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On the horizon

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January

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Our annual look at legal and policy changes due over the next 12 months ranges from measures to support biodiversity to reform of water abstraction

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Joseph Kennedy describes the journey taken by a waste plastic bucket and how the decisions taken on the way determine if the resources are reused

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Happy new year

Last year IEMA underwent a number of changes, all of which were designed to make us a stronger organisation. Going by what I've heard from members in recent months, the benefits of those changes are already being felt, and I'm excited about what we can do together in 2015.

Members' contributions to the 2013 consultation on IEMA's vision for 2020 helped the Institute to identify some areas for improvement and growth. The key areas that were mentioned time and again were around the topic of sustainability, the need for a better structure for continuing professional development (CPD) and for IEMA to have a much stronger voice. So, I and my colleagues here in Lincoln spent a lot of time and effort throughout 2014 addressing those three issues.

In April last year, we adopted GACSO – the Global Association of Corporate Sustainability Officers – to provide the Institute with a firm foothold in the field of corporate sustainability. We've already grown the association's membership by opening up the criteria to eligible IEMA members. With the publication of the white paper, *Defining corporate sustainability*, GACSO is making real headway in developing corporate sustainability as a profession.

2015 will provide members with plenty of opportunities to influence the future of IEMA, starting with a consultation on revising the environmental skills map

Last September, we launched our training arm, iemaSTS, with the aim of delivering quality training at the necessary scale with our training partners. This development will make opportunities for environment and sustainability training and CPD more accessible than ever.

In October, the Institute launched its campaign, "Preparing for the perfect storm", which encourages collaboration to bridge the environment and sustainability skills gap threatening the UK's economy. This has had a huge impact, resonating with members, businesses and the media, and we will continue this campaign throughout this year.

Which brings me to 2015, which will provide a year of activity, engagement and influencing opportunities for IEMA members. In the first three months of the year, we will be revising the environmental skills map to ensure it incorporates sustainability skills. Later this year, the Institute will begin a consultation on its membership levels to ensure they are fit for the future. I hope you will all take part in the surveys and events that will form part of this consultation, as I hope the recent successes I've outlined remind you that your voice really does influence our work.

None of what IEMA did in 2014 would have been achieved without your input, and I think that together we can achieve great things, this year and beyond.

Tim Balcon, CEO of IEMA

The Institute of Environmental Management & Assessment (IEMA) is the professional home of more than 15,000 environment and sustainability practitioners from around the globe. We support individuals and organisations to set, recognise and achieve global sustainability standards and practice.

We are independent and international, enabling us to deliver evidence to governments, information to business, inspiration to employers and great stories to the media that demonstrate how to transform the world to sustainability.
Join us at iema.net.

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Business plans

Air monitoring units are to be installed at schools, commercial buildings and other infrastructure across London, with the aim of providing detailed street level air pollution data in the capital. The **AirSensa** network will see the installation of up to 10,000 units. The project is being led by not-for-profit organisation **Change London**, real estate business **CBRE** and law firm **King & Wood Mallesons**. Each unit will take continuous readings of key air pollutants, such as NO_2 and PM2.5, and atmospheric conditions before transmitting the data to the project's cloud platform. The first 500 units will be installed by May.

Cemfree has won the 2014 supply chain green solutions award from construction business **Skanska UK**. Cemfree uses industrial by-products to provide up to a 95% reduction in CO_2 compared with conventional portland cement. If was used widely in the UK, it would reduce annual carbon emissions by up to 2.1 million tonnes.

Food company **2 Sisters** has announced a deal with renewable energy experts **H2 Energy**, which will see the construction and operation of bio-refineries at all of the company's 43 factory locations in the UK. The refineries will convert site waste to generate renewable power and heat. The first project will be at a site in Carlisle, which manufactures ready meals, and annually will produce up to 3,500 MWh of electricity and about 5,000 MWh of processing steam.

Moy Park, meanwhile, will install biomass boilers at 86 sites in England by the end of 2015. The project, which is backed by the **Green Investment Bank**, will be delivered through renewable energy specialists **Land Energy** and **Cofely**. Moy Park says the biomass projects will replace LPG fuel with sustainably sourced wood pellets, and reduce its CO_2 equivalent emissions by 18,500 tonnes a year.

P&G has reported that it has reached its waste reduction goal six years early. The fast-moving consumer goods firm, whose brands include Ariel, Duracell, Gillette and Pampers, set a 2020 target to dispose of less than 0.5% of manufacturing waste at landfill. In 2014, it achieved 0.4%.

IEMA pushes skills agenda

IEMA has called on the business community and the government to bridge the environment and sustainability skills gap after research by the Institute revealed that only 13% of organisations are fully confident that they have the skills to compete in a sustainable economy.

In a new position statement launched in December at the House of Commons (bit.ly/1wBMGTI), IEMA outlined a four-point action plan on skills to ensure that sustainability is placed at the heart of business strategy and for environment and sustainability understanding to be included in mainstream training and education.

Speaking at the event, IEMA chief executive Tim Balcon warned that businesses are facing a "perfect storm", including population growth, the soaring costs of energy and materials, water stress and decreasing availability of natural resources, which will limit the ability of many firms to survive and thrive. He argued that equipping more of their workforce with environment and sustainability skills could help organisations to prevail.

"Environment and sustainability skills will not make the issues go away, but having good quality people with the right skills and knowledge will help companies to face them head-on, and capitalise on the innovations that are forcing them to change the way they work in the transition to a sustainable economy," said Balcon.

The parliamentary gathering was attended by more than 200 environmental and sustainability professionals and hosted by Joan Walley MP, who chairs the Environmental Audit Committee. She welcomed IEMA's campaign, describing it as crucial in helping to successfully tackle the pressing sustainability agenda. Construction business Wilmott Dixon sponsored the event, and its managing director Rob Lambe (pictured) told leading figures from consultancies, engineering companies and commercial businesses that improving skills is vital, if companies are going to benefit from the opportunities emerging from sustainable business practices.

2014 breaks all UK records

Provisional figures from the Met Office reveal that 2014 was the warmest in the UK since records began in 1910, with temperatures 1.1°C above the long-term (1981–2010) average. Last year was also the fourth wettest in the UK.

The average 2014 temperature in the UK was 9.9°C, surpassing the previous record warmest year in 2006, when the mean was 9.7°C. The high average temperature last year also means eight of the 10 warmest years in the UK have occurred since 2002.

The Met Office data shows that 2014 was the warmest year on record in every part of the UK except Northern Ireland. The weather and climate service also reports that last year was the warmest in the UK since 1659, according to the Central England Temperature series, which is the world's longest running instrumental temperature series. The mean figure in 1659 was 10.93°C.

Total rainfall across the UK in 2014 was 1,297.1mm, says the Met Office, confirming that five of the UK's top six wettest years have happened since 2000. The 12 months to December was one of the 20 wettest periods recorded by the England and Wales precipitation series, which dates back to 1766.

The rainfall data shows that January and February 2014 were very wet compared with previous years, while May, October and November were also wetter than the UK average.

In December, the World Meteorological Organisation (WMO) forecast that 2014 would be Europe's warmest year on record. It estimated that the January–December annual mean temperature for the continent would be 0.3°C above the previous record set in 2007. The WMO said all but one of the 10 warmest years have been since 2000, with the only exception, 1989, in sixth place.

Negotiators disagree over scrutiny of climate pledges

National climate pledges will not be formally scrutinised as the negotiators at the latest round of climate change talks failed to reach agreement on a formal assessment process.

The latest round of climate change talks in Lima, Peru led to a draft outline of a new global deal to tackle climate change, known as the "Lima call for climate action". However, the document is over 40 pages long, with some points containing as many as 10 different options.

One of the main things that negotiators were aiming to pin down was how national pledges would be assessed. Countries need to set out what action they will take towards meeting the internationally agreed goal of limiting global temperature rises to 2°C above industrial levels, presenting their plans six months ahead of the Paris talks in December 2015. These national pledges, known as "intended nationally determined contributions" (INDCs), will be assessed and reported on by the UN a month ahead of the Paris talks.

Some countries had called for a formal review process, under which the UN would scrutinise the pledges and have the power to challenge those countries whose commitments were deemed inadequate.

Image: J.Vilca/REX

But this was vetoed by countries including China and India, according to Leo Hickman, chief climate change adviser at WWF. "How do you compare all the country pledges fairly? There will only be one short month to do that, and no time to digest the UN's report before Paris," he said. Organisations such as WWF will now have to independently review the INDCs to calculate whether the action pledged in them will be enough to meet the 2°C target, he said.

But Jonathan Grant, assistant director of the sustainability and climate change team at PwC, believed that this type of third-party review would be effective. "If a country has a weak plan it will be criticised; if it has a bold plan it will be celebrated. A UN review process of the INDCs is unlikely to add much."

UKELA concern over guidance

Members of the UK Environmental Law Association (UKELA) have expressed unease over plans by the government to reform existing development guidance. In its response to Defra's smarter guidance and data consultation, UKELA says it has concerns that the proposed simplification exercise may go too far, resulting in important guidance either being lost or having doubt cast on its status.

Under the proposals, a large number of documents are to be either archived or rewritten and the current version archived. Many of these, argues UKELA, serve as important tools in the planning regime.

Although it assumes that the inclusion of the national planning policy framework (NPPF) in the list of documents to be archived is an error, the association says any proposal to archive or replace the NPPF, which it describes as fundamental to the operation of the planning system, should be subject to a separate consultation.

UKELA also warns that revising existing documents, such as the guidance relating to contaminated land exposure assessments, soil guideline values and CLR11 model procedures, will require significant resources. "It is not apparent resources are available for rewriting (bearing in mind government budget cuts), the timeframe for rewriting, at what point the current versions will be archived, and how this will affect their status," says the association.

It is demanding clarity on these matters to avoid uncertainty over the status of current documents, and to ensure that important guidance is not axed without new guidance being in place.

Defra's plans to simplify environment guidance are due to be finalised by March.

Business plans

ISO 14001 draft agreed

Revisions to ISO 14001 have moved into the final stages, after 92% of member bodies of the International Organisation for Standardisation approved the draft. The revised standard aims to align environment management systems more closely with an organisation's strategy. It places greater emphasis on reducing environmental impacts across the whole lifecycle of products and services, including supply chains, and in the development and use of products and services. The new standard will also require organisations to consider impacts from a changing environment and provide a framework for organisations to manage the risks and maximise the opportunities from trends such as the scarcity of natural resources and climate change. The next meeting of the international working group drafting the standard will be held in February in Tokyo to produce the final version to be published later in 2015.

Carbon from ships

New EU rules for monitoring, reporting and verification of carbon emissions from ships will apply from 1 January 2018, after the European environment council approved their introduction at its December meeting. The regulation, which will come into force from 1 July 2015, covers emissions from ships above 5,000 gross tonnes – warships, naval auxiliaries, fish catching or processing ships, wooden ships of a primitive build, ships not propelled by mechanical means and government ships used for non-commercial purposes will be excluded from the measures. Ship owners will have to monitor emissions for each ship on both a per voyage and an annual basis. The regulation includes provisions on monitoring and reporting, verification and accreditation, and compliance and the publication of information, as well as international cooperation. According to the commission, emissions from the global shipping industry account for 3% of the world's total greenhouse-gas (GHG) emissions and 4% of the EU's total emissions.

In parliament

In the blue and yellow corners

Energy and climate change secretary Ed Davey warned late last year that, as he puts it, Conservative "ideological" opposition to onshore wind is "undermining new British jobs and driving up customer bills ... because wind is the cheapest clean energy". You might think to yourself that this looks a bit like the necessary process of differentiation that is enveloping the coalition; Tories don't like wind much, while Lib Dems do. But it is about much more than that.

Onshore wind is doing particularly well in the UK, with more than 4,500 turbines installed. In the first quarter of 2014, onshore wind generated 2.47 TW hours of electricity – about 2% of overall demand. But there's a long way to go. Decc's 2020 projections and pathways for achieving the 15% supply target from renewables show that onshore wind should be producing about four times the electricity that it is likely to have generated in 2014. That means a lot more turbines. Onshore wind is well placed to compete with the supply price of conventional energy, particularly with gas-generated electricity, by 2020. So we are looking at reduced subsidies. It's a good position to be in, providing new wind turbines can actually be erected.

And that is where the other half of the government enters, in the shape of communities secretary Eric Pickles, who has taken over decisions on a large number of planning appeals for onshore wind developments. Of the 50 proposals that he has recovered, only two have emerged partly or wholly approved, while 17 went into the bin. More than 30 await his attention.

If something is not done to reign Pickles in, then Davey is right: the development of the cheapest form of clean energy will be in jeopardy. The UK renewable targets will have to be met one way or another by 2020, so the demise of onshore wind means it is likely that less efficient or more expensive means will bridge the gap.

Alan Whitehead, Labour MP for Southampton Test and a member of the House of Commons' energy and climate change committee.

Cities central to climate action

Cities will be critical to tackling climate change, according to a series of new studies from the Global Commission on the Economy and Climate.

The commission calculates that, by 2030, the world's 724 largest cities could reduce greenhouse-gas (GHG) emissions by up to 1.4 billion tonnes of carbon dioxide equivalent annually through better, more efficient transport systems. It also says that adopting low-carbon technologies, such as new building technologies and electric buses, in 30 megacities could create more than 2 million jobs, and avoid 3 billion tonnes of GHG emissions and 3 million tonnes of local air pollution by 2025.

"Over the next two decades, cities will grow by over a billion people. If this rapid urban growth is managed badly, we face a world of sprawling, inefficient, polluted cities – and a major climate change risk. But a new breed of cities is emerging with compact, connected development – innovative cities that are more productive, attractive and low carbon," said Graham Floater, the commission's director of cities research.

It cites Stockholm (pictured) as an example of what can be achieved, revealing that the Swedish capital reduced its GHG emissions by 35% between 1993 and 2010, while growing its economy by 41%.

Image: REX/Chad Ehlers/Stock Connection

Meanwhile, Arup's *Future of highways* report considers the consequences of rapid urbanisation up to 2050 and how climate change, resource depletion and changes in behaviour will shape roads in the future. It suggests that existing road surfaces could be replaced with advanced solar panels, which would generate clean and renewable power and wirelessly charge electric cars as they are driving or are parked.

In a separate report, WSP argues that London's air pollution could be reduced by over a third, carbon emissions cut by 80% and noise pollution reduced significantly, if it was to switch to only electric forms of heating and transportation by 2035.

UK lags on remanufacturing

Defra, Decc and the business department should actively promote remanufacturing in the UK to encourage take-up among industry, according to a new report.

