

14001

19

## Setting the scene

How workshops can help meet the new standards requirement to grasp organisational context

Renewables

22

## Academic power

Its own wind farm and biomass plant will help Scotland's oldest university to be carbon neutral

Pollution

29

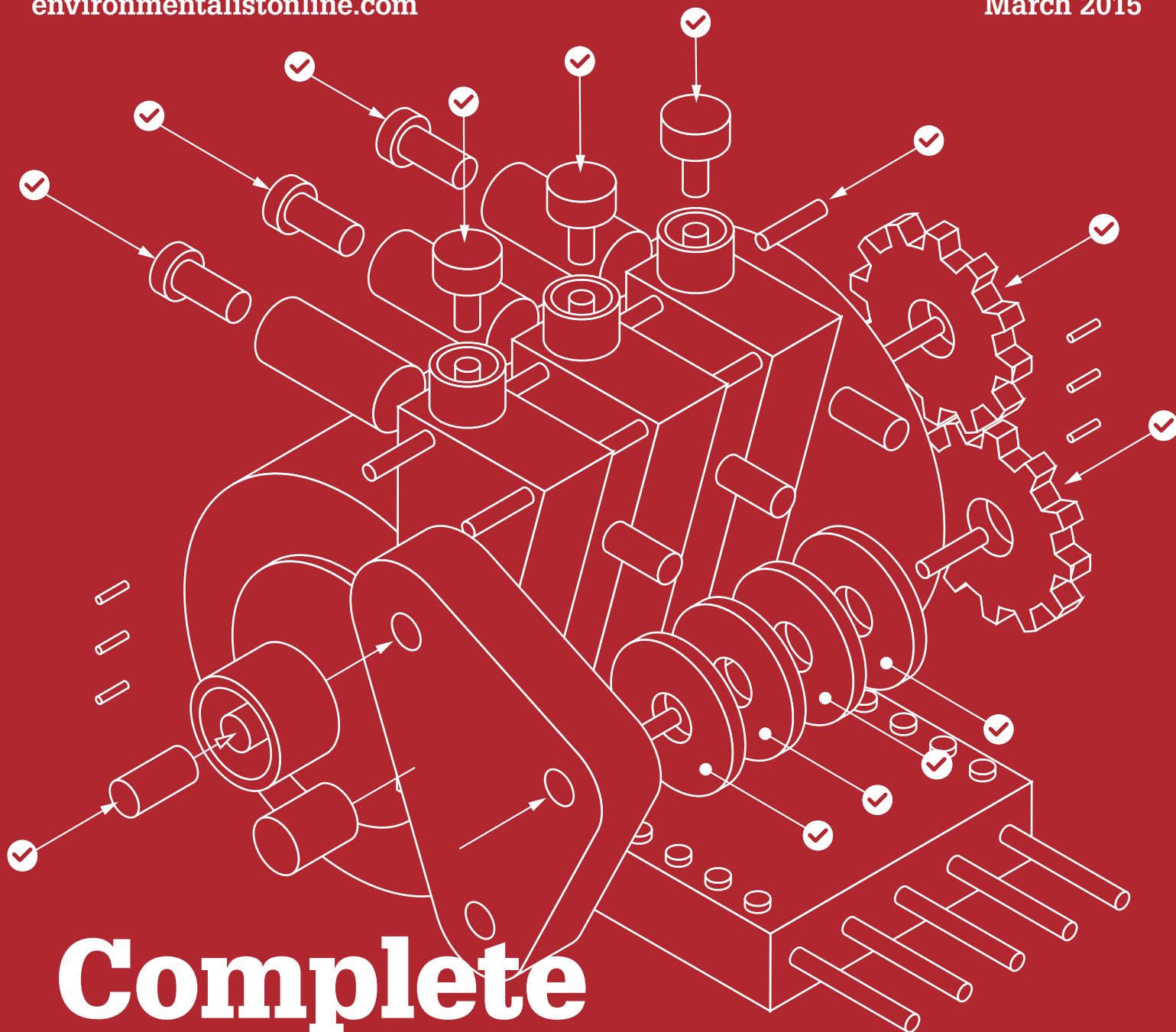
## Chimney sweeps

What can carbon capture and storage learn from the rollout of desulphurisation equipment?

# the environmentalist

[environmentalistonline.com](http://environmentalistonline.com)

March 2015



# Complete transparency

## Environmental product declarations

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# Countdown to ESOS compliance

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Client questionnaire / ESOS assessment

ESOS scoping exercise

ESOS energy audit and report sign off

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# Long time coming

It would appear that negotiators are edging closer to a new global treaty to tackle climate change. The 86-page draft negotiating text agreed in Geneva last month (p.4) builds on agreements made in Lima, Peru late last year. The UNFCCC says the draft covers the substantive content of the new agreement, including mitigation, adaptation, finance, technology and capacity-building, adaptation and finance, and is hopeful it will form the basis for a deal at the Paris talks in December. But let's not get too excited just yet. It is worth remembering that we've been here before. Environmentalists had high hopes that COP15, the Copenhagen climate summit in 2009, would produce a new legally binding agreement. Those hopes were dashed, with the world's two biggest emitters of greenhouse-gases, China and the US, each blaming the other for the failure.

It is also worth recalling the Geneva talks took place 50 years after president Lyndon Johnson delivered a special message to the US congress. In February 1965, in midst of the Vietnam war, he warned: "This generation has altered the composition of the atmosphere on a global scale through radioactive materials and a steady increase in carbon dioxide from the burning of fossil fuels." Also, that the Swiss city was the scene, in 1990, of the second climate conference, at which the then UK prime minister, Margaret Thatcher, declared: "In recent years, we have been playing with the conditions of the life we know on the surface of our planet. We have cared too little for our seas, our forests and our land. We have treated the air and the oceans like a dustbin. We have come to realise that man's activities and numbers threaten to upset the biological balance which we have taken for granted and on which human life depends."

Given such warnings, many will wonder why today's leaders have so far failed to agree a course of global action. At least the leaders of the three main parliamentary parties in the UK have signalled their intention to pursue robust action on climate change by each signing an agreement reaffirming a commitment to ambitious reductions in emissions (p.6). Unfortunately, some MPs do not share the same aspiration. The general election in two months provides an opportunity, however, to ensure that most MPs in the next parliament will be committed to decarbonising the economy. For UK readers, this month's *environmentalist* contains a postcard from IEMA setting out some important questions to pose to prospective MPs when they ask for your support. Make sure you use it and let's hope the next government takes swift action on climate both at home and abroad.

Leaders of the three main parties  
in the UK have signalled their  
intention to take climate action.  
Unfortunately, some existing MPs  
do not share the same aspiration



Paul Suff, editor

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

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

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# March

## News

- 4** EU ETS reform gets green light  
Climate talks yield draft text
- 5** Energy outlook bad for emissions  
EIA scoping process works
- 6** EU cities top global index  
Market for sustainability advice failing expectations  
**In parliament** Alan Whitehead welcomes party leaders signing climate agreement
- 8** Defra counts costs and benefits  
Parties debate green taxes
- 9** **Big conversation** IEMA members on LinkedIn discuss the reasons why some chief executives are ignoring climate change

## Legal brief

- 11** **Recent prosecutions** Pollution incidents cost Thames Water £247,500; ECJ considers mandatory EIAs; Aarhus committee rules on NGO costs  
**Case law** LexisPSL experts on the Court of Appeal's dismissal of an appeal against High Court's decision not to grant judicial review
- 12** **New regulations** Climate change; energy; environment protection; noise; water; emissions; waste; marine environment
- 13** **Latest consultations** Civil sanctions; low-emission strategy; low-level nuclear waste; maritime transport; marine conservation  
**Guidance** Energy savings opportunity scheme; natural capital; cradle-to-cradle
- 14** **Laying down the law** Andrew Wiseman considers the changes to EIA thresholds and whether raising them will have much impact

## Insight

- 38** **EIA update** Call for mandatory fracking EIAs fails; IEMA EIA practice update with Josh Fothergill; EIA research
- 39** **My career** Anya Ledwith, director and environmental consultant, ESHCon

## IEMA news

- 34** New 14001 on track for September launch  
New member e-newsletters coming
- 35** Speakers confirmed for collaboration event
- 36** Preparing for the general election  
**Policy update** Josh Fothergill on how IEMA is encouraging collaboration for change

## Features



### 16 Product transparency

As demand for environmental product declarations rises, Maxine Perrella discovers whether the benefits to suppliers outweigh the costs of doing them



### 19 Context is everything

EEF's Greg Roberts describes how he conducted workshops in two firms to help them understand the clause on organisational context in the new 14001



### 22 Learning to make a difference

Scotland's oldest university has ambitions to be energy self-sufficient by 2016. Catherine Early reports on how St Andrews is going to achieve its target



### 26 Building blocks of sustainability

Paul Suff talks to Jennifer Clark, director of environment at Skanska UK, about how IEMA corporate membership is helping the firm become greener



### 29 From FGD to CCS

Flue-gas technology has helped remove sulphur from power stations. Peter Brown discovers what carbon capture and storage can learn from its rollout



### 32 Carbon in the city

Experts at ENERGIES 2050 in France on the new finance mechanisms that could help to tackle greenhouse-gas emissions from multiple urban sources

## Shortcuts

## Emissions reporting

About 150 public sector bodies will have to report climate change information under proposals from the Scottish government, which have been put out to consultation. “The introduction of required reporting is one area where we have the power to do more to tackle climate change,” said climate change minister Aileen McLeod. “This is why we are seeking views on standardising reporting for public sector bodies to enable consistent standards, continuous improvement and transparency within the public sector.” The organisations affected would include government departments, local authorities, education institutions and NHS boards. The plans would also introduce a standard reporting form to improve data quality and consistency. The proposals set out how reports would be validated, analysed and monitored in the future. Data published last year revealed that Scotland had failed to meet its statutory emissions reduction targets for the third year running. The National Atmospheric Emissions Inventory reported that overall greenhouse-gas (GHG) emissions in Scotland increased by 0.8% (52.5 MtCO<sub>2</sub>e) between 2011 and 2012. The consultation ends on 29 May.

## New EU finance tools

Private sector involvement in energy efficiency and biodiversity projects could be boosted by two new European financial instruments. The European commission and European Investment Bank (EIB) are funding an €80 million scheme to encourage private investment in energy efficiency projects. The money will be used to fund long-term low-cost loans, credit risk protection and technical expertise to encourage local financial institutions to increase lending for the schemes. The money is expected to unlock at least €500 million of private sector investment. Meanwhile, the natural capital financing facility will support investments in flood protection, rainwater recycling, biodiversity offsets, eco-tourism and projects to protect forests, and reduce water and soil pollution.

## ETS reforms get green light

Measures to stabilise the EU carbon market will be introduced by the end of 2018 after a vote by MEPs.

The commission had suggested a 2021 start date for the reforms to the EU emissions trading system (ETS), but several member states, including the UK and Germany, had called for the proposed market stabilisation reserve (MSR) to begin in 2017. MEPs on the European parliament’s environment committee voted for a compromise timetable, with the MSR in place by 31 December 2018.

Under the agreement, which still has to be ratified by member states, millions of ETS allowances will be withdrawn from the market and placed in a reserve in an effort to shore up the price. MEPs also supported a proposal to prevent the 900 million allowances withdrawn last year under the commission’s “backloading” mechanism re-entering the market in 2019 as originally planned.

The decision to introduce the MSR three years ahead of the commission’s proposed start date was welcomed by campaigners. Bryony Worthington, founder of emissions pressure group Sandbag, described the vote as a “game changer”. “These amendments represent a massive improvement on the commission



Ed Davey had called for a 2017 start date for the ETS reforms

Image: Vickie Flores/LNP/REX

proposal,” she said. Catherine Bearder, MEP and *environmentalist* columnist, said: “These crucial reforms will permanently plug the hole in the EU’s carbon market and boost long-term green investment.”

However, in a joint ministerial statement issued ahead of the committee’s meeting, energy and climate secretary Ed Davey and his counterparts in eight member states, said the MSR should begin in 2017, arguing that an early start was needed to provide the certainty required by investors to fund the creation of a low-carbon economy. They said: “We cannot wait until 2021. By that time, the level of surplus in the ETS is likely to be significantly higher, with the resulting risk that critical low carbon investments needed this decade, are further postponed into the future.”

## Climate talks yield draft text

A consensus for ramping up action to tackle climate change at regular intervals gained traction during the latest international climate talks in Geneva.

Delegates from more than 190 countries meeting in Switzerland discussed the potential for a flexible agreement that could be revised over time without major renegotiation. The move follows acknowledgement by some negotiators, including Christiana Figueres, executive director at the United Nations Framework Convention on Climate Change (UNFCCC), that any agreement in Paris at the end of this year will not be enough to limit the global temperature rise to 2°C, said Jonathan Grant, assistant director of the sustainability and climate change team at PwC, who attended the talks.

Delegates succeeded in drawing up a draft negotiation document outlining all the options for a potential new treaty to be agreed in Paris. The UNFCCC said the

text, which runs to 86 pages, covers the substantive content of the new agreement, including mitigation, adaptation, finance, technology and capacity-building, adaptation and finance. The draft will now be translated and sent to negotiating teams.

Jennifer Morgan, director at the World Resources Institute, said: “At this early stage, the palpable positive spirit coming out of Geneva is a much better measure of progress than the current length of the negotiating text.” However, Tasneem Essop, WWF’s head of delegation to the UNFCCC, warned that traditional fault lines remained. These include how emission reductions are divided between developed and developing countries, and funding to tackle climate change.

Countries must submit their emissions reduction plans to the UNFCCC by the end of June. The EU was due to announce its draft plan for discussion between member states as *the environmentalist* went to press.

## Energy outlook bad for emissions

Carbon emissions from energy consumption will grow by 1% a year between now and 2035, according to new analysis by energy company BP.

Its latest annual energy outlook warns that the trajectory for carbon emissions is significantly above the path scientists recommend. "The most likely path for carbon emissions, despite current government policies and intentions, does not appear sustainable," writes BP chief executive Bob Dudley. The report forecasts that, by 2035, global carbon emissions will be 18 billion tonnes above the International Energy Association's 450 scenario. In this context, restricting the global increase in temperature to 2°C requires limiting the concentration of greenhouse-gases in the atmosphere to around 450 parts per million of CO<sub>2</sub>.

The BP report says that abating emissions will require additional steps by policymakers beyond those already assumed. It advises that no one option is likely to be sufficient on its own, and multiple options, ranging from increases in renewables to improvements in vehicle efficiency, will need to be pursued.

BP says policymakers must implement measures that lead to a "meaningful" global price for carbon. This would provide the



Image: Image Broker/REX

right incentives for the most cost-effective investments to be made, says the report.

The oil and gas firm forecasts that energy demand will rise 37% over the next 20 years, mostly in non-OECD countries. It also predicts a change in the global energy mix over the next two decades, with increases in coal consumption declining sharply, and natural gas replacing it as is the fastest growing fossil fuel. The fastest growth will be in renewables, with capacity rising by around 6.3% a year. Among non-fossil fuels, renewables, including biofuels, will gain share rapidly, from around 3% today to 8% by 2035, says BP. It forecasts that the overall shares of nuclear and hydro will decline, but the scaling up of renewables will lift the aggregate non-fossil share from 32% in 2013 to 38% by 2035.

