 Local room heating products	Ongoing Study	
	21 Central heating products using hot air to distribute heat (other than CHP)	Ongoing Study	
	22 Domestic and commercial ovens	Ongoing Study	
	23 Domestic and commercial hobs and grills	Ongoing Study	
	24 Professional washing machines, dryers and dishwashers	Ongoing Study	
	25 Non-ferrous coffee machines	Ongoing Study	
	26 Networked standby losses of EUP's	Ongoing Study	
	27 Domestic uninterruptible power supplies (UPS)	Ongoing Study	
	Future IM	E1 Refrigerating and Freezing Equipment	Ongoing Study
		E2 Transformers	Ongoing Study
E3 Sound and Imaging Equipment		Ongoing Study	
E4 Industry and laboratory Furnaces and ovens		Ongoing Study	
E5 Machine Tools		Market Assessment	
E6 Air conditioning and ventilation systems		Ongoing Study	
- Medical imaging equipment		Ongoing Study	
Future IM	27 Uninterruptible Power Supplies	Ongoing Study	
	28 Pumps for private and public waste	Ongoing Study	
	29 Pumps for swimming pools and fountains	Ongoing Study	
	30 Products in motor systems	Ongoing Study	
31 Products in motor systems particularly compressors	Ongoing Study		

Figure 1 – Status of Implementing Measures under the Ecodesign Directive

New innovation for Schueco super-insulated façade system provides economic solution

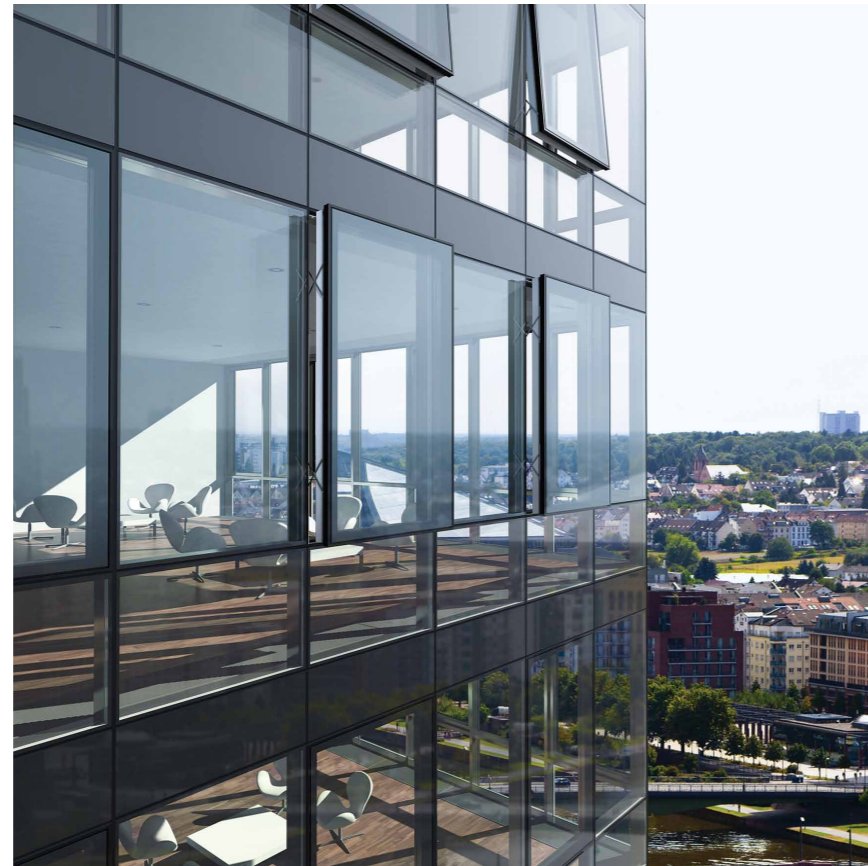
A new innovation from leading UK building envelope specialist, Schueco UK, is the FW 50+ SG.SI, a large-scale, aluminium, structural glazing façade system which combines an attractive flush-fitted appearance with outstanding insulation values.

The Schueco FW 50+ SG.SI optimises thermal insulation through the use of double- or triple-glazing up to 64 mm thick with enhanced isolator technology and features a new economical option for fixing the glass units to the aluminium structure. This new fixing option can also be used with existing Schueco SG façades.