The report, *Triple win: the social, economic and environmental case for remanufacturing*, follows an eight-month inquiry by the all-party parliamentary groups on sustainable resource and manufacturing. The investigation, headed by former Defra secretary Caroline Spelman, aimed to identify the UK's position in the global remanufacturing sphere and how its expansion can be supported.

According to the EEF, 55% of UK manufacturers are unaware of or have never considered remanufacturing, while the US and China are both investing heavily in remanufacturing, with governments in both countries supporting the sector's growth through incentive schemes. The report says UK government departments need to learn from practices in China and the US.

Remanufacturing can benefit manufacturers and consumers by reducing the cost of materials and can also cut carbon emissions, and water and energy use, the report argues. These drivers need to be highlighted and promoted to industry in order to change perceptions and encourage take-up.

Speaking at the launch of the report, Defra minister Dan Rogerson said: "Remanufacturing is quickly rising up the agenda. The move towards the circular economy is right and it is possible."

Meanwhile, Chris Holmes, managing director for waste and bioenergy at the Green Investment Bank, said that investors would be attracted to the sector by high quality products. "The market pull for recycled materials is not strong. One way to increase demand is to create price-competitive high quality products. There's only so much that can be achieved by innovative financing," said Holmes.

Legal pitfall potential from EIA changes

Raising the thresholds for environmental impact assessment (EIA) screening could result in legal challenges, experts warn.

The government announced in January that housing developments under 5 hectares or 150 homes will no longer have to go through the screening process whereby local planning authorities decide whether the project needs to undergo EIA.

The current threshold is 0.5 hectares, but the communities and local government department (Dclg) believes that smaller projects should not be covered by EIA because they are unlikely to cause the "significant" environmental impact that the assessments are designed to prevent. It believes that EIAs increase costs and workload for local authorities and developers. Dclg had originally planned to raise the screening threshold solely on the basis of land area, but has broadened it to cover the number of homes in a project. This was after respondents to the consultation, including IEMA, raised concerns that restricting the threshold to land area only would mean the environmental impact of tower blocks would be ignored.)

Nonetheless, many EIA practitioners and planning lawyers warn that the change could result in smaller projects with the potential for significant environmental impact being challenged in the courts. IEMA members reported several recent housing projects under 5 hectares and 150 homes that local authorities said required an EIA.

Josh Fothergill, policy and practice lead at IEMA, said: "There is a lot of precedent where local authorities have said that a particular type of development needs EIA." He warned that a lawyer acting for an opponent of an application could find examples of such cases and use them to support a legal challenge.

Examples of sub-5 hectare residential planning applications where councils required EIA include 53 homes on a 0.39 hectare site at Marble Arch in London (pictured); 80 homes on a 2.3 hectare site in Bristol; and 58 homes on 2.7 hectare site at Moat Lane in South Northamptonshire.

Richard Buxton, senior partner at law firm Richard Buxton, said: "Potentially what the government has done is unlawful. It's excluding all kinds of projects which are likely to have significant environmental impacts."

From environmentalistonline.com…

CRC failings

Ten companies have been issued with penalties by the Environment Agency for not meeting reporting requirements under the carbon reduction commitment (CRC) energy efficiency scheme, reports the Environment Agency. Six firms received two civil penalties – for failing to both submit an annual and a footprint report by the set deadline; and four received a penalty for failing to meet the date for submitting their annual report only. The agency says the proportion of firms that complied with the deadline for submitting their annual report for 2013/14 was 97%, down from 99% the previous year. The number of firms required to submit reports in 2013/14 was 1,968. In the past year, CRC financial penalties imposed by the agency include: £179,952 on estate agents Harbour Exchange Management Company; £3,500 on pharmaceutical manufacturers Aptuit (Glasgow) Limited; and £2,500 on Mansfield College, part of the University of Oxford.

environmentalistonline.com/CRC2014

Energy costs

Low carbon policies could push energy bills up by 25% for commercial and industrial users by 2030 unless they improve energy efficiency, according to the Committee on Climate Change (CCC). In new analysis, the CCC found that between 2004 and 2013 commercial sector energy bills increased by 135–155%, while energy costs for industrial companies increased by 140–145%. The increases were primarily due to increases in the wholesale price of gas. Up to 35% of the rise was due to low-carbon policies. Bills could increase in real terms by 10–15% by 2020 due to the costs of low-carbon policies; and by 20–45% cent by 2030, the CCC predicts. However, firms in the commercial sector could offset the rises by around 20% by 2020 if they improved their energy efficiency. Industrial businesses, meanwhile, have the potential to save around 5% on bills to 2020 and 9% to 2030 by installing energy-efficient equipment.

environmentalistonline.com/energycost

EU work plan

The new European commission has proposed withdrawing draft rules to improve resource efficiency in Europe, including tighter recycling targets, which were set out in the previous commission's circular economy package. The new commission has promised, however, to bring forward a "more ambitious" proposal later this year. The national emissions ceilings directive, which would have lowered the maximum emissions limit of some pollutants, will be modified as part of the legislative follow-up to the 2030 energy and climate package, the commission said, launching its 2015 work programme. Commission vice-president Frans Timmermans said the proposal on national emission ceilings had proved controversial and there was a gap between what MEPs and the council wanted to achieve. "We will bring forward modified proposals which we hope can help bridge this gap," he said. MEPs voted on the proposals as *the environmentalist* went to press.

environmentalistonline.com/EU2015

In court

Agency agrees enforcement undertakings with 11 firms

Eleven companies agreed civil sanctions with the Environment Agency between May and August 2014 for failing to comply with the Producer Responsibility Obligations (Packaging Waste) Regulations 2007. The actions will result in environmental improvements worth more than £84,500, said the agency in its latest disclosure of enforcement undertakings (EUs).

Under the Regulatory Enforcement and Sanctions Act 2008, the agency can accept EUs for some environmental offences. The Environmental Civil Sanctions (England) Order 2010, which came into force on 6 April 2010, states that EUs must ensure that the breach will not be repeated and, if possible, measures are put in place to restore the environment to what it would have been. Where restoration of the harm is not possible, however, action must be taken to secure equivalent benefit or improvement to the environment.

The majority of the 11 firms had neither registered with a packaging compliance scheme (reg. 40(1)(a)) nor taken reasonable steps to recover and recycle packaging waste (reg. 40(1)(b)). They have now taken action to ensure these failings are not repeated. Action to secure equivalent benefit or improvement to the environment include the following financial contributions:

- £7,100 to Derbyshire Wildlife Trust and Yorkshire Dales Millennium Trust by meat processing business Chesterfield Poultry;
- £7,500 to Young People's Trust for the Environment by the soft toy company Ty UK;
- £7,560 to the Wiltshire Wildlife Trust by ready meal business Oakhouse Foods;
- £9,166 to the Dorset Wildlife Trust by merchandising firm Humatt;
- £10,702 to the Yorkshire Dales Millennium Trust by Eurofood Partners, which imports and distributes food products;
- £15,551 to the Trust for Oxfordshire's Environment (TOE2) by tea and coffee business Whittard Trading; and
- £15,654 to The Earth Trust by Weber-Stephen Products, which supplies barbecue equipment.

Costly energy-efficiency failings

Six energy companies that failed to meet their environmental obligations have had to pay Ofgem £54.7 milliion in total. The regulator launched an investigation in May 2013 into the failings by generators and energy suppliers to deliver their targets under the Community Energy Saving Programme (CESP) by the December 2012 deadline. The CESP was designed to lower carbon emissions through the delivery of energy-saving measures, such as loft and cavity wall insulation free of charge, to households in low-income areas. The six companies missed their targets by the deadline and these failings have resulted in the following payments: £28 million from Drax Power; £11.1 million from British Gas, including £500,000 for failing to reach obligations under the Carbon Emissions Reduction Target; £11 million from InterGen; £2.4 million from ScottishPower; £1.75 million from SSE; and £450,000 from GDF Suez/IPM.

Italy gets heavy waste fine

The Court of Justice of the EU (ECJ) has ordered Italy to pay €40 million for failing to comply with a 2007 judgment by the ECJ to fulfil its obligations under the waste, hazardous waste and landfill directives. In addition to the lump sum, the ECJ requires Italy to pay €42.8 million for each six-month period of delay in taking the necessary measures to comply with the 2007 decision. An investigation in 2013 by the European commission found that Italy had not yet adopted all the measures necessary to comply with the 2007 judgment. As a result, 218 sites in 18 of the 20 Italian regions did not conform to the Waste Directive (75/442/EEC) and, most likely, were operating without a permit. In addition, 16 of those sites contained hazardous waste in breach of the Hazardous Waste Directive (91/689/EEC). Also, Italy had not proved that five landfill sites had been "conditioned" or closed down in accordance with the Landfill of Waste Directive (1999/31/EC).

Case law

Solar companies fail in judicial review of policy

A judicial review application by solar companies challenging Decc's decision to close the Renewables Obligation (RO) in April 2015 has failed. The High Court ruled in *Solar Century Holdings Ltd and others v Secretary of state for energy and climate change* [2014] EWHC 3677 that the government's cuts to subsidies for large solar projects are legal.

In May 2014, the government issued a consultation paper on future subsidies to support the installation of solar photovoltaics (PV). It included plans to bring forward the closure date of the RO from 2017 to April 2015. Decc's justification was the unexpectedly high levels of large-scale solar PV deployment, which risked breaching the cap imposed by the Treasury's levy control framework (LCF). Solar Century, Lark Energy, Orta Solar Farms and TGC Renewables brought a rolled-up judicial review application that challenged the policy change. Decc confirmed in October 2014 the early closure of the RO, though it extended the "grace period" from three to 12 months. The claimants challenged the policy change on four grounds: closure of the scheme before 2017 was *ultra vires*; pre-legislation statements amounted to an "assurance" that should bind the government; previous policy statements gave rise to a "legitimate expectation" that cannot be altered; and the introduction of retrospective "grace periods" was unfair and unlawful. The judge rejected each ground and dismissed the claim.

The decision underlines that levy schemes subject to the financial limits imposed by the Treasury can change. The LCF, therefore, represents a systemic risk that all operators must always take into account.

Keith Davidson

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New regulations

In force	Subject	Details
9 Oct 2014 	Permitting	European commission decision 2014/738/EU establishes best available techniques for permitted installations in the mineral oil and gas-refining sector. Competent authorities in each member state are required to update permit conditions in line with the decision by 9 October 2018. lexisurl.com/iema50952
24 Oct 2014 	Energy labelling	European commission decision 2014/736/EU establishes criteria for the "ecolabelling" of absorbent hygiene products. The criteria will remain valid until 26 October 2018. lexisurl.com/iema50929
30 Oct 2014 	Climate change	EU Regulation 1191/2014 establishes the format for reports to be submitted under article 19 of the Regulation 517/2014 on fluorinated gases (F-gas). Under article 19, producers, importers, exporters, feedstock users and destroyers of some types of F-gases are required to report data to the commission. lexisurl.com/iema50934
7 Nov 2014 	Planning	The Town and Country Planning (General Permitted Development) (Amendment) (Wales) (No. 2) Order 2014 extends permitted development rights on the installation, alteration or replacement of masts, antennas and telegraph poles by electronic communication codes operators. The Town and Country Planning (Compensation) (Wales) (No.2) Regulations 2014 amends compensation rights when development orders or local development orders are withdrawn, or planning applications are refused or granted subject to certain conditions. Compensation rights are extended to electronic communications code operators for specified developments. lexisurl.com/iema40552; lexisurl.com/iema40553
7 Nov 2014 	Waste	The Landfill Tax (Scotland) Act 2014 (Commencement No. 1) Order 2014 brings into force sections of the Landfill Tax (Scotland) Act 2014. It empowers the Scottish government to make legislation to define activities subject to the tax, the amount of tax payable, methods to calculate landfilled weights and the liability of parties to pay the tax. Powers are also granted to require that specified information is kept and made available by landfill sites. lexisurl.com/iema40554
11 Nov 2014 	Reporting	EU Regulation 1112/2014 establishes common data reporting and publication formats for incidents and major accidents in the offshore oil and gas industry. lexisurl.com/iema50953
12 Nov 2014 	Planning	The Town and Country Planning (Determination of Procedure) (Wales) Order 2014 brings sections of the Planning Act 2008 into force, enabling Welsh ministers to determine procedures for applications referred to them under the: Town and Country Planning Act 1990; Planning (Listed Buildings and Conservation Areas) Act 1990; and Planning (Hazardous Substances) Act 1990. The Town and Country Planning (Determination of Procedure) (Prescribed Period) (Wales) Regulations 2014 require that the Welsh ministers determine procedures for proceedings regarding applications referred to them within seven working days. The Planning (Listed Buildings and Conservation Areas) (Determination of Procedure) (Prescribed Period) (Wales) Regulations 2014 require that the Welsh ministers determine procedures regarding applications affecting listed buildings or conservation areas that have been referred to them within seven working days. lexisurl.com/iema40557; lexisurl.com/iema40559; lexisurl.com/iema40560
13 Nov 2014 	Emissions	The Sulphur Content of Liquid Fuels (Scotland) Regulations 2014 implement requirements of the Liquid Fuels Directive (1999/32/EC), as amended by Directive 2012/33/EU. Revised provisions concern land-based consumption of heavy fuel oil and gas oil. Sulphur content limits for these fuels are unchanged, unless used in certain large combustion plants. lexisurl.com/iema40549

This legislative update has been provided by Waterman's Legal Register available at legalregister.co.uk

