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February 2015



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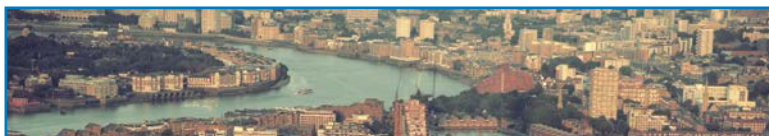
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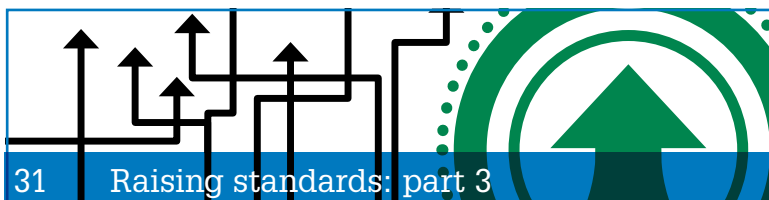
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# Leading the way on climate change

Climate change should take centre stage this year, with world leaders gathering in December to hopefully sign a new global agreement to reduce greenhouse-gas emissions. Some corporate leaders are increasingly recognising that businesses have a key role to play in tackling climate change, and they are pushing to reduce the carbon footprints of their own organisations and encouraging others to do likewise. Addressing members of the Corporate Leaders Group at an event in January to celebrate its 10th anniversary, Prince Charles stated: "Forward-thinking businesses are ever more determined that they are going to be a part of the solution to climate change." There are many examples of companies acting to show that this is true. So why was climate change absent from the list produced by consultancy PwC of the 19 issues that most concern chief executives in 2015?

The heir to the British throne made a few other observations in his speech that may provide an answer to that question. He expressed great faith in business leaders getting things done on climate change because they tend to have the vision, the skills and the capacity to drive real change. This belief was accompanied by the caveat, "once they are fully engaged". Engagement on environment issues is something that top management will have to demonstrate if their organisations are to comply with the requirements of the revamped 14001 standard. It includes a section devoted to leadership and the role of senior managers, and, as practitioners make clear (pp.16–19), provides an opportunity to raise awareness among executives of the business risks and opportunities associated with issues like climate change.

One explanation for the lack of engagement among so many at present is the excessive focus by some business leaders on short-term results at the expense of long-term interests. Profit maximisation and achieving quarterly earnings tend to trump all other strategies in too many big companies and among investors. The pressure to deliver quick returns is often to a company's detriment. Long-term incentive plans for executives have been introduced to try to counter the mindset that focuses on short-term returns at the expense of longer-term sustainability. If carbon reduction targets and other sustainability goals were included in the performance objectives for executive incentive plans, and the new 14001 acts as a lever to raise awareness, those top managers now failing to show leadership on climate change may change their behaviour. They could then, as Prince Charles pointed out, put their skills to good use and help drive reductions in greenhouse-gas emissions on the scale needed to keep temperature rise below the dangerous 2°C level.

**Including carbon targets and other sustainability goals in performance objectives for executive pay plans could be an effective way to engage those failing to show leadership**



**Paul Suff, editor**

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## Short cuts

## Urban energy growth

Urban energy use will increase more than threefold if current global trends in the expansion of cities continues, according to research. A new study in the US journal, *Proceedings of the National Academy of Sciences*, predicts use will rise from 240 exajoule (EJ) in 2005 to 730 EJ in 2050. It examined data from 274 cities and found that economic activity, transport costs, geographic factors and “urban form” explain 37% of direct energy consumption and 88% of transport energy use. The authors say that selecting policies that reduce energy consumption will differ by type of city. Higher petrol prices combined with compact urban form are likely to reduce residential and transport energy use in mature and affluent areas. By contrast, compact urban form and better transport planning would encourage higher population densities in developing cities and avoid lock-in of high carbon emission patterns for travel. The authors say their model shows that urban planning and transport policies can limit the future rise in urban energy use to 540 EJ in 2050.

## EU air quality platform

The European commission has appointed consultancy Ricardo-AEA to develop a Europe-wide platform for air quality. The commission wants a common method for presenting information on the levels of key pollutants affecting air quality for the whole of Europe, including a data platform to make information easily accessible to the public. Ricardo-AEA will also establish a “smog index”, to list the performance of products in relation to air quality. Small-scale combustion machinery such as petrol lawnmowers will be listed as well as road vehicles. The Europe-wide air quality platform is expected to be finalised in 2016 before the commission review it. The consultants hope that the data will enable vulnerable people to avoid illness by modifying their activity when air pollution is high. Ricardo-AEA has previously produced smartphone apps for the UK and Scotland advising the public on air quality in their area.

## Two ways to count electricity

Updated guidance on reporting greenhouse-gas (GHG) emissions from electricity will require companies to report figures under two different methods.

The GHG protocol scope 2 guidance, published by the World Resources Institute (WRI), provides a framework for disclosing how different types of electricity purchases count towards a company’s emissions targets. The guidance aims to increase transparency on what energy the company buys and explains how to deal with renewables and green tariffs. It should help inform corporate decisions on the kind of energy a company buys, the WRI says. It instructs companies to report, where possible, its direct emissions according to a “location-based” and “market-based” methods.

The first method uses an average emission factor for the grid on which energy consumption occurs. In effect, this is the same as that required in the original GHG standard. The second approach involves using an emission factor that is specific to the electricity purchased, if the company operates in markets where energy certificates of supplier-specific information are available. Under this method, electricity from renewables or a green tariff is accounted for differently.



Image: Rex/Jason Bryant/LNP

Nick Blyth, policy and practice lead at IEMA, welcomed the use of the dual accounting approach. However, he warned that concerns remained about how the guidance might be used. “Without the correct skills to implement the guidance, there is a potential risk of organisations placing undue emphasis on one method only or on the potential misuse of reported footprints,” he said.

The CDP, Climate Registry and other reporting programmes will require thousands of companies to provide extra information about their scope two emissions using the guidance, the WRI said. Pedro Faria, technical director of the CDP, said that the guidance represented a “critical evolution” in corporate sustainability reporting.

## Consultancy market slips back

Revenues from the global environmental consultancy market totalled \$28.7 billion in 2013, down 0.8% on the previous year, according to a report from Environmental Analyst. It also reveals that 25 companies, led by CH2M Hill, dominate the industry, accounting for more than 46% of all revenue in 2013.

The slight decline in revenue in 2013 follows three successive years of growth and is the result of a continuing downturn in the international mining sector, the US government shutdown and the squeeze on the federal budget. Nonetheless, the business intelligence service forecasts an upturn over the next five years, estimating that revenues from the global environmental consultancy market are set to reach \$32.6 billion by 2018, with growth likely to come from a recovery in key markets and emerging economies.

The report also finds that specialist environmental consultancies are

far better than many of the larger, integrated firms or multidiscipline hybrid organisations. Specialist firms, such as Antea, ENVIRON and ERM, achieved average organic revenue growth from environmental consultancy of more than 25% between 2010 and 2013. At the same time, the non-specialists recorded organic growth of only 1–1.3%.

Liz Trew, co-author of the report and editor at Environmental Analyst, said: “Smaller specialist firms have been growing and thriving over the past few years in spite of the market challenges, while the large-scale integrated and multidisciplinary firms – for whom environmental consulting activities account for less than 50% of the business – have been struggling. Our analysis supports the theory that there is a definite client preference for firms that retain their specialist focus in the environmental/sustainability consulting field.”

# Fracking rules tightened

Shale gas operations will be banned in national parks under new, tougher regulations, the government has confirmed. The move came after Labour tabled a new clause to the Infrastructure Bill that included a measure to prevent fracking “within or under protected areas”. Existing planning guidance states that councils should refuse applications for shale gas extraction in protected areas except in “exceptional circumstances”.

Fracking will also not be allowed in any groundwater protection zones. Currently, it is only banned from groundwater protection zone one, so it could have taken place in zones two or three. Shale gas operators will also have to conduct baseline monitoring of a site for 12 months before fracking starts, rather than the three months now. Other measures in the Labour clause are already embedded in regulations or industry best practice commitments. They include a requirement for all shale gas operations to undergo an environmental impact assessment and for operators to disclose all chemicals they plan to use in fracking.

An amendment to impose a moratorium on fracking, introduced by a cross-party group of MPs on the environmental audit committee, was defeated, however. The



committee argued that exploitation of shale gas was inconsistent with the UK's climate change targets. Energy minister Amber Rudd has pledged to place a duty on the secretary of state to consider advice from the Committee on Climate Change on the impact of shale operations on the targets, and to report every five years on the issue. Scottish ministers, meanwhile, have placed a moratorium on shale gas consents in Scotland pending a public consultation.

Meanwhile, a leaked letter from chancellor George Osborne revealed the extent to which the oil and gas industry and government have been working to overcome obstacles to shale gas development. The letter, written in September 2014, sets out plans to “respond to the ‘asks’ from [shale gas explorer] Cuadrilla over which the government has influence”.

## Risk management trending for 2015

Changes to 14001 will push risk-based thinking to the top of sustainability leaders' agendas in 2015, according to research on the key sustainability management trends that will affect businesses this year.

Sustainability analysts at Verdantix say that, while practitioners already approach sustainability planning with elements of risk-based thinking through materiality matrices its inclusion in the updated ISO 14001 standard, due to be published this year, will open the door to a consistent and systematic use in management systems. Verdantix also says the greater emphasis on risk in the revised standard will support the broader trend of increased involvement of sustainability leaders in risk management. Verdantix's 2014 global survey found that 62% of leaders had full or shared sustainability risk management authority, an increase from 20% in 2012.

The analysts also predict that supplier sustainability assessments in 2015 will move beyond checklists as businesses encounter more pressure from consumers to account for and rectify sustainability failures in their supply chains. “The realisation that it is no longer enough to simply state that a firm has a supplier sustainability questionnaire is pushing firms to seek means to audit and engage suppliers to ensure sustainability performance,” says Verdantix. It expects water scarcity concerns to heighten this year, leading to more companies investigating risks from natural capital.

Another issue likely to see a rise in popularity in 2015 is green infrastructure strategies for water management. Verdantix cites Dow Chemical, Holcim and Italian utility Eni as firms that have used green infrastructure to reduce costs, improve water quality and availability, and decontaminate soils.

### Short cuts

#### Managing chemicals

Most companies are adhering to the harmonised classification of substances with carcinogenic, mutagenic or reprotoxic (CMR) properties, according to the European Chemicals Agency. It checked about 1,400 individual substances and 23 groups of substances with a harmonised CMR classification listed in annex VI of the Classification, Labelling and Packaging (CLP) Regulation and found that around 97% adhered to the CLP. The agency says 12 registrations will be referred to national enforcement authorities for follow-up because they are not in line with the requirements of the CLP. The Helsinki-based body has also published its REACH 2018 roadmap, which outlines its plans in the run-up to the final registration deadline. Chemicals manufactured or imported in quantities of between one and 100 tonnes a year must be registered by 31 May 2018, and the agency expects a large number of small and medium-sized enterprises to register for the first time. “The REACH 2018 deadline may seem distant but I really urge companies to start preparing now,” said executive director Geert Dancet.

#### Renewables top coal

Renewable energy took over as the number one power generation technology in Germany last year for the first time. An analysis by consultancy Agora Energiewende revealed that renewables composed 27.3% of domestic power consumption in 2014, displacing lignite as the top source of power in the energy mix. Power demand fell by 4% in 2014, despite economic growth of 1.4%, continuing a trend for electricity usage to decouple from growth. Greenhouse-gas emissions also fell in 2014 and are currently at their second-lowest level since 1990. This is due largely to the mild winter at the beginning of the year and the decrease in coal for power production. Electricity generation from nuclear remained steady in 2014, though it is likely to decline this year as the Grafenrheinfeld plant shuts down in the spring. The German government is aiming for a renewables share of 40–45% by 2025.



## In parliament



## Air quality stays, but waste goes

It's been a turbulent few weeks in Brussels. Just before Christmas the European commission published its work programme for 2015, which set out its priorities for the next year. Normally this would be a pretty straightforward process, but what has made this particularly significant is the new commission's decision to drop or modify pieces of legislation proposed by the previous administration. These include vital new air pollution limits as well as the waste package, which sets out targets to increase recycling and tighten the rules on landfill and incineration, and help shift Europe towards a more circular economy.

Before going ahead with the withdrawals, the commission said it would consult the European parliament. So the pressure was on when, earlier this month, MEPs began to debate a resolution on the work programme. In the end, centre-right and Conservative MEPs refused to table a joint resolution, which left the parliament bereft of a strong and united position. However, like-minded MEPs did team up to vote in favour of key amendments, criticising the withdrawal of these key pieces of environmental legislation.

Finally, the commission backed down and is no longer proposing to drop the air quality law, which will now continue as planned. As one of the lead negotiators on this legislation, I'll be fighting for tough national limits that force governments to tackle this silent killer.

However, the bad news is that despite strong objections from ministers and MEPs, the commission is going ahead with its withdrawal of the waste package. It claims that this proposal will be replaced by something more ambitious by the end of 2015. But many, including myself, are unconvinced. If the aim is to improve this piece of legislation, why not leave that to MEPs and the council?

**Catherine Bearder**, Liberal Democrat MEP and a member of the European parliament's environment committee.

## Natural capital catching on

Corporate awareness of natural capital is growing, with four companies in the FTSE 100 now using the term in their latest annual reports, compared with only two a year ago, according to consultancy PwC.

It also reports that more than a quarter of the FTSE 100 mention biodiversity or ecosystems in their reports, but rarely with a view to potential value creation or value at risk. The number of companies that include information on natural capital in sustainability reports is higher than in annual accounts; seven refer to it specifically and nearly half mention biodiversity or ecosystems. But even among these, recognition of natural capital as a vital business asset is rare, says Will Evison assistant director of environmental economics at PwC.

To raise the number of firms reporting on these issues, a framework and guidance on corporate natural capital accounting has been developed by PwC, together with eftec and the RSPB, and is being promoted by the Natural Capital Committee (NCC). The tool helps businesses to identify the natural capital assets that are the most important to its operations; how much of the value of an organisation relies on natural capital; and how much it might change in the future.



Image: REX/ imageBROKER

Meanwhile, in its third and final report before its abolition, the NCC calls on the government to demonstrate how it plans to fund its ambition to leave the natural environment in a better state than it inherited, and suggests dividing responsibilities between the private and public sectors. "Government controls many of the levers, be they taxes, subsidies or legislation, and will therefore be instrumental in ensuring the right incentives are in place. However, the private sector and civil society also have a significant part to play because they own or are ultimately responsible for the majority of natural assets," the report states.

## UK supply chain doing well

UK suppliers are in the top three for climate change resilience, according to a study by the CDP and Accenture. Only suppliers in France and Japan rank higher than those in the UK, says the report, which ranked the world's 11 major economies on their level of resilience to the business risks generated by climate change.

A lack of preparation leaves supply chains in Brazil, China, India and the US more vulnerable to climate risks than those in Europe and Japan, the research finds. However, suppliers in China and India deliver the greatest potential financial return on investment to reduce their greenhouse-gas emissions.

The CDP and Accenture collected climate and water data from 3,396 companies on behalf of 66 multinational purchasers to create a sustainability risk and response matrix to assess how prepared suppliers in 11 major economies are to mitigate and manage environmental risk.