## EIA scoping process works

Non-key issues are being successfully scoped out of environmental impact assessments (EIAs) for major infrastructure projects, according to an analysis by consultancy Aecom.

Aecom studied the EIAs for 15 nationally significant infrastructure projects (NSIPs) that have received government consent. These vary from a rail freight terminal in Daventry to large offshore wind farms.

Impacts on traffic and landscape were included in all of the environmental statements (ESs) that were analysed. Archaeology and cultural heritage, ecology, geology and ground conditions, and noise were each covered in all but one of the project applications. But other topics were considered in far fewer applications. Impacts on climate change and sustainability, marine mammals and nature conservation were each reviewed in five or fewer projects.

The ES for Hornsea offshore wind farm off Yorkshire had 25 chapters covering technical issues, the highest number in the sample. The Willington C Gas Pipeline near Burton-on-Trent had the fewest, with only eight. Marine-based infrastructure generated the largest ESs, most likely due to projects having both onshore and offshore components, the consultants believe. ESs for projects that are solely onshore have 10-12 technical chapters.

Laurence Copleston, EIA coordinator at Aecom, said the findings were interesting in the light of government claims that applicants are undertaking some technical assessments unnecessarily to avoid legal challenges. "Scoping is a fairly effective process and robust enough to remove topics if they are not required," he said.

However, NSIPs cover many sectors so it is difficult to judge conclusively if any ES is too big, he added.

### Short cuts

#### Climate tool launched

An interactive tool has been launched to help businesses, charities and governments better understand the trade-offs for energy and land use resulting from reducing carbon emissions. The free online calculator uses data reviewed by more than 150 international experts in a project led by the energy and climate department (Decc). The calculator is an extension of a similar tool launched by Decc in 2010 to allow users to explore energy futures for the UK to 2050. National Grid and Friends of the Earth are among the organisations that have used the previous version, says Decc. It also says that governments, including those of China, India and Vietnam, have adopted the model to develop their own national calculators. The new calculator goes further than the old edition by allowing users to add up actions at a global level. International organisations from the US, China, India and Europe worked with Decc to develop the calculator, which was co-funded by Climate-KIC, an EU climate innovation initiative.

#### Law on invasive plants

The Infrastructure Act, which received royal assent in February, provides regulators with new powers to control and eradicate invasive non-native plants. Environmental authorities in England and Wales will be able to issue species control orders to compel land owners or occupiers to control or eradicate the plant. Alternatively, the issuing authority could carry out the operations. The Law Commission, which recommended this extension of powers, says the orders may be issued only when it has been impossible to reach an agreement with the owner or occupier or action is urgently required. In addition, the plant must be identified as both "invasive" (a serious threat to biodiversity, the economy or other social or economic interests) and "non-native" or "no longer normally present in Great Britain". Breaching a species control order will be a criminal offence, but owners or occupiers will have the right to appeal at a tribunal.



## In parliament



## Party pact on climate change

The news that the leaders of the three largest parliamentary parties have signed a joint statement on climate change is not just significant in terms of the forthcoming general election but well beyond. It provides a badly needed signal that there will be no rowing back on action on climate change, whatever the long-term composition of government is, and that the broad framework for what needs doing is accepted and supported across party lines. Some of the smaller print in the declaration underlines this, notably that the leaders commit to agree future carbon budgets in accordance with the Climate Change Act 2008.

The inter-party pact is the good news. The slightly less good news is that a gap remains between what they've sign up to in principle and how the practice of observing it plays out. The five-year carbon budgets offer some room for policy manoeuvre. As to action on climate change, the 2008 Act clearly intended that the Committee on Climate Change would be closely respected in terms of its judgments on what policymakers can and cannot do. Ideally, if a specific government policy had a high carbon cost, it would need to mitigate its effect by tightening constraints elsewhere.

That is where the really hard choices over the next few years will be disputed and we are already beginning to see this happen. Gas is less CO<sub>2</sub> intensive than coal but if it's deployed at scale over the next 20 years it's likely to bust any serious carbon budget. And can the UK live with the assumption that delaying energy efficiency measures to save a huge amount of emissions can really be recouped later when the saving needed will be far steeper and over a shorter period?

Nonetheless, the pact is a good and solid step forward. The world is a little better with the agreement than without it. Now we've got to make it work over the next 10 years.

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

## EU cities top global index

European cities occupy seven of the top 10 places in a new index of the world's most sustainable cities. Frankfurt leads the way followed by London and Copenhagen.

The Arcadis sustainable cities index ranked 50 major urban areas on measures of "people", "planet" and "profit". The planet category assessed factors such as share of energy from renewables, recycling rates, greenhouse-gas emissions, natural catastrophe risk, quality of drinking water, and air pollution. The people category looked at issues such as quality of life.

Profit, meanwhile, focused on the business environment and economic performance. Although Frankfurt took first place in both the planet and profit categories, London came 12th in the planet rankings.

Whereas the German city scored highly for reducing its CO<sub>2</sub> emissions per capita by 15% since 1990, while increasing its economic power by 50% and office space by 80%, London suffered because of its declining air quality and high levels of consumption. Berlin came second in the planet category, with Birmingham 10th and Manchester 14th.

No North American city makes it into the planet top 10, with Toronto ranking the highest overall in 12th. Generally, the



Image: Arcadis

US cities fare worse on the planet metric than on the others, found Arcadis, a design and consulting business. It cites Chicago, Philadelphia and Los Angeles as examples of poorly performing US cities, mainly because they are energy-hungry and have a low proportion of renewable energy. Every North American city in the index sits in the bottom half of the rankings on carbon emissions, said Arcadis.

Elsewhere, Chinese cities, particularly Wuhan, are penalised due to the presence of large, polluting manufacturing industries. São Paulo, meanwhile, scores badly for greenhouse-gas emissions, ahead only of Nairobi and Manila.

## Market for sustainability advice failing expectations

Global spending on sustainability consultancy will rise from \$877 million this year to more than \$1 billion by 2019, though growth will be far below industry expectations, according to a study.

Research organisation Verdantix forecasts annual growth of just over 4% in spending on sustainability consulting over the next five years. This it says, is less than the trend growth rate for the major consulting and accounting firms. Annual expenditure per firm on sustainability consulting averages just \$150,000 to \$200,000, which is well below what is expected by management consultants, says Verdantix.

"In 2015, large corporations will spend \$877 million on management consulting advice relating to sustainability reporting, energy efficiency, sustainability risk assessment, sustainability strategy, sustainable supply chains and product

sustainability. However, this is not the booming market that the Big Four accounting firms and other consultants expected or hoped for," said the report's author, Yaowen Ma.

The analysis says growth rates are failing to match expectations because fast-growing, emerging economies like China and India are not yet big spenders on sustainability consulting and account for just 19% of the global total. It also suggests that sustainability departments have less control of purchasing decisions than some other functions.

The report found that less than half (48%) of spending on sustainability engagements is paid for by the head of sustainability, while 10 other functions contribute the remaining 52%. Even sustainability reporting advice is funded entirely by only 60% of heads of sustainability, says Verdantix.





## Businessplans

**Carlsberg** has unveiled plans to develop fully biodegradable wood-fibre bottles for beverages. The world's fourth largest brewer is working with packaging company ecoXpac, as well as Denmark's Innovation Fund and its Technical University, on the three-year project. All materials used in the bottle, including the cap, will be developed using bio-based and biodegradable materials, primarily sustainably sourced wood fibres.

**BRE** is to work with US organisation **Green Generation Solutions (GGS)** on improving the energy efficiency of existing buildings. Under the arrangement, the building science centre at BRE will carry out independent energy audits to identify quick wins and long-term improvements that can be implemented. Cost and return data will be provided by GGS based on BRE's recommended retrofit actions and manage the delivery of work. Solutions will include improvements to the building envelope, mechanical systems, controls and lighting. Additional areas of focus include policies, procedures and occupant behaviour.

**IKEA's** 2014 sustainability report reveals that the home furnishings business now owns 224 wind turbines and has installed 700,000 solar panels, taking it closer to its 2020 goal to produce more renewable energy than the total energy it uses. By the end of 2015, the firm aims to have invested in or made a commitment to invest in renewable energy projects worth €1.5 billion.

**GE** and **Statoil** are collaborating on the development of more environmentally sustainable technology solutions that address some of the challenges facing shale oil and gas production. The US manufacturer of power generation technologies and the Norwegian energy company say the partnership aims to tackle issues such as global flaring, methane leakages and water consumption.

**Nanoslide**, a technology that is used to spray an extremely thin low-friction coating on to the inner surfaces of the aluminium cylinders in car engines, has secured **Daimler** the innovation accolade at European Business Awards for the Environment. The coating enables more efficient use of fuel, reducing consumption and CO<sub>2</sub> output.

## Defra counts costs and benefits

Every £1 spent by businesses to comply with environmental regulations generates a benefit to society worth £3, according to analysis by Defra.

It used the data from impact assessments to calculate the costs and benefits from 428 regulations over a 10-year period, from 2012 to 2021. Direct compliance costs are estimated at £6 billion a year, with direct benefits totalling £2 billion. But when wider benefits to society are included, such as financial savings to the government and benefits to the environment and health, the figure rises to around £10 billion.

Defra says that net costs to the business community increased by £40 million a year between 2011 and 2012, even though the government's "one in one out" (OIOO) policy – under which every regulation implemented by a department needs to be matched by equivalent savings to business – achieved £3 million annual savings. However, regulations outside the scope of the OIOO policy increased costs by around



Image: Jeff Blackler/REX

£43 million, of which £42 million came from EU-derived regulations.

Peter Young, chair of the Aldersgate Group, said Defra's analysis missed many direct business benefits, such as increased property prices from quality landscapes. Better balanced legislation would eliminate claims that the benefits from environmental legislation are not proportionate to the cost, he argued. "Maybe others could pay some of the costs. The NHS, for example, could shift some of its budget for respiratory disease from treatment to prevention," he said.

## Parties debate green taxes

The Conservatives would favour "subtle market interventions" over any hard-hitting green taxes if they are elected to government in May, according to former energy minister Greg Barker.

He told a debate organised by the Aldersgate Group, that, although the Conservatives want to lower the tax burden in the next parliament, there would be a place for taxes that did not hit people's pockets hard but prompted big behaviour change. He cited as an example the introduction of charges for plastic bags. "That's the sort of subtle market intervention I'd like to see more of and we can be quite free-thinking and open to new ideas on that," he said.

Barker called for the Conservatives to be much more ambitious with landfill tax to support the transition to a circular economy.

Energy secretary Ed Davey argued that the key issue was finding a way to properly price carbon and making the EU emissions trading system (ETS) work more effectively. "That is the crucial test, far more than individual green taxes. If we can have the carbon markets working properly it will send signals that will change behaviour not only in the UK, but across the

whole of Europe." If that was achieved it would encourage investment in renewables and carbon capture and storage.

Davey pledged to continue to push for reform of the ETS through his work with the Green Growth Group, comprising energy ministers from across the EU who are ambitious on climate change action. However, he refused to be drawn on the level of the carbon price.

Shadow energy minister Jonathan Reynolds said that one of the genuinely regrettable events during the current parliament was the row after David Cameron called levies on energy bills to fund energy efficiency measures "green crap". This undermined investor confidence, he argued.

If the next government is another coalition, Barker said the key to an agreement between parties would be affordability of policies. "We have to continue to have real financial discipline. Decd did not have that discipline when the coalition took office and it's taken several years to instill it," he claimed.

Reynolds said that Labour's priorities were further reform of the energy market and effective support for energy efficiency.



# The big conversation

Climate change was not included in the list of 19 issues that consultancy PwC recently asked chief executives to rank as a priority. It was axed as an issue from this year's survey after less than 10% of business leaders mentioned it in 2014. On IEMA's LinkedIn page – [iema.net/linkedingroup](http://iema.net/linkedingroup) – Clare Topping, energy and sustainability manager at Northampton General Hospital, wondered whether practitioners are surprised by the fact that climate change does not keep CEOs awake at night. Here is what some people had to say.

## Are chief executives ignoring climate change?

➤ “I’m not surprised by the finding given that CEOs will be focused on a much shorter time horizon than 10 or 20 years. They are also likely to be representative of the general population and most of them don’t worry about climate change either.”

**Graham Hutchinson, MIEMA CEnv, consultant**

➤ “I agree it is a timescale issue, but there is another factor: to acknowledge climate change as a risk means opening up to the other megatrends facing us – geopolitical shifts, population change, technology, ecosystem failures etc – and the complexities of potential future scenarios these present. But those that don’t address future risks are planning insufficiently. An organisation that plans for future scenarios – some of which aren’t that far into the future at all – are more resilient.”

**Kirsti Norris, AIEMA, consultant, Action for Sustainability**

➤ “Kirsti’s comment about future proofing by thinking about possible scenarios is spot on – it makes you more resilient. But many firms don’t do this and assume the future will be business as usual. Maybe some of it is about risk awareness and risk attitudes. When disaster is stalking your company through the extra pressures from multiple megatrends – which you are not sure if and how hard they are impacting – this may be a new experience that the current culture of CEOs makes them ill-equipped to handle. Bad luck might sometimes still trump good planning, but good luck can’t overcome really poor planning. It needs help and this is where sustainable resilient answers to future scenarios come in.”

**Julie Winnard, AIEMA, doctoral engineer, University of Surrey**

➤ “CEOs state that they aren’t concerned about climate change but they are concerned about ‘over regulation’, much of which has been created to tackle climate change. So they are concerned about climate change in as far as it impacts the profitability. That’s exactly what you would hope from someone in place to maximise short-term shareholder value, and also the reason why climate change mitigation requires legislation to support it.”

**Rob Jones, AIEMA, group environment manager, Specsavers**

➤ “It is going to be a while before the economic cost of pollution and other megatrends catches up with the profit factor. Some enlightened CEOs are catching on to the building of sustainability programmes, and the rate of acceptance of sustainability does seem to be increasing.”

**Neil Johnson, AIEMA, independent consultant**

➤ “I’m not sure it’s all bleak news. The World Economic Forum’s global risks report – also based on global leaders’ opinions – listed failure to adapt to climate change and water crises as two of the five most important issues for 2015. But there is still plenty to do, and that’s also our challenge to communicate more effectively.”

**David Symons, MIEMA CEnv, director, WSP**

➤ “Previous contributors rightly point out that CEO performance tends to be judged on short-term profits. However, the boards that appoint them have a responsibility to shareholders as well as to employees and other stakeholders to consider the potential of external events to derail performance and destroy shareholder value. So corporate risk assessment should be in place and should result in action to mitigate risks such as climate change.”

**Roger Horne, AIEMA, consultant, Horne Partnership**

## PwC findings

More than 1,300 business leaders responded to the 18th annual global CEO survey by PwC. The most pressing concern – cited by 78% of respondents – is “over regulation”, which the consultancy reports is “not limited to industry-specific regulations but goes much broader into areas like trade and employment”. The availability of key skills is also a major cause for concern, with 73% of respondents citing this as a potential threat. PwC reports that concerns about the availability of key skills are at an eight-year high. Chief executives were asked to rate global cooperation on a range of issues. On the question of whether collaboration among governments and businesses is more effectively mitigating climate change risks, 47% answered no and 31% said yes.