New regulations

In force	Subject	Details
17 Nov 2014	Energy	EU Directive 2014/94/EU requires member states to support infrastructure for the delivery of alternative sources of fuel, such as: providing adequate electrical charging points for road transport; refuelling infrastructure for hydrogen; and natural gas refuelling points for marine use. The Directive must be transposed by 18 November 2016. lexisurl.com/iema50948
24 Nov 2014	Packaging	The Producer Responsibility Obligations (Packaging Waste) (Amendment) Regulations 2014 reduce the target for glass recycling from 81% to 75% in 2014. The lower target will increase by 1% each year, up to 77% in 2016 and 2017. Targets for recycling by re-melt are increased for this period, rising from 65% in 2014 to 67% in 2016 and 2017. lexisurl.com/iema50954
28 Nov 2014	Climate change	The Climate Change Agreements (Administration) (Amendment) Regulations 2014 amend the 2012 Regulations by removing the requirement to provide full read-write access to operators for the input of data required under their agreement accounts. Operators will continue to be able to request changes to personal information. lexisurl.com/iema50955
1 Dec 2014	Hazardous substances	The REACH Enforcement (Amendment) Regulations 2014 brings into force a derogation, allowing the supply and professional use of paint strippers containing dichloromethane. lexisurl.com/iema50942
9 Dec 2014	Waste	EU Regulation 1234/2014 amends three annexes to the Regulation on the transfrontier shipment of waste. Exports to non-OECD countries of non-separable plastic and aluminium waste from the pre-treatment of composite liquid packaging and certain self-adhesive laminate waste is prohibited. lexisurl.com/iema50969
10 Dec 2014	Energy	The Guarantees of Origin of Electricity Produced from High-efficiency Cogeneration (Amendment) Regulations (Northern Ireland) 2014 revise legislation in line with the EU Energy Efficiency Directive (2012/27/EU). lexisurl.com/iema50964
12 Dec 2014	Marine environment	The Marine and Coastal Access Act 2009 (Commencement and Consequential Provisions) (Wales) Order 2014 brings into force sections of the Marine and Coastal Access Act 2009 by replacing marine nature reserves with marine conservation zones (MCZs). Welsh ministers have the power to designate MCZs in the country's inshore region. lexisurl.com/iema50971
16 Dec 2014	Emissions	The Merchant Shipping (Prevention of Air Pollution from Ships) and Motor Fuel (Composition and Content) (Amendment) Regulations 2014 reduce the maximum permitted sulphur content in marine fuels. lexisurl.com/iema50965
31 Dec 2014	Regulation	The Environmental Regulation (Relevant Offences) (Scotland) Order 2014 defines offences under five sections of the Regulatory Reform (Scotland) Act 2014. Offences specified may be subject to compensation orders, financial benefit-based fines, and publication of convictions and/or liability may be extended to employees, agents and persons carrying out an activity on behalf of another. The Environmental Regulation (Liability where Activity Carried Out by Arrangement with Another) (Scotland) Order 2014 makes persons carrying out regulated waste, water, industrial installation and sludge, slurry or silage activities on behalf of another party liable for the same offence when there has been a breach. The Environmental Regulation (Significant Environmental Harm) (Scotland) Order 2014 specifies 18 pieces of legislation. Compliance with the legislation specified can be used as a defence when charged with a significant environmental harm offence. lexisurl.com/iema50960; lexisurl.com/iema50961; lexisurl.com/iema50962

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Laying down the law

Acting within the rules to aid growth

Simon Colvin says the new code and the planned duty on regulators to consider the impact of their actions on the economy change the regulatory landscape

The regulatory landscape never stands still. One aspect that has seen a lot of change last year and which will see further change in 2015 and beyond are the rules that regulators, such as the Environment Agency and Natural Resources Wales, have to abide by when exercising their regulatory functions. Businesses need to know and understand these new rules so they can make best use of the opportunities they present.

The EU and UK perspectives

At a European level, commission recommendation 2001/331/EC on minimum criteria for environmental inspections sets out a number of requirements that must be followed by environmental regulators in all member states. The recommendation is designed to create a level playing field but, as it was published in 2001, it is now quite old.

The seventh environmental action programme, agreed by EU leaders in November 2013, places significant emphasis on the need for better implementation and enforcement of existing environmental laws. This will be especially important with the potential scrapping of EU initiatives, such as the circular economy (p.8). The message at the moment is to squeeze more out of what we already have, and I expect to see the 2001 recommendation updated or replaced soon to help achieve that aim.

From a UK point of view, a new code for regulators was published last summer and a new "economic growth duty", which is contained in the Deregulation Bill (now in parliament), is due to come into effect in April and require regulators to consider the impact of their actions on growth.

Both these developments have gone relatively unnoticed but businesses need to ensure they understand what these changes will mean for them.

Code of conduct

The Legislative and Regulatory Reform Act 2006 details a number of principles that regulators must have regard to when exercising their regulatory functions. The first code was published in 2008 but was replaced in 2014.

The updated code sets out a detailed framework within which regulators should exercise their functions. It contains six sections. These are: act in a way that supports regulated businesses to comply and grow; offer simple and straightforward ways to engage; adopt a risk-based approach to regulation; share information about compliance and risk; provide clear information, guidance and advice; and adopt a transparent approach.

Regulators must have regard to the code when developing their own policies and procedures as well as when exercising their functions. The code includes a note on monitoring, and it encourages businesses to challenge regulators who they believe are not complying. There is also the right to report any non-compliance to the Better Regulation Delivery Office (BRDO). Businesses need to use these tools when they believe they are not being treated fairly.

The code is supported by a guidance for regulators information point (GRIP), set up by the BRDO. This drills down into the code in more detail and gives examples of the types of behaviour expected of regulators. Highlights include:

- The need for regulators, when responding to non-compliance, to clearly explain what the non-compliant activity is, provide advice and give reasons for actions taken.
- To provide opportunities for dialogue to ensure regulators are acting proportionately and consistently.
- To create an environment in which regulated businesses have confidence in the advice they receive and feel able to seek advice without the fear of triggering enforcement action.

Firms need to remember they are entitled to bring failings by regulators to meet the standards provided for in the code to the attention of the regulators as well as the BRDO. This should help to bring about a change in behaviour and approach on the part of the regulator.

The growth duty

The planned duty will be another powerful tool in the armoury of the business community in their dealings with the environmental regulators. As stated, it provides that regulators must have regard to the promotion of economic growth when exercising their regulatory functions. It has been much criticised by environmental NGOs for the weight it attaches to economic growth.

The draft guidance document that has been published alongside the duty stresses that regulators must be accountable and transparent in their decision making. The guidance is clear that the duty can be used as a ground to challenge regulatory decisions. In an environmental context, this would mean it is relevant in terms of applications for environmental consents, enforcement notices and compliance assessment forms. Businesses will be able to ask regulators to explain what impact the duty had on a regulator's decision.

It is evident that the duty and the code will have a significant role to play in the future of environmental regulation in the UK. Businesses need to understand what the code and the duty mean so they can identify the opportunities that both developments offer them.

Further information

A copy of the regulators' code is available at lexisurl.com/iema57685, while a summary can be found at lexisurl.com/iema57687. The guidance for regulators information point is at regulatorsdevelopment.info/grip/.

Simon Colvin is partner and national head of the environment team at Weightmans LLP. Follow him on Twitter @envlawyer.

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What lies ahead

the environmentalist highlights some of the legal and policy changes due in 2015

A general election year makes it difficult to provide a comprehensive outlook for imminent policy changes. Whichever party or parties forms the UK government after 7 May will have their own priorities for sustainability, some of which are unlikely to become clear until ministers take office. As the actions of the new European commission have shown through its plans to withdraw new waste targets (p.8), policy trajectories set by the previous administration often fall foul of a new set of priorities. Whatever the political complexion of the next government, there are, nonetheless, a number of major legal and policy measures at both a national and EU level planned for 2015. With the support of IEMA and the EEF, *the environmentalist* has collated some of the most important regulatory and policy changes to look out for over the next 12 months.

Biodiversity and natural capital

Defra produced its **biodiversity strategy** for England in 2011 and in 2012 outlined a set of 24 biodiversity indicators. A working group is developing a method for assigning a level of confidence in a trend, and the assessment of that trend, for individual indicators. The methodology will be peer-reviewed in early 2015. The baselines for the priority habitat inventory will also change this year; new interim measures of individual plant species and connectivity are also due; and changes to some forestry elements of the LULUCF – land use, land use change and forestry – greenhouse-gas inventory are planned.

The **Natural Capital Committee** expects to publish its third state of natural capital report in late January. Its previous report, published in April 2014, warned that most of England's natural assets would need action to restore and improve them. Details of the committee's work on corporate natural capital accounting will be included in its third report to generate interest ahead of the publication later of more technical information.

A **nature recovery plan** to reverse the narrowing biodiversity in Wales is being finalised by the Welsh government to fulfil its commitments under the Convention on Biological Diversity.

The Scottish government intends to lay legislation in parliament in May 2015 on measures to manage 11 **nature conservation marine protected areas** (MPAs) and **nine special areas of conservation** (SACs) in Scotland's territorial waters. A consultation on its proposals ends on 2 February. The MPAs and SACs covered are those identified as the most sensitive habitats. The government in Edinburgh is also planning to adopt a **national marine plan** by April.

A priority for the new EU environment commissioner, Karmenu Vella, is to review the **Birds** (2009/147/EC) and **Habitats** (92/42/EEC) directives. A "fitness check" of the directives is part of the European commission's regulatory fitness and performance programme (REFIT) to make EU law "simpler and to reduce regulatory cost". The first step has been to set the criteria for the examination, which was completed last year under the previous commission. The next stages are: collecting and assessing evidence for the fitness check (completed by autumn 2015); public consultation (start 2015); assessment of art. 17 of the Habitats Directive, which requires a report every six years on implementation across the EU, and art. 12 of the Birds Directive, which requires updates on implementation every three years (first half of 2015); a stakeholder meeting (summer 2015); and a report on the findings by the end of 2015 or early 2016.

The commission is scheduled this year to set out how it plans to achieve action seven under the **EU biodiversity strategy**, which is to ensure no net loss of biodiversity and ecosystem services by 2020.

Negotiations continue on finalising **sustainable development goals** (SDGs) to supersede the millennium development goals, which expire this year. The UN working group devising the SDGs is due to announce them at a summit in September.

Built environment and planning

As the result of a consultation last year, the department for communities and local government intends to introduce secondary legislation for a **"deemed discharge"** on some planning conditions. Dclg confirmed that developments subject to **environmental**

impact assessment (EIA) or likely to have a significant effect on qualifying European sites would be exempt. The department also plans to revise guidance on development consent orders, specifically the procedures that must be followed depending on whether the change is deemed to be material or non-material.

In January, Dclg published its response to the consultation on raising the EIA **screening thresholds** for industrial estates and urban development projects from 0.5 hectares to 5 hectares. The department confirmed that it will go ahead with its proposals (p.8).

The Scottish government is consulting until 21 January on proposed changes to guidance in the Domestic and Non-Domestic **Building Standards** Technical Handbooks for 2015, including section three, which is concerned with the environment, and section five and seven, on noise and sustainability, including carbon emissions, respectively. The government aims to publish a report of any proposals in the spring. New **energy standards** for buildings apply in Scotland from October 2015 (section six of the handbooks has already been updated to accommodate these changes). The revisions apply from October 2015.

The Welsh government launched its **Planning (Wales) Bill** in October 2014. Proposals include: ministers to decide on planning applications for developments of national significance to Wales; where planning issues extend beyond the boundaries of a single authority, a strategic planning panel, comprising representatives of local authorities, community, environmental and business interests, should draw up a development plan; and changes to enforcement to deliver prompt action against breaches of planning control.

In Northern Ireland, the **planning system** will be reformed on 1 April 2015 when most functions will transfer to 11 district councils.

Carbon and energy

Organisations covered by the **energy savings opportunity scheme** (ESOS) are required to notify the Environment Agency of their compliance by 5 December 2015. Under ESOS, companies employing at least 250 full-time staff or with a balance sheet of more than €43 million and an annual turnover of over £50 million (or is part of a group in which one part exceeds these thresholds in the UK) must measure their energy use over the previous 12 months.

Climate change agreements (CCAs) are voluntary arrangements between industry and the Environment Agency to reduce energy use and carbon emissions. Operators participating in a CCA receive a discount on the Climate Change Levy (CCL). The first CCA data reports (for the period ending 31 December 2014) must be submitted to the relevant sector association by 1 May 2015. The government is planning to review the CCA targets in 2016.

The first payments under the **contract for difference** (CfD) scheme to support investment in low-carbon electricity generation will be made from April 2015. CfDs are a key element of the electricity market reform and licensed electricity suppliers will fund their costs. The government is to exempt electricity suppliers of eligible energy intensive industries (EIIs) from some of the costs associated with CfDs. Eligibility criteria are expected soon.

From 1 April 2015, the government will exclude from the **carbon price** support rates fossil fuels that are used by combined heat and power plants to generate electricity that is self-supplied or supplied under exemption from the requirement to hold a supplier licence.

Plans by the UK government to support the exploration and extraction of **shale gas** and oil by hydraulic fracturing (fracking) will be developed further in 2015 with the creation of a sovereign wealth fund from the industry's tax revenues. There will also be financial support for independent research into the robustness of the existing regulatory regime for onshore activities. The Scottish government, meanwhile, says it supports enforcement of robust regulation of fracking to maintain the highest levels of environmental protection. It has strengthened Scottish planning policy in relation to onshore unconventional gas activities by introducing buffer zones and additional risk assessments. Ministers will bring forward in 2015 further guidance to empower communities that could be affected.

The Welsh government expects to publish its **energy efficiency strategy** in the final quarter of 2015.

Major accidents and the environment

In 1976 an industrial plant in Seveso, Italy, released a vapour cloud containing a dioxin, devastating land and vegetation and causing homes to be evacuated and people to be poisoned. The accident led to the adoption of the Seveso I Directive in 1982. The most recent version, Seveso III, was published in 2012 and will be implemented in the UK by way of the Control of Major Accident Hazards (COMAH) Regulations 2015, which come into force on 1 June 2015.

The regulations are applicable to establishments that handle large quantities of hazardous substances and require businesses to "take all necessary measures to prevent major accidents involving dangerous substances" and "limit the consequences to people and the environment of any major accidents which do occur".

Although it is nine years since the explosion and fire at the Buncefield oil storage depot, the implications are still felt by operators of bulk storage tanks as the recommendations from the investigations are translated into industry guidance. Although there has been a necessary focus on safety and health, demonstrating that the risk from a COMAH establishment to the environment has been reduced to a "tolerable" level has remained a challenge. The Chemical and Downstream Oil Industries Forum (CDOIF) developed guidance in 2013 to help assess the risk posed to environmental receptors from major accident hazard sites. The guidance defined tolerability as a willingness to live with a risk so as to secure certain benefits and in confidence that the risk is properly controlled.

Andy Goddard, senior manager at ENVIRON.

Political negotiations on measures to stabilise the EU carbon market will continue in 2015. EU member states agreed in 2013 to temporarily withdraw 900 EU **emissions trading system** (ETS) allowances to reduce some of the surplus and bolster their price. Under the so-called "backloading" of allowances, 300 million will be withdrawn from auctioning this year – 400 million were withheld in 2014 and 200 million will be withdrawn in 2016. An additional 300 million and 600 million allowances will be included in the 2019 and 2020 auctions respectively.

The commission adopted the second **carbon leakage list** in October 2014. It covers the period 2015–19 and started on 1 January. Sectors and sub-sectors on the list are those exposed to a significant risk of "carbon leakage". They will receive a higher share of free ETS allowances between 2013 and 2020.