Another innovation is a new cruciform glazing support system that means the façade can accommodate glass units up to 2.6 metres wide and 4.2 metres high and weighing up to 650 kg. An apparently seamless all-glass external appearance is achieved by means of slender, flush-fitted, wet-sealed joints, the profiles being visible only from the inside.

As an alternative, it is possible to give the façade a semi-structural look if required and the wide range of cover caps available can be used to provide either horizontal or vertical emphasis to its exterior.

Integrated Schueco AWS 102 top-hung and parallel vents are available with either manual or motor driven opening, depending on size. New vents, designated Schueco AWS 114 SG.SI, will be introduced in autumn 2013. These



will allow glass dimensions up to 1500 mm wide x 3600 mm high or 2700 mm wide x 2500 mm high with a maximum weight of 250 kg. They will have the option of new Schueco TripTronic concealed motor drives for maximum aesthetic

appeal and ease of operation.

For further information about the Schueco FW 50+ SG.SI and all other façade, window and door systems from Schueco UK Ltd, email mkinfobox@schueco.com www.schueco.com

Tata Steel launches RIBA-Approved CPD on cladding systems

Tata Steel has launched a new CPD module, approved by the Royal Institute of British Architects (RIBA). It will offer technical advice for architects and wider design and construction teams on how to get the greatest benefit from steel cladding systems.

The CPD module comes in the form of a one hour seminar, and covers the key themes of sustainability, cost and performance, and where benefits can be found. It will look at:

- Overview of a range of cladding systems, from single skin to built up systems, composite panels and rainscreens;
- Sustainability, from responsible sourcing to environmental product declarations and end of life considerations.

- Performance characteristics including fire, structural and acoustic performance.
- Conservations of heat and power.
- Integration of renewable energy technologies
- Weather tightness and installation.

Ian Clarke, part of the Colorcoat® technical support team commented: "If design teams are to get the best possible environmental, design and operational benefits from their building it is vitally important that consider the role of the building fabric. This module will help design teams to understand the wide range of systems available to them and how to best specify them to ensure the building performs as specified.

Clarke continued: "With the building envelope required to meet an increasing

number of performance criteria, and legislation and client demand driving complex building design, it is essential that design teams have access to technical information and advice enabling them to specify the right systems to meet the project requirements.

This module is a great way to show design and construction teams exactly how they can use the building envelope to get the best from it. With projects becoming increasingly demanding in terms of cost, sustainability and performance, understanding the benefits that the building fabric can offer could prove vital."

The module is the latest in a series of nine RIBA-approved CPD seminars from Colorcoat® by Tata Steel.

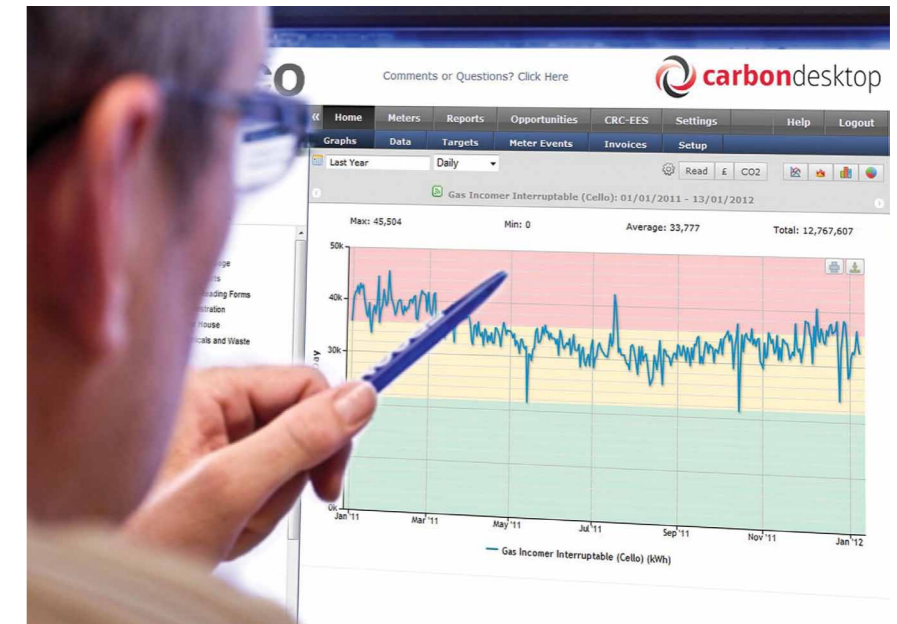
To register for a CPD seminar visit www.colorcoat-online.com/cpdseminars