It found that, despite relatively low levels of exposure to climate risks, suppliers in France, the UK, Spain and Germany were the most sustainable. Japan, meanwhile, is the only country with suppliers that are well equipped to respond to high climate risks, as the country's supply chain has some of the highest levels of emissions reporting, target setting and climate risk awareness.

Suppliers in Brazil, Canada and India, by contrast, report fewer emission reduction initiatives than the global average.

The study says that, while the onus for improving suppliers' performance lies with the large multinational companies, suppliers should recognise that it is in their interests to embrace more sustainable modes of operation. "Not only do these offer a means to reduce costs by driving efficiency in resource use, but sustainability is likely to become a key differentiator in the marketplace," it concludes.



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# Manufacturers not ready for ESOS

Almost half of manufacturers in the UK are unaware of the energy saving opportunities scheme (ESOS), a poll by energy company npower Business Solutions has found. And, despite having to complete their first assessments under the scheme by early December, 45% of companies report being unprepared for the deadline, while 69% claim to feel uninformed about ESOS.

The mandatory scheme will affect around 7,000 businesses. Companies that fail to comply with the 5 December deadline face fines of up to £50,000, npower warns. It wants the government and energy suppliers to make a stronger business case for manufacturers to do more on energy efficiency. "There are significant shortcomings in the way the policy has been communicated and will be implemented. I strongly believe that if we want to encourage the business community to embrace energy efficiency we must do a better job of making the case for it to do so," said Wayne Mitchell, head of npower Business Solution.

Gareth Stace, head of climate and environment at EEF, warns that many manufacturers, particularly those still planning their strategy on energy efficiency, will find ESOS a challenge. "While Decc has taken every opportunity

to ensure the scheme has remained as straightforward and flexible as possible, many organisations will find the requirements of ESOS a significant undertaking and will need help in achieving them," said Stace.

The energy department estimates that firms implementing just 6% of the measures identified by the assessments will save a cumulative £1.9 billion between 2015 and 2030. But Mitchell says the poll findings suggest that many firms may not benefit. "ESOS may seem like another



Image: REX/Mood Board

policy that just brings more costs for manufacturers, but we see it as a significant opportunity to reduce the pressure on your bottom line. Energy is one of the least optimised costs in a business and yet, by implementing simple efficiency measures, the average business could reduce consumption by 20%."

Under the scheme, firms with at least 250 employees or an annual turnover of more than €50 million and a balance sheet exceeding €43 million will have to complete an energy assessment every four years.

From [environmentalisonline.com](http://environmentalisonline.com)...

## Risky resources

Most of the vast coal reserves in China, Russia and the US should remain unused, according to new research by UCL's Institute for Sustainable Resources. The study identifies the locations of fossil-fuel reserves that should stay in the ground if global warming is to be kept below the 2°C target agreed by policymakers. The Middle East's 260 thousand million barrels of oil reserves, as well as more than 60% of the region's gas reserves should also remain untouched, says the study. It also declares that the Arctic's fossil-fuel resources must remain untapped and that any increase in the development of unconventional oil should be ruled out. Paul Ekins, director of the UCL institute, advised energy companies to rethink their budgets for finding new fossil-fuel resources (totalling \$670 billion last year), stating that the firms are increasingly seen as risky investments and that prudent investors in energy are shifting towards low-carbon sources. [environmentalisonline.com/UCL](http://environmentalisonline.com/UCL)

## CO2 costs go up

The economic damage caused by a tonne of CO2 emissions could be six times higher than previously calculated, according to scientists at Stanford University. They applied a "social cost" to carbon to calculate the costs and benefits of action to mitigate climate change. A 2013 study had concluded that a tonne of CO2 emitted in 2015 would cause \$37 worth of economic damage. But the new research found the cost to be \$220, casting doubt on the computer model widely used for calculating the economic impacts of climate change, the so-called integrated assessment model (IAM). The scientists found that the IAM failed to account for how damages associated with climate change might persist over time. If economic growth as well as output is affected, there would be a much higher social cost of carbon and this would justify the rapid, early implementation of mitigation measures to limit global temperature rise to 2°C, said the scientists. [environmentalisonline.com/costs](http://environmentalisonline.com/costs)

## Cheaper fuels

Many renewable energy technologies have costs equal to or lower than fossil fuels even without financial support and despite falling oil prices, according to the International Renewable Energy Agency (IRENA). The agency analysed the latest data from renewable and fossil fuel sources using the "levelised cost of energy". This represents the per-kilowatt cost of building and operating a plant over its lifecycle, including the costs of capital, fuel, operations and maintenance, finance and use rate. Average regional values for onshore wind, for example, ranged from \$0.06/kWh in Asia, Eurasia and North America to around \$0.08/kWh in the rest of the world. This compares with a range of \$0.045 to 0.14/kWh for fossil fuel power plants, says IRENA. Projects are consistently providing electricity for \$0.05/kWh without subsidies in regions of the world with good wind resources and low cost structures, IRENA found. [environmentalisonline.com/IRENA](http://environmentalisonline.com/IRENA)

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# Circular economy jobs boost

Establishing a circular economy could create up to 500,000 jobs in Britain over the next 15 years, says Wrap and the Green Alliance in a new report.

It estimates the labour market outcomes from improving the economy's resource efficiency, based on three scenarios. The first involves no new initiatives, while the second envisages a continuation on the current trajectory, with significant further increases in recycling and remanufacturing. The third consists of making substantial progress in recycling and remanufacturing, but also major development of the reuse, servitisation and biorefining sectors.

The number of jobs created, and the potential impact for the resource management industry to offset declining employment levels in other sectors, varies between the three scenarios. Under the first, around 31,000 jobs would be created and cut unemployment levels by about 10,000. The second could generate 205,000 jobs and reduce unemployment by about 54,000, says the report. Scenario three has



Image: REX/WestEnd61

a much bigger potential impact, creating more than half a million jobs and reducing unemployment by around 102,000.

Matthew Spencer, director at the Green Alliance, said policymakers would need to set higher standards for product and resource recovery if jobs are to be created on the scale forecast. "The biggest opportunity to do that is in the EU circular economy package which is being renegotiated this year, but the UK will have to become an active champion of higher ambition," he said.

# Water crises rated high risk



Image: REX/SPA

Water crises and failure to adapt to climate change rank as two of the top five global risks, according to experts polled by the World Economic Forum (WEF) for its annual meeting in Davos.

WEF asked nearly 900 experts, including academics, risk analysts and business people, to rank the top five global risks in terms of likelihood and potential impact over the next 10 years. Water was ranked as the issue to have the biggest impact, ahead of the rapid spread of infectious disease, weapons of mass destruction and interstate conflict. Failure to progress climate change adaptation was fifth.

More environmental risks featured at the top of the list than economic ones, WEF analysts noted. This is due to a

marked increase in experts' negative views of how well society is adapted to cope with challenges, such as extreme weather and climate change, rather than a reduction of fears over economic risks, they believe. Major biodiversity loss and ecosystem collapse were assessed as high impact by respondents, but below average in terms of likelihood, WEF said.

In a separate survey, WEF asked business leaders what risks were most significant to them in terms of doing business in their particular country. UK respondents ranked economic risks, such as failure of financial mechanisms or institutions and global oil price shocks, as more significant than environmental ones, including water, which came 12th. Failure to effectively address climate change adaptation was ranked 15th.

The survey findings came as charity Business in the Community called on businesses to take action on water. Its water taskforce, which is chaired by Steve Mogford, chief executive at United Utilities, has launched a three-year action programme to encourage business to safeguard water supplies and improve their resilience to flooding and water shortages.

## Businessplans

The aluminium sector has established a new standard to improve the industry's environmental, social and governance performance. It includes plans to reduce the industry's greenhouse-gas emissions. The Aluminium Stewardship Initiative (ASI) performance standard addresses issues linked to the production and stewardship of aluminium, from extraction of bauxite to the recycling of pre- and post-consumer scrap. It was developed by **Rexam, Constellium, Hydro, Novelis, Rio Tinto Alcan** and 15 NGOs.

Installing an energy management system has halved energy consumption at the Worcestershire manufacturing plant of **Harris Brushes**, saving the company £133,00 over two years. The firm worked with **Vickers Energy** to install the system, which regulates the site's 55 gas- and oil-fitted warm air heaters to ensure they operate at maximum efficiency. The overall cut in energy use between 2012 and the end of 2014 totals more than 2 million kWh.

A study commissioned by **Kingspan Insulated Panels** claims that improving lighting systems could save the UK business community around £3.7 billion a year. The average business lighting electricity cost would fall from £25,583 to just £3,837, it found. The study accompanied Kingspan's launch of a system that combines in a single package rooflights, LED lighting with smart controls, and photovoltaic technology.

**Mars** is strengthening action on deforestation. It has launched three policies to tackle deforestation in its beef, soy, paper and pulp supply chains. Its pulp and paper policy sets two targets: all of its virgin pulp and paper-based packaging is to be traced to at least the country of origin by the end of 2016; and all such packaging to be purchased from certified, verified or recycled sources by the end of 2020.

**Thomas Cook Group Airlines** says it has reduced its carbon emissions by 385,000 tonnes since 2008. The firm also reports that it is on track to meet its 2020 target to improve the fuel efficiency of its fleet by 12%, having achieved a 5.6% uplift since 2009 by introducing of new lightweight seats and trolleys onboard its planes.

# Countdown to ESOS compliance

Compliance to the UK government's directive for the Energy Saving Opportunity Scheme (ESOS) is required by 5 December 2015. If your organisation needs to be compliant to this new directive LRQA can help you meet this deadline.

## Options for ESOS compliance

Whichever route your organisation decides to opt for, we have a full range of solutions to support your ESOS compliance. We are offering the provision of ESOS energy audits, ESOS Appreciation & Interpretation, ISO 50001 training courses and accredited ISO 50001 certification assessments.

Deadline:  
5 December 2015

### ESOS Energy Audit

Undertake an ESOS energy audit, by an approved Lead Assessor, which measures energy consumption in three areas: buildings, transport and industrial processes. The ESOS audit will be accompanied by recommendations for energy saving opportunities in these areas.

Client questionnaire / ESOS assessment

ESOS scoping exercise

ESOS energy audit and report sign off

### ISO 50001 Energy Standard

Fully compliant with ESOS, ISO 50001 is an international standard which provides organisations with the requirements for energy management systems. ISO 50001 establishes a framework to promote energy management best practices and reinforce good energy management behaviours.

ISO 50001 training: public or In-Company

ISO 50001 implementation

ISO 50001 certification ESOS compliant

## Training to support ESOS compliance

We have a full range of ISO 50001 training courses from Appreciation & Interpretation through to Lead Auditor, as well as ESOS Appreciation & Interpretation. Our training can also be run on your premises ensuring that the training is tailored to your team, organisation and management systems.

[www.lrqa.co.uk/esoscountdown](http://www.lrqa.co.uk/esoscountdown)

Advisory line: 0800 783 2179

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# In court



## Permit breach costs SITA UK almost £120,000

Waste business SITA UK has been fined £110,000 and ordered to pay costs of £8,832 for breaching the conditions of the environmental permit for its landfill site at Albury, near Guildford.

Redhill Magistrates' Court heard how the site, a former sand quarry, throughout 2013 breached the leachate levels set out in its environmental permit. Leachate is the liquid that forms when waste degrades in landfill. To reduce the risk of it escaping and polluting the groundwater Albury landfill is lined with an engineered system of clay overlain by a plastic liner. The clay extends across the base of each cell in the landfill structure and up the side slope to a level of 3m above, with only the plastic liner rising higher. The court heard that during 2013 there were eight leachate wells at the site that did not comply with the permit requirement for a maximum leachate level of 3m above the base.

It was also told that SITA continued to breach its permit conditions despite ongoing guidance and support from officers at the Environment Agency. Pollution prevention and control officer Neil Martin said it took SITA until February 2014 to comply with permit for leachate levels at Albury. The company reduced levels by supplementing treatment through the onsite leachate treatment plant by taking the leachate off site in tankers for treatment elsewhere. "The company is now continuing to focus on completing the capping and restoration of the landfill, which will help reduce the generation of leachate at the site," Martin said.

SITA UK was prosecuted under reg. 38(1) (b) of the Environmental Permitting (England and Wales) Regulations 2007.

## £16,000 for breach of waste duty

Allowing unlicensed contractors to transport and dispose of waste produced by its transfer station over a four-month period in 2011 has cost CMI Demolition cost £16,000 in fines.

The Environmental Protection Act 1990 requires waste management companies to ensure that all operators who transport waste on their behalf are licensed as legitimate carriers by the Scottish Environment Protection Agency (Sepa). Producers must also complete waste transfer notes (WTNs), detailing the type of waste, where the materials are being taken to, and the name of the firm transporting them. Sepa officers investigating illegally dumped waste traced the original owners of the refuse, who identified Glasgow-based CMI Demolition as their waste management provider.

Although the company was not responsible for the dumping, it was liable for failing to carry out adequate background checks, being unable to provide accurate WTNs and for ensuring waste produced from its transfer station was disposed of correctly. Due to early acceptance of responsibility and cooperation by CMI Demolition, Airdrie Sheriff Court reduced the penalty from £24,000 to £16,000.

## Penalty for outlaw motorcycles

Six companies will have to pay a civil penalty in the US totalling \$1.25 million for violating the Clean Air Act by importing and selling more than 11,000 motorcycles and all-terrain vehicles (ATVs) that did not conform to the specifications that the companies had certified to the Environmental Protection Agency (EPA) or lacked the necessary certification.

The agency's environmental appeals board has ruled that two Texas-based companies, Jonway Motorcycle and Shenke, imported 11,043 non-compliant highway motorcycles and 226 ATVs beginning in model year 2009. It also found that the companies illegally imported and distributed more than 80 models of uncertified vehicles. Four Chinese companies linked to the US firms made the vehicles.

The Act requires vehicle manufacturers to certify to the EPA that their products meet federal emission standards to control air pollution, and every vehicle sold in the US must be covered by an EPA-issued certificate of conformity. Tests by agency officials found that vehicles did not conform with their certificates. The EPA also discovered evidence of recordkeeping violations related to emissions testing and certification.

## Case law

### No obligation to consult Natural England on site

In *Savage v Mansfield District Council* [2015], the Court of Appeal had to decide whether the local authority's failure to carry out a risk-based assessment on the advice of Natural England (NE) meant that it had not complied with its legal duty under the Conservation of Habitats and Species Regulations 2010.

In this case, an application for outline planning permission was submitted for a large mixed-use development in Sherwood Forest, close to substantial breeding populations of nightjar and woodlark and a site of special scientific interest. The authority consulted NE, which advised that the area was not a proposed special protection area (SPA) for the purposes of the Regulations or the national planning policy framework. However, there was a possibility that part of the forest would in due course be recommended as a SPA, so it advised the council to consider the implications of a future classification.

The authority granted outline planning permission and the developer entered into a s106 agreement that contained a provision protecting the council from compensation claims in the event that permission was modified or revoked in accordance with the Habitat Regulations. The claimant challenged the authority's decision on the basis that it had not followed NE's advice to conduct a risk-based assessment and so had failed to comply with its legal duty.









The court rejected the allegation that the authority had failed to act on NE's advice, saying it had collected relevant data and put forward proposals to mitigate any harmful effects on the nightjar and woodlark populations, including supplying a ranger service to monitor the site.