New EU **energy labels**, which were introduced by the new framework Directive (2010/30/EU) on 19 June 2010, have been phased in. The new labels have applied to gas ovens since 1 January 2015 and will be introduced for water heaters from 26 September.

Climate change

Negotiations on delivering a new **global climate change treaty** are due to be completed at COP 21 in Paris between 30 November and 11 December. The agreement is due to be implemented from 2020. The Lima climate conference in December 2014 agreed elements of the draft negotiating text (p.5). This is due to be completed in May 2015 ahead of the Paris meeting, while countries should put forward their intended contributions to reducing global greenhouse-gas emissions in the first quarter of 2015. EU leaders agreed in October 2014 to reduce the bloc's GHG emissions by at least 40% against 1990 levels by 2030.

In the UK, the Committee on Climate Change begins work this year on the **fifth carbon budget**. Under the Climate Change Act 2008, the committee is tasked with setting five-yearly budgets to ensure the country meets its legally binding 2050 target to reduce emissions by at least 80% against 1990 levels. After a review, the government last year confirmed the fourth budget, which runs from 2023 to 2027. very wet weather in January and February. May, October and November were also wetter than average

New EU rules on controlling **fluorinated gases** (F-gas) came into force on 1 January 2015 and apply to member states without the need for domestic legislation (see panel, p.18). Regulation 517/2014 revoked and replaced Regulation 842/2006 on F-gas.

Environment management

Revisions to **ISO 14001**, the international standard for environment management systems, are due to be completed this year. The next meeting of the group working on the revised standard takes place in Tokyo in February. The final version is due in March and the new standard is expected to be available in the summer. In December 2014, 92% of member bodies of the International Organisation for Standardisation (ISO) approved the draft. Meanwhile, work on a revised version of **ISO 14004**, which outlines general guidelines on environment management principles, systems and support techniques, is also ongoing, running roughly six months behind the revision to 14001.

The ISO technical committee for greenhouse-gas (GHG) management, TC207/SC7, is continuing to revise **ISO 14064-1**, which provides guidance for organisations to quantify and report their GHG emissions. The revision is focusing on establishing a more standardised reporting framework. It will also cover: 14064-2, which includes quantification, monitoring and reporting of GHG emissions at the project level, and will be expanded to cover carbon credits and innovative technology projects. In addition, 14064-3, which supports the validation and verification of GHG assertions, and 14065, the standard for verification bodies for use in accreditation, will be updated to serve new markets, such as product carbon footprint verifications.

Hazardous substances

New **Control of Major Accident Hazards (COMAH) Regulations** come into force in Great Britain on 1 June 2015, implementing the Seveso III Directive (see panel, above). The main COMAH duties will stay the same but there are some important changes particularly on how dangerous substances are classified and the information made available to the public. For the first time, lower-tier operators will have to provide public information about their site and its hazards. Both top-tier (now referred to as upper-tier) and lower-tier operators will need to provide public information electronically and keep it up to date. The Health and Safety Executive is due to publish new guidance in March. The land use planning requirements of Seveso III will be implemented through

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New rules on F-gas

Regulation 517/2014 revoked and replaced the existing Regulation 842/2006 on fluorinated gases (F-gas) from 1 January 2015, with the main change amending the thresholds for maintenance frequency. Previously the criteria was based on the charge (in kg) of F-gas in an item of equipment but is now based on the global warming potential (GWP) CO_2 weight equivalent. Under the change some equipment may no longer require maintenance, while other equipment may need more.

The new regulation bans or restricts the use of F-gas in, for example, some refrigeration equipment, air-conditioners, insulating forms, and technical aerosols, and introduced conditions on marketing products and equipment containing or relying on F-gas. Other changes include: cap and phase-down for the placing on the market of hydrofluorocarbons (HFCs); future restrictions on the servicing and maintenance of equipment using HFCs; and new rules on the containment, use, recovery, and destruction of HFCs.

Preparation is the key to success for companies concerned about complying with 517/2014. Ensure that maintenance schedules are still correct in order to identify any equipment that was not previously covered but now is. A fully up-to-date F-gas register will be necessary, listing all the equipment and systems containing F-gas that are required to be checked for leaks. The previous 3kg, 30kg, and 300kg leak check requirements have been replaced by different limits based on CO_2 equivalent tonnes CO_2et. The new requirements are for 5, 50 and 500 CO_2et.

The gas contents should be identified and, where it is confirmed as an "R" code refrigerant, the chemical component needs to be noted, although bear in mind the gas could be blended. Having identified all the gases, consult annex 1 and 2 of the 517/2014 for the calculations to determine the GWP of the gas.

Neil Howe, senior legal author with online environment and safety specialist Cedrec.

amended planning legislation by the communities and local government department and the devolved administrations in Scotland and Wales.

On 1 June 2015, the **Classification, Labelling and Packaging Regulation** (CLP) (2008/1272/EC) replaces the Dangerous Substances Directive (67/548/EC) and the Dangerous Preparations Directive (1999/45/EC). The new regulation introduces a system of chemical classification based on hazard classes, categories and statement codes (rather than risk phrases and categories of danger) and will alter the way waste is classified and assessed. As a result, environment regulators in the UK are updating the current guidance (WM2) on waste classification and assessment. A draft waste classification and assessment, technical guidance (WM3), has been produced. The closing date for comments is 3 February 2015 (lexisurl.com/iema48643).

The sunset date under **REACH** means substances may be placed on the market or used only if an authorisation has been granted. Authorisation is one of the REACH processes for managing the risks of substances of very high concern (SVHC) and promoting their replacement with safer ones. The first 2015 sunset date is 21 February and applies to four phthalates: bis(2-ethylhexyl) phthalate (DEHP), benzyl butyl phthalate (BBP), dibutyl phthalate (DBP), and diisobutyl phthalate (DIBP). Further sunset dates for 2015 are: 21 May – lead sulfochromate yellow (C.I. pigment yellow 34), lead chromate molybdate sulphate red (C.I. pigment red 104), diarsenic pentaoxide, diarsenic trioxide, and lead chromate; and 21 August 2015 – gamma-hexabromocyclododecane, 2,4 – dinitrotoluene (2,4-DNT), hexabromocyclododecane (HBCDD), alpha-hexabromocyclododecane, beta-hexabromocyclododecane, and Tris(2-chloroethyl) phosphate (TCEP).

New EU rules to account for **nanomaterials** under REACH are expected later this year.

The European commission has been consulting (until 15 January) on criteria for identifying **endocrine disruptors** in the context of implementing the Plant Protection Product Regulation (1107/2009) and the Biocidal Products Regulation (528/2012).

Regulation and inspection

Regulatory charges are set to rise from 1 April across the UK. Consultation by the Environment Agency on raising its charges for 2015/16 ended on 20 November. The proposals included: a 2% increase for installations and waste facilities covered by the Environmental Permitting Regulations (EPR); increasing the compliance band adjustment for waste facilities and installations that are in bands D, E and F for more than two years – for example, from 125% to 200% for band D sites; introducing a permit commencement charge to recover the additional costs the agency incurs in the 12 months immediately after the issue of a new permit – this would be an additional 40% of the annual charge for the permit and apply to EPR installations and waste facilities. The agency also proposed amending its Opra (operational risk appraisal) scheme, covering assessments of operator compliance and how Opra defines activities and the associated charging bands.

The Scottish Environment Protection Agency (Sepa), meanwhile, says it intends to implement a new **charging framework** in 2016. However, from April 2015 water (Controlled Activity Regulations), pollution, prevention and control, and radioactive substances (nuclear) charges increase by 2.7% and waste charges by 7.7%. Consultation on plans by **Natural Resources Wales** to raise its charges for 2015/16 ended on 9 January. Under the proposals, installations and waste facilities covered by the Environmental Permitting Regulations will rise by 5% from April, while those for water quality will increase in line with the consumer price index.

Scotland will introduce a new **regulatory framework** in the spring. It will provide Sepa with a broader range of enforcement tools, including fixed monetary penalties, variable monetary penalties, enforcement undertakings and non-compliance penalties.

Regulations to extend the Environment Agency's use of **enforcement undertakings** are due to come into force on 6 April. The regulations will amend the Environmental Permitting (England and Wales) Regulations 2010 in relation to offences under regulation 38, such as knowingly contravening reg.12 (permitting) or failing to comply with reg.60 (providing information).

The Environment Agency is now consulting on changes to 12 sets of **standard rules**, which will apply later this year. The changes are required after

amendments to the Environmental Permitting (England and Wales) Regulations 2010 as a result of the Industrial Emissions Directive (2010/75/EU). The rules govern, for example: clinical waste transfer stations and treatment; low-impact Part A installations; low-impact Part A installations for the production of biodiesel; treatment of waste to produce soil; composting in closed systems; composting in open systems; farm anaerobic digestion using farm wastes only; anaerobic digestion facilities, including the use of resultant biogas; and the treatment of incinerator bottom ash from Part A installations. The agency says the revised rules will be published in mid-2015 (lexisurl.com/iema48642).

Regulations to transpose art. 38 of the **Offshore Safety Directive** by extending the Environmental Damage (Prevention and Remediation) Regulations 2009 to include offshore marine waters must be in place by 19 July 2015.

Defra's year-long programme to simplify **environment guidance**, is due to end in March 2015. The environment department says the aim is to make guidance simpler, quicker and clearer for businesses and others to understand and comply with their obligations. At the same time, Defra and its regulators have been reviewing all the environmental information required by businesses to ensure it is really needed.

Defra is this year due to review the **mandatory reporting of greenhouse-gas emissions** by quoted companies under the Companies Act 2006 (Strategic Report and Directors' Report) Regulations 2013, which came into force in October 2013. When they were introduced, the environment department stated that ministers would assess in 2015 the costs and benefits on businesses of mandatory disclosure before deciding whether to expand the obligation to report to large unquoted companies. The government's commitment to reduce regulatory "burdens" makes this unlikely.

Waste and resources

From 1 January, businesses have had to separate glass, metal paper and plastic, after an amendment to the **Waste Framework Directive**, which seeks to improve the quality of recyclate. The Waste (England and Wales) (Amendment) Regulations 2012 revised those set in 2011 on the separate collection of waste. From this year, authorities must, where it is technically, environmentally and economically practicable, ensure waste passes through a recovery operation process to facilitate or improve recovery of material. Regulations 18 and 20 of the Waste Regulations (Northern Ireland) 2011 transpose the separation element of the directive into Northern Ireland law and obligate district councils and private waste collectors to also separately collect at least glass, metal, paper and plastic from 1 January 2015.

Transposition of the amended **Batteries and Accumulators and Waste Batteries and Accumulators Directive** (2013/56/EU) must be complete by 1 July 2015. A consultation on the draft regulations by the government and the Scottish and Welsh governments ended on 5 November. The amended Directive removes the exemption for button cells with mercury content of less than 2% by weight from 1 October 2015.

The standard and lower rates of **landfill tax** will increase to £82.60 per tonne and £2.60 per tonne respectively from 1 April 2015. The lower rate applies only to wastes listed in the Landfill Tax (Qualifying Material) Order 2011 (as amended) and the higher rate to all other waste that is taxable for landfill tax purposes and is chargeable at the standard rate. The government is introducing a loss-on-ignition testing regime on fines produced from the processing of waste at mechanical treatment plants from 1 April 2015. Only qualifying fines below a 10% threshold will be considered eligible for the lower rate, though there will be a 12-month transitional period where the threshold will be 15%.

In Scotland, **Landfill Tax Act 2014** is due to come into force on 1 April 2015. Scotland's finance minister has confirmed that the Scottish landfill tax rates will be the same as elsewhere in the UK. However, under the 2014 Act Scottish ministers have additional flexibility and can set extra tax bands and make specific exemptions. Indeed, the Holyrood government says its ministers intend to use powers in the legislation to enhance provision to those communities who live near a landfill site through the communities fund. Guidance on the Scottish landfill tax regime will be added in phases to Revenue Scotland's website, alongside tax calculators to assist in the calculation of the taxes. The government says this material will be available well before 1 April 2015.

The new commission proposed in December 2014 the withdrawal of plans to revise **EU waste targets**, which formed part of the previous administration's **circular economy** package (p.8). The EU parliament voted on whether to approve the proposals as *the environmentalist* went to press. The commission has promised to bring forward more ambitious plans in 2015.

Water and flood management

A consultation on proposals by Defra and the Welsh government to integrate **flood defence consents** into the environmental permitting regime (EPR) in England and Wales ends on 17 February (lexisurl.com/iema51971). The consultation focuses on the changes to the existing regulations, and proposed exemptions and exclusions from these. New legislation will apply from October 2015. At the same time, the Environment Agency is consulting until 3 March on changes to 13 sets of standard rules under the EPR governing watercourse activities, which are linked to the plans to integrate flood defence consents into the regime (lexisurl.com/iema51972).

The first **flood risk management plans** are due in December 2015. These come after consultations by the Environment Agency on draft plans for a number of river basin districts. These set out how the agency, councils, drainage authorities, highway managers and water companies will work together to manage flood risk. From 1 January 2015, business contributions to **flood and coastal erosion risk management** projects have been deductible for corporation tax and income tax purposes.

Consultation on reform of the **water abstraction** system in England and Wales concluded in March 2014. The environment department says key decisions on which to base new legislation will be made in 2015.

Here to serve

Lucie Ponting discovers that service solutions are driving sustainability in the office

Sustainability is high on the agenda for providers of IT and communications solutions. As well as greening their own operations and producing "eco-friendly" products, companies such as Dell, HP, Kyocera and Ricoh are increasingly combining their hardware, software and consulting services in a more holistic way to help offices operate more sustainably.

Most people are familiar with traditional tips for minimising the environmental impact of office IT systems. These include procuring "green-rated" equipment – such as ENERGY STAR, EPEAT and Blue Angel; raising employee awareness; enabling energy-saving features; setting double-side and and black and white printing as default; and recycling peripherals, such as ink and toner cartridges, as well as hardware.

This tried-and-tested advice continues to hold true but advances in server virtualisation and cloud computing have widened the scope for reducing energy consumption and carbon emissions, offering economies of scale in shared infrastructure, improved use of capacity and greater flexibility to acquire equipment on a pay-as-you-go basis. These and other technologies are also supporting wider moves to increase the sustainability of modern offices, encouraging more flexible ways of working, reducing travel and freeing up expensive workspace.

"The intersection between people and technology is getting closer," says Tracey Rawling Church, head of corporate social responsibility at Kyocera. "And some of the most interesting things going on in the past five years are around 'servitisation'." That is the shift to services that support or complement products. To help customers recognise and take full advantage of the potential benefits available from this change, vendors are now offering wide-ranging professional services and advice on how to harness the latest hardware and software technologies to reduce environmental impacts, cut costs and increase productivity.