## WEF global risks report

The findings of the PwC poll were revealed at the 2015 World Economic Forum (WEF) in Davos in January. The forum’s global risks report was also published in the Swiss municipality. Its findings, as WSP’s David Symons points out, run counter to the PwC results and suggest that business leaders are concerned about climate change. The nearly 900 people polled were asked 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 likely to have the biggest impact, ahead of the rapid spread of infectious diseases, weapons of mass destruction and mass conflict. Failure to progress climate change adaptation was fifth. Major biodiversity loss and ecosystem collapse were also ranked highly on impact, but less so for likelihood. WEF analysts noted that more environmental risks featured at the top of the list than economic ones.





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## In court

### Pollution incidents cost Thames Water £247,500

Guildford Crown Court has fined Thames Water £220,000 and ordered it to pay £27,500 costs for polluting a watercourse running through a site of special scientific interest and killing scores of fish.

The case was referred to the court for sentencing by Redhill Magistrates' Court because of its seriousness and to ensure stiffer financial penalties were imposed on the company. The lower court had been told that partly treated sewage from Thames Water's Camberley treatment works was allowed to pollute the River Blackwell twice in September 2012.

The first incident, on 7 September, killed more than 100 fish by depriving them of oxygen over a 1.5km stretch of the watercourse. Agency officers traced the problem back to the treatment works. Thames Water argued that contractors had been at fault, but the court concluded that the company had been "reckless in relation to the incident" and that "significant environmental harm had been caused".

On 30 September, Thames Water told the agency about hour-long illegal discharge into the river from storm tanks at the site. Thames Water accepted that the problem was due to a blockage that caused toilet paper and sewage debris to build up. This resulted in raw sewage being diverted to the storm tanks. Judge Lucas concluded that the company had been negligent in allowing the blockage to occur, and that a discharge of that nature would have resulted in some harm to water quality.

Thames Water pleaded guilty to causing pollution to an environmentally sensitive site on both occasions. A spokesperson said: "We very much regret this incident and have reviewed procedures and invested in new equipment at the treatment works to reduce the chance of anything like this happening again."

Agency officer Andrew Valentine commented: "Unfortunately, the first incident was a serious one which led to fish being killed and the water quality being badly affected over a significant stretch of the river."

### ECJ considers mandatory EIAs

The Court of Justice of the EU (ECJ) has ruled in the proceedings between Marktgemeinde Straßwalchen and the Bundesminister für Wirtschaft, Familie und Jugend concerning a decision to allow Rohöl-Aufsuchungs AG to carry out exploratory drilling in the municipality of Straßwalchen in Austria. The Austrian courts had asked the ECJ for a preliminary ruling on the drilling of a well more than 4,000m deep for gas exploration without an environmental impact assessment (EIA). The ECJ concluded that annex I to the EIA Directive (the list of activities likely to have a significant impact on the environment and subject to mandatory EIA) does not include oil and gas exploration activities. However, it also said that the activities fell under the scope of the annex II (discretion of states on whether EIA is required), adding that: "Member states [should] determine through a case-by-case examination or through thresholds or criteria set by them whether projects listed in annex II are to be made subject to an EIA."

### Aarhus committee rules on NGO costs

The UN compliance committee for the Aarhus convention has concluded that the award of costs against Greenpeace for its failed legal bid to designate the national policy statement for nuclear power generation were "prohibitively expensive". The UK courts had thrown out the NGO's application in December 2011 for a judicial review, ordering it to pay costs of £11,813. The amount was later reduced to £8,000 after Greenpeace argued that the case fell within the scope of the convention, which provides access to justice in environmental matters. The NGO, however, continued to argue that the amount was excessive and failed to comply with the convention, asking the Aarhus compliance committee to rule. In its judgment, the committee ruled that that the UK government had not complied with "article 9, paragraph 4, of the convention due to the cost order awarded against the communicant [Greenpeace], which rendered the procedure prohibitively expensive".

## Case law

### Compulsory acquisition under Planning Act 2008

An appeal in *FCC Environment (UK) v Secretary of state for energy and climate change* [2015] has been dismissed. The Court of Appeal said because alternatives had been considered for the purposes of the compulsory purchase there was no change in the development of a resource recovery facility, which had received consent, so no further assessment of its effects on the environment was required.

Covanta had applied for an order granting development consent under the Planning Act 2008. The application also sought compulsory acquisition powers. The panel of commissioners set out the reasons for its decision to make the Rookery South Order. Para 7.93 of the decision listed four points put to the panel by Covanta during the compulsory acquisition hearing.

The High Court dismissed the claimant's claim for judicial review, which appealed on two grounds: the inadequacy of the panel's reasoning and that the EIA was out of date. On the first point, the court accepted that the panel had not expressly agreed with the four bullet points in para 7.93, but said the judge's conclusion that it had done so by necessary implication had been correct.

On the second, it said the order had not reserved any detailed matters that might have had environmental effects for further consideration and approval by parliament. The environmental statement in support of the order had been a comprehensive assessment of the development, said the court. Since the panel had reported on the order without amendment, there had been no change to the development, so no further assessment was necessary.

Jen Hawkins

Lexis®PSL

# New regulations



In force	Subject	Details
1 Jan 2015 	Climate change	European commission decision 2014/746/EU revises the list of sectors and subsectors at risk of “carbon leakage” under the EU emissions trading system between 2015 and 2019. <a href="http://lexisurl.com/iema50947">lexisurl.com/iema50947</a>
1 Jan 2015 	Energy	The Feed-in Tariffs (Amendment) (No. 2) Order 2014 requires the data published by the secretary of state on the deployment of solar photovoltaic installations to be split into those that are standalone or provide electricity to buildings. <a href="http://lexisurl.com/iema50945">lexisurl.com/iema50945</a>
1 Jan 2015 	Environment protection	EU Regulation 1143/2014 imposes duties to prevent the introduction and spread of invasive alien species, and manage those already present. Mandatory restrictions are applied on invasive alien species. Early detection and rapid eradication systems must be implemented and risk-based management obligations applied on species already present. <a href="http://lexisurl.com/iema50968">lexisurl.com/iema50968</a>
1 Jan 2015 	Environment protection	The Phosphorus (Use in Agriculture) Regulations (Northern Ireland) 2014 restrict the application of chemical phosphorus on land. The restrictions aim to reduce the amount of phosphorus lost to run-off and impacting surface and groundwaters. The Nitrates Action Programme Regulations (Northern Ireland) 2014 address high nitrate levels in ground and surface waters by establishing programmes to improve the use of fertilisers and manure. <a href="http://lexisurl.com/iema61448">lexisurl.com/iema61448</a> ; <a href="http://lexisurl.com/iema61456">lexisurl.com/iema61456</a>
1 Jan 2015 	Climate change	European commission decision 2014/904/EU determines quantities of imported ozone-depleting substances that may be released for free circulation in the EU. <a href="http://lexisurl.com/iema68522">lexisurl.com/iema68522</a>
1 Jan 2015 	Natural environment	The Plant Health (Fees) (England) (Amendment) Regulations 2014 revises the fees for plant health examinations on consignments of various plants, plant products and other articles. <a href="http://lexisurl.com/iema61474">lexisurl.com/iema61474</a>
1 Jan 2015 	Noise	The Railways (Interoperability) (Amendment) Regulations 2014 amend the 2011 Regulations on noise pollution requirements for trains. It means these will be determined in light of annex III to Directive 2008/57/EC on rail interoperability. <a href="http://lexisurl.com/iema61476">lexisurl.com/iema61476</a>
1 Jan 2015 	Water	The Environmental Permitting (England and Wales) (Amendment) (England) Regulations 2014 remove requirements on small sewage discharge operators to register septic tanks or sewage treatment plant, to keep maintenance records for five years and to notify the Environment Agency if the discharge ceases. <a href="http://lexisurl.com/iema50944">lexisurl.com/iema50944</a>
7 Jan 2015 	Emissions	The Clean Air (Miscellaneous Provisions) (England) Regulations 2014 consolidate and update six regulations under the Clean Air Act 1993. These relate to: permitted periods for dark smoke emissions; exemptions concerning arrestment plant and chimney heights; and local authority air pollution research and publicity powers. <a href="http://lexisurl.com/iema61445">lexisurl.com/iema61445</a>
19 Jan 2015 	Waste	The Carrier Bags Act (Northern Ireland) 2014 applies the existing five pence charge on single-use carrier bags to all new carrier bags with a retail price below 20 pence. The charging regime is being extended to prevent the use of low-cost reusable bags as disposable items in the place of single-use bags. <a href="http://lexisurl.com/iema22964">lexisurl.com/iema22964</a>
28 Jan 2015 	Marine environment	The Merchant Shipping (Prevention of Pollution) (Limits) Regulations 2014 extend various legislation – such as the Merchant Shipping (Reporting Requirements for Ships Carrying Dangerous or Polluting Goods) Regulations 1995 and Merchant Shipping (Prevention of Oil Pollution) Regulations 1996 – to the UK’s exclusive economic zone. <a href="http://lexisurl.com/iema61450">lexisurl.com/iema61450</a>



# Latest consultations



30 Mar 2015

## Civil sanctions



The Welsh government has issued a call for evidence on the use and effectiveness of civil sanctions for environmental offences under the Environmental Civil Sanctions (Wales) Order 2010, the Environmental Civil Sanctions (Miscellaneous) (Wales) Regulations 2010, and the Single Use Carrier Bags Charge (Wales) Regulations 2010. The aim is to gain an understanding of stakeholders' experiences of civil sanctions, their effectiveness in influencing behaviour change and compliance, and their influence on collaboration between the regulator and those regulated.

[lexisurl.com/iema68482](http://lexisurl.com/iema68482)

10 Apr 2015

## Low-emission strategy



A draft low-emission strategy for Scotland is out for consultation. The strategy has been developed by the Scottish government, the Scottish Environmental Protection Agency and Transport Scotland. It brings together the policies being implemented and developed across a range of central government portfolios that could

improve air quality and presents them within a coherent overall framework. The strategy would also set the national standards for the introduction of low-emission zones in Scotland.

[lexisurl.com/iema68476](http://lexisurl.com/iema68476)

21 Apr 2015

## Low-level nuclear waste



Decc and the devolved governments in Northern Ireland, Scotland and Wales are consulting on plans to amend the UK strategy for the management of solid low-level waste from the nuclear industry. The review cycle set out by the Nuclear Decommissioning Authority in August 2010 requires a revised strategy document to be published by August 2015, and the consultation document forms part of the review. The document points out that the management environment for low-level nuclear waste has changed considerably since the publication of the original strategy. Changes include: the diversion of significant volumes of LLW from the low-level waste repository, and the development and use of different treatment and disposal routes.

[lexisurl.com/iema68456](http://lexisurl.com/iema68456)

22 Apr 2015

## Maritime transport



The European commission is conducting a mid-term review of the EU marine transport strategy, which was adopted in 2009. A key aim is to enhance the environmental performance of maritime transport in the EU, including reducing CO<sub>2</sub>, SO<sub>x</sub> and NO<sub>x</sub> emissions; promoting the use of alternative fuels; and developing new ship designs, structures, materials and equipment.

[lexisurl.com/iema68470](http://lexisurl.com/iema68470)

24 Apr 2015

## Marine conservation zones



Defra is seeking views on the 23 sites it has selected to become marine conservation zones (MCZs). The sites are the second tranche of MCZs to be proposed and cover 10,810 km<sup>2</sup>. This adds to the 9,664 km<sup>2</sup> protected by the 27 MCZs designated in 2013. The consultation includes proposals to add features for protection to some sites designated in the first tranche of MCZs. Defra says it aims to designate the second tranche within 12 months. Thirty-seven sites were originally considered for the second round of designations.

[lexisurl.com/iema68453](http://lexisurl.com/iema68453)

## New guidance

### ESOS

EEF has published a free guide on the energy savings opportunity scheme (ESOS) aimed at manufacturers. *Understanding the energy savings opportunity scheme: a guide to ESOS for manufacturers* ([lexisurl.com/iema68486](http://lexisurl.com/iema68486)) provides an overview of the scheme, what it is, what is required and when it is required by. The contents cover: the key facts and dates for the regulations; how to assess eligibility with the qualification criteria; how to calculate the right figures for a business; a step-by-step guide to conducting an ESOS assessment; and how to conduct an ESOS audit.

### Natural capital

Guidelines on preparing a corporate natural capital account (CNCA) have been published to accompany the third and final report from the Natural Capital Committee ([lexisurl.com/iema68488](http://lexisurl.com/iema68488)). The guidelines have been developed by eftec, the RSPB and PwC, and are designed to help individuals and teams tasked with coordinating and producing a CNCA. It describes the natural capital accounting framework and its potential applications; presents "high-level" practical steps for planning, developing and reviewing an account; provides an illustrative example of the calculation of natural capital asset values within the accounting framework; sets out checklists to assist in the preparation of an account; and provides sample templates for key components of an account.

### Cradle-to-cradle

After four years of work by experts in northern Europe (including the UK) to develop tools to help entrepreneurs and policymakers implement the "cradle-to-cradle" (C2C) principles on business sites, the *C2C Bizz guide* has been published ([c2cbizz.com/tools](http://c2cbizz.com/tools)). It explains the tools in detail and provides documents, databases and worksheets that were used in pilot C2C projects. Also included is systematic and practical guidance on implementing C2C on business sites to generate high-quality positive impacts rather than pursuance of a strategy to minimise negative environmental impacts. The guide has a flexible structure so that it can be used according to the specific needs of a site.



## Laying down the law

### On the threshold of a new era for EIA?

**Andrew Wiseman** highlights changes to the thresholds for environmental impact assessment and wonders whether raising them will make much of a difference in practice



In 2014, the government consulted on proposals to “simplify and streamline” the process for making and determining planning applications in England. These included changes to neighbourhood planning and the deemed discharge of planning conditions. One of the more controversial proposals was to raise and modify the thresholds for when an environmental impact assessment (EIA) is required as part of a planning application.

The communities and local government department (Dclg) published its response to the consultation in January. It summarises the consultation responses received and sets out the Dclg’s decision on how it intends to proceed with the proposed increase in the thresholds at which EIA screening is required.

#### Raising the thresholds

There were 327 responses to the consultation. Of these, 60% were from public authorities. Having reviewed the consultation responses, Dclg confirmed that it would introduce a number of changes to the threshold at which an EIA is required. To recap, the key changes are that the current 0.5 hectare limit will rise for:

- housing developments, so that it is now 5 hectares or more than 150 units. The 5 hectare threshold can include developments with up to 1 hectare of non-residential urban development. The alternative threshold of 150 units has been introduced to recognise the impact of high-density development projects in some urban areas, which may be well under the hectare threshold, such as city centre tower blocks;

- other urban development will be raised to 1 hectare; and
- industrial estate development will be raised to 5 hectares.

It is Dclg’s belief that these higher thresholds will not result in any significant environmental effects being missed by the lack of an EIA because:

- all developments in or partly in an environmentally sensitive area will still need to be screened irrespective of their size;
- interested parties will continue to be able to make representations on the environmental effects of a project as part of the normal planning process; and
- the secretary of state will continue to be able to issue a screening direction for any project irrespective of whether it falls above or below the threshold.