Jen Hawkins

Lexis®PSL

# New regulations



In force	Subject	Details
5 Dec 2014 	Energy	The Electricity and Gas (Energy Companies Obligation) (Amendment) (No. 2) Order 2014 reduces the overall carbon emissions target, from 20.9MtCO <sub>2</sub> to 14MtCO <sub>2</sub> , for the January 2013 to March 2015 phase of the energy companies obligation (ECO). Achieving the carbon emissions reduction obligation by 31 March 2015 will no longer be an enforceable regulatory requirement. The Electricity and Gas (Energy Company Obligation) Order 2014 imposes three obligations on energy suppliers with more than 250,000 customers, including new targets for the period April 2015 to March 2017. <a href="http://lexisurl.com/iema61440">lexisurl.com/iema61440</a> ; <a href="http://lexisurl.com/iema61441">lexisurl.com/iema61441</a>
9 Dec 2014 	Ecolabelling	European commission decision 2014/893/EU establishes criteria for ecolabelling of rinse-off cosmetic products. These criteria will remain valid until 9 December 2018 and replace decision 2007/506/EC on the ecolabelling of soaps, shampoos and hair conditioners. <a href="http://lexisurl.com/iema61454">lexisurl.com/iema61454</a>
11 Dec 2014 	Environment protection	The Pollution Prevention and Control (Industrial Emissions) (Amendment) Regulations (Northern Ireland) 2014 require cost-benefit analysis of cogeneration or waste-heat recovery to be undertaken. This will be necessary where permit applications or variations are made for energy producing installations with an aggregated net rated thermal input of more than 20MW. The regulations now have an additional Part C permitted activity: burning fuel(s) in a combination of boilers, furnaces, turbines or compression ignition engines on a single site where the aggregated net rated thermal input is more than 20MW but less than 50MW. <a href="http://lexisurl.com/iema61444">lexisurl.com/iema61444</a>
18 Dec 2014 	Hazardous substances	European commission decision C(2014) 9676 authorises the use of dibutyl phthalate (DBP) by Sasol-Huntsman as an absorption solvent in closed systems for maleic anhydride manufacture under the REACH Regulation 1907/2006. <a href="http://lexisurl.com/iema61489">lexisurl.com/iema61489</a>
20 Dec 2014 	Energy	The Electricity Capacity (Supplier Payment etc.) Regulations 2014 require electricity suppliers to pay a "capacity market supplier charge" to fund capacity payments and a "settlements costs levy" to cover the cost of administering these payments. <a href="http://lexisurl.com/iema61484">lexisurl.com/iema61484</a>
20 Dec 2014 	Hazardous substances	EU Regulation 1342/2014 amends 850/2004 on persistent organic pollutants. More substances have been added to annex IV and it requires all reasonable efforts are taken to avoid contamination of waste with substances listed in the annex. Meanwhile, part 2 of annex V, which concerns permanent storage of contaminated waste, is updated accordingly. To allow companies time to adapt to the new requirements, Regulation 1342/2014 applies from 18 June 2015. <a href="http://lexisurl.com/iema61480">lexisurl.com/iema61480</a>
1 Jan 2015 	Climate change	EU Regulation 517/2014 revokes and replaces the Regulation 842/2006 on fluorinated gases (F-gas). The new legislation imposes requirements on the supply, use, storage, recovery and destruction of fluorinated greenhouse gases. The F-gas regime is extended to include other gases containing fluorine with global warming potential; and further equipment, including refrigerated vehicles, is brought into scope. The Regulation also phases out a number of products containing F-gases. <a href="http://lexisurl.com/iema23856">lexisurl.com/iema23856</a>
1 Jan 2015 	Climate change	European commission decision 2014/774/EU sets reference values to calculate the balance of hydrofluorocarbons placed on the market in the EU between 1 January 2015 and 31 December 2017. This balance consists of the annual average of gases produced or imported, minus those exported from the EU market. <a href="http://lexisurl.com/iema50936">lexisurl.com/iema50936</a>



# Latest consultations




25 Feb 2015

## Marine licensing

 Proposals to allow the environment secretary to recover marine licensing decisions for activities that fall in band 3 of the Marine Licensing (Application Fees) Regulations 2014 (as amended) are out for consultation by Defra. The band covers projects requiring an environmental impact assessment or appropriate assessment under the habitats regulations, construction projects worth more than £1 million and dredging or disposal activity. The proposals apply to English waters and the offshore areas of Wales and Northern Ireland where the secretary of state is the licensing authority. [lexisurl.com/iema61510](http://lexisurl.com/iema61510)

2 Mar 2015


## Seveso III

 The Scottish government has published a consultation document on the proposed amendments to planning legislation to implement the land use planning elements of Seveso III. The revised EU Directive on the control of major-accident hazards must be transposed into domestic legislation by

1 June 2015. The proposals cover consent applications for hazardous substances and relevant planning permission procedures. [lexisurl.com/iema61521](http://lexisurl.com/iema61521)


6 Mar 2015

## Flood defences

 The Welsh government is consulting on how funds can best be allocated to address flood risk and coastal erosion. It is proposing a new approach, which prioritises funding according to national priority and establishes a Flood and Coastal Erosion Risk Management Investment Programme. [lexisurl.com/iema61523](http://lexisurl.com/iema61523)

16 Mar 2015

## Emissions trading system

 As part of its framework for climate and energy, the European council agreed in October a binding domestic target to reduce greenhouse-gas (GHG) emissions by at least 40% by 2030 compared with 1990. To achieve this, the council agreed that the emissions covered by the EU emission trading system (ETS) should be cut by 43% against 2005 levels. Under this plan, the ETS cap will decline on an annual linear reduction factor of 2.2% from 2021

instead of the current 1.74%. The council also highlighted the need for: strategic guidance on the free allocation of ETS allowances to industry; the establishment of a modernisation and innovation fund; and optional free allocation of allowances to modernise electricity generation in some member states. These elements are now the subject of a consultation. [lexisurl.com/iema61518](http://lexisurl.com/iema61518)

20 Mar 2015

## Standard rules

 The Environment Agency is consulting on the withdrawal of four standard rules allowing a range of wastes to be used in construction and land reclamation activities. It follows findings that some of these waste types can pose a risk to groundwater in some locations. The plan is to replace the rules with a more restrictive single set of rules. The agency is also planning to revise four standard rules covering land spreading and digestate storage activities to provide additional restrictions and improve environment protection. Significant changes that affect 13 standard rules permits for soil recycling are also planned by the agency. [lexisurl.com/iema61513](http://lexisurl.com/iema61513)

## New guidance

### ESOS

Revised online guidance on the energy savings opportunity scheme (ESOS) from Decc and the Environment Agency is now available ([lexisurl.com/iema61530](http://lexisurl.com/iema61530)). The resource has separate sections on: deadlines for compliance; whether your organisation needs to comply; how to comply: completing an ESOS assessment; ESOS-compliant energy audits; site visits during an audit; non-compliant energy audits; penalties for non-compliance; applying for professional body register approval; the approved registers of lead assessors; and submitting an ESOS notification of compliance. Under the scheme, qualifying organisations must carry out their ESOS assessment and notify the agency by 5 December 2015. The assessments must be carried out every four years.

### Public sector energy efficiency

Decc has updated its guidance on financing energy efficiency in the public sector ([lexisurl.com/iema61527](http://lexisurl.com/iema61527)). It includes sections on strategy and business planning; public sector borrowing; sources of funding; and contractual considerations. The energy and climate change department says the new version includes updated text and a refresh of some case studies. It says the publication is intended to increase awareness of the benefits to public sector organisations of investing in energy efficiency and offer guidance on options for funding energy efficiency improvements.

### F-gas

Defra has published ([lexisurl.com/iema61533](http://lexisurl.com/iema61533)) a list of gases that have record-keeping requirements under the new EU fluorinated greenhouse gas (F-gas) regulation (842/2006), which came into force on 1 January 2015. It sets out the thresholds for record-keeping in terms of carbon dioxide equivalent (CO<sub>2</sub>e) and the global warming potential of a gas to enable users to calculate the CO<sub>2</sub>e weight of an F-gas. The list covers three types of substances: unsaturated hydro(chloro)fluorocarbons; fluorinated ethers and alcohols; and other perfluorinated compounds. The environment department has also published ([lexisurl.com/iema61535](http://lexisurl.com/iema61535)) a list of F gases covered by 842/2006 under three headings: hydrofluorocarbons (HFCs); perfluorocarbons (PFCs); and other perfluorinated compounds.



## Laying down the law

### The significance of an undertaking

With the use of enforcement undertakings being extended in England to more environmental offences, **Ross Fairley** says companies need to think carefully before agreeing one



**R**eaders of *the environmentalist* will be aware that since 2011 the Environment Agency has had the option of using so-called “civil sanctions” as an alternative to criminal prosecution for a number of environmental offences. The glaring omission from this list of offences has been breaches of environmental permits. In reality, companies are most likely to commit environmental permitting offences and businesses have for some time been calling for their inclusion on the list.

At the end of 2014, Defra announced that it intended to introduce legislation to extend the use of enforcement undertakings in England to include permitting offences. If all goes to plan, from April this year the agency will be able to accept enforcement undertakings from companies that breach a number of permitting offences under environmental law. This will include operating without a permit or failure to comply with the conditions of a permit.

#### A big shake up

This extension of enforcement undertakings is significant. The agency has used them widely in other areas since 2011, such as for offences under the Producer Responsibility Obligations (Packaging Waste) Regulations 2007. *the environmentalist* reported last month, for example, that 11 companies agreed undertakings with the agency between May and August 2014 for packaging offences. The agency said the actions will result in environmental improvements worth more than £84,500.

Undertakings can be offered and agreed with non-compliant companies as an alternative to criminal proceedings.

If the regulator accepts an undertaking a business can avoid an appearance in court, fines and the consequent damage a prosecution has to its reputation.

Enforcement undertakings are in effect binding contractual agreements, which an alleged offender enters into to make amends for the breach of law and its effects. If we take the example of packaging waste offences, which until now have been the most common use of an enforcement undertaking, a company typically agrees to pay the amount that would have been payable had it complied with its obligations to a relevant local environmental charity.

#### Careful consideration

Doubtless having enforcement undertakings available for environmental permitting offences is good news. However, they do not have to be accepted by the agency and, even if they are, undertakings still have potential reputational consequences to consider. Companies need to think carefully about when and how to offer undertakings or risk making a bad situation worse.

Having undertakings available may also provoke companies to consider admitting permitting breaches ahead of the agency identifying them. The history of enforcement undertakings and their acceptance demonstrates that the regulator is more willing to agree to them, and to moderate the expense such arrangements incur, if the applicant itself identifies a breach before the agency does.

The regulator has its own internal rules and guidance on enforcement undertakings, which also need to be factored into decisions on whether to offer an undertaking. Although there will inevitably be a desire on the part of a business to limit ancillary expenditure surrounding a breach of law including legal costs, it pays to take specialist advice early on to place yourself in the best possible position.

#### Six types of civil sanctions

- **Compliance notes** aim to prevent an offence continuing or reoccurring. It is a written notice setting out the actions that are required to comply with the law, or return to compliance, in a specified period.
- **Fixed-monetary penalties** are low-level fines that are fixed by legislation and can be imposed by the EA for a specified minor offence.
- **Variable monetary penalties** are imposed for serious offences. These may be used instead of criminal sanctions for offences when imposing a financial penalty may change offender behaviour and deter others or lead to faster resolution. Such a penalty does not carry a criminal conviction.
- **Stop notices** are imposed where there is the need for an immediate cessation of an activity. This will be where the activity is causing serious harm or presents a significant risk of causing harm.
- **Restoration notices** require organisations to take steps within a stated period and so far as is possible, to restore harm caused.
- **Enforcement undertakings** set out how a business might repair any environmental damage it may have caused. If the proposed undertaking is accepted by the Environment Agency, it becomes a legally binding voluntary agreement. The business must identify the steps it intends to take to put right any harm caused and what it plans to do to ensure future compliance. It can also include any plans the business has to compensate the local community. The agency says undertakings should encourage business operators to make amends, come into compliance and prevent recurrence.

The agency's guidance to its sanctions and enforcement policy is available at [lexisurl.com/iema63961](http://lexisurl.com/iema63961).

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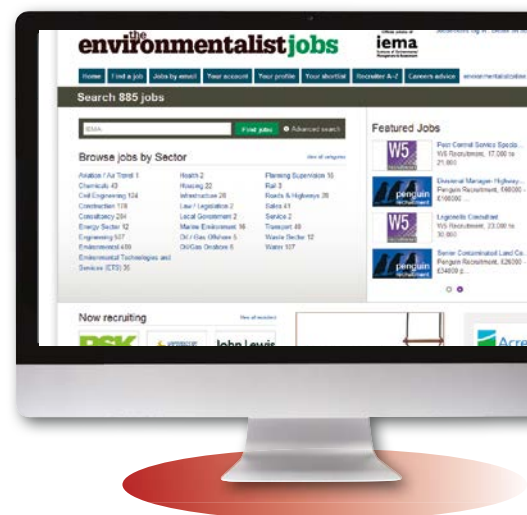
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# Leading the way

The new 14001 standard requires senior managers to do more to promote environment management. What will this mean in practice? **Paul Suff** reports

**T**he latest version of ISO 14001, the international standard for environment management systems, is expected to be unveiled after the summer. As *the environmentalist* went to press, the working group developing 14001: 2015 was meeting in Tokyo to discuss the feedback on the draft standard (DIS), which was approved by 92% of member bodies of the International Organisation for Standardisation (ISO) late last year. Although there are likely to be some last-minute tweaks, practitioners know pretty much the core content of the new standard and how it differs from the 2004 version. One area that is noticeably different and which is likely to make a positive difference is the greater emphasis in on organisational leaders playing an active role in the environment management system (EMS).

An explicit reference to leadership was absent from 14001: 2004. Clause 5 of the revised standard, however, is devoted to leadership and includes a raft of requirements to which those at the highest level in an organisation must

adhere. Senior management will have to demonstrate leadership and commitment with respect to the EMS by, for example, being accountable for its effectiveness and for ensuring that it achieves the intended outcomes. They are also responsible for establishing, implementing and maintaining an environmental policy that is appropriate to the purpose of the organisation and its context – such as the nature, scale and environmental impacts of its activities, products and services. Assigning EMS roles and responsibilities is also the function of senior management.

Top management will no longer be able to simply delegate to a representative key elements of the EMS and consider that an end to their involvement. Delegation remains permissible and senior managers are not required to perform every action themselves but, importantly, the top team is accountable for ensuring that they are performed.

Many environment professionals welcome the new version's greater emphasis on those in senior positions taking responsibility for the EMS. Sandra Norval,

head of environment at Southern Railway and Govia Thameslink Railway, says: "There is a big opportunity here for forward-thinking organisations to begin to use their systems in more creative ways, more in line with the original intentions of the standard. We are still in a rut of organisations using systems to tick the environment box."

To many, like Andrew Edlin, group environment and sustainability director at food business 2 Sisters, the 2004 version is dated. "The 2015 edition has definitely raised the bar," he says. "It is tougher and more challenging, and has addressed some of the criticism levelled at the old standard in terms of integrating environmental considerations into organisational decision-making and ensuring environment management is not a marginal activity."