"Cloud computing, software as a service and unified communications, which were still quite cutting-edge concepts five years ago, are now well embedded," explains Rawling Church. "To drive your technology, you don't need to have onsite servers that you power and maintain and air condition yourself. You can now outsource that to an organisation that does it in a collective way to get the best energy efficiency and economy of hardware."

Managing documents

In the printing and copying sector, the servitisation trend has resulted in a marked shift to managed document services (MDS). "These services help the business manage its entire document flow," explains James Deacon, head of corporate responsibility at Ricoh UK. "It's no longer just about how you get paper out of the machine but how you convert knowledge into information and then distribute, store and retrieve it. It's about information knowledge and management, with the device simply a means to an end."

Rawling Church believes MDS have "completely changed the emphasis in terms of defining and meeting customer needs". Historically, a customer with 500 old printers would decide they were too expensive to maintain and would buy 500 new ones. "They'd replace one-for-one, but with newer, shinier and faster printers," she says.

A more modern way of approaching this is to ask: why do you need 500 printers? What are the business processes you're trying to support? What documents come into the organisation, are processed and leave?

"We're looking at how we can support workflows in a way that reduces the need to rely on hard copy and gives better access to documents," Rawling Church explains. "And ultimately that might mean you need only 50 devices, supported by a suite of document management software that allows you to share information efficiently using paper only where absolutely necessary, and some of that data will be hosted on the cloud as well." This approach – as opposed to specifying 500 slightly more energy-efficient printers – has obvious potential to make a dramatic difference to an organisation's costs and environmental impact. In terms of paper consumption, Rawling Church says it is not unusual to be able to reduce it by 20-25%, while cutting the number of devices will reduce energy consumption and costs, as well as the embodied carbon.

HP estimates that its managed print services alone – which include imaging and printing devices, software,

supplies, and support and professional services – can produce energy savings of up to 80% and reductions in paper waste in the millions of pages (see panel, p.22).

"MDS is still a relatively new way of procuring printing and copying facilities for the office," acknowledges Rawling Church. And to some extent, it is being held back by the way in which organisations procure, particularly those in the public sector.

"If your system is geared around buying hardware, then making the shift to procuring services requires quite a lot of rethinking," she explains. In the private sector, procurement is more collaborative, but in the public the invitation to tender has often been issued for a specified number of devices of a certain speed. "That's what you have to bid [on] and no dialogue is permitted."

Even within the private sector, such a shift requires time and effort from the customer. "You need to devote time and energy to helping a third party understand your workflows," says Rawling Church, "and that takes commitment and more joined-up thinking than is required for old hardware procurement. It's not just about what the IT team wants to support or what's compatible with the network operating system; it's about all the information flows within the business."

User engagement

Alongside direct cost and environmental benefits, however, the processes involved in specifying an MDS can also produce indirect, and sometimes unexpected, benefits. One Kyocera client, for example, reduced the lead time on a particular type of customer interaction from about three weeks to a couple of days because they found a document was visiting several departments unnecessarily. "Over time, processes get convoluted and no one really notices because it happens incrementally," says Rawling Church. "Then, when you stand back, you realise you're doing something quite nonsensical and the customer experience is being compromised."

Another benefit of an MDS is that the key performance indicators are embedded. An integral element of any MDS is software to manage and monitor all the printing and copying activities from the network.

"You can set objectives for how many fewer pages are going to be printed, how much paper is going to be saved, how much less energy is going to be used and so on," says Rawling Church. All the relevant data is captured and reported back to the customer, who can immediately see whether it is meeting its targets and where there are "hotspots" that might be preventing targets being reached.

"You can get data on what's being printed or copied by department, by individual or on certain devices at certain times of the month," explains Rawling Church. "This helps provide an ongoing insight into your document processing to drive future improvements and change behaviours. User engagement is a really strong component of an MDS. People have to understand why they're being asked to change the way they work and have to be kept informed about achievements."

Mike Baddeley, head of business excellence at Ricoh UK, picks up this point and applies it more widely. "Technology is not the solution," he emphasises. "Technology is just an enabler – the solution is mindset change; once you've got awareness and a desire to do something differently then, when you give people technology, they'll find a way of using it as a tool."

Connected workplaces

Alongside its MDS, Ricoh is now offering a portfolio of other services, ranging from IT infrastructure and communication to workplace organisation and sustainability. Deacon and Baddeley believe the work Ricoh has done in-house (*the environmentalist*, September 2014) on changing the workspace and making it more sustainable has been critical to developing these new services and solutions.

"Rather than just our historical green offering to customers, which focused on print impact reduction, we're advising them on managing wider aspects of business impact, including energy consumption, travel and waste management," explains Deacon. "It's quite a diversification from where we were five or 10 years ago as a photocopier manufacturer; we're now talking about culture change and workspace management."

"We're offering externally some of the same types of data-led tools and assessments we used internally to transform our office," adds Baddeley. "When you go through it yourselves, the level of detail you find out and the lessons you learn are invaluable. From a credibility point of view, it's very important."

Often overlooked is the way offices can become greener by using technology to displace environmentally damaging behaviours such as travel, and MDS can play a key role in this. "If documents are digitised and people have access to these from wherever they're working, clients can be a little freer from the office base," explains Baddeley. "From a sustainability point of view that means we can reduce the impact on areas such as travel but also perhaps question whether we even need to be in an office space all the time."

Linked to this, other technological advances mean businesses now have access to better and more mobile equipment and facilities for remote meetings and interaction. "Unified communications mean that from my desk I can videoconference, teleconference and WebEx, so the temptation to travel to meetings is significantly reduced," says Rawling Church. All this can also be done from a laptop or mobile phone, as well as from the desktop.

For Ricoh, visual communications infrastructure and solutions are a growing business segment. "People need simple and easy ways to collaborate and communicate from wherever they are," explains Baddeley.

One of the firm's most popular innovations in this context is an interactive whiteboard. This is a 55-inch monitor that looks and behaves like a whiteboard, and allows colleagues to work together on a document such as a design or floor plan. When this is combined with videoconferencing, people can see each other, talk and pull up documents on which they can write and amend collaboratively and interactively from wherever they are.

Baddeley finds many organisations are not aware of the true impact and cost of staff travel, so Ricoh offers a tool for clients to calculate how many people attend their

80%

The scale of the potential energy savings from using managed print services

Print reduction in action

- When **Kyocera** worked with global insurer RSA, the firm's fleet of printers was reduced from about 3,000 units to just 282 Kyocera devices – a reduced ratio for devices to employees from 1:8 to 1:21. The changes produced a 25% reduction in monochrome printing per month, a 56% reduction in colour printing, as well as a 17% reduction in the number of pages printed as a result of double-sided printing.
- **Ricoh**'s managed document services (MDS) work for law firm Eversheds Ireland has made legal staff more productive by saving 1,000 working days previously spent on document administration, freeing up time to focus on more financially valuable, fee-earning work. The MDS is also pedicted to reduce paper consumption by one third, from 7.5 million to five million pages in the first year.
- **HP** reports that its managed print services have helped:
  - The Walt Disney Company to reduce its number of printing devices by 59% and energy consumption for printing by 18%, avoiding 185 tonnes of CO_2 equivalent emissions over three years.
  - 3M optimise its printing systems, saving more than $3 million.
  - Viacom slash energy use for printing by 62.5%.
  - Swiss Post to reduce 17,000 printers to 6,000, and move from 140 models to just six.

business and from where to build an accurate picture of all the costs, from working hours lost in travelling to business mileage and lunches. He recognises that people, by their nature, will always need to meet up physically at certain times, and a degree of travel is productive and necessary. "But perhaps after the first kick-off meeting on a project, subsequent ones could be held without everyone travelling around," he suggests.

Deacon believes more flexible and remote working will also ultimately help firms keep and hire the best talent. "If companies encourage a degree of working at home or at alternate locations, it widens the pool of potential employees," he suggests. "People who might have been excluded because of commuting distance are now more accessible and hireable."

Dell recently reported that in financial year (FY) 2014 its "Connected workplace" initiative, which encourages flexible working – including working from home, part-time working, variable working times and job sharing – helped it avoid an estimated 12 million kWh of energy and reduce greenhouse-gas emissions by 6,700 tonnes of CO_2 equivalent. The company also reinforces Deacon's point about talent hire, noting in its annual report that about 11% of people hired in FY14 were for positions in a remote location. "This allows us to hire the best person for each job, despite their physical location or ability to come into the office," it states.

End of life

While new systems and ways of working can enhance sustainability, Rawling Church urges organisations not to forget end-of-life equipment. "As long as you're using equipment and it's helping to improve your workflows and supporting your processes, that's great," she says, "but also think about how you dispose of it afterwards."

Many of the resources consumed in manufacturing high-value IT equipment are scarce or have good reuse value, either in terms of materials, full subassemblies or the whole device. For devices that are still functioning, an IT asset recovery company might be able to help find a second life, or local charities might need equipment that is not necessarily up-to-date.

"The worst possible outcome for a piece of IT equipment is that it's shredded in a massive reprocessing plant where they use a magnet to pick out metals," says Rawling Church. Because waste electrical and electronic equipment (WEEE) legislation is written around collection targets by weight – rather than the value of resources recovered – it does not support whole product reuse, parts reuse or high-value materials recovery very well, she explains. "Even though we design our products for disassembly, to make it easy to either repair them or recover materials at end of life. It's quite a challenge to make that happen."

The advantage of a managed services approach, says Rawling Church, is that hardware is typically leased as part of a contract, so at end of life it returns to the service provider, which refurbishes it, releases it to customers with different needs or harvests parts and recovers materials. This allows greater control over reuse and recycling.

Anywhere, anytime

"We too often tend to overlook the positive aspects of ICT," emphasises Rawling Church. "We talk a lot about the impacts of the technologies and the amount of energy they consume, but actually some of that is displacing other consumption and driving wider changes." Looking further, perhaps five years, into the future, she believes the completely virtual office is probably as unlikely a reality as the now almost mythical paperless office. What she does expect to see, however, is the "less paper" office and the "office anywhere", meaning that people will be properly supported to work anywhere they happen to be. "That way, you'll get better morale and better productivity," she says.

But people will still probably have a set base, she believes. "As long as you take care to ensure the office is as environmentally efficient as it can be, the idea of having to downsize to reduce the environmental impact of the building is not particularly helpful to staff. It's great to be able to work remotely but there are times it is appropriate and times when it isn't."

For his part, Baddeley believes that, within five to 10 years, traditional office space will have transformed into "a shop front for the organisation or brand" and somewhere to meet rather than somewhere people go to work all day, every day. "There will be more remote working, and the available collaborative tools will get far more sophisticated with the further development of augmented and virtual reality," he predicts.

Both Deacon and Baddeley see cultural inertia as the biggest single barrier to companies adopting more sustainable practices and innovative approaches to work. "Cost is less a barrier than it was a few years ago," says Deacon, "because it is now proven that significant cost savings go in tandem with green initiatives." Baddeley particularly stresses the need to change mindsets and get away from "we've always done it this way" attitudes.

"It's about getting people to embrace working more agilely or remotely, and ultimately more sustainably," he says, "because we are rapidly running out of resources and there are lots of areas where we need to make a step change in how we do things."

Despite some of the ongoing cultural barriers to change, however, there is strong evidence that customers are placing greater emphasis on sustainability, corporate responsibility and community investment when they specify ICT services and equipment. To try to quantify this, Ricoh has looked at the weightings given to these issues in tenders. On average the total weighting is now around 8%. "That's a significant uplift," says Deacon, "compared with it being almost an optional extra, and barely scoring, eight to 10 years ago."

Lucie Ponting is a health, safety and environment journalist.

6,700
tonnes of CO_2 equivalent emissions saved by Dell in 2013/14 through its "connected workplace" inititative

Trying som

Paul Suff learns how Sainsbury's operational carbon footprint by

20X20 is the name of the sustainability plan adopted in 2011 by Sainsbury's. It contains 20 commitments to achieve by 2020, including five related to the environment. One of those is to reduce absolute operational carbon emissions by 30% compared with 2005 levels. The retailer is increasingy confident of hitting its 2020 operational carbon target.

The keys to achieving it are more energy-efficient stores and an investment in technologies to lower their carbon footprint. Paul Crewe, head of sustainability, energy and engineering at Sainsbury's, told *the environmentalist* that electricity consumption across the retailer's stores was down 12.7% overall in December 2014 compared with 2007/08, and for those stores operating in both 2007 and 2014 by 24.1%.

Over the same period, sales area space has increased by 40%. "We are also now much less reliant on the grid," Crewe says, reflecting the fact that Sainsbury's has invested heavily in onsite ground source heat pumps, biomass boilers and solar photovoltaic panels, among other technologies.

Compelling story

Project Graphite, the retailer's carbon reduction programme, started in September 2011, and is a multi-million pound initiative to help secure the 30% target. In July 2014, Sainsbury's agreed a "green" loan with Lloyds Bank and the Dutch financial services business Rabobank, which the supermarket chain says is the first commercial loan of this type to be structured specifically to support environmental and sustainability initiatives in the retail sector. The £200 million deal will fund clean energy generation, energy efficiency and water saving projects across its portfolio of stores and properties.

The scale of the investment in efficiencies and low-carbon technologies is because energy is one of the retailer's largest costs, though that is not the only driver. Crewe explains that Sainsbury's uses just under 1% of all the electricity and gas consumed in the UK each year.

"Investing in measures to reduce energy consumption and carbon is obviously the right thing to do for the environment and the planet, but it has to make business sense. There has to be a real commercial benefit too," he insists. Crewe says the Sainsbury's board backs the carbon reduction programme, yet he won their support by keeping his message simple. "Sustainability captures a number of areas, and can be complex and difficult to communicate upwards," he says.

"Focusing wholly on the 'green sustainability benefits' was not the answer and it was key to bring to life the compelling commercial aspects of how a changing natural and regulatory environment will impact Sainsbury's, in terms of rising energy and water costs coupled with rising carbon taxes. If we had chosen to do nothing moving forward from 2011, there was a real possibility that our energy costs could triple over the next 10 years, and that's a scary scenario for a company with an energy bill the size of Sainsbury's."

Not that Crewe has a blank cheque to invest in just any low-carbon technology or project. The board has set challenging "hurdle rates" – that is the minimum return expected from an investment. "Graphite has to

LEDs reduce a store's energy lighting bill by around 59%

ething new

is aiming to reduce its absolute 30% by the end of the decade

Natural refrigeration can cut carbon emissions by a third

stand on its own two feet," Crewe says. "There has to be a compelling business case to invest in a particular technology and payback needs to be within the hurdle rate agreed. Everything we do has to make a return on investment. This is not about 'greenwash'.