#### Unnecessary bureaucracy?

Dclg believes that the changes to EIA thresholds will remove what it describes as unnecessary bureaucracy and will reduce the cost and time taken to grant planning permission. Whether the thresholds were unnecessarily low has long been a matter for debate but Dclg expects that raising the thresholds could dramatically reduce the number of screenings. Whether this is a good thing remains to be seen.

These changes will reduce the upfront assessment costs a developer will have to meet and also ease a local planning authority’s concerns over the likelihood of a legal challenge. In the longer term, the degree to which the developer’s costs are reduced remains to be seen, with many of the issues an EIA looks at still needing to be addressed.

The intention is that the communities and local government department will lay the necessary regulations before parliament soon to bring the changes into effect before May’s general election.

#### Rationale for raising thresholds

The chancellor announced measures in his 2012 autumn statement to improve the application in England of environmental impact assessment (EIA), including a pledge to consult on changing the EIA thresholds for certain types of development. In the subsequent consultation document, the government argued that EIA procedures went beyond those normally required for a planning application. This increased the workload of developers, local planning authorities and the consultation bodies, and added to the cost of making a planning application as well as the time taken to make a decision.

“Therefore subjecting projects, which are not likely to give rise to significant environmental effects, to an EIA unnecessarily adds to the time and cost of preparing an application and obtaining planning permission,” it stated. The document went on to say: “We believe that concern about the risk of legal challenge has led some local planning authorities to require EIA for projects which are not likely to give rise to significant effects.”

The consultation set out plans to raise the screening threshold solely on the basis of land area. But after respondents to the consultation, including IEMA, raised concerns that restricting the threshold to land area would ignore the environmental impact of tower blocks, it was broadened to cover the number of homes in a project.

However, many EIA practitioners warn that the change could result in smaller projects with the potential for significant environmental impact being challenged in the courts. IEMA members have reported several recent housing projects under 5 hectares and 150 homes that local authorities said required an EIA. Josh Fothergill, policy and practice lead at IEMA, said: “There is a lot of precedent where local authorities have said that a particular type of development needs an EIA.”

**Andrew Wiseman** is a partner in the specialist environmental and planning law firm Harrison Grant; [andrewwiseman@hglaw.co.uk](mailto:andrewwiseman@hglaw.co.uk).

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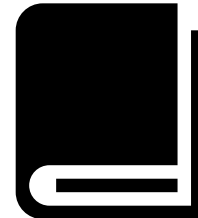




Search for or create product category rules (PCRs) that comply with ISO 14025 and are registered with a credible EPD programme operator



Conduct and verify lifecycle assessment in accordance with the PCRs



Compile EPD that conforms with the PCRs

# Product transparency

As environmental product declarations become more common, **Maxine Perella** finds out whether the benefits outweigh the costs

**T**he popularity of environmental product declarations (EPDs) has grown in recent years, as businesses, particularly in manufacturing, seek to provide greater disclosure over the claims made about the environmental impacts of the goods and services they offer.

EPDs are widely considered to be the gold standard of product transparency. These declarations provide a detailed, independently verified statement of a product's raw materials and chemicals and their origins, as well as lifecycle assessment (LCA) data, such as embodied energy and water, treatment of waste, and global warming potential.

## Standard disclosure

EPDs tend to be drawn up in accordance with the international standard ISO 14025 (type III environmental declarations) and, as such, the methodology used to produce them is robust. The 14025 standard requires that certified declarations be prepared in accordance with specific product category rules (PCRs). These define broad product categories, describe the scope of the LCA to be conducted and identify the types of potential impacts that must

be evaluated. A compliant declaration must be independently verified to ensure these steps have been followed before it can be registered and published through an EPD programme operator.

The extent of data gathering required to create EPDs, particularly for companies undertaking the process for the first time, can make the exercise complex and costly. According to EPD consultant Dr Sandy Smith, UK managing director of PE International, businesses coming to this afresh should first drill down on the motivating factors. "Identifying the business case is crucial before you even start," he says, suggesting some questions that need to be asked. These include: How many customers are asking for EPDs? Are customers asking for this as a tick-box exercise or are they making decisions based on it? What is the contractual worth of sales at risk if we do not have an EPD?

"If you start with that process, based on business value, that's great," Smith says.

Robert Epsom, an approved individual EPD verifier and senior consultant in resource efficiency at Ricardo-AEA, points out that, since EPDs are product-based, most interest in them comes from manufacturing companies that operate on a business-to-business sales

## The EPD process

Source: 2011 UL Environment Inc.



Verification by EPD  
programme operator



Registration in  
operator's system



EPD process  
complete

model. Their customers tend to buy in bulk, and thus any variations in procurement decisions can have significant impact. "Unlike consumers, they will be affected by legislation, or sustainable procurement guidelines, or non-statutory market drivers," he explains.

The construction product sector is the fastest growth area for EPDs. Epsom explains that this is because certification schemes, such as LEED and BREEAM, award higher scores to buildings in which the products procured have LCA data or an EPD. "This is a non-regulatory driver that has almost as much effect as legislation in the UK and internationally," he says. "There is a standard methodology – essentially an overarching PCR – for construction products, EN 15804. This standard is significantly catalysing the development of EPDs in this sector."

### Driving transparency

One company mindful of this trend is building materials supplier British Gypsum. Last year it became the first plasterboard manufacturer in the UK to introduce EPDs for some of its products – it now has eight declarations and, at the time of writing, was due to release seven more. British Gypsum's sustainability leader, Heidi Barnard, says the company is very forward thinking, which was one of the key drivers behind choosing EPDs. "Because of the likes of BREEAM, where clients are looking for more evidence that our products will help them deliver that performance, this is one way we can help demonstrate that and give them something tangible," she says.

Barnard believes customer demand for EPDs will only increase in the future to the point where it might become an essential element of product information. Ramon Arratia, sustainability director at carpet tile manufacturer Interface EMEA, which first spoke to customers about EPD in 2010, agrees: "We try to be one step ahead of customer demand. We were trying to make our customers such as designers and architects aware that this was going to come."

Arratia sees product transparency as being an important driver for the business; it can lend a

competitive edge and ultimately help customers make value judgments during the purchasing process downstream of the supply chain. "EPDs give architects a way of assessing products in a scientific way, which is what they like ... [they] can present customers with a sophisticated analysis of the impact of the product that they are suggesting," he says.

Interface is one of the most vocal advocates of EPDs. About 99% of its products globally now have them.

EPDs can also act as a useful lever for transitional markets, particularly in the renewables sector. The wind power and renewables division at Siemens recently published four EPD brochures, each representing one of the company's four product platforms, covering geared and direct drive wind turbines for offshore and onshore projects. Tine Joergensen, who led on the EPD process at the company, says the move will help demonstrate the level of contribution wind energy can make to the future energy mix. "EPDs help several stakeholders like customers, developers and authorities to estimate the potential of our technology," says Joergensen. "We expect this to support the whole industry in improving acceptance of wind energy."

She adds that EPDs are now a strategic focus across the company's global business operations. "More than 40% of Siemens' revenues have been generated by green products and solutions in recent years. As a consequence, these EPDs have a high strategic importance for us. EPDs have been published in several units, including Siemens' power and gas division and healthcare business. The EPDs are an important element to underline our strength in what we call 'product eco excellence'."

### The economics

Is there a tangible economic benefit to EPDs to go with the definite reputational one? The costs in obtaining EPDs can vary, but they generally run into thousands of pounds. "The verification of a single product will be in the order of £2,000 to £8,000 subject to its complexity," Epsom says. "It is difficult to provide a single figure. Each product category is different and



products vary greatly in complexity. Further to this, companies will often use different LCA software, databases and lifecycle impact assessment methods.”

He points out there are significant economies of scale in that multiple verifications carried out within a particular product category will cost less than the first. “Having completed one verification within a product category, verifiers will be familiar with the supply chain, the manufacturing sites, the product lifecycle and the calculation approach taken and will therefore need less time for subsequent EPDs,” Epsom says.

Ultimately, Epsom believes a good EPD can help a company sell more products. “In many cases an EPD, or the data communicated within one, can be the differentiator when a decision is being made on whether to purchase a product,” he says. Smith at PE International agrees: “It comes back to the business value case – you need to work out how many more sales you are going to get. I think increasingly there is either an opportunity to increase your sales or an opportunity not to lose some sales based on environmental performance.”

In practice however, it would seem the level of payback is a tricky one to quantify. “It is not easy to investigate if there is a relation between sales and EPDs,” Joergensen admits. “But as customers’ requirements increase, EPDs get more important.”

Meanwhile, Barnard points out that, for there to be a tangible cost benefit, more companies need to have EPDs so that there is a level playing field on which to assess such matters. “That’s not where we are at the minute,” she says. “Direct economic benefit would be very difficult to prove. EPDs are not a standalone offering, but part of a larger business proposition when it comes to sustainable products and solutions.”

## Environmental product declarations are not a standalone offering, but part of a larger business proposition when it comes to sustainable goods

Peter Howard, senior brand manager for sustainability at Akzonobel Decorative Coatings, which has five EPDs covering 67 products for its Dulux Trade paint brand, thinks new business will be won on the back of such transparency, particularly at the top end of the market it serves. “I think [EPDs] will help us win major specification in new construction and refurbishment work,” he says.

“There will also be benefits around maintaining our current customers. We have very good relationships with the largest players in construction and fit-out, and it will help us maintain those relationships and demonstrate that we are moving forward with the client.”

Howard believes secondary benefits have emerged from the EPD process. “If we dive into each EDP and the actual detail of particular products, it enables us to show and model how different choices can have a sustainability impact. We weren’t able to do that before. For example, we can now calculate for a particular specification what the impact is. That can help to drive

a real understanding that these products have a credible sustainability benefit or credentials.”

What also comes with such transparency is a greater understanding of the supply chain, notably greater certainty over where the impact hotspots are and how they can be improved. According to Barnard, this will help drive eco-innovation and product development forward. “It’s confirming a lot of the assumptions we’ve made and giving us evidence for what we thought was the case – and now we can prove it.”

### Risks and opportunities?

For those that embark on it, the EPD process is generally an eye-opener – both good and bad. If the data obtained does not stack up positively, especially compared with that of competitors, there is always the option not to publish it. “If the data doesn’t show them in a good light they should make it about the journey rather than the EPD,” Epsom reflects. “The document allows you to include targets and ambitions for following years – that is, you treat the first EPD as the baseline and communicate reductions at pre-defined intervals.”

“What’s interesting is that EPDs, the results that you get, are very much determined by the PCRs and the assumptions that you make,” Howard notes. “Therefore if you change those assumptions or you change those rules, you can get a very different result.”

This, he says, makes benchmarking a challenge. “I imagine many people look at EPDs and say ‘How can I compare this manufacturer to that manufacturer?’ and at the moment, I don’t think you’re going to be able to do that in such a way that it produces a meaningful result. What it could do is positively or negatively impact on one of those manufacturers or brands – and that’s undoubtedly a risk. But you have to make a start on the journey. I believe EPDs are a very positive thing for our industry and generally in driving transparency.”

To be comparable, EPDs for a particular product category must be based on the same PCRs to ensure consistency in methodology and data quality. In practice, this means they must come from the same EPD programme. There are several EPD programme operators in the UK and Europe, however, and companies are free to choose with whom they sign up. Some are now calling for a more harmonised approach to PCR methodology and there are ongoing product environmental footprint pilots at EU level, with which EPD programme operators are involved, to ascertain whether PCRs need to be refined or streamlined.

According to Smith, the pilots are proving controversial with uncertainty over what the final outcome will be. “It has to be right that we try to provide a common framework to decide whether this product is better than that product from an environmental point of view,” he argues. “Although it is incredibly difficult to do, if we don’t try to do it how are we going to harness the consumerism and the buying power? If we move towards comparability, one reason why industry is so nervous is that there will be winners and losers. It’s a huge risk, but also a huge opportunity.”

Maxine Perella is a freelance journalist.





# Context is everything

Understanding an organisation and its context is required by the revised 14001 standard. **Greg Roberts** discovers how

**T**he clause in 14001: 2015 to understand the organisation and its context will require high-level understanding of the important internal and external issues that can affect an organisation's environmental management system (EMS). A workshop approach to increase cross-functional understanding and input from across the organisation would be one way to ensure this requirement helps improve the effectiveness of the EMS.

But an EMS tends to be the exclusive domain of only one or two people, disconnecting it from the rest of the business and, with the exception of environmental issues, what is happening in the outside world. As a result, the system often lacks exposure to "big picture issues", which have the potential to seriously affect, negatively or positively, the ongoing success of the EMS and the business itself. Examples of such issues include a possible change in government, a changing workforce or future restrictions on accessing critical substances. Such issues could be a threat or an opportunity or both, and apply to the environment and the organisation. If the revised standard helps an organisation to identify, assess and manage risk, it, as well as the EMS, will prove its extra resilience.

Focusing on these kinds of "macro" issues is not familiar EMS territory, though arguably it should be, given that they could limit the success of a system. 14001: 2015 will require organisations to think beyond risk in the sense of environmental aspects but also consider the risk to the success of the EMS itself.

## Intended outcomes

The revised standard will require organisations to determine external and internal issues that are relevant to its purpose and that affect its ability to achieve the intended outcomes of its EMS. The term

"intended outcome" refers to what the organisation is required to and wants to achieve by implementing the EMS. The minimum intended outcomes under the revised standard are likely to include enhancing environmental performance, complying with statutory obligations and fulfilling environmental objectives. However, ISO 14004 – the guidance document on establishing, implementing, maintaining or improving an EMS, which is also being revised – encourages organisations to set additional intended outcomes. These could include going beyond the EMS or legislative requirements by, for example, adopting social and environmental sustainability principles.

A further element of the requirement to understand the organisation and its context is that practitioners will also have to consider environmental conditions affecting the organisation as well as those conditions the business affects. This flips the existing demand, "what is our impact on the environment?", to one that also considers the effect of a changing environment on the organisation. Obvious examples are climate change, resource scarcity and decline in natural capital. This widens the interaction with other processes, such as business continuity and corporate risk, and raises the value of 14001 across the organisation.