Others regard the clauses on leadership in the 2015 version as pivotal to improving the performance of management systems. Greg Roberts, environment consultant at manufacturers' body EEF, says that successfully meeting all the new requirements in the revised standard depend on top management taking accountability for the EMS. "Leadership and commitment are fundamental to success," he says. "Currently many systems have little support from senior managers. Arguably, it is the requirement for leadership and commitment in the revised standard that organisations should focus on first."

Clare Dann, global technical manager for environmental management systems at BSI, describes the new leadership features as a big change. "Leadership has always been in 14001, but now it will be much more explicit. Leadership flows through the whole of the revised standard, which should help raise the profile of the EMS." Martin Baxter, executive director at IEMA and a member of the working group revising the standard, is pleased that 14001: 2015 now specifically defines top management and what it is accountable for. "This undoubtedly strengthens the role of senior management in an EMS. There will be an expectation on executives and directors to make sure management systems are effective."

### Levels of engagement

So how will top management respond to the challenges posed by the revised standard? A gap assessment by EEF in 2014 found 80% of the 800-plus organisations examined had insufficient top-level support to meet the requirements of 14001: 2015, while in 42% of cases senior managers had little or no involvement in their company's EMS. Environmental and safety legislation advice service Cedrec polled just over 200 practitioners last year on the revised international standard and found that nearly two-thirds (62%) of respondents were unsure how the changes would affect their organisations. The results revealed that strategic management involvement and leadership, and lifecycle thinking were the two biggest areas of concern with 14001: 2015.

Despite the findings, many practitioners are reasonably confident that their top management teams will cope with the transition from 2004 to 2015. Edlin reports that several divisions at 2 Sisters have been

certified to the 14001 standard for a number of years and that its leadership team is committed to the system. He believes this longstanding support will mean the top management at the company will easily be able to demonstrate the requirements in clause five of the revised standard. "We've got a culture of leadership engagement with the environment at 2 Sisters, which will stand us in good stead," he says. Likewise, Kirsten McLaughlin, company environment manager (UK) at consulting firm Parsons Brinckerhoff, says her senior management team is engaged on the environment. "We have a sustainability action plan that runs to the end of 2015, which was signed off by the leadership team. A member of the sustainability team reports to top management quarterly and senior managers sign off the management review of the firm's EMS," she explains.

Independent environment consultant Anya Ledwith at ESHCon also considers the new standard an opportunity to embed environmental management more effectively. "It's what the profession has spent the past 20 years striving for," she says. But, she warns, that this might only happen in organisations that already see the value of using 14001.

Edlin also suspects that organisations without the same level of top-level commitment might struggle at audit to show how senior management is delivering its functions under the new 14001. This lack of ongoing support for the standard among top management in some organisations is a theme taken up by Roberts at EEF: "Many EMS have little support from top management. This is largely down to the business case for the EMS not being fully understood or articulated beyond the need to have the 14001 'badge'. Too frequently, after certification has been achieved, the system is left to stagnate, with small incremental operational improvements. Strategic vision is absent and the organisation misses out on driving real business value from their EMS. Many organisations are therefore not ready for transitioning to the new standard."

Norval agrees: "In my experience many systems have been delivered by keen individuals managing upwards, merely endorsed by those at the top level, so this will potentially prove to be a challenge in some organisations." She believes that, because the new iteration of the standard is much stronger in its requirements for genuine leadership from top management, this will help move away from structures where the "environment" is seen as a standalone team, and where all relevant tasks and issues are simply diverted to those designated as responsible for it.

Dann at BSI offers a similar view: "Top management will no longer be able to pay lip service to a commitment to the management system. They will have to demonstrate, for example, how they ensure the environmental policy and objectives are compatible with the strategic direction and the context of the business, and where they are explicitly involved."

### Raising awareness

Baxter believes the degree of engagement by top management will depend largely on the messages delivered by environment practitioners. "The revised

## High-level structure and top management

Both 14001: 2015 and the revised quality management standard (9001: 2015) are due to be published around the same time and both adopt the high-level structure for management system standards (MSS) approved by ISO in 2012. The aim is to harmonise MSS, so the structure, text and common terms and definitions are the same, making it easier for organisations to integrate them. The result is that the various clauses in the revised 14001 and 9001 follow the same framework, from one (scope) to 10 (improvement), with the sub-clauses reflecting the focus of the different standards. An example of identical text is: "Top management shall ensure that the responsibilities and authorities for relevant roles are assigned and communicated within the organisation."

In its consolidated supplement setting out the high-level structure, ISO defined top management as the "person or group of people who directs and controls an organisation at the highest level". It also referred to top management having the power to delegate authority and provide resources in the organisation. In addition, if the scope of the management system covers only part of an organisation, top management is defined as those who direct and control that part of the organisation.

Image: iStock

standard provides further impetus for practitioners to engage the senior management team," he says "But to be able to do that well, they need to understand their business, how it impacts the environment and how the environment impacts the business. Once you get that right, the leadership will be supportive."

He advises EMS teams to make sure they understand the constraints and opportunities presented by environmental impacts in the context of their organisation. "If practitioners can demonstrate to the leadership how the EMS is effective in helping the organisation deal with threats and opportunities, they will be in position to have credible conversations with top management," he argues. Baxter outlines some possible scenarios where practitioners can demonstrate how an EMS can add value. "The system could aid a finance director's efforts to cut costs by identifying how to reduce waste, for example, or it could provide evidence of good environmental performance if that is something a major customer is demanding to see."

Because the new standard links environmental policy and scope of the EMS to the context of the organisation it provides a good starting point for top management to engage with the management system, says Dann. "Clause four focuses on the context of the organisation and about developing a high-level understanding of the important issues that can affect, in both a positive and negative way, how it manages its environmental responsibilities," she explains. "That should make it easier to raise awareness of the main issues among senior managers and show how the EMS can contribute to business success by highlighting opportunities and threats."

McLaughlin at Parsons Brinckerhoff believes there is a responsibility on environment practitioners to ensure top management is compliant. "The new version of 14001 requires senior managers to do more than under the previous standard," she says. "I expect our corporate environment and sustainability team will more frequently report to top management and they will also be involved in raising awareness of environment

issues among senior managers." She describes a fourfold approach, consisting of informing, engaging, motivating and embedding, to ensure leaders can show that they meet the requirements under 14001: 2015. McLaughlin says this is likely to consist of frequent performance alerts, regular briefing sessions and updates on how tackling environment issues can add value for each business unit. "The detail has still to be worked out, but I can envisage the development of an online briefing session for the senior team."

McLaughlin attended the IEMA EMS forum in November and was impressed by the approach taken by the infrastructure projects division at Network Rail (NRIP) to equip senior management with environment and sustainability skills and knowledge. *the environmentalist* reported in December's training supplement how the rail business is rolling out environment knowledge to its 4,000 workforce. The head of sustainable development, Tertius Beneke, explained that, for senior people in the organisation, this is all about behaviour and leadership, not technical knowledge. "They need to know what's important, what words to use, and so on," he said.

Roberts is another advocate of providing senior managers with relevant environmental knowledge. "One way of kick-starting leadership commitment and the transition to the new standard is for an organisation's senior management team to sit the half-day IEMA session, 'Leading with environmental sustainability,'" he says. He explains that the course, which was recently certified by IEMA, is based on the concept of facilitated discussion, enabling senior executives to explore sustainability at a strategic level, to review the business case and whether their company's current strategy is fit for purpose.

The leadership clauses will be a big change for some organisations, says Norval, and many will take time to adapt. Like McLaughlin, she believes the pace at which they evolve will depend largely on environment practitioners. "I think this will require the environment team to move from being a standalone function to educating the wider business to understand environmental issues more deeply," she says. "The environment team needs to become a leadership, training and monitoring function with the direction set at board level. This should be cyclical with reviews of progress and assessments of risk and opportunity influencing future directions, a step that is often limited in the current version to a simple review of the system itself."

Ledwith says: "The changes should help raise the credibility of the profession, certainly for experienced, well-qualified practitioners." She advises environment professionals to look again at the IEMA skills map to ensure they develop the skills and knowledge to communicate effectively with their organisation's leaders and to make the most of the opportunities presented by the new standard to raise their professional position.

Norval also thinks as a result of the leadership elements of 14001: 2015 environment practitioners may need to work harder to influence the board and to maintain top management's long-term commitment. "This will require constant effort," she says.



### Auditors' responsibilities

How successful the revised standard is in raising commitment to the EMS at the highest levels in an organisation will also depend on the effectiveness of auditors, Edlin believes. "The audits will be critical to driving engagement. They need to see evidence that five or six members of the top management team, from the managing director to the head of HR, are all involved," he says. "It shouldn't be acceptable for senior management or the board to put up one representative so the others can escape their responsibilities."

Dann is sure that 14001: 2015 will mean auditors discuss the EMS more often with senior management. She explains that the certification process at BSI requires assessors to engage with top management at least once in the assessment cycle. "This approach should become the norm now that leadership is written into the standard," she argues. Although Dann concedes that the new, explicit requirements on leaders in 14001: 2015 might lead in some cases to difficult conversations between clients and auditors, she expects the new requirements in the revised standard to improve the audit trail and clarify where the weaknesses and opportunities to improve lie.

Baxter also emphasises how important it is for 14001 auditors to have access to senior management: "Auditors need to speak with the top management to ensure they understand the context of environment to their organisations."

### Going further?

There is a feeling among some practitioners that the revised standard could have gone further to ensure senior management buy-in. Separating sections on environmental aspects and impacts from the sub-clause on risk associated with threats and opportunities is a mistake and could hamper leadership engagement, says Edlin. "It would have been better to embed impacts and aspects into risk. They are not separate from wider business risks," he argues. "This is a missed opportunity to reshape 14001 as part of the risk management process, and would certainly get management attention."

McLaughlin agrees. She describes the draft standard as weaker in this regard than the earlier drafts, which linked impacts and aspects more closely with risk. "I've developed an environmental risk tool for use on our projects and it would have been ideal, had the strong connection in the first draft between impacts and aspects and risk been retained," she says.

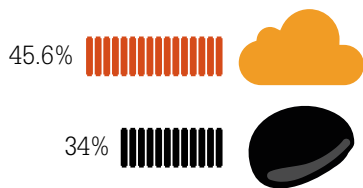
Others caution that the new leadership requirements might be the final straw for organisations that had only regarded 14001 as a "badge", and that these might decide to no longer use the standard or have an EMS.

Despite these concerns, most professionals see 14001: 2015 as a way to elevate environmental management from an add-on to a core business practice. Organisations have a three-year transition period after the revised standard has been published to migrate their EMS to the new edition. Meeting the new leadership clauses will be one of the major challenges to overcome on that journey.



14001

# The UK's energy mix



**2.2%**  
2.2TWh





Energy figures from Decc covering the third quarter (Q3) of 2014 show what fuelled the 75.5TWh of generated electricity, and how the UK energy mix is changing. Decc statistics from 2013 reveal how each country in the UK is generating electricity.

18.8% 

43.6% 

**7.2%**  
26.4TWh

## Key

-  Nuclear
-  Renewables
-  Gas
-  Coal



**16.2%**

Nuclear generation fell 16.2%, from 18.7 TWh in 2013 Q3 to 15.7 TWh in 2014 Q3.

**23.5%**

2013

**21.0%**

2014

**7.7%**

Electricity generated by onshore wind increased by 7.7% in 2014 Q3, from 2.7 TWh in 2013 Q3 to 2.9 TWh.

**13.6%**

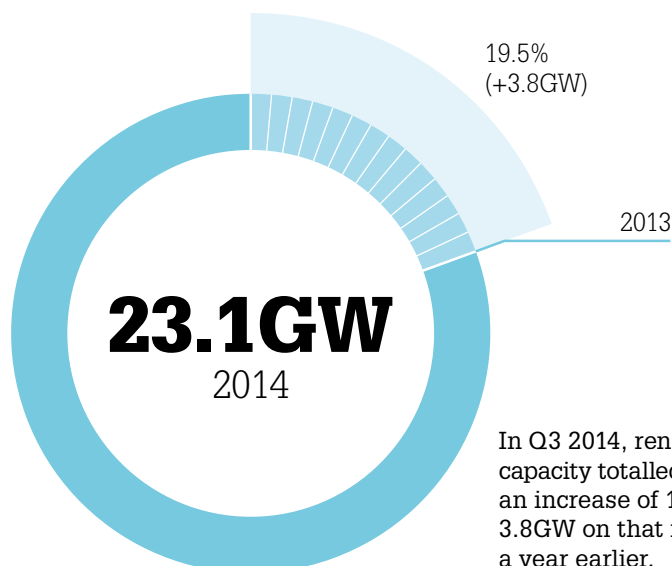
2013

**Nuclear**

**Renewables**



Coal-fired generation fell by 43% in Q3 2014 compared with the same period in 2013, down from 26.7 TWh to 15.2 TWh.



In Q3 2014, renewable capacity totalled 23.1GW, an increase of 19.5% or 3.8GW on that installed a year earlier.

**14.8%**  
53.1TWh



34.9%



32%



20.4%

**75.7%**  
271.9TWh



30%



38.9%

**38.5%**

2014



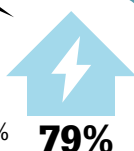
**43%**

Gas accounted for 38.5% of electricity generated in Q3 2014; up from 26.5% in the same period in 2013.

**26.5%**

2013

Electricity from solar photovoltaics increased 79% between Q2 and Q3 in 2014, from 0.8TWh to 1.5TWh.



**79%**

**17.8%**

2014

Gas maintained a larger share than coal in Q3 2014 for the second quarter running.



# A river runs through it

**Paul Suff** takes a trip on the River Thames to see how it is fast becoming an important transport route for the nation's capital city



Spanning 346km, from the Cotswolds through London to the North Sea, the Thames is the longest river in England. The Port of London Authority (PLA) is responsible for the tidal section of the river, from Teddington Lock to a strait in the North Sea, roughly between Clacton-on-Sea in Essex and Margate in Kent. This 153km stretch of river is now reprising its historical role as an important artery for moving people, goods and material, reducing vehicle traffic and congestion in the capital – helping to reduce carbon emissions and noise pollution, and improve air quality.

Inland waterway freight between terminals on the Thames increased by 62% to 5.3 million tonnes between 2012 and 2013, much of it spoil from construction projects, such as Crossrail and the Lee tunnel. According to Martin Garside, deputy director of corporate affairs at the PLA, that amount of freight is equivalent to saving 250,000 lorry journeys a year. The rising tide of freight being transported on the river continued in 2013. Just seven years earlier, inland freight amounted to just 1.8 million tonnes, albeit a 15% increase on 2005. People too are increasingly using the river to commute, with Transport for London (TfL) reporting in February 2014 that passenger numbers in the first year of the river action plan – published in 2013 by London mayor Boris Johnson and TfL – were a record 8.5 million.

### Building up traffic

The Greater London Authority's London plan sets out a strategy for greater use of the river and the PLA forecasts that freight transport on the Thames in London will increase substantially over the next 10 years, primarily owing to a commitment by infrastructure projects to maximise use of the waterway. There is mounting evidence that large construction projects are helping to fuel the renaissance in the river being used to transport goods and materials.