The Proven Value of Wireless Utility Monitoring

Wireless utility monitoring products from HWM's Radio-Tech brand have been used by Verco Advisory Services to reduce a major UK food producer's water consumption by almost 10% and gas consumption by over 5% in 5 months, with projections showing savings of around £1m in only 2 years.

When implementing sustainability improvements, companies need reliable, traceable data to target their efforts effectively and efficiently. It can, however, be difficult to rationalise the expenditure and disruption of installing such a system against results that may seem too speculative or distant. The speed of return on investment from wireless monitoring is substantially quicker than for hardwired systems, and the costs can be easily identified up front to ease and simplify the specification process: there are no potential wiring or access problems when the battery-powered devices can simply be fixed into place, meaning the most appropriate equipment within budget can be identified and used from the very beginning.

Verco, the energy management consultancy, has been working with its client for several years, focussing in 2012 on improving the company-wide sub-metering of resource consumption across its 15 UK sites. To do this, Verco has used Ecochirp transmitters and Wi5 data concentrators from HWM's Radio-Tech range, which have been installed to



enable rapid, centralised data collection from all areas of the business. The wireless devices were chosen largely because of their modular nature, integrating easily with the Carbon Desktop energy management system and requiring minimal ongoing maintenance and management. Easy to specify, install and expand, they have proven to be effective at providing a visible return on investment in the fastest possible timeframe.

Radio-Tech is one of the UK's leading names in remote energy monitoring and smart metering products. The company's

small, battery-powered transmitters are coupled with their 'Wi5 data concentrator', which collects local readings wirelessly before sending all the information back via GPRS to the user's choice of computer or server. For Verco, this approach has provided a quick return for evidence of real savings: a tangible reduction in consumption through targeted measures, significantly reduced spend on utilities and a more thorough and detailed picture of the company's resource usage throughout its business operations and locations. www.hwm-water.com

New addition to Schueco AWS open out window system is super-insulated

The tried-and-tested AWS range of outward-opening aluminium windows from Schueco UK has now been extended by the addition of a new system, the Schueco AWS 75.SI. This new window offers superb design flexibility and benefits from a number of optimised features which help it set new standards in thermal insulation.

With a face-width of 111 mm, Schueco AWS 75.SI can achieve a Uf value of 1.3 W/(m²K) and a Uw value as low as 0.91 W/(m²K), figures which will not only comfortably exceed the new Document L 2013 regulations but which make it one of the highest performing aluminium outward-opening window systems in the UK.

In addition, the new window – part of a modular range currently available in frame depths ranging from 50 mm to 70

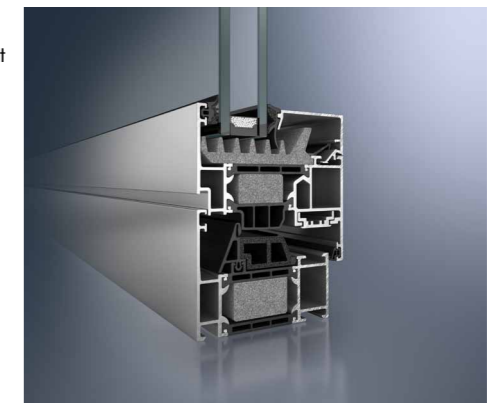
mm – offers excellent security thanks to Schueco's own multi-point locking system.

Large vent sizes are possible with the new Schueco AWS 75.SI window, with top-hung vents up to 2 m x 2 m (maximum 130 kg) and side-hung vents up to 1.45 m x 1.9 m (maximum 90 kg), allowing large areas of openable ventilation. The generous weight capacity of the concealed friction hinges or optional butt hinges, combined with the robust frame profiles, means that both double- and triple-glazed units may be accommodated.