"An investment also has to benefit the group as a whole and is not about building just a few super energy-efficient or 'green' stores. We can learn much from installing a technology at a new site, but we also want something that we can roll out across the Sainsbury's estate." Crewe's focus therefore is mainly on the retailer's existing outlets, which number more than 1,200 and range from small convenience stores to large supermarkets plus logistics depots and its store support centre head office sites too.

Chilling effects

Sainsbury's use of electricity accounts for about 53% of its carbon footprint, which in 2012/13 amounted to 1.44 million tonnes (scope 1 and 2). At 40%, refrigeration consumes the largest proportion of the annual energy used across Sainsbury's operations. Heating accounts for 20%, along with 20% for lighting and 20% combined between in-store bakeries and counters.

As the largest single source of energy consumption, refrigeration has been key to lowering the company's carbon footprint. The retailer is aiming to switch all of its stores to natural refrigeration by 2030. Crewe reports that 193 stores have already been converted, reducing carbon emissions by 33% and supporting energy efficiency aims. Its depots all converted from hydrofluorocarbon to natural refrigerants, including CO_2 and ammonia, in 2011.

The Sainsbury's Local in Haslucks Green, Solihull, which Crewe describes as the UK's greenest convenience store, was the first of its kind in the firm's estate to install a small-scale CO_2 refrigeration system. Sainsbury's is also piloting the use of fridge doors at some of its convenience stores to understand the impact on both the customer journey and energy.

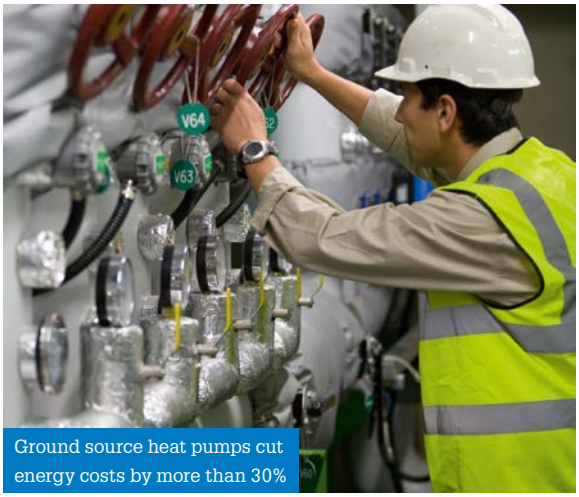
Separately, the food retailer has installed ground source heat pump technologies (GSHP) in about 20 stores so far. It enables heat produced by chillers to warm the store. A refrigeration system in retail is similar to domestic refrigerators. Inside it is cool and at the back there is a condenser that dispels the heat from the refrigeration process and is warm to the touch. The GSHP stores this heat in boreholes drilled around 200 metres into the ground and it is pumped back into the store when needed.

Sainsbury's is partnering with several specialist companies to implement the largest GSHP programme in the UK, with aspirations to roll out significant numbers across its estate. Crewe says the technology reduces energy consumption by more than 30%.

Power to the store

Solar photovoltaic (PV) arrays are an increasingly common sight at stores and depots operated by Sainsbury's. The retailer is the largest operator of rooftop solar PVs in Europe and is aiming to have installed more than 170,000 panels on its premises by

170,000 solar PV panels will generate 4MW of power



Ground source heat pumps cut energy costs by more than 30%

spring 2015. "We've installed 150,000 solar PV panels so far and over the next few months that number will rise to generate 4MW of power," says Crewe. "Supermarkets are ideal for PVs, as many have the equivalent of several football pitches on their roofs."

The sales areas in more than 200 stores have been converted wholly to LEDs. "They are one of the most important technologies we've invested in," Crewe says. Installing its first LED system at the outlet in Leek, Staffordshire, for example, has reduced the cost of energy for lighting by 59%. Crewe explains that Sainsbury's has used various LED light types, such as flat panels, linear, high bay and blade lighting, across its stores and depots and has worked with manufacturers to identify the right solutions for different properties.

Sainsbury's is also keen on power from anaerobic digestion (AD). Among UK retailers, it is the largest user of energy from the technology, purchasing enough AD energy to power 2,500 homes each year.

In 2011, Sainsbury's signed a rolling contract with waste company Biffa for the retailer's food waste to be sent to AD plants. One outcome is that, in 2014, Sainsbury's announced that its store in Cannock would be the first to run entirely on energy produced from food waste. The store is supplied with power via a unique private 1.5km cable from Biffa's Poplars site, which is the largest operational AD plant in the UK dealing with source segregated food waste. To Crewe, the Cannock site is an exemplar of the circular economy in action.

In addition, Sainsbury's invested in renewable enrgy company Tamar Energy in 2012, supporting its plans to develop a UK network of AD plants.

Sainsbury's has also installed biomass boilers in 94 of its stores, generating 54.8MW of thermal heat. Crewe concedes that, although biomass boilers have been a vital contributor to the organisation's carbon reduction plans, he is now focusing more on other technologies for renewable heat, including combined heat and power (CHP) and GSHP technologies.

The retailer has two triple-zero stores in its network, at Leicester and Weymouth. Both earn that tag because they emit zero carbon from all operational energy used, send zero waste to landfill and have zero impact on the water usage of the local catchment area. The 8,100 m² Leicester outlet relies on an onsite CHP system. In this case, the store uses natural gas from the grid and the equivalent biogas is imported into the national network each year from AD facilities across the UK.

The triple zero stores are being monitored closely with expectations that the use of this technology will be repeated across the estate as Sainsbury's secures more supplies of gas from operators of AD facilities.

Sainsbury's has also pioneered the purchase of energy directly from renewable suppliers. In 2008, it became the first company in the UK to agree such an arrangement, signing a 10-year deal to take all of the power generated by a 6MW wind farm near Glasgow. Now more than 15% of all power consumed in Sainsbury's is contracted through such sustainable power purchase agreements.

New thinking

Some of the technologies being rolled out at Sainsbury's have come as a result of the retailer's desire to embrace innovation. The GSHP system installed in 20 outlets is regarded by Sainsbury's as groundbreaking and Crewe hopes other retailers will install similar processes soon.

Other technologies are still being piloted. In 2013, Sainsbury's, in partnership with the logistics company Carrier Transcold, started a two-year trial of what the retailer described as the "world's first naturally refrigerated truck". The refrigeration trailer is free of HFCs and, if the trial is successful, Sainsbury's entire fleet of refrigeration lorries could be switched to the system, which would cut its annual carbon footprint by 10,000 tonnes. Also in 2013, the retailer trialled a solar PV canopy over the forecourt of a number of its stores, including the refuelling station at its Leicester outlet. It is expected to provide a quarter of the station's total annual energy requirements. Again, the technology may be rolled out across the estate if it proves successful.

Crewe is keen that suppliers of energy-efficiency equipment continue to innovate, energy storage technology being in his sights. "I'm looking for a way to generate energy from existing assets that enables us to store energy when it is cheapest and at cleanest to use later," says Crewe. He also wants mini GSHP systems to come to the market. "GSHP systems are only viable in stores with at least 4,650m² of space, so we need mini-versions for our smaller stores."

Crewe has this message for suppliers: "We need more new ideas and innovative technologies to enable us to continue to reduce our energy and carbon consumption. We're always willing to try new commercially viable technologies to see if they can help us achieve our stretching 20X20 targets."

Closing the performance gap

A new development in Brighton has shown that sustainable buildings can work. **Ben Gill** reports

The gap between what is promised on paper at design stage and what a new structure actually achieves once it is built and its occupants have moved in is an issue that poses difficulties for those promoting low-carbon buildings. One Brighton, a 172-apartment complex in the seaside city, aimed to set a new standard in sustainability. Has it achieved that objective?

In the four years since the first residents moved in, the complex's performance has been subjected to intense scrutiny, including an in-depth analysis of its lifecycle carbon emissions. The examination has revealed a mixed but broadly positive picture, with plenty of lessons to apply to other building projects and to the future management of One Brighton itself.

Building on BedZed

The complex comprises two blocks – one 12-storey and the other eight-storey. It was developed by Crest Nicholson and BioRegional Quintain, and was the follow-up to the sustainability charity's world-renowned 100-home Beddington Zero Energy Development (BedZED) in Sutton, south London. The "eco-village", which was finished in 2002, remains BioRegional's head office.

The charity wanted to use the lessons learned from BedZED to work with leading commercial developers and build large-scale sustainable housing projects. Its aim is to bring "one planet" lifestyles into the mainstream. One Brighton returned a profit despite going on sale during the depths of the recession and provides dozens of affordable new homes in one of the most expensive UK housing markets outside London. Just under one-third of its apartments were allocated for shared equity or social housing. A further 11% were built as low-cost "eco-studios" offering people a first rung on the housing ladder.

Among One Brighton's sustainability features are roof terrace allotments; a living roof planted with cliff-top vegetation; a community composter; a 9.6kW peak output array of photovoltaic (PV) panels; a community centre; and a sustainable food café, which began life as the construction site canteen. A communal biomass boiler provides heating and hot water. Non-PV electricity is purchased through a green tariff backed by Ofgem's certificate of renewable energy guarantee of origin. One Brighton, which is next to the main railway station and many bus routes, is virtually car free; its few parking spaces are available for disabled users and car club vehicles only.

The building, designed by architects Feilden Clegg Bradley Studios and built by Denne under a design-and-build contract, was engineered to have low embodied carbon with a "green concrete" frame. The cement comprised 50% ground granulated blast furnace slag and all of the aggregates used were from demolition waste. The exterior walls were built of clay blocks fired at low temperatures, which further reduced embodied carbon.

One planet communities

The 10 principles

Health and happiness
Encouraging active, sociable, meaningful lives to promote good health and wellbeing

Equity and local economy
Creating bioregional economies that support equity and diverse local employment and international fair trade

Culture and community
Respecting and reviving local identity, wisdom and culture; encouraging the involvement of people in shaping their community and creating a new culture of sustainability

Land use and wildlife
Protecting and restoring biodiversity, and creating new natural habitats through good land use and integration into the built environment

Sustainable water
Using water efficiently in buildings, farming and manufacturing. Designing to avoid local issues, such as flooding, drought and water course pollution

Local and sustainable food
Supporting sustainable and humane farming, promoting access to healthy, low impact, local, seasonal and organic diets and reducing food waste

Sustainable materials
Using sustainable and healthy products, such as those with low embodied energy, sourced locally, made from renewable or waste resources

Sustainable transport
Reducing the need to travel, and encouraging low- and zero-carbon modes of transport to reduce emissions

Zero waste
Reducing waste, reusing where possible, and ultimately sending zero waste to landfill

Zero carbon
Making buildings energy-efficient and delivering all energy with renewable technologies

These blocks had a honeycomb internal structure, providing a high standard of insulation. They were covered by a thick layer of wood fibre and finished with a layer of weatherproof mineral render and softwood cladding from an FSC-certified source. Triple-glazed windows throughout maintain the high levels of insulation.

Lifecycle analysis

The lifecycle analysis (LCA) carried out by eTool, an Australia-based software house, estimated greenhouse-gas (GHG) emissions for the entire operational life of the materials used in One Brighton plus those from the construction work and from final demolition a century from now. For purposes of comparison, eTool also modelled the GHG emissions embodied within the average new-build UK home. The estimate of the operational emissions from One Brighton was based on the development's measured energy consumption.

The LCA was an ambitious undertaking, incorporating GHG emission estimates for more than 600 building components, from a variety of raw materials. Key finding are:

- One Brighton's lifetime GHG emissions are 60% lower than those of the average UK home. In other homes, the total lifecycle emissions are dominated by operational emissions, which occur while the house is occupied. In One Brighton, the embodied carbon emitted in constructing the building and making all the materials that go into it comprises a much larger part of the total lifecycle emissions – even though these embodied emissions are lower than in conventional housing.
- The complex's current emissions performance is not yet achieving design targets. The gap is mainly due to the intermittent availability of the biomass boiler. However, the boiler is not running as much as planned because the engineers oversized the spec and the water demand is lower than was forecast. So far, the boiler is meeting abouty 30% of the building's heat and hot water demand, with the remainder supplied by natural gas. If BioRegional achieves its target of meeting 90% of the building's heat demand from biomass, One Brighton's overall lifecycle carbon emissions would be 78% lower than that of the average UK home. This would be in line with achieving the (near) zero carbon target for operational emissions by 2020.
- The building's annual operational carbon emissions were found to be 67% below the UK housing stock average. But they would be 89% below if BioRegional can hit its 90% heating and hot water target from the biomass boiler.

"The LCA shows the very low-carbon fundamentals of the building are sound," says Pooran Desai, BioRegional's co-founder, who led the organisation's involvement in One Brighton. "But we are working to greatly improve performance from the biomass boiler, to reduce operational emissions significantly and take us to our 2020 target."

Community action

The LCA was part of a wider review of One Brighton's sustainability performance. The building is one of a growing international family of "one planet" communities, including the Sonoma Mountain village, near San Francisco, and the Grow community in Bainbridge Island, near Seattle. One planet communities aim to adhere to an action plan based on 10 sustainability principles (see panel, p.28).

The most evident benefit for One Brighton residents is that their heating bills are much lower than average. The building's water-saving features appear to work too, as water consumption is considerably lower than the UK mean. A strong sustainability-minded community with close links between residents has yet to emerge. Many of the units that were sold were bought to let, and are being rented by students, who tend to be fairly transient.

But the positives strongly outweigh this negative. One Brighton has shown that a smart, modern and mainstream housing development can be far more sustainable than the norm, and profitable too. The few apartments that have been sold on since it was completed have attracted relatively high prices.

Ben Gill, MIEMA, CEnv, is technical manager, One Planet Communities, at BioRegional.

Grade A information

Jim Kandler and **Aidan Turnbull** believe that sharing data will greatly improve the quality of RoHS and REACH declarations

Collecting substance compliance declarations for regulations governing the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS) and the EU chemicals legislation REACH is a difficult task for original equipment manufacturers (OEMs). But these need to be done to prove compliance with the RoHS Directive (2011/65/EU) or to report a substance of very high concern under the EU REACH Regulation (1907/2006).

Most OEMs and parts manufacturers will choose to collect the declarations for each part from the suppliers. However, there are many issues that occur during collection, each of which can stall or even halt efforts. It is important that OEMs acknowledge this, and are aware of what they can do to compensate for these difficulties.