The Crossrail project is one example. *the environmentalist* reported in July 2014 how the new rail link between Heathrow and Reading in the west with Abbey Wood and Shenfield in the east involves boring 42km of new tunnels beneath London. Around 4.5 million tonnes of material was excavated during the tunnelling operations. Some was taken by barge or ship to Wallasea Island, eight miles north of Southend-on-Sea, which the RSPB is transforming into 1,500 acres of tidal wildlife habitat. Veolia's Pitsea landfill facility at Holehaven Creek (see panel, p.25) also received shipments, helping to transform the site into high-quality land for public access and a chalk-grassland habitat. Excavated gravel was taken to a washing and grading centre at Tilbury for separation, with larger aggregate sold to the construction industry and finer graded material used in landfill restoration.

When Crossrail signed a memorandum of understanding with the PLA in 2009 to confirm its commitment to use barges and ships along the Thames to move excavated materials, it estimated that river transport would remove up to 500,000 lorry journeys from the roads. The river has also been used to ship in concrete rings, the segments used to construct the

tunnel. One barge can typically carry the same 1,150 rings as 82 articulated lorries.

Construction of the 6.4km Lee tunnel in Newham, which will help prevent more than 16 million tonnes of sewage mixed with rainwater overflowing into the River Lee each year by capturing it and transferring it to Beckton sewage treatment works, started in 2010 and is due to be completed this year. In parts, it is the deepest tunnel ever constructed in London. All spoil – up to 1.7 million tonnes – produced by the tunnelling is being removed by barge. Tanya Ferry, environment manager at PLA, says the work has brought barge traffic on Bow Creek in east London back to 1960s levels. The moving of spoil and materials for the tunnel was a planning condition secured by the PLA, and Ferry says the authority worked with Thames Water to ensure the utility firm meets its obligations. The Lee tunnel will eventually link, at Abbey Mills, with the Thames Tideway tunnel. This will involve around 130,000 tonnes of material being shipped in via Bow Creek.

The next big construction projects that are likely to use the river extensively are Thames Water's Tideway tunnel and the regeneration of Nine Elms, the area on the south bank that includes the redundant Battersea power station. Ferry reports that the Tideway tunnel is set to be the biggest single project on the river over the next 10 years and the largest since the construction of Bazalgette's sewer system in the 19th century. Many of its construction sites are close to the river and there will be a significant increase in barge movements carrying tunnelling spoil from and building materials to the sites. The planning statement by Thames Water that accompanies its application for the site of the main tunnel boring operations illustrates the extent to which the river will be used to move materials during the construction of the tunnel.

Under the plans, the main tunnel will be bored in two directions simultaneously from the Kirtling Street site in Wandsworth. Thames Water says at least 90% of material excavated from the main tunnel, as well as the sand and aggregates imported for its secondary lining at the site, will be transported by river. The water company anticipates that 1,000-tonne barges will be used and there will be eight barge movements a day over three years associated with main tunnel construction. Thames Water forecasts that the barges will avoid 90,250 heavy goods vehicle visits (180,500 movements) on the local road network around the site.

Work has already started on transforming the Nine Elms area, which includes the extension of the Northern Line underground route and construction of a pedestrian bridge over the river.

The initial work is making use of the river for transport. In October 2014, for example, work started on dismantling the two listed cranes on the riverside jetty at the power station, which stopped generating electricity in 1983. The crane parts will be taken by barge to the Port of Tilbury for storage before restoration and, in 2017, will be put back in place. Their removal, meanwhile, enables the jetty to be used for removing spoil from the Northern Line extension tunnelling work by river rather than road.



### Expanding existing operations

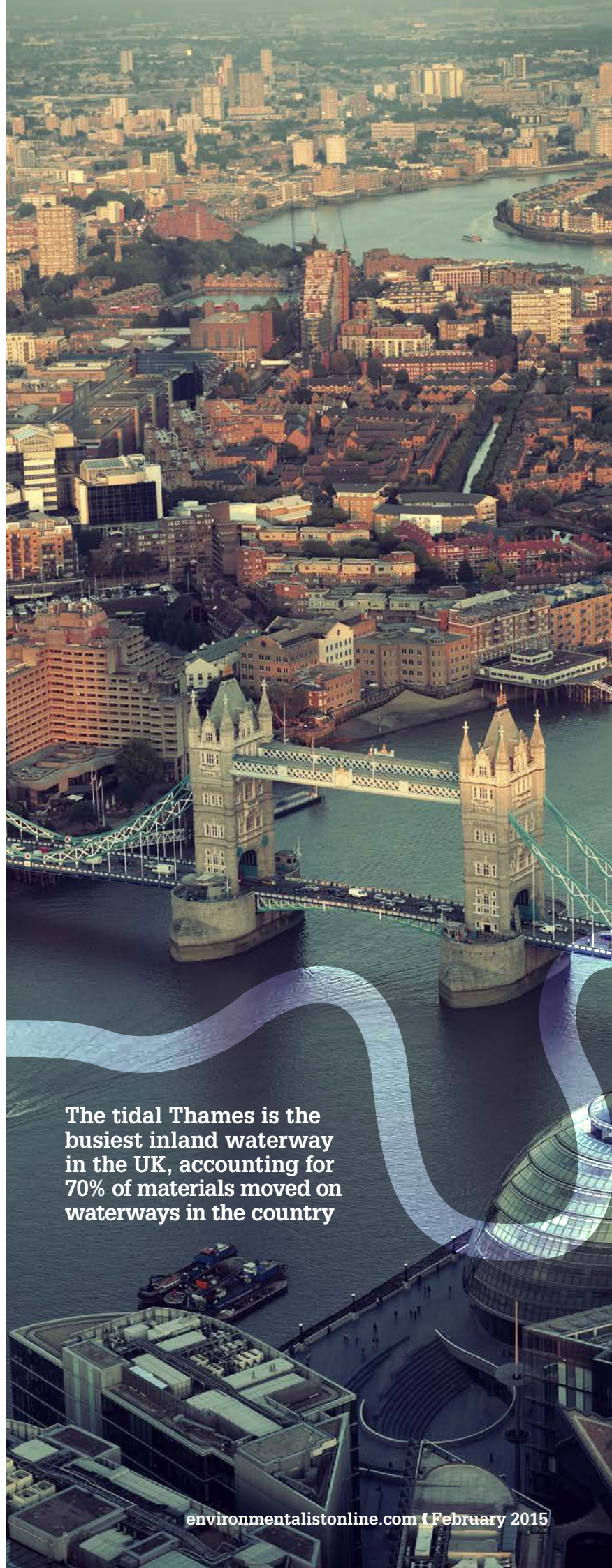
Much of the capital's waste has long been transported on the river and there are four waste transfer stations along its banks between Wandsworth and the Thames Barrier. One is Cringle dock at Battersea, which handles, on average, more than 250,000 tonnes of waste a year. This waste is transferred by barge to an energy-from-waste facility at Belvedere. The City of London Corporation also sends its waste to Cory Environmental's site at Belvedere by river from Walbrook Wharf near Cannon Street Station. This amounted to 58,577 tonnes in 2013/14. The corporation says this was the largest quantity since 2007/08.

In its evidence to the mayor's 2012 review of London's wharves, the corporation described Walbrook as an essential part of the infrastructure in managing the city's waste, contributing to reductions in road traffic in the capital, and helping to reduce airborne pollutants and carbon emissions.

Aggregates are the other main staple of freight traffic on the Thames. Aggregate Industries, Cemex, Hanson and Lafarge are among the major aggregate companies with riverside operations that move material via the Thames. Aggregate Industries says it is committed to using the river for transporting freight and operates a fleet of tugs and barges through its Bennett's Barges division, moving dry bulk loads from Robins Wharf in Northfleet, Kent. During the redevelopment of Blackfriars station, which spans the river, Bennett's assisted in moving more than 80,000 tonnes of material to and from the site. Hanson operates three riverside facilities. Around 600,000 tonnes of marine sand and gravel are landed each year at its Dagenham wharf and taken by barge to ready-mix concrete plants at Greenwich and Wandsworth.

Several operators on the Thames are expanding their fleets as more freight is moved on the river. The PLA reported last year that four operators – Bennett's Barges, GPS, S Walsh and Thames Shipping – had collectively invested more than £15 million in their fleets since 2012. A new tug, SWS Breda, joined the marine management services division of construction business S Walsh, while Thames Shipping added a second vessel in 2013 to meet demand for transporting aggregates. Walsh reports moving up to 10,000 tonnes of bulk cargo material each day by river, which is equivalent to taking about 450 HGVs a day off London's roads. GPS Marine, meanwhile, has invested in larger barges. Barge 2801, which entered service in December 2014, holds 2,830 tonnes of cargo and is the largest on the Thames.

Another area set for further expansion is passenger traffic. The mayor of London, Boris Johnson, and TfL committed in 2013 to doubling passenger journeys on the Thames to 12 million a year by 2020. The 8.5 million passengers using river transport in the 12 months to February 2014 shows that the 2020 target is achievable, says Ferry. Work by TfL estimates that, by 2031, a further 100,000 homes will be built in growing riverside areas. For this, new piers are planned by 2020 at, for example, Battersea power station (as part of the Nine Elms regeneration) and, to the west at Plantation wharf and at the Thames Gateway in the east.



**The tidal Thames is the busiest inland waterway in the UK, accounting for 70% of materials moved on waterways in the country**



Figures from the river bus service Thames Clippers highlight the growth in passenger numbers. The service started as a one-boat operation in 1999, carrying 21,000 passengers in its first year. It now operates 14 vessels and annual passenger numbers were projected to reach 3.6 million by the end of last year, compared with 3.3 million in 2013. To meet the rising demand a new boat is being added to the service in 2015.

### Rising tide

Ferry says expanding the Thames as a freight thoroughfare into the capital is largely dependent on safeguarding wharves from developers and bringing redundant sites back into operation. A policy to protect selected wharves for cargo handling in London transferred to the mayor in 2000. Twenty-five wharves are protected upriver of the Thames Barrier and 25 downstream. A review of the policy in 2012 included recommendations on addressing a deficit or surplus in wharf capacity in different regions along the Thames and reactivating several vacant wharves.

In October 2014, the transport secretary confirmed PLA's application to buy Orchard wharf in Tower Hamlets, east London. The wharf has been unused for more than 15 years and the case for its compulsory purchase was made at a public inquiry in 2013. The planning inspector said the PLA demonstrated that Orchard wharf was navigationally viable and well placed to supply London's construction sector. The planning application forecasts that the wharf could eventually handle 350,000 tonnes of aggregates and 260,000 tonnes of cement powders each year.

According to the Inland Waterways Association (IWA), moving freight by water has significant environmental benefits. It cites data from the European commission indicating that CO<sub>2</sub> emissions (gram per tonne-km (CO<sub>2</sub>g/t-km)) from transporting freight on inland waterways is 40–66 CO<sub>2</sub>g/t-km compared with 207–280 CO<sub>2</sub>g/t-km by road. The IWA also says that waterway transport emits negligible noise compared with road transport and that waterways use less land. Well-designed waterways may also provide opportunities for landscape enhancement, wildlife conservation, recreation, pedestrian access, land drainage, flood protection, water transfer and hydropower generation, it argues.

"The tidal Thames is the busiest inland waterway in the UK for freight and passengers, accounting for more than 70% of all materials moved on waterways in the country," says Ferry. "Moving bulk materials by barge is a far more energy-efficient and less environmentally damaging mode of transport than either rail or road." She cites research by the US Environment Protection Agency to back up her assertion. The agency found, for example, that an inland barge transporting one tonne of bulk liquid would travel 514 miles on one gallon of fuel. The figures for rail and road were 202 and 59 miles, respectively.

Ferry also points out that, on a tidal river like the Thames, moving with the tide provides up to five miles an hour of free energy. "The tides are highly predictable so it is easy to take advantage of this benefit."

### Working on the river



The Port of London Authority (PLA) is primarily responsible for navigational safety on the tidal Thames, and for promoting use of the river and safeguarding its marine environment. As a harbour authority, the PLA regulates work on the river. It is also a significant landowner, including sites of high value for nature conservation and biodiversity.

Environment manager Tanya Ferry explains that the river and estuary are home to hundreds of thousands of wintering birds every year, 129 species of fish, four special protection areas and eight sites of special scientific interest (SSSI). Holehaven Creek at Pitsea is an SSSI because it supports nationally important numbers of black-tailed godwits. The PLA is working with a number of organisations, including the RSPB and Veolia, to transport materials from London development projects – such as Crossrail – by barge to cap the Pitsea landfill site and expand the habitat. "The landfill site is due to close in 2017 and around 3 million tonnes of material is required to cap it," says Ferry. "The barges deliver about 100,000 tonnes a month, which keeps over 400 lorries off the road."

One of the PLA's environmental stewardship activities is the removal of driftwood, which can be a hazard to navigating vessels, particularly those travelling at high speed. A series of floating "litter traps" are stationed along the Thames to collect floating debris, with harbour launch crews also removing large-pieces such as timber. Ferry says the PLA works closely with other regulators, including the Environment Agency, Natural England and the Marine Management Organisation. The agency and Natural England, for example, are members, as is the PLA, of the Dredging Liaison group. The group ensures that dredging operations on the tidal Thames, which are necessary to maintain navigational channels and remove obstructions to navigation, are performed in an environmentally responsible way.

The PLA's hydrographic team monitors the natural movement of sediment along the river so that build-ups in specific locations can be tackled to ensure ships can use the Thames without difficulty. The team uses several catamarans equipped with high-resolution multi-beam echo sounders to survey the river bed. Ferry says such activity helps the PLA manage the river in a more sustainable way, as the information will ensure it dredges only when and where necessary.

# Assessing the natural order



**Mark Everard** argues that environmental impact assessments should explicitly include ecosystem services

**E**nvironmental impact assessment (EIA) and strategic environmental assessment (SEA) are well-established tools for assessing environmental impacts from developments. So too are sustainability assessments (SA) for local plans in the UK. However, do they go far enough, given what we now know about the many values that natural systems confer on humanity? Importantly, do they omit to address the many benefits that flow from protected or restored natural systems and processes, unintentionally framing “nature” as a constraint on legitimate economic and social development rather than the most fundamental resource assuring it?

**Has EIA, SEA and sustainability assessment been reappraised in light of the shift away from ecosystems being regarded only as fixed assets?**

## Natural value

Understanding, analysis and valuation of ecosystems and their contributions to human wellbeing have advanced significantly, particularly since the UN millennium ecosystem assessment was published in 2005. This change in perception of the multiple values provided by nature is backed by global studies, such as TEEB – The Economics of Ecosystems and Biodiversity – and the UK’s national ecosystem assessment (NEA), whose first reports were released in 2008 and 2011, respectively. These assessments built on evolving science concerning ecosystem services – the many benefits nature confers – and international commitments under the Convention on Biological Diversity to undertake an ecosystem approach.

There has been a shift (in theory at least) in policy and practice away from regarding nature solely as a fixed asset warranting protection. An ecosystem services perspective addresses how nature benefits people in multiple material and non-material ways, not least by enabling ecosystems to continue to support human needs into the future.

In recognition of these benefits, protection of ecosystems remains a priority. However, protection has been interpreted historically as lying outside economic and social contexts, and the transition from seeing nature as a fixed asset to being a provider of multiple values may seem daunting – even impossible.