## Determining context

Although the revised 14001 standard does not specify how to determine context, 14004 suggests organisations undertake a context review. This could include interviews, questionnaires, surveys and research. However, what is fundamental is that the process receives input from all departments, including finance, training, human resources and commercial

## PESTLE workshop outputs for Ervin Amasteel and NOV Downhole Eurasia

Issue	Threat/opportunity to intended outcomes	Action
<b>Political</b>		
Political change	Changes in environmental policy and financial incentives for business	Review environmental policies of political parties. Develop lobbying position/join membership body where relevant
Potential changes in energy or infrastructure policy – for example, fracking or HS2	Reduced fuel prices from fracking could reduce incentive to invest in renewables. HS2 may lead to products being transported by rail	Specific action to monitor policies
Policies by Chinese authorities to control resources	Increased costs and vulnerability to shortages	Investigate circular economy concept – how do we retain control of the resources in our products?
Potential new corporate owner	New owners may not be focused on environment	Lead upwards by example Demonstrate the business case
<b>Economic</b>		
Increase in long-term energy costs due to climate change policy and availability of resources	Investment in onsite energy efficiency and renewables becomes more attractive, as does increasing research and development in low-carbon products	Research renewables; invest more in low-carbon research and development
Continued financial downturn in some economies; cuts to tariffs/subsidies/financial support for carbon reduction initiatives	Could reduce availability of investment/government incentives for low carbon and renewable initiatives	Look at different funding mechanisms and financing models
<b>Social</b>		
Current and potential employees lack skills for a sustainable economy	Constraints placed on sustainability transformation strategies	Include sustainability requirements in recruitment process; partner with local education providers
Increasing awareness of environmental issues leading to changes in customer behaviour	Opportunity if the business meets or exceeds expectations	Increase stakeholder engagement to understand the environmental requirements of customers
<b>Technology</b>		
Lack of internal investment in alternative technology and materials	Unable to design new low carbon/lightweight products to meet environmental objectives	Research potential partnerships or alternative funding mechanisms
<b>Legal</b>		
New environmental permitting requirements for sector	Change in compliance requirements may adjust focus of EMS	Obtain draft guidance documents; participate in consultation
<b>Environmental</b>		
Climate change and resource scarcity	Increased risk of flooding at site and vulnerability of supply chain; increasing cost of resources could reduce competitiveness or increase it if managed	Undertake a climate change vulnerability assessment – for example, BACLIAT (business areas climate impacts assessment tool)
Local planning policy	Policy may stop/encourage renewables	Research local planning policy; increase stakeholder engagement with planning authority/community
Lack of space onsite	Unable to segregate waste	Research alternative approaches, such as offsite segregation

and design, to gather a breadth of expertise. Not only will this ensure an appreciation of the context but also wider engagement, particularly with those functions not previously involved with the EMS. This support will be critical for every other requirement of 14001: 2015.

A valuable way of undertaking the context review is to hold a workshop to share ideas. A PESTLE analysis can be used to structure the conversation and help to achieve buy-in to what is often seen as a peripheral or niche area. This type of analysis can be used to develop an understanding of the external context in which an organisation operates as well as the internal context. It has six themes:

- **Political** – Who is or could be in government? What are their policies? What about internal politics, organisational structure and style?
- **Economic** – Is there growth or recession? How about inflation levels? Are interest and exchange rates rising, falling or stable? What capital is available?
- **Social** – What are the changing demographics and trends? What are the main concerns of society?
- **Technological** – What new technology or materials are emerging? What is the cost of renewables? What are the levels of internal R&D expenditure?
- **Legal** – What are the changes in international, European, national and local policy? What is the internal structure to manage legal compliance?
- **Environment** – How is the environment changing due to, say, the impact of climate change, local air quality and the availability of space?

### In practice

Manufacturers' organisation EEF has used such an analysis to support a number of companies. Ervin Amasteel, a steel abrasive manufacturer in Tipton, West Midlands, and NOV Downhole Eurasia, which designs and manufactures drill bits for the oil and gas industry and is based in Stonehouse, Gloucestershire, are two examples. Ervin Amasteel is implementing 14001 for the first time this year, while NOV Downhole Eurasia is changing its existing EMS to the revised standard.

Before undertaking the PESTLE analysis workshop, the cross-company senior management teams from both companies benefited from participating in IEMA's course on leading with environmental sustainability. The half-day sessions were facilitated by EEF. The course allowed participants to identify for themselves the particular relevance of environmental sustainability to their organisation, allowing them to discuss the changes that would be required by their companies and what their business would look like in 2030.

This vision was achieved by answering simple questions, such as: Where will we get our energy from? Where will our waste go? What will our product look like and how will our business model have changed?

The one-page vision document the group developed brought to life the intended outcomes of the EMS, since it is these that the system will be required to achieve in the long term. It made identifying the issues a relatively straightforward process, as managers could more easily visualise those issues that would help or hinder the achievement of this long-term vision.

### Tips on conducting a PESTLE workshop

- Before the workshop, find out who has experience of using PESTLE. They can assist or act as a supporter during the discussion.
- Obtain results from earlier analysis – this will be relevant even if not captured for environmental reasons.
- Do not get too bogged down in collecting vast amounts of detailed information – the workshop should not be seen as a project in itself. Understanding will improve over time.
- Encourage participants to ask: "So what?" Only those issues that can affect the intended outcomes of the EMS deserve a lengthy discussion.
- Do not worry too much about placing the issues under the right PESTLE theme because some will cross over two or more – just ensure the issue is captured.

Richard Jordan, general manager at NOV Downhole Eurasia, said: "The vision we produced was more than just an environmental exercise. It made us question where we were going, gave the management team a real sense of purpose, and supported our commitment to delivering sustainable and efficient manufacturing."

To ensure the involvement of every participant, smaller groups worked through a prepared template, which was split into the six PESTLE themes and provided several areas to consider. Participants were asked to identify the issue but also the threat or opportunity it posed. Feedback was collated and a summary of the results from the two workshops is provided in the panel on p.21.

The revised standard requires an organisation to take action on the issues that present the greatest threat or opportunity to the success of the EMS. The response may centre on environmental objectives or operational control, although it is just as likely that the identified threats and opportunities will have to be addressed through other processes, such as business continuity, business strategy or financial planning. Ervin Amasteel and NOV Downhole Eurasia undertook a simple risk assessment using a 5 X 5 matrix – consequence x likelihood of occurrence – and are using the results to develop a response.

The workshops highlight the robustness that the requirement in 14001: 2015 to understand the organisation and its context will bring to an EMS and how the PESTLE analysis approach can help participants grasp the complexity of risks, threats and opportunities. It is something Phil Ripley, commercial director at Ervin Amasteel, is keen to highlight: "We had tended to focus on the environment as the preserve, and the problem, of manufacturing. The workshop has led us to review the wider implications for our industry, with additional focus and guidance to suppliers and customers in terms of sourcing and disposal. This may in turn also lead to an additional revenue stream."

Understanding the organisation and its context will be the first requirement of 14001: 2015. Implemented correctly, it can be used to engage senior managers not normally involved in the EMS to consider environment as a strategic issue. This will increase the resilience of the EMS and contribute further to organisational success.

**Greg Roberts** is an environmental consultant at EEF and the UK expert on the ISO technical committee revising ISO 14004.



# Learning to make a difference

Scotland's oldest university is aiming to be energy self-sufficient by 2016. **Catherine Early** reports

A paper mill had been operating in the village of Guardbridge outside St Andrews in Fife for more than 130 years when it closed in 2008. One reason for its demise was the rising cost of energy, ironic considering its imminent transformation to a biomass plant constructed primarily to slash energy bills at St Andrews University.

The 6MW biomass plant is a key part of St Andrews' ambitions to become the first university in the UK to be carbon-neutral for energy by 2016. A 12MW wind farm being built just outside the town will also help the university realise its ambition. Together, the projects should reduce the institution's carbon emissions by 29,000 tonnes a year.

St Andrews is investing in the biomass plant and wind farm in response to rising energy prices. Its annual bill for gas, water and electricity is predicted to soar from £3.2 million in 2005/06 to £20 million by 2020, even though its total consumption remains flat. The university's main academic focus is science, and subjects such as chemistry, physics, supercomputing and research on energy storage use around 50% of its energy.

The university's senior governors realised that the escalating costs of energy posed a direct threat to frontline teaching and resources and were not difficult to persuade of the need to act, according to Roddy Yarr, energy and environment manager at St Andrews. "They understood the link between carbon and cost. Energy was seen as a big risk by the university," he said.

## Powerful ambitions

Yarr began his renewable energy ambitions in 2007 with plans for a six-turbine wind farm at Kenly, three miles from St Andrews. But the project proved controversial and was opposed by some residents and the local planning authority, Fife Council. A survey of local residents by the university found 46% in support of the wind farm, while 36% opposed it.

Fife was one of several local authorities in Scotland to impose a moratorium on granting planning permission for wind farms, and the university's proposals for Kenly were unanimously refused by council officers and councillors on the ground of visual impact. The university argued that, if it could not reduce costs by producing its own energy, 10 full-time jobs a year would be at risk. It appealed against the decision and the wind farm was approved in October 2013 after



Main: Former paper mill will be turned into a 6MW biomass plant  
Below: St Salvator's Quadrangle is the oldest part of St Andrews







two-and-a-half years in the planning system. In the meantime, Fife council underwent a radical change of heart on wind energy, even planning to construct wind turbines on its own land, Yarr says.

The university is now commissioning a developer to plan the project's grid connections and build six turbines. It is keen for the wind farm to be operating by October 2016 before new government subsidies under the contract for difference (CfD) system come into effect, Yarr says. "We estimate we'd get 10–15% less revenue with CfDs," he explains. Yarr adds that the university will also benefit financially under the carbon reduction commitment because payment on energy generated by a scheme participant is exempt.

Whichever contractor the university chooses to develop the wind farm will need to resolve technical issues with grid connections. The university wants power generated at Kenly to connect directly to the university's high-voltage network in its North Haugh complex, where its energy-intensive science research is located. A combination of overground and underground cables would need to be laid to enable a direct connection, Yarr says.

The community should also benefit, with excess supply sold into the national grid and a proportion of profit going into a trust to benefit the area.

### Burning desire

The Guardbridge biomass project was much more straightforward than the wind farm in planning terms and received permission last October, Yarr says. The £25 million energy centre will pump hot water four miles underground to St Andrews to heat and cool its laboratories and student residences. The university secured a £10 million grant from the Scottish Funding Council towards the cost of the scheme.

The university is tendering for a company to design, build and operate the plant, which will be fuelled by up to 17,000 tonnes of virgin roundwood a year. Yarr is aiming for much of this to come from the local supply chain as there is already a strong biomass market in the area. "A big part of what we're trying to do is to promote a local supply chain," he says.

Yarr has asked contractors to engage with local suppliers as part of their bid. For example, farmers could be interested in selling felled "shelter belt" trees planted on the edges of fields to prevent soil erosion. Such trees have a lifespan of around 30 years, after which the farmer would typically have to pay to remove them.

The biomass plant is expected to be running by December, when it will be known as the Sustainable Power and Research Campus. The site is also home to a micro-brewer and small-scale agricultural business growing micro-vegetables, and Yarr has plenty of plans to extend use of the site to other local businesses or university enterprises. Some of the buildings on the site could also be used to store books for the university and house its datacentre, he says. There is also potential for solar panels on the roofs and an anaerobic digestion plant to take the town's waste.

"There's a wider agenda here. It's going to be a busy site, a local-carbon campus where these functions are carried out," he says.





Kenly, three miles from St Andrews, is the site of the university's proposed wind farm



### Resource management

Yarr's ambitions to boost the university's green credentials do not stop at energy. He wants St Andrews to be zero waste-to-landfill by 2020. "We don't treat waste as a waste product; we see it as a resource," he says.

When Yarr began working at the university in 2005, its recycling rate was 4%. It is now 73%, all of which is segregated on site so it can be sold as high-value waste rather than commingled waste. A key part of his strategy to boost recycling was to enlist the cleaning staff to help. He did this by explaining to them that properly segregated waste had a much higher value and that the university would benefit financially. "Once they got that, recycling figures went through the roof," he reports.

Cleaners were given stickers to put on bins that contained mixed recyclables and these would not be emptied, he says. "Cleaners were empowered; they were in charge," he explains. Some people were resistant to the new system but Yarr explained it to them in person so that cleaners did not bear the brunt of any criticism.

"We keep the bins consistent between the buildings, and other simple things like that. People want to do it but you have to make it easy," he says. In 2013, the university concentrated recycling bins in communal areas to encourage people to recycle on the go. This has worked to a point, but there is more to do. Yarr concedes that there is still a lot of contaminated waste going in with the recycling, which then has to be sorted by staff.

Achieving the final 27% towards his zero waste-to-landfill target is proving a challenge. "We're getting there, but the last part is hard. There's no silver bullet," he says. "It really is down to people to do the right thing, but that's the problem. If it comes to 2019 and we can't meet the target we might have to think again about how we meet it. I'd rather fail the target the way we're doing it than give it over to someone to segregate on a materials recovery facility somewhere else – I'm not sure that's the way to go, but we'll see."

### Challenging buildings

Improving the energy efficiency of the university's building stock is also a challenge, Yarr acknowledges: "We have 600-year-old buildings and conservation areas, which are not easy to refurbish. We're focusing on boiler controls, replacing old boilers and behaviour change." Once the biomass plant in Guardbridge is producing energy, he says, there will be options for heat networks to supply other buildings on campus.

Fortunately, the older buildings are used mainly as teaching spaces, so do not have as high an impact on energy use as the high-tech research in which the university specialises. The research, which includes areas such as supercomputing and energy storage, tends to take place in the university's newer buildings, which are away from the conservation area and are easier to refurbish.

All new buildings procured by the university have to meet a BREEAM excellent rating as a minimum, Yarr says. In 2012, a new laboratory building to house research into microbial infection and human immunity achieved an outstanding rating. It was the first such building in the UK to achieve such a standard. The building costs less to heat, light and power than predicted and beat all environmental targets set within the first nine months of operation, the university reports. Features include extra-efficient insulation and heating, and habitats for local wildlife.

### Community work

Yarr's environment team has also encouraged the students to get involved in improving the university's environmental performance. It secured a grant to fund a full-time employee for a year to lead student activity, which included an intra-hall competition to see which student residence could reduce its energy consumption most. Students have also taken part in initiatives on transport, energy and locally sourced food. "Students respond better to peer-to-peer engagement," Yarr says. "An old fart like me going to talk to students doesn't have the same resonance."

His team has also set up a student group, known as "Transition University of St Andrews". It is part of the UK's transition town network. The resident-led St Andrews environmental network (StAndEn) works on similar themes, and together the two groups have successfully bid three times for funding from the Scottish government's climate challenge fund. The money has been used to support community-led carbon reduction projects.

The latest grant, of £148,000, was awarded in November and will help to save 300 tonnes of carbon a year through six interlinked projects. These include a "grow your own" food cooperative; neighbourhood-based energy advice sessions; a home energy advice scheme targeting rural households; and a town-wide bike maintenance and rental programme.

Yarr's team also carries out extensive work to engage with the university's 9,000 staff. Each new member of staff has an induction in the university's environmental policies and activities. From this process, Yarr's team has recruited a network of environmental facilitators who meet regularly to discuss upcoming issues and challenges and how to resolve them. "It's standard stuff but, together with transition activities, there's a lot going on to help spread awareness of what we're doing and climate change generally," he says.

Ultimately, Yarr believes that his work exemplifies the sort of effort universities should be leading on. "Tackling climate change in a demonstrable fashion enables students, staff and stakeholders to understand what can be done and to enable learning. In a way this is what universities are for: to demonstrate good practice through learning," he says.