Not rocket science

Difficult it may be, but collecting declarations is not rocket science. And with effective and efficient processes it can be successful. Many issues are commonly encountered, both internally and externally. Internal problems faced by those collecting the data may include:

- limited resources;
- out-of-date supplier or part data;
- ineffective tools; and
- tools that do not connect to clean data sources.

The most common external issues are:

- untrained personnel in the supply chain;
- limited resources in supplier companies;
- poor supplier policies;
- suppliers' priorities failing to align with the needs of the OEM;
- the need for action by its supply chain to enable the main supplier to correctly declare;
- frequently changing regulation;
- multiple declaration types;
- multiple interpretations of regulations; and
- staff involved in delivering declarations have different languages, geography, experience, education, motivation, and interests.

Each of these issues can cause processing problems that would cripple declaration efforts if they are not addressed promptly and effectively. The following examples illustrate where control of supplier delivery might be lost:

- What happens when the supplier does not respond to requests for declarations?
- Are suppliers allowed to propose a later delivery of the data for the declarations?
- Are requests for corrections by the suppliers followed up to confirm delivery of corrected declarations?
- Are declarations that indicate substances above the regulatory thresholds acted on?

Lack of response

It is not unusual for a request for declarations to be ignored by companies supplying parts. If there has been no declaration delivered or no reply after several requests, further attempts are unlikely to generate the information. In such circumstances supplier compliance needs to be transferred to another person or team outside the usual declaration collection team. They will need to seek help from further up the organisation until the declaration is provided or the business switches to an alternative supplier or part.

There are several reasons why a supplier might not respond to a request. The contact might have changed; the supplier might not know the part number; they are unaware of RoHS or REACH; the part is obsolete; a purchase order is required to have the part analysed; or the information is available on the supplier's website.

Each of these results will necessitate a different action or response from the OEM. But the objective is to get the declaration or move the internal processes along until it is obtained. Where the part is not known or is obsolete, the engineering department should be asked whether it can supply an alternative.

Good metrics

When declarations are not forthcoming it is important that progress is monitored. Without indicators of progress it is easy for the declarations team to expend resources but not make progress or improvements. Metrics need to be tracked and monitored regularly. Suitable metrics to use on a weekly or monthly basis are:

- cost-to-collect declarations;
- number of declarations collected;
- number of parts added;
- proportion of required declarations collected; and
- average cycle time (in days).

Knowing these metrics, you can determine whether the declarations team will meet the needs of the company or programmes within budget or by the delivery date. It will also enable the team to determine whether changes to processes are having the desired improvements. Moreover, the metrics will allow the company to benchmark its efforts against others.

If the team is asked by management to investigate the purchase of declarations, knowing their firm's own costs will enable it to decide whether the purchases will reduce overall declaration collection costs or be used only to meet the deadline for declarations.

Tools for the job

Most tools do little to facilitate collecting declarations, though they are effective at archiving and qualifying loaded declarations. BOMcheck is different. It is an industry-led, centralised online database for suppliers and manufacturers worldwide to share declarations on conflict minerals and standardised, high-quality materials declarations for millions of parts.

BOMcheck is a sharing tool that enables a declaration from one supplier to be used by several OEMs. This sharing concept adds value to the collection of declarations similar to the internet and mobile phones experience: the more that people use them the more valuable they become to the users. The same concept applies to BOMcheck. The more OEMs that use it the more it will add value for suppliers and vice versa.

BOMcheck includes supplier training so that they understand what OEMs are asking for, so reducing new user confusion and errors. Updates to regulations are issued within three weeks of new ones or amendments to existing ones.

The tool will check and verify the declaration generated by the suppliers before releasing it for distribution, so reducing the time spent sending it to and fro for correction. There are functions that enable declaration teams to request declarations from member suppliers and track responses.

There is also a programming application built in that can interface with an OEM's own internal systems. The list of suppliers is maintained by suppliers themselves, helping to minimise the effort required to identify and contact companies throughout an OEM's supply chain.

Jim Kandler is managing director at RoHS Ready (rohs@rohsready.org) and **Aidan Turnbull** is director at BOMcheck.net (aturnbull@environcorp.com).

Kicking the plastic bucket

Whether waste plastic is reused depends on the choices made once it is discarded. **Joseph Kennedy** investigates

This article is not as morbid as the headline suggests; it's just that life and death are so intimately linked that mentions of both are of a certain necessity. Upon death, our body might find itself six feet below ground, contributing to the earth as the earth had contributed to it during life. For plastic materials, it is just not the same. What plastic materials can offer in life, they can also offer in death, and then in life again and again and so on. What some humans might call reincarnation, for plastics read recycling or reuse. But, for waste plastic to be used again and again requires the right decisions to be made at every stage of its journey from being discarded to renewal.

Out with the old

Tom is a construction worker. The site on which he is working has just had a delivery of new, higher-quality equipment. His paint-stained, concrete-splattered plastic bucket is now deemed redundant. Tom throws it in the skip, starting a chain of events. At the end of the day, a hire company collects the full skips. The one containing the discarded bucket arrives at the recycling centre, where it can travel in several directions. Bear in mind that the bucket is a rigid plastic, most commonly made out of PP (number 5) or HDPE (number 2) and is fully recyclable. At this stage, there are three main choices:

- the bucket is sent to landfill with other waste;
- the skip's contents are sent down a sorting line, with workers pulling out the materials they are told to. There are new technologies that allow this procedure to be done by machines and, in some centres, there may even be "artificially intelligent" waste sorting; or
- the bucket is sent for mechanical biological treatment (MBT), and becomes either refuse-derived fuel or solid-recovered fuel (SRF). In layman's terms, it is incinerated.

Lee Bell, senior researcher at the National Toxics network in Australia, puts the three choices into perspective: "Recycling of plastic waste is becoming a critical issue in a carbon-constrained economy where there are strong indications that we have reached peak oil. As a petrochemical derivative, the fate of plastics is inextricably tied to increasing oil scarcity and growing oil demand. Plastics will become increasingly expensive to produce. Recycling them makes both economic and environmental sense.

"Landfilling plastics is an enormous waste of a resource and leads to groundwater pollution as acidic leachate extracts toxic chemicals from the plastic matrix. Incineration of plastic waste is far worse because it destroys the embedded energy of the plastic item [the energy used to extract, refine, produce and transport the petrochemical-based plastic] and converts many elements of the plastic, such as chlorine and flame retardants, into toxic air emissions and toxic ash for a paltry amount of calorific energy. Recycling plastic such as PET [polyethylene terephthalate] can save 26 times more energy as the calorific energy obtained by burning the plastic in a waste-to-energy incinerator."

Quality control

In this case the discarded bucket has gone down the route of recycling, and has been picked out on the sorting line. Whether it successfully navigates the next stage of its journey to be turned into a new product depends on the quality control measures in place at the recycling site. The operations manager of a waste-recycling centre will be tasked with informing, educating and overseeing the sorting process. Through his or her guidance, the correct materials must not only be pulled out, but also separated correctly into the distinct types. In terms of plastic, there are seven categories.

If the plastic used to make the bucket is correctly identified it will be squashed and baled with similar material to compact it into a cube. This is fastened tightly with baling wire so that it is at maximum efficiency for transport. The bales will be stored until there is enough to warrant a collection. Scrap plastic dealers buy these bales and move them on to the next step. There are a few decisions that need to be made at this stage:

- Take the material to a UK storage site, where it can be collected in greater quantity.
- Send it to wash plants in central Europe. This is the preferred method.
- Load it immediately on to a container and ship it overseas, usually to China or south-east Asia.

Granulating and washing

At EU sorting plants the material will enter another sorting process, this one mechanical. Each polymer type will be segregated and granulated so that it is turned into little granules or pellets. These are then put through a washing process, in which solvents and liquids clean the plastic and filter off any sediment or alien material. Often, granulating and washing are done by separate businesses. The old construction bucket is now part of a barrel of granulated plastic, which could be made up of anything from underground piping to wire cabling or kitchen aprons. This granulated polymer will be sold to manufacturing companies to make a new product.

Most of these remanufacturing plants are found in China and south-east Asia, although Germany has a sizeable remanufacturing market. A product remanufactured in China is likely to be shipped to the West, to be sold as something new.

Changing landscape

China is revolutionising its waste management processes, which, as its nascent closed-loop economy matures, will reduce demand for European plastics. When China begins collecting its own recyclable waste on a national scale, and starts to remanufacture at all stages, demand for waste from the West, particularly poor-quality recyclate, will decline. That could result in more of the West's waste plastic going to incineration. China is already scaling back demand. In 2013, the Chinese authorities introduced their so-called "green fencing" policy, restricting the import of poor quality scrap plastic.

To ensure the "plastic bucket" does not end up in landfill or is incinerated, waste producers are advised to find out what happens to their waste materials after collection. Also, Europe now needs to improve its own capacity to reuse waste materials and not let valuable resources be lost.

Joseph Kennedy is marketing executive at plasticexpert UK.

Westminster launch for IEMA campaign to bridge the sustainability skills gap


Joan Walley MP

IEMA chief executive Tim Balcon

IEMA brought together 200 business leaders and politicians at the House of Commons in December to establish a course of action to equip the UK's workforce with environment and sustainability skills.

With support from Joan Walley MP, chair of the environmental audit committee, and sponsors Willmott Dixon, the event was held as part of IEMA's campaign, "Preparing for the perfect storm", to highlight and address the environment and sustainability skills gap.

"IEMA research has found that only 13% of organisations are fully confident that they have the skills to successfully compete in a sustainable economy, the system which provides the only viable future for business. This skills gap is limiting businesses' and organisations' ability to capitalise on the significant economic opportunities offered by more sustainable actions," said IEMA chief executive Tim Balcon.

At the event, IEMA launched its four-point action plan – taken from the recently published position statement, *Skills for a sustainable economy* – to ensure the right skills are available and are deployed across the economy. The four actions are:

- placing sustainability at the heart of business strategy;
- ensuring sustainability skills are at the centre of all organisations;
- mainstreaming sustainability skills through training delivered by education and training providers; and
- embedding sustainability across the economy through collaborative action, energised by a government commitment to a sustainability skills strategy.

Opening the event, Walley congratulated IEMA on the aims of the campaign and for encouraging cross-economy collaboration to upskill the UK's workforce. "This is about guiding the compass, navigating the green skills agenda," she said, highlighting that the skills issues facing the UK are complex and require distinct leadership.

Balcon added: "There is no one business out there that has all the answers. The only way to tackle this is to collaborate. We're in this together."

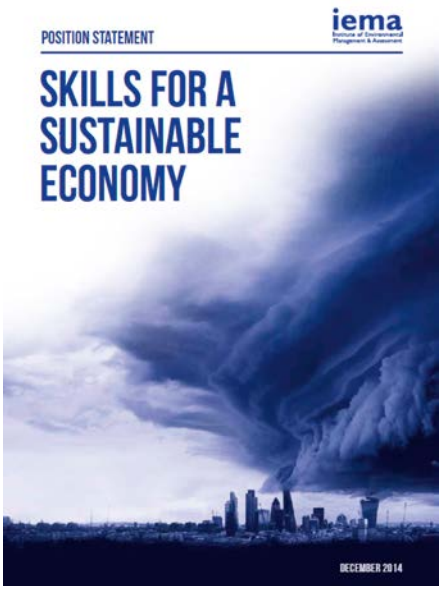
Rob Lambe, Willmott Dixon's managing director of rethinking and energy services, then gave an organisational response to the skills deficit. He explained the challenges the construction industry in particular is facing across its workforce and supply chain.

Delegates included representatives of the campaign's supporters, including BAE Systems, EY, the NUS, Saint Gobain, Rolls-Royce, Wiles Greenworld and WSP. IEMA is seeking to extend the list of supporters into 2015 to involve more industries and sectors in the action plan.

As a result of the event, several more organisations are signing up to become supporters. If you are interested in your organisation becoming one, e-mail skills@iema.net or visit iema.net/skills-campaign for further details.

The *Skills for a sustainable economy* position statement and the supporting *Preparing for the perfect storm* report can be downloaded at iema.net/skills-campaign.

Willmott Dixon's Rob Lambe



All jobs greener courses receive certification

IEMA's training arm, iemaSTS, is getting 2015 off to a strong start by relaunching the all jobs greener suite of courses as certified training.

The relaunch recognises that globally, a new business model is emerging in which leading organisations are considering environmental impacts across the entire value chain of the organisation. Businesses are also changing the way products and materials are designed, manufactured, procured, distributed and sold. There are many reasons for this: engagement with shareholders and investors; increasing vulnerability in the availability of raw materials; the rising cost of energy; and concerns over the security of the supply.

To successfully meet these challenges, there is growing recognition in businesses that they cannot rely solely on the skills of environment and sustainability professionals, but that everyone in the organisation needs to understand the contributions of their role and how they can provide support in these areas, and help the organisation achieve its objectives.

To support this, iemaSTS has relaunched and certified the three all jobs greener courses. Introduced originally in 2013, these courses provide essential underpinning knowledge of environment and sustainability issues in a business context, and its practical application to all job roles in a company.

Through these courses, the entire workforce can contribute to the improved environment and sustainability performance of their organisation to deliver real business benefits.

The three courses are:

- **Working with environmental sustainability** – this one-day course is suited for any job role in an organisation, providing a practical introduction to the environment and sustainability so delegates are equipped with the knowledge, understanding and motivation to make a positive difference.
- **Managing with environmental sustainability** – this two-day course is aimed at supporting managers and supervisors in understanding the strategic and operational implications environment and sustainability has on them, their team, department and the wider organisation.
- **Leading with environmental sustainability** – this half-day session challenges leaders in organisations, including senior executives, board members and investors, to formulate a strategic understanding of the risks and opportunities presented by a changing environment on their organisation's ability to do business, as well as help them to understand their personal obligations to ensure the business remains compliant.

To discover more about these courses and to find details of providers and 2015 dates, visit iemasts.com.

Policy update

The year ahead

This year offers the prospect of some real progress on international climate policy and with IEMA members engaged in supporting many key developments. This month the WRI is running free workshops in London, Washington, Brussels and Taipei to launch the Greenhouse Gas protocol scope 2 guidance. IEMA and members participated in this four-year international collaboration to harmonise methods for reporting firms' greenhouse-gas emissions from purchased electricity, steam, heat and cooling. A key focus has been the way different way countries measure grid electricity from renewables. For example, the UK guidance advocates using "grid average" emissions, whereas, in the US, contractual emissions factors are employed, in many cases allowing zero emission reporting. The GHGP guidance uses a dual reporting approach, enabling transparency in reported footprints and accounting methods. Some concerns remain around how the guidance will feed into associated communications and claims, however.