But considerable traction has already been gained with the progressive internalisation of some ecosystem services into the UK and other countries. A common saying at the outset of the 20th century was that an “Englishman’s home is his castle”. This maxim reflected how natural assets were regarded substantially as the physical property of (generally male) owners who enjoyed largely unconstrained rights to use them as they desired. Yet, by the close of the last century, the freedom of action of resource owners had been substantially constrained through, for example:

- environmental, industrial, planning and other legislation;
- a growing body of common case law relating to the impacts of resource use on the rights of other people;
- incentives to manage the land in certain culturally-preferred ways;
- taxes to dissuade undesirable activities;
- novel markets for sustainably-sourced goods as well as biofuels and feedstock crop production;
- catchment management strategies favouring water-sensitive land uses; and
- measures to secure public access.





We need to accelerate the shift in emphasis from ecosystems as fixed property to the safeguarding of various publicly beneficial ecosystem services provided by natural assets regardless of ownership status. Are the tools sufficiently developed to speed up the transition? Have EIA, SEA and SA, for instance, been reappraised, implemented and understood in light of this shift?

### Accounting for nature

Reviews of development appraisals – in infrastructure, regional spatial development, urban and industrial development contexts – suggest strongly that, with notable exceptions, the “nature as fixed asset” approach continues to dominate in the execution of EIA, SEA and SA. Ecosystem services feature rarely, if at all, and then only in a fragmented manner rather than in a systemic analysis of the implications for all tightly interlinked services and their associated beneficiaries.

Disappointingly, the opportunity to formalise the inclusion of ecosystem services in appraisal mechanisms has been ducked, and it is far from certain that ecosystem resources and the benefits they confer on humanity are better protected as a result.

Reference in assessments to designated assets is commonplace. These include:

- sites of special scientific interest;
- areas of outstanding natural beauty;
- Ramsar sites (wetlands);

- special protection areas (EU birds Directive);
- special areas of conservation (EU habitats Directive); and
- listed monuments and other statutory designations.

These approaches may be important for identifying priority natural and built capital for protection. However, do they tell the whole story about the real value for people of the wider, non-scheduled landscapes we inhabit? In turn, do policy tools enacted under this unreconstructed assessment model (such as biodiversity offsetting) adequately reflect the importance of fixed assets, such as identifiable species, and their juxtaposition with other ecosystems and landscape features, as well as proximity to human populations and activities? All of these aspects determine the flows and net value of so many beneficial ecosystem services.

A fascinating research study addressing the economic value of ecosystem services was conducted as part of the NEA follow-on programme. It compared where afforestation might occur across the UK if driven by alternative market value and social value approaches. Under the former, the government would seek to minimise the financial costs of planting trees without considering the wider social benefits and disbenefits that they might generate. As forestry is less profitable than the agriculture it displaces, subsidy payments to landowners would skew forest planting towards agriculturally less productive uplands, despite their importance for many wider, generally overlooked services, such as water storage and purification, carbon storage and habitats for wildlife. The net result





## Societal benefits of landscapes

- Natural regulation of climate and air quality
- Storm buffering
- Urban cooling
- Natural flood-risk management
- Recreational/amenity values
- Spiritual values
- Carbon storage
- Water storage and purification
- Wildlife habitats
- Education

is lower implementation costs but a substantially net negative return on investment when consequences for these overlooked services are considered.

By contrast, modelling of the social value-driven scenario took into account a wider range of benefits in the location of forest planting. These included both market-priced goods, such as timber production and displacement of agriculture, and selected non-marketed goods, including greenhouse-gas emissions and storage, and recreation. The need to pay subsidies is recognised, but policy emphasis shifts to obtaining the best social returns on investment in natural capital. Under the social value scenario, forest planting is redistributed closer to urban centres, providing more people with access to the multiple benefits that forests offer. Annual implementation costs are relatively higher, but a substantially net positive return on investment accrues when these additional, cross-policy area social values are accounted for.

**Impact assessment must be treated as more than a box-ticking exercise if we are to value nature adequately when making decisions.**

### Realising natural value

Assessment must be treated as more than a box-ticking exercise if we are to value nature adequately when making decisions. Though accounting for designations in the target development zones may provide useful background information, a narrow inventory-based approach inevitably overlooks the breadth of highly context-sensitive societal benefits, encompassing multiple technical disciplines and value systems, that landscapes provide (see panel, above).

What matters to people, and why it matters, is as much a part of robust, inclusive and sustainable decision-making as more quantitative technical aspects. Dialogue with multiple stakeholders about the breadth of locally relevant ecosystem service outcomes associated with decisions is essential in a beneficiary-led approach. It is a model that is not only more equitable, but also takes account of a far broader set of societal benefits and potential unintended negative consequences.

Genuinely bringing people together to assess net societal benefits offers many advantages. It is a better basis for decision-making as it helps to identify and avoid unforeseen externalities, and anticipate unexpected objections to development proposals. There are many examples where the multiple negative impacts of a traditional “hard” flood defence might be replaced by multi-benefit creation of periodically inundated flood-resilient amenity or farmed land upstream to absorb flood surges, while providing a diversity of connected wetland-vec-tored ecosystem services. These negative impacts include: lost habitat for wildlife and fish “recruitment” and amenity, concentration of flood peaks downstream, and reduced carbon storage, nutrient cycling and landscape aesthetics.

Under such a model, planning would no longer proceed on the basis merely of averting damage, or justifying safeguarding of natural assets on the basis of altruistic or narrowly statutory criteria. Decisions would rather focus on maximising net societal benefit through optimising multiple ecosystem service outcomes. So, for example, justification of the planting of riparian forests need not be seen as a conflict with the agricultural value of land, but as part of a wider societal investment in building benefits such as natural flood resilience, amenity, carbon storage, wildlife and storm buffering.

### Opportunities for better decision-making

There is a clear case for assessments to consider systemic impacts across the broad spectrum of ecosystem services, their associated beneficiaries and their cumulative value.

A driver for this change would be a mandate from central government for local authorities and the business community to seek “best value” opportunities, including better management of formerly unforeseen risks as well as demonstration of greater social responsibility, whole product sustainability and net societal value. A key enabler to put this into effect would be filling the current gap in clear guidance on how consistently to frame EIA, SEA, SA and other appraisal techniques on the basis of ecosystem services.

This gap needs urgently to be filled. It also represents a significant business opportunity for professional institutions, such as IEMA, government departments and consultancies, which might service this need with clear and pragmatic guidance tuned to different local authorities, businesses and other audiences. The first movers will reap the rewards of pioneering guidance on applying ecosystem services in environmental assessments.

Society at large will enjoy the advantages of further progress towards fulfilling national and international obligations to mainstream the ecosystem approach across society, as well as to future generations and other beneficiaries of the ecosystem services of which we either take better account or inadvertently erode.

**Dr Mark Everard** is associate professor of ecosystem services at the University of the West of England.

# Iceberg in Paris



Ahead of the COP21 meeting later this year, **the environmentalist** talks to Anna-Lisa Mills about a novel way to communicate climate risk

**M**any sustainability professionals will be familiar with the challenge of how to communicate the risks associated with climate change as well as the responses that range from scepticism and fear to apathy. We have a good understanding of why some of these responses occur and we know that, as well as the mixed messages received from the media, there are many psychological factors in play. According to an article in the *Guardian* in November 2014, human brains are wired to respond to short-term problems, not long-term risk. It is no wonder that communication can be a challenge.

The financial cost of, say, erratic weather patterns caused by climate change is regularly felt by the insurance industry, and particularly after a meteorological disaster. These effects have also been observed by Innovation Group (IG), a global provider of business process services and software solutions to the insurance industry. Its sustainability manager, Anna-Lisa Mills, says: “We have seen demand for our services increase after extreme weather events. That said, IG is committed to measuring, reporting and reducing its own carbon footprint and also works to support companies in its supply chain to do the same.”

The company’s commitment to tackle climate change raised an important question for Mills and her team: how do you effectively educate a global workforce of more than 3,000 about climate change? To help achieve this, IG has embedded a five-minute animation in its

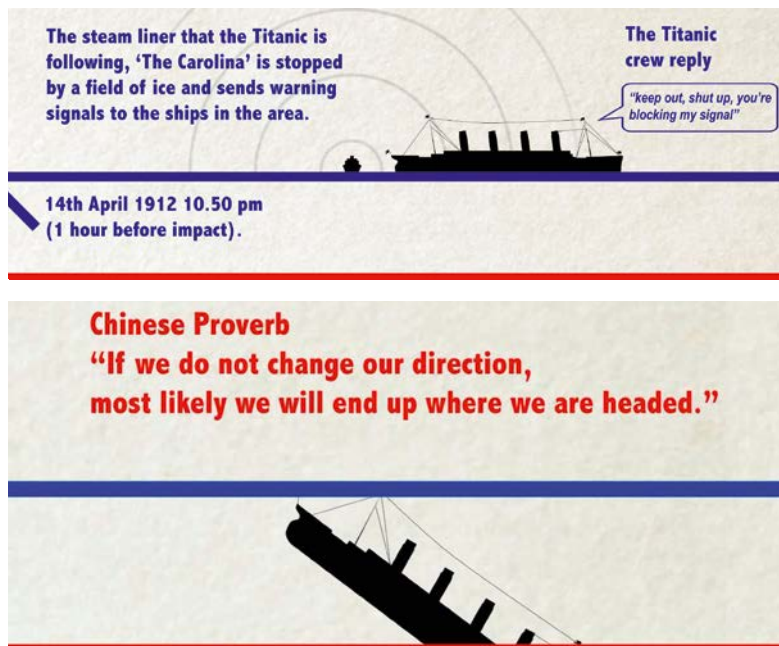
mandatory introduction to sustainability e-learning course for all staff. Called *The journey*, it compares the risk warnings on a timeline for the doomed liner, the Titanic, with warnings from the Intergovernmental Panel on Climate Change (IPCC). Feedback from learners indicates that the animation holds people’s attention as many are fascinated by the story of the Titanic.

## Going on a journey

*The journey* was developed by Mills and is free from the Carbon Fix Foundation, a not-for-profit organisation. Mills explains that she is intrigued by the psychological barriers that prevent some people acknowledging and responding to the dangers of climate change and decided to apply the Titanic analogy, which she has used successfully many times in the classroom and found to be a reliable catalyst for discussion.

“People often tell me to think about the language used when explaining the risks of climate change and to avoid doomsday scenarios or promoting panic or fear,” she says. “However, if I had been aboard the Titanic and tasked with alerting the crew or passengers to the iceberg ahead I don’t think there would have been any advantage in sugar-coating the message.

“With overwhelming scientific consensus that the world is warming and that humans are responsible, there is little more we can do with graphs and numbers without encouraging further the pitfall of analysis paralysis. The world is on course to a temperature



increase of 4°C or more above pre-industrial levels by the end of the century, so we need to effectively convey what this means for current and future generations."

Examples from the animation illustrate some of the comparisons drawn between the sinking of the Titanic and the failure to tackle climate change effectively.

One example is system inertia. "Slowing down carbon emissions or changing course to a low-carbon path would be like changing the direction of a large ocean liner," says Mills. "It would take a long time to change the global energy sector. Carbon dioxide stays in the atmosphere for around 100 years, so emissions added today will remain in the atmosphere for generations."

She also highlights the mistaken belief that technology alone will save the world from the worst of climate change, likening it to how people thought that the unique design of the Titanic made the ship unsinkable when its maiden voyage began in 1912. "The assumption by passengers that there would be enough lifeboats to save everyone can also be likened to assuming we can adapt for climate change by, for instance, building enough flood defences and sea levees. There simply aren't enough to save everyone."

Another analogy between climate change and the Titanic is the unforeseen impacts. "The unseen portion of the iceberg beneath the water represents the part of climate science that we are less certain about," says Mills. Climate scientists are 90–100% certain that the world is warming and that emissions of greenhouse-gases from human activities are causing this, she explains. "But it is more difficult to be certain about how severe the impacts will be or what the exact time frame will be." Mills says this is comparable to the point when the lookouts on the Titanic see the iceberg. "At that point they could not be sure how serious the impact would be or the consequences. But they could be sure that they saw danger ahead."

She adds that the TV drama documentary, *Curiosity: what sank Titanic?*, which was based on factual accounts from survivors, highlighted yet more interesting comparisons. "Even after the Titanic had hit the iceberg

the crew were uncertain about the severity of the repercussions," says Mills. The ship's designer, Thomas Andrews, is quoted as saying that if they could have prevented the water reaching boiler room five there would still have been a chance the ship would have stayed afloat; if not, its fate would be set, even though it would be an hour or more before the ship would sink. "This could be likened to passing environmental tipping points. When positive feedback mechanisms take hold, similar to the Titanic filling with ever more water, there is a point past which there would be little more that could be done."

### Making the message relevant

The animation is hosted on YouTube and includes links to the sources and references. The text accompanying *The journey* provides advice on what a person can do at work or at home to reduce his or her carbon emissions. Giving such guidance is essential to relay the risks effectively, says Mills: "Effective communication of the risks must also be supported with advice about practical action." This is where climate change communications can fall down. Mills says: "If the magnitude of the problem far outweighs the scale of the proposed solutions, people are often left disheartened, or even in despair. It is no good telling someone that their children are likely to witness a world that could be 4°C warmer, paint a very vivid picture of the potential consequences of this, and then suggest that they change their light bulbs at home to more energy-efficient options."

Feedback from IG staff and external parties underline the effectiveness of the animation. As one employee in North America said: "I like the direct comparison to the Titanic disaster. Famous enough to be easily recognisable, plus who hasn't looked back and thought 'what were they thinking?' or 'If I was there, I would've done something?'" Another member of staff, based in the UK, said: "I liked the analogy of the Titanic's journey – it emphasised the reality of climate change and that delay and ignorance is potentially dangerous."

The Carbon Fix Foundation has shared the animation with several external parties, including the Tyndall Centre for Climate Change Research and Al Gore's Climate Reality Project, which both provided encouraging feedback on Twitter.

Mills points out that the international climate conference in Paris from 30 November to 11 December, COP21, presents a last chance to agree a framework to limit global warming to below 2°C. She believes business and commerce have critical roles to play in supporting the efforts of political leaders to reach an agreement and says it is the professional duty of IEMA members and sustainability practitioners to ensure the climate change message is heard. "We spend our careers asking others to act, but we also need to act," she says. "Our action is to communicate effectively and raise awareness within our sphere of influence. This year, with the talks on a new climate deal culminating at Paris, is a crunch one for climate change and we have a duty to ensure that we don't find ourselves in 'boiler room five' where our fate is set."

*The journey* can be viewed at [lexisurl.com/iema59165](http://lexisurl.com/iema59165). Viewers can add comments and share the resource.



# Raising standards

## Environment and sustainability guidance



**T**he third part in our occasional series on environment and sustainability standards and guidance focuses on auditing and reporting. These include ISO standards on the quantification and reporting of greenhouse-gas emissions, which are being revised, the G4 guidelines

on sustainability reporting from the Global Reporting Initiative, the AA1000 series of sustainability assurance standards, and the ISO 19011 guidelines on auditing management systems.

The next part will examine the standards and guidelines on organisational risk and resilience.