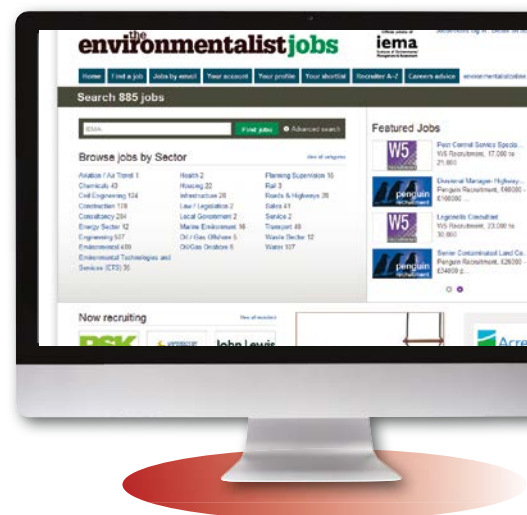
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# Building blocks of sustainability

**Paul Suff** on how IEMA corporate membership is helping Skanska achieve a darker shade of green

**B**eing a corporate member of IEMA is a demonstration that environment and sustainability are at the heart of the business. Construction business and sustainability leader Skanska is one firm that recognises the advantages of company-wide membership and is the first to become a corporate member since IEMA revamped its offering last year.

The firm has a clear vision for sustainability and a long tradition of “greening” its construction projects. Jennifer Clark, director of environment at Skanska UK, says sustainability is part of the ethos driving the Swedish firm. “We always try to influence clients and our suppliers to make sustainable decisions,” she explains. Clark believes IEMA corporate membership will help Skanska develop the skills and knowledge to achieve its environment and sustainability objectives and strengthen its leadership position. “It’s a very visible affirmation of our commitment to leadership on sustainability and helps set Skanska apart,” she says.

## Going deeper

Clark has been with the company for 16 years and is a member of its strategic planning group, which is

developing its 2020 vision. The UK arm of Skanska employs around 5,000 and Clark heads an environment team of 60. She describes the ratio of one environment professional to every 80 members of staff as healthy, citing the development of its “deep green” strategy in 2010 as key to raising the credibility of environment and sustainability professionals in the company. It also ensures that environmental awareness and competency filters throughout the workforce, across all levels of the organisation, and is not just top-down.

Deep green is the destination for a journey to a more sustainable future. It is supported by Skanska’s “colour palette”, a strategic framework and communication tool that measures and guides the company’s environmental performance as it travels to its desired journey’s end. The main image illustrates the three colours on the palette and defines what each means. It moves from “vanilla”, representing a project that complies with local laws, regulations, codes and standards, to deep green, for projects that achieve six “zero” impacts in terms of energy, carbon, materials and water.

“These are the four key areas where Skanska can have the most impact on creating a sustainable future,” says Clark. “There is nothing wrong with being vanilla,





## Vanilla

The construction process, product performance or operation of the facility is in compliance with applicable laws, codes and standards.

## Green

The construction process, product performance or operation of the facility is beyond compliance, but not yet at a point where it can be considered to have near-zero environmental impact.

## Deep Green

The construction process, product performance or operation of the facility has a near-zero impact on the environment and thereby future proofs our projects.

Net zero  
primary  
energy

Near zero  
carbon  
construction

Zero  
waste

Zero  
unsustainable  
materials

Zero  
hazardous  
materials

Net  
zero  
water

but we want to go beyond compliance into the green and deep green areas.” To do this, she explains, involves constructing buildings and projects that do not rely on energy from the grid and are self-sufficient, whether that is from geo-thermal piling or mounting photovoltaics on the roof; consuming zero mains water by installing rainwater harvesting systems, for example, and using no potable water during construction; using no hazardous or unsustainable materials; producing no waste; and achieving near zero carbon emissions during construction.

### Spreading the knowledge

The deep green strategy is embedded in the business, including in how Skanska works with its suppliers and in the training and development its staff receive. “It’s part of the culture of the business,” says Clark. Skanska’s partnership with IEMA aims to assist in raising competence across the business.

The latest internal environmental training prospectus outlines 10 courses under the same vanilla, green and deep green colour scheme used to plot Skanska’s sustainability journey. “The courses aim to promote green leadership and competency across the business, and are designed to meet the requirements of our employees at any stage of their career,” says Clark.

The prospectus explains that vanilla training is in line with environmental legislation of the UK, local guidelines, practices and codes, while courses in the green category go beyond compliance issues and contribute to an employee’s professional development. IEMA’s foundation certificate in environmental management and the Institute’s managing with environmental sustainability course are included in the list of green courses. Deep green training, meanwhile, is considered the final stage of Skanska’s employee development. Courses under this banner include lifecycle costing, lifecycle assessment, sustainable procurement and a masterclass with Tony Juniper, a sustainability adviser and former executive director at Friends of the Earth.

Clark says the courses are open to all employees and reveals that the firm's managing director, his team and the facilities team achieved the foundation certificate in environmental management by attending a four-day residential course. "We regard it as an overarching qualification, not just for environmental specialists," she says.

There has been wide participation in other courses too, with staff in the finance function as well as the preconstruction bid teams attending the one on internal lifecycle-costing. Likewise, the non-operational environmental awareness training scheme has been popular among office-based staff. Popular too is its companion site environmental awareness training scheme, which helps staff with management and supervisory responsibilities on a construction site to understand the importance of environment issues.

One course, titled the deep green workshop, has been particularly useful for engaging staff on the company's sustainability strategy. "It provides time away from the day job for directors, senior managers, designers and others to analyse projects, designs and processes against the colour palette," says Clark.

Professional qualifications for environment practitioners are also being extensively pushed. As part of its corporate membership with IEMA, Skanska is asking every one of the 60-strong environment team who does not have it to achieve IEMA full membership (MIEMA) status by a specific date. "Too often people are too busy, so defer getting the qualification," says Clark. "But doing it collectively means they can support each other. Skanska is paying upfront for this as we believe it will provide real value."

Clark says Skanska is supporting the drive for MIEMA status because clients are increasingly demanding that suppliers have suitably qualified sustainability teams. One is Network Rail. *the environmentalist* reported in December 2014, that the Principal Contractor Licensing Standard used by the company's infrastructure projects division sets out the level of competence and skill it expected of the environment managers and specialists employed by its main contractors.

Environment manager Clare Day is already a full IEMA member and is now working towards becoming a chartered environmentalist. She highlights the professional and commercial benefits of CEnv status: "Becoming chartered is really important for my personal development and because Skanska is seeing more demand from its clients for chartered professionals to work on their projects. The qualification leads to confidence in competency and capability."

Day also believes Skanska's corporate membership will assist her and her colleagues achieve MIEMA or CEnv status: "It's great that lots of my team are working towards qualifications at the same time. We're keeping each other motivated as we go through the process."

Skanska uses the IEMA skills map to advance technical skills and competencies, including leadership and communication, says Clark. "IEMA has a well-crafted career route that appeals to Skanska. The map helps identify strengths and areas of improvement, in conjunction with our internal people development programmes, to help our environmental professionals plan how to progress to full IEMA membership." She adds that Skanska is now working with IEMA on how best to develop a companion skills map for non-environmental professionals.

### Building on the outside

The other key dimension to Skanska's ambition to embed sustainability is to spread knowledge among its supply chain, which is something Clark believes IEMA can help with. The company is a founding member of the construction industry's Supply Chain Sustainability School, a common approach to developing sustainability competence among suppliers. It is a free resource available to any supplier, and has more than 7,000 members from 3,511 companies, 68% of which are small and medium-sized. The school is supported by 18 of the top 20 UK contractors and two major clients, National Grid and Grosvenor.

"The big UK construction companies tend to use the same suppliers, so it makes sense for us to work together to make the supply chain more sustainable," says Clark. The school, which was established in 2012, consists of e-learning courses, case studies and training workshops to increase knowledge and competence in 10 key sustainability themes, from sustainable construction and environment management to biodiversity and climate change.

Participants can complete an anonymous sustainability self-assessment process to map their company's sustainability strengths and weaknesses, and identify the areas in which it could develop competence. Clark reports an average increase of 4.29% in the assessment scores of suppliers' competence in sustainability, and says that, by participating in training workshops, 1,194 delegates have so far increased their knowledge on specific sustainability-related issues.

"It's about educating the whole industry," says Clark, who hopes that training modules developed with IEMA will soon be added to the school system.

Skanska is determined to be the leading green project developer and contractor, and Clark believes the partnership with IEMA, particularly in helping to train its workforce in environment and sustainability skills, will help the construction firm achieve its goals. "Embedding environmental competency and skills makes Skanska an attractive employer, client and contractor," she says.

# From FGD to CCS

**Peter Brown** finds out what lessons carbon capture and storage can learn from the rollout of flue-gas desulphurisation technology

**L**aunching phase two of the government's plans to develop carbon capture and storage (CCS) technology, energy and climate change secretary Ed Davey referred to the precedent set by flue-gas desulphurisation (FGD). So what, if anything, can CCS developers learn from the development and rollout of FGD?

Like CCS, FGD is an emissions abatement technology with clear environmental benefits and similar applications in that both can be deployed in power stations and other industrial plants. The FGD process removes toxic pollutant sulphur dioxide (SO<sub>2</sub>) from the flue gases emitted by coal-fired power plants and other industrial facilities. It was developed in the early 20th century after concerns about the health and environmental impact of SO<sub>2</sub> emissions and what came to be known as acid rain. It was pioneered in the UK and the world's first full-scale commercial FGD unit began operating at Battersea A power station in 1933.

Yet it took nearly 80 years for the FGD technology piloted at the south London site to be fitted to a majority of the UK's coal-fired power stations. As Davey acknowledges in *Next steps in CCS: policy scoping*, which was published in August 2014, the government cannot afford to wait so long on developing CCS.

## Regulatory support

The key factor in the successful deployment of FGD technology around the world has been strong regulatory and policy support. In the US, which along with Japan took the lead in its development after the UK's initial contribution, there was a rapid expansion in the 1970s in the number of plants fitted with FGD in response to increasingly demanding legislation. In particular, the 1970 Clean Air Act Amendments (CAAA) required the Environmental Protection Agency (EPA) to establish nationwide air quality standards for SO<sub>2</sub>. This led to an explosion of FGD deployment: the first large-scale US plants came on-stream in 1968, and there were nearly 50 units operating 10 years later.

Strong policy support for SO<sub>2</sub> abatement was crucial to the development of large-scale,

commercially viable FGD in the US. The CAAA and further standards introduced in 1972 mandated emissions reductions regardless of economic or technical feasibility, in effect creating a market for FGD and related solutions that forced the rapid development and deployment of the technology.

Such forceful policy inevitably met resistance, and a number of US utilities mounted legal challenges to the regulations. Eventually in 1976 the US Supreme Court ruled in favour of the federal government's right to force the development of previously untested technology. This costly pill was made easier for the utilities to swallow by the structure of the US energy industry, which was regulated as a collection of regional monopolies that could pass on higher costs to their customers.

In the UK, by contrast, FGD development proceeded more slowly in the absence of similarly binding legislation. Come 1981, the early FGD units at Battersea and at Bankside, a few miles downstream, had been decommissioned and the issue of acid rain caused by SO<sub>2</sub> emissions was a major international concern. Germany and the Scandinavian countries introduced FGD policies in the early 1980s, but the UK was one of a number of EU member states that resisted European legislation on SO<sub>2</sub> emissions.

Not until the 1988 Large Combustion Plant Directive (LCPD) did the UK agree to act, setting reduction targets of 21% by 1993, 45% by 1998 and 60% by 2003. The government estimated that around 12GW of plant would need to be retrofitted with FGD units to meet these goals. Crucially, however, the LCPD did not mandate any particular solution for achieving the required emissions reductions. In the UK, the newly privatised energy firms succeeded in lobbying for a reduction of the government's FGD target to 8GW of plant. In practice, only 6GW was fitted before the LCPD was revised and strengthened in the early 2000s.

The UK also managed to resist the imposition of emission limit values (ELVs) for individual plants, arguing instead for greater flexibility for operators by allowing them to comply with emissions targets at a company and sector level, known as "bubbles".

**1933**  
year the first full-scale FGD unit began operating at Battersea



### Emissions reductions

Although SO<sub>2</sub> emissions from the UK energy sector did fall in the 1990s, the limited installation of FGD units accounted for only part of the reduction. More important was the gradual phasing out of high-sulphur domestic UK coal in favour of cheaper, low-sulphur imported coal and the building of new gas-fired power stations. That “dash for gas” may have been motivated partly by the perceived high cost of installing FGD on new coal-fired plants and the efficiency penalties that such installations would inevitably incur.

In a further blow to the effective deployment of FGD during this period, the lack of ELVs on individual plants proved to be a constraint on incentives for operators that did install FGD to run the abated plants at full capacity. “Because they had these additional costs of fitting the FGD equipment, they were then disadvantaged compared with the unabated plants that weren’t carrying that level of debt. So we had the cleaner plants sitting idle while the dirtier ones ran instead of them,” says Lesley James, acid rain campaigner at Friends of the Earth.

The bubble regime resulted in power station operators hitting their emissions reduction targets across their portfolio of plants even without running FGD-abated plants at full capacity.



Unlike in the US, where stringent regulations had forced the rapid development and deployment of FGD technology, the flexibility negotiated by the UK under the first LCPD allowed its energy sector to avoid the risks of the costly new technology while demonstrating a reduction in emissions.

These loopholes were finally closed by the second, more rigorous, LCPD in 2001. As well as setting higher emissions reduction targets, LCPD2 also set ELVs for all new plants and required existing plants to either to meet those limits by 2008 or opt out and run at a limited number of hours before shutting down by 2015.

These requirements triggered a major wave of FGD investments in the UK. A further 14GW of power plants were fitted with FGD between 2001 and 2009, bringing the UK's total installations to 20.7GW, or just over 70% of the country's remaining 28.4 KW coal-fired capacity.

Overall, the UK power sector's SO<sub>2</sub> emissions declined by 94% between 1980 and 2008.

### Learning the FGD lessons

As noted in 2008 in a Green Alliance report on the future of CCS, it had taken 20 years since the first LCPD for FGD to fully take hold in the UK, and even then it required binding EU legislation to do so. Moreover, this was a technology that had already been proven effective and commercially viable in other parts of the world. "When it comes to the vital issue of cutting carbon emissions," the report concluded, "we simply cannot afford a repeat of this sorry tale." Davey appears to have reached a similar conclusion.

The concern, however, is that, in comparison with FGD, CCS is a more complex and costly technology. The UK is at least ahead of the pack this time, at least in Europe, with two CCS commercialisation pilots under way at Peterhead in Aberdeenshire and White Rose in North Yorkshire, with the latter being the only European CCS project to have received EU funding so far. Meanwhile, the world's first commercial-scale, coal-fired CCS power station began operating at Boundary Dam in Saskatchewan, Canada, in October 2014.

However, the costs and commercial viability of CCS are harder to predict because of the complex nature of the carbon transport and storage infrastructure needed for the technology to work. For maximum efficiency, this infrastructure will be shared between multiple CCS facilities, which in itself introduces another level of complexity and coordination challenges not faced by FGD.

Until the successful commercial demonstration of some of these first generation integrated CCS projects, policymakers will find it difficult to mandate the use of the technology in the way that FGD was in the US in the 1970s.

James worries that, if the regulatory environment for CCS is as flexible as it was for FGD before the introduction of LCPD2, the technology will struggle to achieve its potential. "If the same regime applies for CCS when it starts operating commercially we'll see cheaper, dirtier plants that are not fitted with CCS running ahead of the more costly ones that are," she warns. "Unless systems are put in place to prevent this it will happen again." James also points to a recent spat

of applications by utilities to build new plants of 290-299 megawatt electric (MWe) capacity – thereby just avoiding the EU's requirement that any new plant above 300 MWe be CCS-ready.