Throughout 2015, the adaptation sub-committee (ASC) of the Committee on Climate Change will be working on the next UK risk assessment. In June, the ASC will report to parliament on progress on implementing the national adaptation programme. This includes an IEMA commitment to provide a web portal, new guidance on the adaptation business case and climate adaptation guidance in environmental impact assessments. At the end of the year, the UNFCCC will hold its COP meeting in Paris with the aim of agreeing a new global climate deal.

IEMA and GACSO members are engaged in all of these and other developments, with some now starting to share their work in the members' area of the Institute's climate change and energy web portal. Please visit the site and help build a resource and showcase the profession.

Nick Blyth is policy and engagement lead at IEMA; @nblythiema.

iema
Institute of Environmental Management & Assessment

People like Michael say:

I've realised that the only truly effective way to change entrenched behaviour within a big business is to change minds first. So I started by introducing a graduate programme which included a compulsory environment module.

Once I'd 'converted' some key people I was able to set up a compliance audit programme, reduce waste to landfill by 68%, cut paper purchasing by 13% and save £27,000 a year on water charges.

But it was receiving an environmental award from the local council that was the icing on the cake. That award generated a sense of pride in what we're doing across the business and has been fantastic for building the team spirit.

It's great to have something so positive to shout about.

Join IEMA at www.iema.net/mystory and lead change.

More successful IEMA members

IEMA would like to congratulate the following individuals on recently upgrading their membership as part of their ongoing commitment to learning and professional development.

Associate

Abdullah Al-Ghonaim
Alexis Alia, Voith Industrial Services
Chris Barnes, PPG Industries
Danny Berridge, Wilkinson Distribution Centre
Melinda Bhartti
Paul Billington, Electric Motive Services International
Blair Birrell
Jason Booth
Ian Bould
Ronald Boyd, Shell
Georgina Brooks
Matthew Bullock
Kevin Cameron, Bristol and Bath Science Park
Lee Cartwright
James Caithness
Sarah Clifford
Richard Coles
Ana Conde De Vega
Chris Cotterill
Tim Champney
Norman Crankshaw, Hemsley Fraser Group
Lee Dargue, Invotec Circuits Tamworth
Tucker Diego
Neil Donaldson
Sarah Dowling, Edrington Distillers
Paul Edmonds
Graham Evans
Christian Everitt
Josephine Fitzgibbon, Crest Nicholson
Aoibhin Flanagan
Tim Forman
Bryony Fowler
Harry Fraser, Colas
Peter Furlong
Steven Goddard
Naoise Glover, Colas Rail UK
Mark Greenway, Moog Controls
David Hall
Thomas Hart, Tata Steel
James Hartley
Scott Harvey
Emily Hawkings
Douglas Haynes
Chris Heybourne
Seamus Higgins, Carbon Credentials Energy Services
Joanne Higginson, Santia Consulting
Lauren Hodgson, International Tubular Services
David Holden, Northern Insulation Contractors LLP
Mike Hooper, Gariff Construction
Sally Ann Horridge-Smith
Emma Houston
Stephen Hunter
Abdullah Hurmat, Abade/Usaid
Christopher Jackson
Rob James
Diana Kelly
Claire Jenkins, Urenco
Elizabeth Jenks, Transport for London
Dave Jones
Joanna Jones, Harkland Group
Kylie Jones, HS2
Lina Kerpauskaite
Aysha Khan, Britvic Soft Drinks
David King
Jamie-Ross Landeg
Peter Lewis
Stephen Lloyd
Cheryl Lockyer
Richard Lowrie
Kath Mackinnon
Maybeth McMillan, Gates Power Transmission
Jillian McRury
Jonathan Merrills, Highways Agency
Bernadette Middleton, Arup
Asha Mistry
Paul Nixon, Ofgem
Ashley O'Toole
Alan Page
Nick Pilcher, Frankham Consultancy Group
Jill Platten, H J Banks & Co
Rasha Saffarini, Ramboll Middle East
Sarah Saha, Jumeirah
Rebecca Sanderson, VSD
Neil Schofield, Tata Steel
Jack Scott, EC Harris
Trevor Senior
Molly Smith
Vince Smith
Antony Snowden, MoD
Kimberley Ellis Stephenson
Steven Stroud
Charles Reed, NSK Europe
Andrew Rippington
Keith Robertson
Steve Rogers
Trevor Roots, Britannia Refined Metals
David Rushton, Man Diesel & Turbo UK
Andrew Thompson
Sushil Thyagarajan, Unilever UK
Rachel Tsourous, Airbus
Daniel Traynor
Alice Turner
Laura Vickery, Jaguar Land Rover
David Wadsworth
Tom Watmough
Tracey Watson, Amey
Caroline Ward
Louise Webster
Janette Wilkinson, Federal-Mogul Motorparts
Phil Wilkinson, Federal-Mogul Vehicle Component
Katherine Williams
Robert Woollen, DHL Express (UK)
Jane Wright, Olive Tree Cottage
Zoe Young

Full and Chartered environmentalist

Simon Chubb, Anglia Ruskin University
Rachel Decelis, En-Sure
Rachel Evans, G&E
Rebecca Hart
Richard Sobey, URS
Caroline Toplis, URS
Julian Whittle, Laing O'Rourke
Lorraine Young, Network Rail

Chartered environmentalist

Karen Beckwith, British Nuclear Group

Fellow

Jae Mather, HW Fisher

Upgrading your membership is key to you gaining professional recognition. Learn more at iema.net/membership-upgrade or call +44 (0)1522 540069.

IEMA events

Date	Region/Time	Topic
4 Feb	South East	Environment and sustainability employability
Webinars		
27–29 Jan	12:30pm	Environment and sustainability offshore 2015 – three-day webinar series: 27 Jan: The role of public bodies 28 Jan: Business experiences – operating and developing in UK waters 29 Jan: Quality Mark experiences – offshore EIA case studies

EIA roundup

Government confirms EIA exemption

Developments subject to an environmental impact assessment (EIA) or likely to have a significant effect on qualifying European sites or designed to manage flood risk will be exempt under plans by the government for a "deemed discharge" on some planning conditions (p.14). The government will also exempt conditions relating to the investigation and remediation of contaminated land and sites of special scientific interest when it introduces secondary legislation later this year. New guidance on development consent orders (DCO) is also being developed to help determine whether a change is more or less likely to be material. The government says the wording of the guidance in relation to updates to the environmental statement will take into account comments made on the need to refer to new significant environmental effects.

EIA correspondence for HS2

The Environmental Audit Committee has published information it received on the compliance of the HS2 hybrid Bill process with the EU EIA Directive and the Aarhus convention. In a letter dated 14 October 2014, committee chair Joan Walley asked transport minister Robert Goodwill whether the government had plans to produce a supplementary environmental statement (SES) when additional analysis on the environmental impacts of the planned high-speed rail link is produced; and whether the convention applied to the hybrid Bill.

In his response, Goodwill confirmed that a new SES will be prepared to account for any new information provided by the further ecological surveys, which were commissioned the Bill was published in November 2013. He also said that the hybrid Bill process complied with the Aarhus convention.

EU helps fund assessment

The Aberdeen Harbour Board (AHB) has received funding from the European commission to develop an EIA and modelling for its planned expansion into Nigg Bay. The AHB has received £600,000 – half of what is required – to model wave climate in the proposed port. The EIA will include individual studies into noise mapping, air quality, fish and bird life, and water sediment/quality. The modelling will look into wave analysis, climate and mooring conditions. Both reports are due for completion in 2015.

EIA practice update with IEMA's Josh Fothergill

IEMA is about to launch its **impact assessment network**. It will provide members with greater opportunity to engage with, influence and contribute to activity across impact assessment, beyond EIA, while QMark registrants will benefit by demonstrating delivery of their commitment to improving impact assessment practice beyond the current EIA articles, webinars and case studies. It will also provide more opportunities to improve practice through, for example, enhanced opportunities to collaborate with developers, planners, government representatives, contractors and lawyers among others.

IEMA's 2014 memorandum of understanding with the **Hong Kong Institute of EIA** will begin to pay dividends in 2015 with events and joint activities scheduled through the year. IEMA and HKI EIA are hosting a series of webinars to share practice, including experiences of undertaking the EIA on Hong Kong's major runway and high-speed rail projects. EIA practitioners from Hong Kong will visit London in April. An events programme is being developed with the south-east regional steering group and QMark registrants to ensure effective sharing and learning.

IEMA members and QMark registrants will continue to assist with the Scottish government's project to streamline assessments as part of the **reform of planning in Scotland**. More information is available at lexisurl.com/iema53932. To monitor progress go to lexisurl.com/iema53933.

Forthcoming **EIA webinars**:

- 29 January – Offshore case studies.
- 26 February – Digital EIA.
- 26 March – GLVIA3: two years on.

EIA research

Value of independent follow-up

An article in the January 2015 issue of the *Environmental Impact Assessment Review* examines the value of independent EIA follow-up reviewers. The researchers, from the School of Geo- and Spatial Sciences at the North-West University in South Africa, found independent verifiers add most value when, for example, they are involved with: screening EIA requirements of new projects; allocation of financial and human resources; checking legal compliance; influencing implementation; stakeholder engagement; and integration with self-responsibility programmes, such as environmental management systems.
lexisurl.com/iema51037

Marine energy projects

EIAs to assess the ecological consequences of offshore and marine renewable energy installations is severely hampered because the legislation in place fails to ensure that the significance of impacts and cumulative effects are properly assessed, according to research in *Frontiers in Marine Science*. The study suggests that instead of trying to ascertain which particular developments are responsible for further polluting an already heavily degraded marine environment, emphasis should be placed on better strategic assessment.
lexisurl.com/iema51047

Newt surveys and EIA

Experts at Environ warn in a new Quality Mark paper available at environmentalistonline.com about the potential risks from following the published great crested newt habitat suitability guidelines when carrying out an ecological site assessment for planning purposes or to inform an EIA. Specifically, they outline how surveys to find Great-crested newts could be mistakenly scoped out of further assessment at sites where the species is under-recorded or is located outside its published optimal range and habitat.
environmentalistonline.com/newts

Simon Smith

Environmental adviser Scotland, QinetiQ

Career file

Qualifications:
BSc, MIEMA, CEnv

Career history:
2010 to now: environmental adviser Scotland, QinetiQ
2009–2010: compliance manager, QinetiQ
2001–2009: area officer, Scottish Natural Heritage
1999–2001: manager, English Nature
1994–1999: warden, Skomer Island, Wildlife Trust of West Wales
1988–1994: various short-term contracts on nature reserves for RSPB, Scottish Natural Heritage, Nature Conservancy Council, National Trust; voluntary work in the Seychelles and Costa Rica
1982–1985: John Lewis Partnership
1980–1982: Barclays Bank

Why did you become an environment/sustainability professional? I recall stumbling across a copy of EF Schumacher's *Small is beautiful* when I was about 10 and being captivated by the cover picture of the Earth in a broken egg so I think I was naturally drawn to environmental concerns. Attending a Jonathon Porritt talk in 1984 also had an impact. I was working in John Lewis at the time but a year later applied for an environmental degree course as a mature student.

What was your first environment/sustainability job? My first paid work was a six-month contract on a beach nature reserve in mid-Wales.

How did you get your first role? I used to grab every chance to get voluntary work experience. This was usually a few days a month, but after graduating I had a six-month intensive block of volunteering in south Cumbria. This helped me get my first job but sometimes it's the odd things that make the difference. As well as environmental experience the centre wanted someone who could run the gift shop and it just happened that my first jobs after school were working in a bank and a shop.

How did you progress your environment/sustainability career? Although my career path might look structured and planned, it's really been a case of seeking and taking advantage of opportunities as they arise and where they also fit into my personal life at the time.

What does your current role involve? In Scotland, QinetiQ manages several sites on behalf of the MoD. Here, the company tests and evaluates military equipment, so much of my work is geared around reducing and mitigating impacts from, say, weapons testing and associated site facilities management. At a practical level this can involve training and supporting others in sustainability appraisal techniques and providing subject matter expertise in, for example, conservation designations and approvals. I also help ensure the ISO 14001 certification is maintained and am involved in environmental management reviews at corporate level, considering trends in audit findings, incidents or energy use and seeking improvements.

How has your role changed over the past few years? In four years it has changed from fixing problems to focusing more on improving environmental performance. This might be achieved through a series of staff briefings about key issues or capacity building in the company by delivering training.

What's the best part of your work? I'm fortunate to work with many people from other disciplines who recognise the importance of good environmental standards. The demands of the job can be high at times but it helps when the sites I work with are in such stunning locations. Landing on St Kilda by helicopter to review waste management or undertake an audit is such a privilege.

What's the hardest part of your job? Sites get very engaged in the lead-up to external audits but the challenge is to maintain this momentum during the period in between. Also, remembering not to talk in acronyms – our profession is riddled with them.

What was the last course/event you attended and what did you bring back to your job? One on marine mammal monitoring. Various active (binoculars) and passive (electronic listening) measures are used to minimise the impact of noise on whales, dolphins and porpoises. I learned how to assess whether existing equipment and procedures reflect best practice.

What is/are the most important skill(s) for your role and why? Understanding people – you have to know what motivates them. Environmental improvements often have business or personal benefits too, and sometimes it can be more effective to focus on them.

Where do you see the profession going? The profile of the profession has risen over the past 30 years and there are more job opportunities. This will continue.

Where would you like to be in five years' time? I enjoy my current role, so I wouldn't be that disappointed to be doing something similar, as long as I still feel I'm making a difference.

What advice would you give to someone entering the profession? I can't recall anyone who has really wanted to enter the profession not succeeding, though it can take dedication and time.

How do you use IEMA's environmental skills map? I have used it to assess my own needs, in particular when I was applying for full membership, and I refer to it when focusing on development needs.

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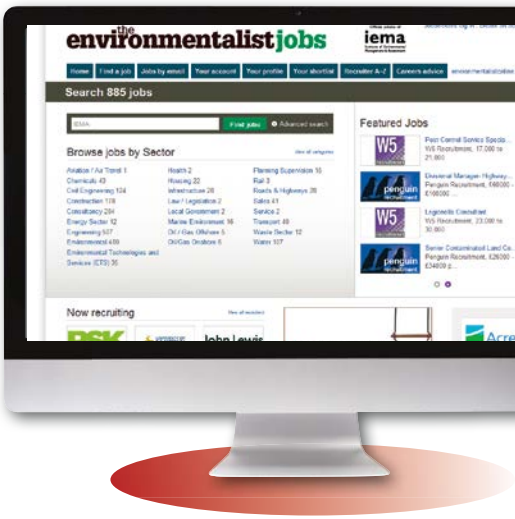

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