Standard/guidance	Details
14064 – greenhouse-gas (GHG) emissions	<p>14064-1: 2006 specifies the organisation-level principles and requirements for the quantification and reporting of GHG emissions and removals. It includes requirements for the development, reporting and verification of a GHG inventory.</p> <p>14064-2: 2006 specifies the principles and requirements, and provides guidance on the quantification, monitoring and reporting of activities to reduce and remove GHG emissions at project level.</p> <p>14064-3: 2006 specifies and provides guidance for those conducting or managing the validation and/or verification of GHG assertions. It can be applied to GHG quantification, monitoring and reporting carried out in accordance with 14064-1 or ISO 14064-2.</p> <p>In October 2014, ISO announced that its technical committee for GHG management, TC207/SC7, is to review the 14064 series of standards – as well as 14065: 2013, which specifies the principles and requirements for bodies that undertake validation or verification of GHG assertions – to ensure they meet changing market needs. The 14064 series was last revised in 2009.</p>
Environmental reporting guidelines	Defra's environmental reporting guidelines, including mandatory GHG emissions reporting guidance, are intended to help eligible companies comply with their obligations to report GHG emissions as well as all organisations to voluntarily report on a range of environmental matters, from voluntary GHG disclosures to key performance indicators. The guidelines were last updated in October 2013.
Climate change reporting framework	The Climate Disclosure Standards Board (CDSB) is revising its climate change reporting framework, which was first published in September 2010. The new version should be available in March. The framework sets out to assist organisations in preparing and presenting environmental information in mainstream reports for the benefit of investors. The CDSB says that information prepared in accordance with the framework will enable investors to assess the relationship between specific environmental information and the organisation's strategy, performance and prospects.
Integrated reporting – international framework	Published in December 2013 by the Integrated Reporting Council, the international framework establishes the guiding principles and content elements for integrated company reports. There are seven principles, ranging from strategic focus and future orientation to consistency and comparability. The nine content elements include organisational overview and external environment, risks and opportunities, and strategy and resource allocation.

Standard/guidance	Details
G4 – sustainability reporting guidelines	The latest version (G4) of the sustainability reporting guidelines from the Global Reporting Initiative (GRI) are designed to support reporters in preparing sustainability reports and to ensure the content focuses on information about the organisation's most critical sustainability-related issues. Sections include criteria to be applied by an organisation to prepare its sustainability report "in accordance" with the guidelines, reporting principles, and standard disclosures. GRI also produces sector supplements – for airport operators, construction and real estate, electric utilities, event organisers, financial services, food processing, media, mining and metals, NGOs, and oil and gas – to use in combination with G4.
AA1000 – assurance standards	<p>AA1000APS: 2008 – the accountability principles standard. APS provides a framework for an organisation to identify, prioritise and respond to its sustainability challenges. The principles cover inclusivity, materiality and responsiveness. They are based on the premise that an accountable organisation will take action to: establish a strategy based on a comprehensive determination of all issues that are material to it and its stakeholder; establish goals and standards against which its strategy and performance can be judged; and disclose credible information to stakeholders about strategy, issues and performance.</p> <p>AA1000AS: 2008 – assurance standard. First published in 2003, AS requires the assurance provider to evaluate the extent of adherence to a set of principles rather than simply assess the reliability of data. It demands that the assurance provider look at the underlying management approaches, systems and processes and how stakeholders have participated.</p> <p>AA1000AES: 2011 – stakeholder engagement standard. AES provides a principles-based, open-source framework for stakeholder engagement and supports the AA1000APS. It can be used as a standalone standard or as a mechanism to achieve the stakeholder requirements of other standards, including the G4 sustainability reporting guidelines (above).</p>
ISAE3000 – assurance engagements	<p>ISAE3000 – the international standard on assurance engagements is designed to guide accountants, auditors and assurance professionals when undertaking non-financial audits.</p> <p>ISAE 3410 – assurance engagements on GHG statements provides guidance for practitioners involved in assurance engagements. An engagement in accordance with ISAE 3410 must also comply with the requirements of ISAE 3000.</p>
19011: 2011 – guidelines for auditing management systems	19011 provides guidance on auditing management systems, including environmental management systems (EMS). It covers the principles of auditing, managing an audit programme and conducting management system assessments. It also provides information on evaluating the competence of individuals involved in the audit process. The 2011 version replaced the 2002 edition.
17021/17022 – conformity assessment	<p>The 17021 series contains principles and requirements for the competence, consistency and impartiality of the audit and certification of management systems, including an EMS.</p> <p>17021: 2011 – requirements for bodies providing audit and certification of management systems; 17021-2 – competence requirements for auditing and certification of environmental management systems; and 17021-4 – competence requirements for auditing and certification of event sustainability management systems.</p> <p>17022: 2012 contains requirements and recommendations to be addressed in a third-party management system certification audit report.</p>



# ADAM INTRODUCED REUSE AND RECYCLING INITIATIVES WHICH DELIVERED SAVINGS OF £100,000 TO THE BUSINESS



**People  
like Adam  
say:**

My role as an Environmental Manager is increasingly driven by commercial needs. A solid environmental strategy is no longer a 'nice to have', it's a requirement because the construction industry understands that good practice delivers profitability.

Just consider the facts. In 2011, I was able to reduce the company's waste to landfill by 70% to turn a cost into £30,000 revenue, reduced the group energy

consumption by 3% and made an annual saving of £100,000 on waste management.

Every business needs to find ways to cut costs, especially when times are tough and I've been able to do that right across our operation.

It's also worth remembering that in a competitive and fast moving industry like construction, a good reputation is priceless.





Image: Getty

## IEMA announces date of sustainability conference

Members are invited to book their place at the first major event of 2015 and take advantage of a special “early bird” rate

The conference, Collaborative change for environmental sustainability, will be held in Bristol, this year’s European Green Capital, on Wednesday 22 April. The venue is the At Bristol Science Centre, at the city’s harbour (left).

Headline speakers include Dr Martin Bigg, director of the environmental technologies innovation network at the University of the West of England. Bigg (right) is the Society for the Environment’s chartered environmentalist of the year for 2015.

The event is being held to recognise the scale and rate of change required to meet global sustainability challenges and how collaboration is vital to this shift. To meet the challenges, organisations at every level need to work together more effectively. Central to this strategy are environment and sustainability professionals working closely with others, such as those with procurement responsibilities, to help drive sustainability through the value chain. Successfully meeting the sustainability challenges also involves bringing together academia and the business community to develop a new wave of innovation.

Speakers will showcase the best in sustainability practice, and delegates will be able to share their ideas in workshops.



Speakers include IEMA Fellow and SocEnv’s chartered environmentalist of the year, Dr Martin Bigg

They will also learn how to develop sustainability in new ways in their value chains and to start to work towards change.

Members can take advantage of a special booking rate of £180 + VAT for this conference. The rate for non-members is £250 + VAT. Places are likely to be taken up very quickly, so book your place today.

[More information about the event, the speakers and workshops, and on how to book a place, is available at \[iema.net/conferences\]\(http://iema.net/conferences\).](#)

## Alteration to 2015-16 membership fees

To support the delivery of existing and new services in 2015-16, some of IEMA’s annual membership subscriptions will increase from June.

With baseline costs rising year on year, it is necessary to apply increases to some joining and renewal fees in order to ensure that IEMA continues to deliver key membership features, such as *the environmentalist*, as well as invest in new and improved products and services.

Members who have Graduate, Affiliate, Associate, Full and Fellow

membership renewals due on or after 1 June 2015 will therefore see a rise to their annual fee. Joining costs for these levels will also increase in line with the renewal fees. Renewal fees for membership of the Global Association of Sustainability Officers and Chartered environmentalist status will remain at the 2014 rate, as will all Specialist Register applications and renewals.

Members subject to the increase – those renewals due on or soon after 1 June – will receive full details of their

2015-16 subscription fees four weeks in advance of their renewal date.

A breakdown of the new rates, including details of by how much each level is set to increase, will be published in the March issue of *the environmentalist*. A list of FAQs to help you find out what you can expect to pay if you have more than one subscription – for example, the renewal cost for a Full member, who is also a Chartered environmentalist and a PEA assessor – will also be available at [iema.net](http://iema.net) from the end of March.

# Supporters of the perfect storm campaign tops 30



More than 30 UK organisations have now pledged their support to IEMA's campaign to bridge a gap in the supply and demand for environment and sustainability skills. The organisations backing the campaign represent a broad spectrum of the UK economy, from sole traders to multinational corporations. The campaign is also supported by a number of recognisable names from politics including Joan Walley MP, as well as high-profile individuals, such as Jonathon Porritt.

With six new organisations signing up during January alone, the campaign, *Preparing for the perfect storm: skills for a sustainable economy*, has now garnered support from 34 organisations. The latest organisations to join the campaign are:

- Skanska UK
- matt:e
- Energised Environments
- A Greener Festival
- The Schumacher Institute
- SW Bruce & Co

The campaign's origins date from October 2014 when IEMA issued an

urgent call to action for the government and businesses to help fill the environment and sustainability skills gap.

A survey by IEMA revealed that just 13% of respondent organisations were fully confident that they had the skills required to compete successfully in a sustainable economy. With the publication of *Preparing for the perfect storm*, IEMA highlighted this issue, and how the global economy is feeling the first gusts of a "perfect storm", consisting of pressures caused by climate change, increasing resource scarcity, unprecedented consumption and a rapidly growing population. This means businesses are facing higher and more volatile prices, and risks to the security of supply of essential materials, products and services. IEMA believes that environment and sustainability skills will enable businesses to be more resilient and better able to adapt to these challenges.

In this important election year in the UK, IEMA is seeking to add more organisations to the list of campaign supporters. To find out how to sign up your organisation, visit [iema.net/skills-campaign](http://iema.net/skills-campaign).

## Policy update



Election takes centre stage

The next government will be responsible for providing the UK with its strategic direction until 2020. During its fixed five-year term, it will need to decide the next steps for three key instruments to support the UK's transition to a low-carbon economy. They are: the Green Investment Bank, the Natural Capital Committee (p.6) and the fifth carbon budget. Internationally it will need to contribute to progressing the UN sustainable development goals (due this September) and finalising the 2030 EU climate and energy package. Alongside this, fundamental issues remain, including: dealing with the deficit, addressing the housing shortage and deciding the UK's future in the EU. At the same time, the economic recovery must be maintained, the environment improved and inequalities addressed. In all these areas it is clear that sustainability and environmental issues play a key part in the debate.

Whichever way you look at it, the 2015 election is important for the profession. As such, IEMA is providing members with the information and tools needed to stay up to date with all the issues discussed and commitments made by the parties. From mid-February we will begin to ramp up our election coverage. So what should you expect?

- A postcard of key sustainability issues – to allow you to engage candidates on sustainability matters, to be included in the March issue of *the environmentalist*.
- An online hub – collating environment and sustainability issues relevant to the campaign, including a Twitter feed.
- Focused surveys – exploring member views on key issues, providing the media with election, relevant views from the profession.

Look out for updates: on IEMA's website, in member emails, such as the IEMA newsroom, and in the March and April issues of *the environmentalist*.

**Josh Fothergill** is policy and engagement lead at IEMA; [j.fothergill@iema.net](mailto:j.fothergill@iema.net)

## 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

**Paul Andrews**  
**Harrison Barrett**,  
 Miller Argent  
**Michelangelo Bovi**, Eco Age  
**Mark Bradbury**, Heatric  
**Michael Byrne**, Balfour  
 Beatty Group  
**Gordon Campbell**, Royal  
 Haskoning UK  
**Laurence Copleston**, URS  
**Gareth Davies**  
**Richard Deaville**, Ecoteric  
**Gurjeet Dhillon**, Associated  
 British Foods  
**Niamh Duggan**, Argyll  
 Environmental  
**Russell Fleetwood**, London  
 Underground  
**Sareh Forouzesh**, Eco Age

**Jennifer Godwin**, Royal  
 Haskoning DHV  
**Brian Goodacre**, Harry  
 Fairclough Construction  
**Jake Goodman**  
**Alan Grimshaw**  
**Stephen Hall**, E.ON UK  
**Toby Hart**, United  
 Environmental Services  
**Michelle Hayward**,  
 Accuro Fm  
**Roy Hull**, Lagan  
 Construction  
**Rowen Li**, EDF Trading  
 Gas Storage  
**Rob Lomer**  
**Brett Mann**, Power Electrics  
**Patrick McCurdie**, Agri-Food  
 and Biosciences Institute  
**Calum McFadyen**, Shell UK  
**Darren Meehan**, Jaguar  
 Land Rover  
**Michael Moore**, Briggs  
 Environmental Services  
**Peace Nkechinyerem**  
**Okafor**  
**Stephanie Parker-**  
**Stephenson**

**Sara Rodriguez**,  
 Caterpillar UK  
**Janet Sampson**, NHS Wales  
**David Smith**, Wales and  
 West Utilities  
**Heather Stevenson**,  
 Warburtons  
**Chris Tutton**,  
 GKN Aerospace  
**Robert Usher**, Taziker  
 Industrial  
**Alex Veitch**, Rail  
 Delivery Group  
**Elizabeth Wilkinson**,  
 Siemens  
**Ashleigh Williams**  
**Catherine Williams**,  
 Environment Agency  
**David Williams**, Magnox  
**Rebecca Woodhouse**, The  
 Sandwich Factory  
**Karina Zachodni**,  
 KLZ Consultants

### Full and Chartered environmentalist

**Louise Bland**,  
 SRK Consulting

**Cathal Brodie**, Clare  
 County Council  
**Dean Drobot**, University  
 of Strathclyde  
**Matthew Goldberg**,  
 Clancy Docwra  
**Paul McGimpsey**, URS  
**Waleed Montasser**,  
 University of Northampton  
**Christopher O'Brien**, Tata  
 Steel Strip Products UK  
**Emily Pitts**,  
 Greenerfourlife  
**Penny Roberts**,  
 Environment Agency  
**Ricky Taylor**, EM  
 Highway Services  
**Polly Turton**  
**Therese Vogt**, Connect3

Upgrading your membership is key to you gaining professional recognition, helping you secure the job you want and even a higher salary. Learn more at [iema.net/membership-upgrade](http://iema.net/membership-upgrade) or call +44 (0)1522 540069.

## IEMA events

Date	Region/Time	Topic	
18 Feb	South West	Social (Exeter)	
25 Feb	Yorkshire and Humber	Implementing practical sustainability in business	
26 Feb	Northern Ireland	Threat or opportunity? Tackling the who, why and how for organisations in Northern Ireland (Belfast)	
5 Mar	South East	Social (London)	
18 Mar	South West	Social (Exeter)	
25 Mar	North West	Environmental careers event	
2 Apr	South East	Social (London)	
15 Apr	South West	Social (Exeter)	
IEMA conferences			
22 Apr	South West	Collaborative change for environmental sustainability (Bristol)	
Webinars			
26 Feb	12:30–1:30pm	Digital EIA – the increasing use of GIS and BIM	
External conferences			
24 Feb	London	Smarter sustainability reporting	sb-reporting.net
3–5 Mar	ExCel, London	Resource 2015	resource-event.com
30–31 Mar	UCL, London	Effective enforcement of environmental law	laws.ucl.ac.uk
21–23 Apr	NEC, Birmingham	SustainabilityLive 2015	sustainabilitylive.com



# EIA update

## Assessment rules retained for GMOs

MEPs have voted to allow member states to restrict or ban the cultivation of crops containing genetically modified organisms (GMOs) on their own territory.

Under the new legislation EU states will be allowed to ban GMOs on environmental policy grounds other than the risks to health and the environment already assessed by the European Food Safety Authority (EFSA).