Nils Markusson, lecturer at Lancaster University, agrees that the lesson of FGD is that, without sufficiently stringent regulation, a commercially risky technology such as CCS may struggle to deliver on its environmental promise. "Lots of the wrangling over FGD was not just about whether to deploy or not to deploy, but how to deploy it," he explains. "There are lots of choices to be made even after you've built the kit and that will very much be the case with CCS as well."

Markusson is concerned that CCS could be introduced with an operating regime as flexible as that which saw some operators running unabated plants in preference to their more costly FGD installations: "What I fear is something half-baked, with [CCS] technology that works at a cost that is not prohibitive but an operating regime that is not particularly stringent, and you end up with quite a lot of emissions anyway. This is why the analogy with FGD is relevant: you can have a technology that works but what you get out of it is also a matter of how you operate it and how you regulate it, which comes down to politics and lobbying."

### A better balance

Markusson believes a balance in CCS regulation needs, therefore, to be struck between flexibility for the operators and environmental stringency. With FGD, the UK energy industry enjoyed so much flexibility that full deployment of the technology was delayed by nearly 20 years. Even though the UK has taken on an arguably more proactive stance on emissions reductions since the 1980s, the upcoming negotiations over CCS will be potentially even more difficult, given the technology's greater complexity and higher and more unpredictable costs.

"The costs of running a CCS system are so much bigger than FGD compared with the basic costs of the overall power plant, so we can expect those issues to matter much more," Markusson says. "They mattered a lot for FGD and they'll be even more important for CCS. The politics of those discussions will be fierce, I would imagine."

The successful FGD example from the US does provide a potential model for future CCS regulation. In that instance, government set tough standards for the development and deployment of FGD technology. As a result, an untested emissions abatement technology was rapidly and successfully scaled up despite resistance from the energy industry.

Although the regulated US energy market of the 1970s is markedly different from – not to mention much larger than – today's privatised UK market, Markusson thinks there are parallels: "The case of FGD in the US shows that policy can drive innovation. It shows that, if we really wanted to, we could get things working that way."

As Davey admitted in his CCS policy document, there is no time to waste.

**94%**  
reduction in SO<sub>2</sub>  
emissions from  
UK power sector  
between 1980  
and 2008

# Carbon in the city

Financing action to cut emissions in cities is a challenge. **Heather Rogers, Stéphane Pouffary and Philippine Waterkeyn** look at the options

## Case study: sustainable housing in Mexico



Image: CONAVI, Mexico

The UNEP publication, *Climate finance for cities and buildings: a handbook for local governments*, highlights a sustainable housing project in Mexico as an innovative example of using climate finance to simultaneously reduce greenhouse-gas (GHG) emissions and improve the standard of living for city residents.

The project has developed incentives such as “green mortgages” to help residents buy low-carbon housing. The scheme has been implemented in different cities across the country, with the various projects grouped together in a nationally coordinated programme of activities for finance purposes.

The scheme is now being developed into a nationally appropriate mitigation action (NAMA), a newer mechanism established by the UNFCCC for capturing broader climate change mitigation activities in developing countries. The move opens the doors to greater international recognition, multiple sources of climate finance and a more holistic approach to delivering benefits beyond GHG emission reductions.



**H**ousing the majority, and an increasing share, of the world's population, cities have a significant role to play in tackling climate change. Estimations vary on the collective carbon footprint of cities – setting the boundaries for such a calculation produces myriad difficulties – but it is widely accepted that they account for a large part of global greenhouse-gas (GHG) emissions generated from energy use.

Despite lobbying and action from city networks and sub-national governments, cities have lacked attention on the agendas of international climate talks, namely those held under the United Nations Framework Convention on Climate Change (UNFCCC). But this is changing. UNFCCC negotiations are increasingly recognising the role that local authorities have to play in translating national commitments into reality.

At the UN's climate summit in September 2014 several climate initiatives for cities were launched, notably the City Climate Finance Leadership Alliance to accelerate investment in low-carbon urban infrastructure. At the same time, the Global Mayors' Compact commits more than 2,000 cities to strengthen their climate change action and reporting. Meanwhile, the Initiative for Sustainable Cities, co-founded by the Institute of la Francophonie for Sustainable Development and the NGO ENERGIES 2050, encourages climate change strategies that are consistent and comparable, yet adaptable to each urban area.

### Where's the money?

A key barrier to implementing climate change mitigation activities in cities is the availability of finance. With local governments facing ongoing budget cuts and pressure to tackle other local issues, the oft-posed question is "who's paying?"

For many countries, international climate finance may provide the answer. This may be through direct support for countries' climate change mitigation efforts or more indirectly through carbon offsetting mechanisms. The latter involves the purchase of carbon credits from GHG mitigation projects by entities wishing to offset their own emissions. These can be voluntary, through corporate social responsibility programmes, or to help comply with legal obligations, such as those under the EU emissions trading system.

The UN clean development mechanism (CDM) permits developed countries to offset GHG emissions by purchasing credits generated by registered CDM projects that implement emissions reduction activities in developing countries. Although the carbon markets are struggling, the CDM has helped to avoid more than 1.5 billion tonnes of CO<sub>2</sub> since it became operational in 2006 and the host countries involved have received up to \$13.5 billion in direct benefits through the sale of credits.

But, so far, cities are hugely underrepresented among CDM projects. It is in this context that the UN environment programme (UNEP) published *Climate finance for cities and buildings: a handbook for local governments*. It discusses the challenges and opportunities for climate finance in the urban

environment and provides an overview of the main mechanisms for doing this (see panel, below). ENERGIES 2050 leads this research project and for the authors it forms part of a broader effort to implement the transition towards a sustainable and equitable energy future.

### High hopes

The key difficulty when raising finance for city projects is that urban GHG emission sources, apart from relatively few larger emitters, tend to be numerous, small and dispersed – from buildings and vehicles, for example. By contrast, CDM projects have focused historically on individual sites that emit a lot of GHGs. A project targeting a smaller emissions source is less likely to be viable, given the transaction costs associated with the CDM, while attempting to bundle together many small projects can be challenging to implement and monitor.

Nonetheless, a transition is under way, as finance mechanisms become more flexible and tools are developed to help manage projects in complex urban environments. For example, CDM methodologies can now be applied in a programme of activities. This allows many smaller projects, such as improving the energy efficiency of individual buildings, to be coordinated under one programme, and further projects to be added over time.

So what are the next steps for cities? The transition towards more "city-friendly" climate finance mechanisms will be important for facilitating the flow of much-needed support towards urban projects. Gaps in data and a need for consistent reporting have hindered replication between cities' climate change activities. It is hoped that initiatives, such as those launched at the 2014 climate summit, will help to resolve these challenges. More broadly, the recognition of cities' roles in mitigating climate change must continue to grow and be supported by efforts to overcome common technical, financial and institutional barriers to their involvement.

Heather Rogers, Stéphane Pouffary and Philippine Waterkeyn work for ENERGIES 2050 in France.

## Climate finance mechanisms

Clean development mechanism (CDM)	Projects registered under the CDM are issued with carbon credits that can be sold in return for reducing GHG emissions compared with business as usual. Methodologies are available for large- and small-scale projects, with simplified requirements for the latter.
Programme of activities (PoA)	The PoA mechanism is similar to the CDM but with additional benefits of being able to register several smaller GHG mitigation projects under one overarching programme.
Nationally appropriate mitigation actions (NAMA)	Rather than an individual project, a NAMA captures voluntary policies, programmes and projects that developing countries undertake to contribute to GHG emission mitigation. Financing may be domestic or international or both.

Source: *Climate finance for cities and buildings: a handbook for local governments*, UNEP



# New 14001 on track for September launch

The group working on revising ISO 14001, the global standard for environment management systems (EMS), recently met in Tokyo to discuss feedback on the draft international standard (DIS). Here, Martin Baxter (pictured), IEMA's executive director, policy and engagement and one of the UK's appointed experts on the working group, provides members with a progress report.

"The country ballot on the DIS in November 2014 showed 92% of ISO member bodies supported moving to the next stage. The step was for the working group to consider comments on the DIS made during the consultation period, which ended in October. Key issues covered in the six-day meeting in Tokyo were the clause relating to 'risks associated with threats and opportunities' and the term 'compliance obligations'.

"Feedback at IEMA workshops on the DIS highlighted that the clause dealing with risks and environmental aspects needed greater clarity. After much discussion, the working group agreed to

revert to using 'risks and opportunities' and to define this as a term in its own right. The clause was also restructured and should give users a much clearer understanding of what is required.

"On the use of the term compliance obligations, a letter from the ISO central secretariat highlighted its desire to limit the scope of compliance obligations and to ensure that the revised standard does not imply that an organisation should comply, stating that 'it goes without saying' that companies need to comply with the law. For an EMS standard not to be clear that legal compliance is an expectation would significantly undermine the credibility of the standard and those using it, so the working group spent a significant amount of time reviewing the DIS to make appropriate clarifications. It eventually agreed that the words compliance obligations will be used.

"Overall, the content is heading in the right direction and, although the contentious issues have been addressed, it was not possible to address all of the



comments made during the consultation. As a result, another meeting to finish going through the comments has been set for the week commencing 20 April 2015 in London. After the meeting, the group will (hopefully) confirm the next steps. The revised standard remains on course to be published in September 2015."

To keep up to date with further developments on the revision of 14001 and all other EMS policy activity, visit [lexisurl.com/iema71559](http://lexisurl.com/iema71559).

## New member e-newsletters coming

From the first week of April, IEMA members can expect weekly delivery to their inboxes of a range of new and informative e-newsletters.

Members currently receive four e-newsletters a month – an alternating schedule of *Newsroom* (membership news) and updates from *the environmentalist*. That provision has been in place for a number of years and, after a review in 2014, the Institute is expanding the newsletter series to include separate updates on careers and events.

Members will continue to receive both the *Newsroom* and *the environmentalist* newsletters, but their frequency will change, from two editions a month to one. Two newly created e-newsletters will be introduced to provide a comprehensive range of weekly updates, which will be sent directly to members' inboxes each Thursday.

So from the first week of April, the monthly e-newsletter schedule will be:

- **Week one** – *Newsroom*: for the latest IEMA and membership news, including comment on issues that

are important to the profession, survey and consultation invitations, member upgrades, special offers and useful links.

- **Week two** – *the environmentalist*: providing links to the complete online content of the month's magazine, along with up-to-date environment and sustainability news, comment and regulations.
- **Week three** – careers: details of new and upcoming iemaSTS courses, job opportunities, and advice on careers and continuing professional development.
- **Week four** – events: a monthly update of all planned IEMA regional events, workshops, socials, conferences and webinars to help members plan their learning, development and networking around their work.



To ensure you receive the full range of e-newsletters, ensure that the iema.net domain addresses are added to your (or your organisation's) e-mail "white list" and not directed as spam or junk mail.

Daily updates are also available via Twitter at @iemanet and from members of the team: @mbaxteriema; @nblythiema; and @jfothergilliema.

# IEMA confirms speakers for its collaborative change conference

The programme for IEMA's first conference of 2015 has just been finalised and features an exciting list of speakers. The conference, Collaborative change for environmental sustainability, will be held in Bristol – the European green capital in 2015 – on 22 April.

It will bring together a number of inspiring speakers to showcase and discuss innovations and changing best practice in sustainability. It is being held on Earth Day 2015 in recognition of the scale and rate of change required to meet global sustainability challenges and how collaboration is vital to make the necessary shift. That requires organisations at every level to start working together more effectively to deliver a step-change in how they operate.

As revealed in the February issue of *the environmentalist*, speakers include Martin Bigg, director of the environmental technologies innovation network at the University of the West of England, who will give the keynote address. He will be joined at the opening session by Mat Roberts, director of sustainability strategy at Interserve, and Chris Hayes, senior sustainability manager at Skanska.

After the morning plenary session, events in the main auditorium will focus on how to achieve sustainable outcomes through collaboration. Speakers are:

- Ian Bamford (EPSRC Centre for Industrial Sustainability)

- Karen Gallagher (University of Exeter)
- Stephanie McGibbon (Arup)

The main plenary session in the afternoon focuses on contracting for sustainability performance. The speakers are:

- Jane Rogers (BAE Systems)
- TBC (Environment Agency)

Throughout the day, delegates will also have a choice of workshops. Confirmed speakers at the morning workshops are:

- Ben Smith (AECOM)
- Steve Malkin (Planet First)

Leading the afternoon workshops are:

- Professor Andrew Douglas (University of the West of England)
- Kylie Russell (Climate Ready)

To round off the day, the keynote speakers, along with Karen Gallagher, who is sustainability manager at the University of Exeter, will reconvene for a panel discussion on the topic of a new age of partnership working.

**IEMA members wanting to attend and hear from all these speakers can do so for a special booking rate of £180 (non-members can attend for £250). To find out more about the conference, the speakers, workshops, and to book your place, visit [iema.net/conferences](http://iema.net/conferences).**



Martin Bigg, University of the West of England



Chris Hayes, Skanska UK



Mat Roberts, Interserve

## 2015–16 annual membership fees set

Following initial notification in *the environmentalist* last month that membership fees will change from 1 June, the new annual fees have been confirmed (see panel). Changes to the annual renewal rates are aligned with joining fees. The alterations to the membership subscription fees are being applied in order to support the delivery of services in 2015–16 and ensure that your IEMA can invest in new products and services as well as growth opportunities that benefit all members, this year and beyond.

FAQs explaining the changes, including the rationale behind the new free Student membership, can be found at [iema.net/fees](http://iema.net/fees).

Member renewals	Price
Student	£0
Graduate	£125
Affiliate	£117
Associate	£152
Full	£160
Fellow	£175
GACSO (plus IEMA non-professional level membership – Student, Graduate or Affiliate)	£260
GACSO (plus IEMA professional level membership – Associate, Full or Fellow) application	£295
Retired	£52

## Policy update



Collaborative  
systemic change

The global economy is unsustainable and organisations need to change to deliver the economic, social and environmental systems that will address the sustainability challenges already set in motion. However, only 13% of organisations are fully confident that they have the skills to successfully compete in a sustainable economy.

As IEMA members, we all have a role to play in catalysing and coordinating action to transform the world to sustainability. However, no individual, profession, organisation, sector or government can deliver the changes needed on their own. But through collaborative action we can deliver a sustainable economy.

IEMA's skills for a sustainable economy position statement highlights collaborative systemic change and calls for further progress in these key areas:

- initiatives that embed "systems-thinking" across the economy;
- partnerships for shared learning and innovation; and
- improved sustainable outcomes from education and training.

IEMA is actively working to increase its collaborative actions to deliver value to members and ensure they are designed to deliver our vision, "Transforming the world to sustainability". Recent examples include our:

- Skills for a sustainable economy campaign, supported by more than 30 organisations.
- An increase in the number of member-led networks.
- An expanding employers forum, where large corporate members share experiences, establish joint goals and work on improving sustainability performance.
- Continuing work with GACSO and IEMA members on the *Defining corporate sustainability* white paper.

Our first conference of 2015 focuses on the value of collaboration. It will held in Bristol on 22 April (see p.35 for details).