With an almost unlimited choice of vent/fixed light combinations, the windows are ideally suited for punched openings, window walls or for insertion into Schueco façades where maximum areas of daylight and thermal insulation are required. The window may also be

used together with the Schueco ADS 75 door system.

For further information about the Schueco AWS 75.SI window and other systems in the Schueco AWS outward-opening range, please email mkinfobox@schueco.com



FLIR thermal imaging triggers home improvements

A former teacher of English, a would-be site carpenter and a retired British Antarctic Survey research scientist; what do these people have in common? Firstly they all have the good fortune to live in an area of the UK whose district council is not only committed to sustainable energy but actively putting resources at the disposal of its parishioners to achieve it. Secondly, they have all become proficient in FLIR thermal imaging, helping themselves and others to spot and stop energy loss.

The establishment of a Sustainable Parish Energy Partnership (SPEP) was the catalyst for this outcome. It is a joint programme between the South Cambridgeshire District Council and the communities it serves to encourage low carbon and sustainable living. Currently 27 South Cambridgeshire villages are part of the SPEP and momentum is sustained through newsletters, web presence, projects and workshops to raise awareness.

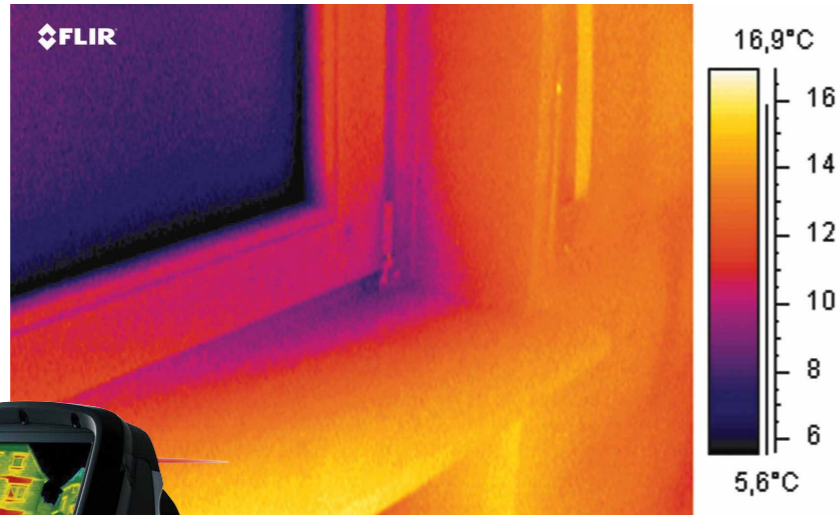
One initiative that has proved particularly effective involves a FLIR E40bx thermal imaging camera to help householders 'see' the heat leaking from their homes and community buildings.

In deciding which thermal imaging camera would best suit its purpose, SPEP put ease of use at the top of its specification list. The model chosen had to be suitable for every level of ability, from those with knowledge of thermal imaging through to complete novices. For this reason the control panel needed to be as intuitive as possible. Good image resolution to obtain meaningful data was also vital.

The FLIR E40bx met all these criteria and is one of FLIR Systems' thermal imaging cameras that are optimised for energy loss applications. Although many of its standard features are not yet being used by the South Cambridgeshire communities they will allow individuals to expand their skills in line with experience.

The FLIR E40bx is available to all parishes in the SPEP and is requisitioned when sufficient interest has been canvassed to merit the organisation of a workshop and training session. The parish then has the use of the FLIR camera for a week.

Typically a survey, conducted by a nominated thermographer or an individual



householder, will take an hour. A priority application is the comparison of internal and external walls

to check the efficiency of cavity wall installation. The technology is also ideal for spotting gaps in loft insulation; loft hatches are commonly overlooked in this regard. Another important illustration that the FLIR camera can provide is the positive effect on energy conservation of double glazing and the simple measure of drawing the curtains.

The Cambridge village of Hardwick was fortunate to have a sustainable energy champion as a resident with good knowledge of thermal imaging. In his working life Roger Worland was a research scientist with the British Antarctic Survey. He used the technology to study living organisms in cold climates and was therefore able to bring a good knowledge of the physics involved to the home surveys he undertook for his fellow villagers.