The legislation, which will come into force in the spring, retains the existing authorisation system, which involves the EFSA conducting a risk assessment to ensure the protection from GMOs for human health, animal health and the environment.

### New EIA criticises Oxford flats

The publication of a retrospective EIA on a new student accommodation development at Castle Mill in Oxford has led to calls to remove the top floor of each block in the complex.

The EIA was commissioned by the University of Oxford after a High Court challenge and found the buildings had a high “adverse impact” on the local area, including Port Meadow, a site of special scientific interest, and the Oxford skyline. Mitigation measures in the EIA would cost around £6 million and include changing the colour of the buildings, and adding timber cladding and mature trees to the west side of the buildings. However, the proposal to reduce the height of the four- and five-storey buildings would remove 38 bedrooms, require all residents to vacate for a year and cost £12 million.

The university is set to present its proposals to the city council for



Image: iStock

The rules will allow member states to ban GMO crops on other grounds, such as town and country planning requirements, socio-economic impact, avoiding the unintended presence of GMOs in other products, and farm policy objectives. Bans could also include groups of GMOs designated by crop or trait.

consideration. Planning permission was granted in 2012 and the buildings have been occupied since September 2013.

### Court condemns stadium plans

The High Court in Northern Ireland has ruled that the country’s environment minister acted unlawfully in approving the new 38,000-seat GAA stadium in west Belfast. Justice Horner identified failures in the EIA for the £77 million redevelopment of Casement Park.

The project would raise the capacity of the stadium from 32,600. The judge said the planning service at the NI department of the environment had failed under domestic and European law to make a proper assessment of the effect the increased capacity would have on the locality and road traffic network. He also highlighted in his judgment less serious errors by the department in its plans for dealing with Japanese knotweed and asbestos.

## Around the world

### Revised environmental protection legislation in China

The first major revision of laws in 25 years to protect the environment in China has come into force. The updated environmental protection law (EPL) contains 70 articles, compared with 47 in the 1989 legislation. The 2015 EPL raises the importance of conducting an EIA and increases the penalties for non-compliance. Article 19 states that an

EIA is required for development plans and for construction projects that could affect the environment. Such plans and projects cannot be implemented or started unless an EIA is performed. Under the law, developers that start a project without an approved EIA can be fined and ordered to restore the site to its original condition.

## EIA practice

### Making scoping effective

In a new QMark paper, EIA experts at WSP encourage practitioners to approach the scoping phase differently to better meet the expectations of all the parties in the planning process and to reduce the scale of the environmental statement (ES). The study argues that, once EIA consultants have gathered further information about a scheme, they should give greater consideration to re-scoping with the aim of reducing the extent of the EIA. By scoping early, revising the scheme and then re-scoping, there is potential for the ES to be more focused and more readily understood by all parties, including decision makers. The art to good EIA consultancy is not the length of reporting, but the quality of the report, say the authors.

[environmentalisonline.com/scoping](http://environmentalisonline.com/scoping)



### The design of mitigation

A successful design modification to mitigate a reservoir development’s environmental impacts is the subject of a QMark case study article available at [environmentalisonline.com](http://environmentalisonline.com). Experts at Arup describe how the ecological and cultural heritage surveys for Bristol Water’s Cheddar Reservoir II uncovered evidence that, in the absence of mitigation, there could be significant negative impacts on a number of habitats and species. The authors discuss how interdisciplinary meetings between the project engineers, ecologists, heritage experts, hydrologists and landscape architects worked to integrate different mitigation requirements into revised designs for the project.

[environmentalisonline.com/design](http://environmentalisonline.com/design)



### Integrating EIA and HIA

In a recent QMark article, MWH Global considers the implications of the revision of article 3 of the EIA Directive, which introduces human health into the assessment criteria.

[environmentalisonline.com/HIA](http://environmentalisonline.com/HIA)



# Helen Woolston

Sustainability coordinator, Transport for London

## Why did you become an environment/sustainability professional?

My degree in biology covered ecology and the study of living things and the impacts of the environment on them, so this was always a passion. During my first role at the British Library, the Environmental Protection Act 1990 was published, which sparked a huge interest in understanding the issues. So I set up the environmental information service (EIS), providing legal and relevant scientific searches for clients.

## What was your first environment/sustainability job?

I'm lucky enough that all the roles I have had have been about the environment in some shape or form, starting with the British Library EIS role.

## How did you get your first role?

When I graduated with my biology degree, there was a demand for librarians and information officers with a science background. I first trained to become a chartered librarian and got a role as a science librarian at the British Library.

## How did you progress your environment/sustainability career?

Having a biology degree and having had a couple of environmental jobs, the big step for me was when I was working for BOC Group. My role covered environmental systems and reporting. My manager there supported me in doing a three-year, part-time master's degree in environmental management at De Montfort University while I was working. This was a great opportunity that helped me immensely.

## What does your current role involve?

I develop and deliver mechanisms for Transport for London (TfL) projects to understand, assess and report on sustainability issues. I coordinate environmental issues that are relevant across the whole business, such as

reporting, adapting to climate change, carbon reduction commitment and staff environmental engagement.

## How has your role changed over the past few years?

My role has stayed largely the same, although, due to organisation and personnel changes, it has moved reporting lines and the business continues to grow.

## What's the best part of your work?

Interacting and influencing with a range of people around the business, seeing their faces light up as they get the idea of sustainability during one of my workshops or training sessions.

## What's the hardest part of your job?

Accepting that not everyone shares the same priorities as me.

## What was the last development/training course/event you attended?

Use of nudge techniques in behavioural safety and environment.

## What is/are the most important skill(s) for your role and why?

For us, it's about being able to communicate, influence, persuade, make the business case. To predict, develop different scenarios and different tools and mechanisms for delivering different options to reach the same goal.

## Where do you see the environment/sustainability profession going?

It's a wide-ranging profession; there are different influences on different types of roles, such as contaminated land professionals, air quality policy makers, those working in resources or managing materials, and carbon footprint managers. Hopefully, this range will continue and the profession will grow even stronger as we realise that there are many roles or parts of jobs that are relevant and can be included.



## Career file

### Qualifications:

BSc, MSc, MIEMA

### Career history:

**2006 to now** environment and climate change coordinator, sustainability coordinator at Transport for London

**2004-06** head of environmental sustainability at London Borough of Sutton

**1998-2004** environment manager, head of environment at Engineering Employers' Federation

**1993-98** environmental information specialist, environmental specialist at BOC Group

**1988-93** science librarian, head of environmental information service at the British Library

## Where would like to be in five years' time?

I'd be happy if I can be doing the same sort of thing.

## What advice would you give to someone entering the profession?

Ask to do work experience or internships in different types of roles. This gets you helpful insights into the wide range of environmental roles available, helps make invaluable contacts and provides experience on your CV.

## How do you use IEMA's environmental skills map?

We are using it to develop an exciting new environmental management graduate scheme at TfL.

## Environmental/Sustainability Advisors

### London, competitive salary & benefits package

Due to the continued growth of our business in the UK, we are currently recruiting for Sustainability Advisors to support one or more projects (depending on project size and nature) by driving the delivery of environmental and sustainability objectives and targets.

Key responsibilities will include:

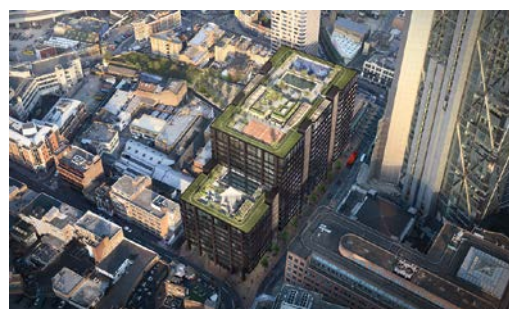
- Providing support to the project team from design, to procurement and delivery on meeting and exceeding objectives relevant to environmental regulations, laws and policies, BREEAM, Code for Sustainable Homes, Considerate Constructors Scheme targets, company sustainability objectives
- Meeting the requirements of the company ISO 14001-certified environmental management system
- Communicating the project sustainability deliverables to subcontractors and monitor their performance
- Liaising with stakeholders e.g. clients, neighbours and regulators
- Compiling reports on project performance to senior management
- Promoting sustainability innovations on projects

Key experience and skills:

- Recent experience within the UK construction sector is essential as well as previous experience with building environmental assessments, such as BREEAM and Code for Sustainable Homes.
- University degree in environmental or engineering studies or equivalent
- Professional membership of relevant bodies e.g. IEMA
- A strong team player with excellent written and verbal communication skills
- A proactive approach and ability to work in a fast paced environment with strong attention to detail

In return, Brookfield Multiplex offers a chance to showcase your talents on some of London's most prestigious projects, personal and professional development opportunities and a friendly collaborative culture.

To apply, or for the full job description, please contact our internal recruiter at [matthew.dean@brookfieldmultiplex.com](mailto:matthew.dean@brookfieldmultiplex.com)







## Considering a career in Recruitment?

In the past year we have seen a rapid expansion, with a second UK office and a new office in the US. We are looking for ambitious Graduates who would enjoy working in a target driven environment to be based in either of our UK offices (Aylesbury or Reading). We will consider Graduates who are not graduating until 2015 as we have a number of open vacancies.

## Get in contact

For more information regarding any of these opportunities or to apply please call 01296 611322 or email [response@shirleyparsons.com](mailto:response@shirleyparsons.com)



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## SELECTION OF CURRENT OPPORTUNITIES

### Environmental Manager

**MANCHESTER £35-45K + CAR LO 6791**

One of the UK's largest main contractors is seeking an Environmental Manager to help support multiple rail projects across Manchester. This role will see you carry out site-based inspections and audits, produce environmental performance reports and carry out training as required. Candidates must have a minimum of 5 years' environmental management experience and hold an environmental degree.

### Senior Environmental Manager

**LONDON £40-50K + CAR ALLOWANCE LO 6780**

An exciting opportunity has arisen for an experienced Senior Environmental Manager to join a global construction and civil engineering company. You will assist in the development and delivery of environmental/sustainability training, liaise with external parties and local authorities and promote continuous improvement across project sites. The ideal candidate will have a strong rail background, previous managerial experience and a relevant environmental degree.

### Sustainable Materials Advisor (Contract)

**LONDON £350 A DAY LO 6762**

A major client organisation is currently seeking a Sustainable Materials Advisor to work closely with their engineering and sustainability teams. The successful candidate will be responsible for supporting the development of sustainability throughout the organisation as well as providing technical sustainability advice to internal teams. Suitable candidates must have a relevant environmental degree and experience implementing BREEAM on large scale projects.

### Environmental Manager

**GLASGOW £COMPETITIVE + CAR LO 6794**

A multinational principal contractor requires an Environmental Manager to work between Glasgow and Edinburgh. You will support a team of Environmental Advisors by monitoring and reviewing their performance, as well as supporting the sites as you undertake inspections and audits. Candidates should have a degree in an environmental related subject and hold an IEMA membership.

### Global Responsibility Officer

**LONDON £29-35K LO 6734**

A multinational accountancy firm requires a Global Responsibility Officer to work within their corporate team. Responsibilities of the team include implementing strategy to meet CR commitments, liaising with stakeholders, measuring social impact and assurance. Candidates must be confident analysing data, report writing and have a 2:1 degree or equivalent.

### Environmental Consultant (Contract)

**NOTTINGHAMSHIRE £180 PER DAY LO 6602**

A leading service provider is currently looking to hire a Senior Environmental Consultant in Nottinghamshire. You will be responsible for delivering support and environmental advice to the project development team in the form of environmental assessments and reports. Candidates will be expected to independently lead on specific projects so will require effective management skills.

### Senior Environmental Consultant (IAWQ)

**HOME-BASED £40K LO 6647**

A leading HSEQ consultancy is currently seeking a Senior Environmental Consultant (IAWQ). The successful candidate will be responsible for scheduling, surveying and providing written technical reports for survey work on high risk and complex water/air systems. Candidates must have a minimum of 5 years' environmental consultant experience.

### Environmental Manager

**GREATER LONDON £35-45K + CAR ALLOWANCE LO 6799**

A specialist contractor within the construction industry is seeking an Environmental Manager to join a growing and progressive QHSE team. Covering multiple sites, you will be responsible for offering environmental advice and support on a range of new build and construction projects. Candidates must hold a relevant environmental degree, be a member of IEMA and have experience with BES 6001 and ISO 14001.

### Sustainability Advisor

**LONDON £35K LO 6571**

An international contractor is currently recruiting for an experienced Sustainability Advisor. This role will see you ensure that all environmental objectives relating to regulation, law and contractual commitments are met. You will also implement and manage ISO 14001 as well as managing company environmental requirements. Candidates must be a member of IEMA and have a minimum of 2 years' experience within the construction/infrastructure industry.

### Senior Acoustics Consultant

**LONDON £30-40K + £5K CAR ALLOWANCE LO 6782**

A leading global consultancy is currently seeking an experienced Acoustics Consultant to deliver strong technical Acoustics and Vibration expertise. The successful candidate will be responsible for managing the delivery of key projects, undertaking environmental noise assessments for infrastructure projects and developing new business. Candidates should be confident in working within a commercial environment and have relevant qualifications or extensive experience in acoustics.

[www.shirleyparsons.com](http://www.shirleyparsons.com)



# Time for a new challenge...?

This is a fantastic time to join RPS. We are involved in a number of high-profile, £multi-million projects and are looking to recruit talented individuals who want to expand their experience and develop their career. We have a number of roles available, all with an excellent salary and benefits package on offer.

## Our Company

RPS is a leading multi-disciplinary consultancy with the expertise to support clients through the development process, from planning to design to implementation.

We are acknowledged as experts in planning, transport, landscape and environmental consultancy and we are award winning architects, civil, structural and mechanical and electrical engineers.

RPS has grown into one of the world's pre-eminent consultancies by maintaining its local connections whilst underpinning these with the resources and knowledge of a global business.

We employ 5,000 people in the UK, Ireland, the Netherlands, the United States, Canada, Brazil, Africa, the Middle East, Australia and Asia. Our international presence allows us to undertake co-ordinated and integrated projects throughout the world.

To apply, or for more information, contact our Recruitment Manager, Geoff Thorpe via e-mail at [geoff.thorpe@rpsgroup.com](mailto:geoff.thorpe@rpsgroup.com)

No Agencies Please

RPS is an equal opportunities employer

**Principal Hydrogeologist**

Bristol / Cardiff

**Principal Contaminated Land Consultant**

Bristol / Cardiff

**Senior EIA Consultant**

London

**Senior / Principal Ecologist**

Bristol / Cambridge / Cardiff / Oxford

**Senior EIA Co-ordinator**

Bristol / Cardiff

**Graduate Environmental Consultant**

Cardiff / Oxford

**Ecologist**

Cambridge / Oxford

**Contaminated Land Consultant**

Bristol / Cardiff

**Principal Acoustics Consultant**

Brighton



# ACHIEVE ESOS COMPLIANCE IN TIME

If your organisation is legally required to comply with the UK government Energy Savings Opportunity Scheme (ESOS), please contact NQA today to ensure you achieve compliance before the first deadline on

**5 DECEMBER 2015**

08000 522424 | [info@nqa.com](mailto:info@nqa.com) | [www.nqa.com/esos](http://www.nqa.com/esos)



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