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

# Preparing for the election

**7/5**

**They want your vote!**

Find out their views on key sustainability issues

#SustainableMP  
[www.iema.net/election2015](http://www.iema.net/election2015)

**iema**  
Institute of Environmental Management & Assessment

With the UK general election two months away, IEMA is seeking to learn members' views on what the next government should prioritise and create some discussion on emerging party policies on environmental issues.

UK members will find a postcard included with this month's issue of *the environmentalist* and are encouraged to use it as a prompt to ask candidates seeking their votes on how they plan to:

- bridge the sustainability skills gap;
- create a society with opportunities for all;
- solve complex environmental problems (for example, urban air quality);
- give business the confidence to invest long-term in sustainability;
- drive green growth and jobs across the economy;
- balance new infrastructure demands with community and biodiversity interests; and

- address environmental matters that are important to the electorate.

We are very interested to find out how candidates respond, so have created a special election 2015 Twitter hashtag, #SustainableMP, to gather all your tweets. Remember to use #SustainableMP and tag @iemanet when tweeting your experiences. This will help us to establish where each party and candidate stands on the issues that are important to the environment and sustainability profession.

UK members will have also been invited to take part in two quick polls, on climate change and energy and resources. We have been delighted by the response. The results from these polls not only enable us to create an IEMA membership consensus on where you think the opportunities lie for the next government, but also create some member-driven media stories at this critical time.

## IEMA switches on its register for the ESOS

Around 9,000 organisations will be affected by the energy savings opportunity scheme (ESOS), resulting in demand for a large number of qualified third-party energy assessors. In late 2014, IEMA became one of only 11 organisations and one of only six professional bodies or associations approved by Decc to operate an ESOS lead energy assessor register. After a

period of recruitment and training, IEMA's register of qualified lead energy assessors is now live. Visit [lexisurl.com/iema71871](http://lexisurl.com/iema71871) to see who is listed.

Full members of IEMA who hold environmental auditor status as well as principal environmental auditors who work in this area are eligible to join the register. Guidance and an application pack are available at the register webpage.



## 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

**Ian Adams**, SNCO Ops  
**Yaasaah Afriyie**  
**Thomas Alison**  
**Peter Allman**, National Grid  
**Amad Dawo Aboaleed**  
**Anfees**, Peterborough Regional College  
**Andrew Bates**, National Grid  
**Anwen Bickers**, Environment Agency  
**Melanie Blanchard**, RG Carter Technical Services  
**Justin Chapman**, National Grid  
**Chris Cole**, Wagg Foods  
**Jack Collins**, Golder Associates

**Sarah Cressy**, Environ UK  
**James Edney**  
**Mohamed Khalid Babekir Elbadawy**  
**Eleanor Fenton**, Canary Wharf Management  
**Yasmine Ghazzi**  
**James Holland**, Studsvik UK  
**Graham Horrocks**, National Grid  
**Grace Johnson**  
**Chris Lamb**  
**Marie Le Page**, Climate Care  
**Wan Loh**  
**Seamus McEvoy**, SEH  
**Sophie Morrell**, EDF Energy  
**Daniel Mullick**, ACCON UK  
**Konstantina Olimpiewa**, Xchanging  
**Clare Richmond**, WSP UK  
**Lee Riley-Thompson**, Environment Agency  
**Nichola Robinson**, National Grid  
**Dawn Rodgers**, Manx Electricity Authority  
**Stephen Smith**

**Margarita Stublely**, National Grid  
**Sophie Thompson**, Haskoning UK  
**David Waite**, National Grid  
**Lee Wallace**, Ove Arup and Partners  
**Tim Wearne**, De La Rue

### Full and Chartered environmentalist

**Salma Bin Breik**, GHD  
**Francis Binney**, RBC Wealth Management  
**Stuart Clayton**, WSP UK  
**Alexander Coulter**, Ecosys Environmental Management and Education  
**Marcela de Leon Perez**, Mott MacDonald  
**Martin Doherty**, Dublin Airport Authority  
**Laura Dugdale**, WSP UK  
**Richard Grimwood**, Frazer Nash Consultancy  
**Victoria Lownes**, Deloitte LLP

**Simon Mussett**, Sodexo  
**Jaime Sanchez-Garcia**  
**Jonathan Steele**, Fish World  
**Jo Stott**, JCB  
**Georgina Taylor**, Waste and Resources Action Programme  
**Lucy Wood**, Barton Willmore Partnership  
**Therese Yarde**

### Chartered environmentalist

**Kim-Marie Clothier**, Wardell Armstrong  
**Ruth Frith**, Enterprise Mouchel  
**Colin Parry**, Diageo

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](http://iema.net/membership) or call +44 (0)1522 540069.

## IEMA events

Date	Region/Time	Topic
11 Mar	<a href="#">Wales</a>	Full member and Chartered environmentalist mentor forum
11 Mar	<a href="#">Wales</a>	IEMA network meeting and social
18 Mar	<a href="#">South West</a>	Social (Exeter)
25 Mar	<a href="#">North West</a>	Environmental career event
2 Apr	<a href="#">South East</a>	Social (London)
15 Apr	<a href="#">South West</a>	Social (Exeter)
7 May	<a href="#">South East</a>	Social (London)
20 May	<a href="#">South West</a>	Social (Exeter)
<b>IEMA conferences</b>		
22 Apr	<a href="#">South West</a>	Collaborative change for environmental sustainability (Bristol)
<b>External conferences</b>		
30–31 Mar	<a href="#">UCL, London</a>	Effective enforcement and environmental law <a href="http://laws.ucl.ac.uk">laws.ucl.ac.uk</a>
21–23 Apr	<a href="#">NEC, Birmingham</a>	SustainabilityLive 2015 <a href="http://sustainabilitylive.com">sustainabilitylive.com</a>
22–23 Apr	<a href="#">Telford</a>	Air quality and emissions show 2015 <a href="http://aqeshow.com">aqeshow.com</a>
<b>IEMA webinars</b>		
18 Mar	<a href="#">12:30–13:30</a>	Where to go from entry level
19 Mar	<a href="#">12:30–13:30</a>	Implementing the energy savings opportunity scheme (ESOS)
25 Mar	<a href="#">12:30–13:30</a>	European legal update (£25.00 + VAT)
26 Mar	<a href="#">12:30–13:30</a>	GLVIA3: Two years on – practical experiences of applying the guidelines

# EIA update

## Call for mandatory fracking EIAs fails

The government has rejected an amendment to the Infrastructure Bill requiring mandatory environmental impact assessments before hydraulic fracturing (fracking) for shale gas or oil can start. The bill, passed on 11 February, includes a requirement that planning authorities take account of the environmental impact of a development, but does not insist on a compulsory EIA.

The government had earlier accepted several amendments to the bill put forward by the Labour Party, including that any hydraulic fracturing cannot take place unless an EIA has been carried out. The House of Lords rejected this addition before sending the bill back to the House of Commons for consideration.

In the Lords, Baroness Verma argued that the amendment was not legally viable and “simply would not work in practice”. She said a secretary of state would only grant consent if they were satisfied that conditions had been met, including that the environmental impact of the development had been taken into account by the planning authority.



Image: iStock

Energy minister Amber Rudd reiterated this point in the House of Commons. The government clause states that permission will not be granted for any shale gas operations unless the local planning authority states that “environmental information was taken into account” in deciding the application.

Shadow energy minister Tom Greatrex said that the government’s proposed clause stopped short of a full commitment to an EIA. He argued that individual notification would be impractical.

### EIA practice update with IEMA's Josh Fothergill

IEMA's **impact assessment network** officially kicked off with its first steering group meeting on 20 February. The network's aim is to further improve current good work around EIA, increase coverage of wider impact assessment areas and to empower members to identify priorities for action. The steering group will act as the catalyst to help drive the direction of impact assessment related activity ([iema.net/policy-impact-assessment](http://iema.net/policy-impact-assessment)).

EIA practitioners with 10 or more years experience will remember the excitement generated by the introduction of **strategic environmental assessment**, but it has failed to deliver regularly on its potential. However, 2015 could see the beginning of a renewal. The European commission will begin a second review of the Directive, with

policymakers indicating a desire to refresh the legislation and improve delivery. Meanwhile, Oxford Brookes University is hosting a conference on SEA (1–2 June), which will bring practitioners together to share views ([planning.brookes.ac.uk](http://planning.brookes.ac.uk)). SEA is also the topic of one of this year's annual Scottish government forums. Its latest newsletter ([gov.scot/Resource/0046/00469784.pdf](http://gov.scot/Resource/0046/00469784.pdf)) provides details and includes a note on ecosystem services in SEA.

From May the monthly Quality Mark **webinar** will be rebranded impact assessment webinars. This will mean that every other webinar will cover a subject beyond UK EIA. Forthcoming webinars:

- 26 March: GLVIA3 – two years on.
- 30 April: IEMA's noise guidelines – six months on.



### EIA research

#### Ecosystems and EIA

Ecosystem services (ES) are not being effectively incorporated into assessments, finds research published in *Environmental Impact Assessment Review*. The researchers reviewed five environmental and social impact assessments (ESIA) reports for mining, hydroelectric and transport infrastructure projects in Africa, Asia and South America. In all cases, ecosystem services were included in the assessments to meet a requirement of the International Finance Corporation's performance standards on environmental and social sustainability. However, in only three cases were most of the tasks recommended by current guidance adopted and, although all the reports included a dedicated chapter or section on ES, there was no evidence in three that the ecosystem services analysis was integrated in impact assessment. By contrast, in the two ESIs that followed the guidance, ES analysis resulted in specific mitigation measures.

[lexisurl.com/iema69128](http://lexisurl.com/iema69128)

#### Bats and wind farms

A study in *Environmental Impact Assessment Review* examines the mitigation hierarchy to reduce impacts from new wind farms on bat populations. It presents new guidelines on compensation when negative impacts remain after avoidance and minimisation measures have been taken. Although the conservation strategies outlined are developed for Europe, the authors say they are applicable elsewhere if the specifics of each region in terms of local bat populations, landscape features and policy on nature and biodiversity conservation and management are considered. An analysis of potential opportunities and constraints from implementing offset or compensation programmes, and gaps in the current knowledge, are also considered.

[lexisurl.com/iema69130](http://lexisurl.com/iema69130)

# Anya Ledwith

Director and environmental management consultant, ESHCon



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

I have a drive for environmental improvement and it only makes sense to develop this as a career. You've got to love your job!

## What was your first environment/sustainability job?

I started out doing short-term roles, including in land mapping and transport planning, before finding my niche in environmental management.

## How did you get your first role?

I was fresh out of university, persistently applying for any environmental jobs. As my experience grew so did my choice of roles, allowing me to progress.

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

I soon knew that environmental management systems (EMS) would be a big issue, so I focused my development (MSc), skills and experience on this. It was only later that I realised I wanted to run my own company.

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

Not only have services developed over the years – for example, with energy management becoming more important and the energy savings opportunity scheme (ESOS) starting later this year – but I also tend to develop longer-term relationships with clients. Rather than just short, one-off projects, I provide ongoing support, often as a part-time environmental manager.

## What does your current role involve?

I work with clients developing environmental and energy management systems, carbon reporting and training. I'm a lead auditor and assessor. As ESHCon's director, I am also responsible for business strategy and development. This is the range of experiences I wanted.

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

New experiences, clients' businesses, detailed operations, technologies, new requirements and best practice. I love the variety of projects and clients I support. It's never dull.

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

Slowing down! I am always on the go, delivering services, developing the business or supporting regional and national projects.

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

ISO 50001 lead auditor course and IEMA's EMS forum in London in November 2014.

## What did you bring back to your job/business?

I further developed my 50001 services, which are particularly important for ESOS now.

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

Integration will be key. The environment needs to blend into core business operations. There is a great opportunity

## Career file

### Qualifications:

BSc, MSc, MIEMA, CEnv

### Career history:

**2006 to now** environmental consultant and director, ESHCon  
**2008 to 2012** principal consultant, carbon management, Carbon Clear  
**2000 to 2008** environmental manager, Crawley borough council  
**1997 to 2000** communications officer, Going for Green

with the new ISO 14001 requirements coming in later this year.

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

Innovative thinking – to see the opportunities in a client's business and develop them accordingly.

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

To see my consultancy expand, while still focusing on core services.

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

Get a mentor to help you map your career and challenge you to new heights.

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

To influence the development of my clients, to focus on achieving the best results and commercial benefit.

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## SELECTION OF CURRENT OPPORTUNITIES

### Sustainability Analyst

**HERTFORDSHIRE £25-30K LP 6847**

A global manufacturing company requires a Sustainability Analyst to work within their dedicated team. You will assist with the development of social sustainability reporting systems and provide data intelligence to the company's sustainability plans. Candidates must be degree qualified and have experience in a similar role.

### Sustainability Manager

**LONDON £28-35K LO 6881**

Shirley Parsons Associates has been engaged by a global consultancy and construction firm to recruit a Sustainability Manager. The successful candidate will be responsible for driving sustainability initiatives and helping the company become an industry leader in sustainability. Suitable candidates must have a relevant Environmental Degree (2:1 minimum) and prior experience on large scale construction projects.

### Environmental Advisor

**LONDON £35K + CAR ALLOWANCE LO 6840**

A leading Rail Technology company are currently seeking a bright and proactive Environmental Advisor to join their growing team. This role will see you advise and assist project teams to enable them to fulfil environmental requirements and consistently improve environmental performance. You will also assist with environmental noise monitoring and section 61 consent applications. Candidates must hold an IEMA membership.

### Senior/Principal Ecology Consultant

**LONDON £28-43K TN 6782**

A UK Environmental Consultancy is currently looking for an experienced Ecology Consultant to deliver a variety of services to clients in a fast-paced and commercial environment. You will manage key accounts as well as developing new business and liaise with stakeholders to create business development. Candidates must have experience working as an Ecology Consultant and have a full membership of CIEEM.

### Environmental Manager

**WEST MIDLANDS £50K + CAR LO 6844**

A principal contractor is currently seeking an Environmental Manager for their Construction Business Stream. You will be responsible for providing specialist environmental advice on a number of ongoing operations and developments across England. Due to the nature of travel in this role, it would be most suited to candidates based in the Midlands. Candidates would be expected to travel to various sites across England and be a member of IEMA.

### Environmental Services Manager

**MILTON KEYNES £40-45K + CAR LO 6563**

A leading FM provider is looking for an experienced Environmental Services Manager to work within their new 'Compliance' division. You will be responsible for delivering environmental solutions to a wide range of FM clients and carrying out environmental gap analysis audits and implementing ISO 14001 management systems. Candidates must have an environmental related degree and be an associate member of IEMA.

### 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 working on a large rail project. This role will see you promote continuous improvement across project sites from an environmental and sustainability perspective, and support the delivery of CEEQUAL/BREEAM/LEED. Candidates must have experience within the environmental industry.

### 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 Environmental Consultant (IAWQ)

**LONDON £35K LO 6647**

A leading HSEQ Consultancy is currently looking to hire a Senior Environmental Consultant (IAWQ). The successful candidate will be responsible for scheduling, surveying and providing written technical reports for survey work of high-risk and complex water/air systems. Candidates must have experience as an Environmental Consultant and be BOHS P901 and P903 certified.

### 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.

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



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**Ecologist**

Cambridge / Oxford

**Contaminated Land Consultant**

Bristol / Cardiff

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