"Most people who requested a survey were interested in their cavity wall and loft insulation," he explained. "In my own home I inspected areas which are prone to damp and I also checked the insulation. As a result I have put more insulation in my loft, making the house appreciably warmer."

During another thermal survey the FLIR camera provided Roger Worland with clear visual evidence of a water leak in the householder's loft. In this case the wet area showed up as cold spot rather than a hot spot.

He continued: "I found the FLIR E40bx easy to use and understand. In fact most people I visited wanted to take the camera around their homes themselves, with my

supervision."

Thanks to his good connections with the village school, Roger Worland was also able to demonstrate the FLIR camera to the Ethics Group.

"The pupils were very interested in the camera and found several problems in the school, the main one being the windows which were all single glazed. They also discovered a missing loft hatch making the room very cold," he added.

At their own admission ex-teacher Christine Bromwich and apprentice carpenter Shane Holland were thermal imaging novices but they embraced the technology with the aim of raising consciousness of energy issues. And one of the first projects they undertook was an inspection of Girton Baptist Church before and after insulation and refurbishment to measure the improvement and justify the funds.

Following training, they too organised energy conservation workshops through their local 'green' voluntary group to demonstrate the importance of efficient insulation. This led to a programme of household surveys, providing evidence of both structural and insulation faults.

The main aims during the first year of the project have been to engage with South Cambridgeshire residents on wasted energy, make energy loss visible and encourage people to give appropriate home improvements greater priority. Although the thermal imaging project is still in its infancy, interest is growing fast. The FLIR camera is now in constant demand, not just amongst householders, but also by schools who are keen to demonstrate the importance of energy conservation to the next generation.

www.flir.com

To receive regular copies please complete and return or register online at www.pssmagazine.co.uk



Name:

Job Title:

Organisation:

Address:

.....

.....

.....

.....

.....

Postcode:

Email (for digital copies):

Telephone:

Date:

Signed:

We recommend the 'greener' digital edition

Please register me for free DIGITAL copies of Public Sector Sustainability (To be sent via email)

Please register me for free paper copies of Public Sector Sustainability

PSS Magazine, 42 Wymington Park, Rushden, NN10 9JP Tel: 0845 680 8618 www.pssmagazine.co.uk

Turn your onsite waste into onsite energy



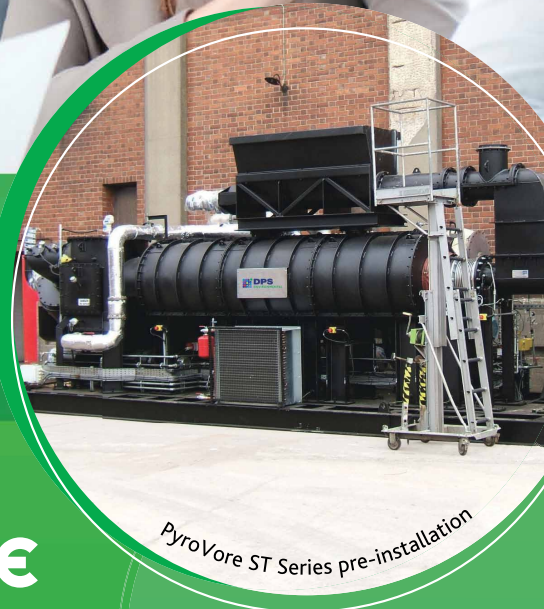
and you'll save money while you work

Compact, onsite unit (small footprint and minimal noise) which is able to process up to 200kg/hr of waste, offering significant savings on energy and waste disposal costs whilst recovering heat for use and therefore a broad range of potential applications.

For more information on our innovative technology, please contact Nick Palmer on npalmer@dps-global.com

pyroVore
ST SERIES

- ☉ **Proven technology**
- ☉ **Robust and flexible with straight forward integration**
- ☉ **Destroy waste on site and recover heat**
- ☉ **Significant economic, environmental and operational benefits**
- ☉ **Up to 200kg/hr capacity**



DPS Environmental,
Serbert Road, Portishead, Bristol,
BS20 7GF United Kingdom
t: +44 (0)1275 841300
f: +44 (0)1275 841301
www.dps-environmental.com

Another innovation from

 **DPS**
ENVIRONMENTAL