

**Internal carbon pricing**

Does setting a carbon price  
change business behaviour?

p20

**Working together**

Tips on overcoming the silo  
mentality in organisations

p23

**New tunnel for London**

The capital updates its  
Victorian sewer system

p27

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# June

## News

- 4 EA targets embedded carbon  
Reporting spreads confusion
- 5 Climate action relies on EU membership  
Chemicals data still flawed
- 6 Damage to planet accelerating  
Firms need to address SDGs  
**Business plans** Mars, Eneco, Unilever, Timberland, JLL, Gatwick, Heathrow
- 8 World Bank calls for better risk assessment  
**Online** A selection of news stories from [environmentalisonline.com](http://environmentalisonline.com)

## IEMA news

- 9 Report updates sustainability storm warning  
**Policy column** Martin Baxter finds that cities are leading on tackling air pollution
- 10 New IEMA membership journey and brand revealed

## EIA news

- 12 Consortia win NDA contracts  
**Practice update** Rufus Howard on establishing a marine assessment group  
**EIA research** BIM and EIA; risk assessment and EIA

## Political insight

- 13 Government wins parliamentary battles  
**In parliament** Catherine Bearder seeks input on tackling wildlife crime

## Legal brief

- 14 **In court** Yorkshire Water fined a record £1.1m; £370,000 penalty for waste offences; Ford Mexico fined \$1.05m  
**Case law** LexisPSL experts on Court of Appeal ruling on building in the green belt
- 15 **New regulations** Environment protection; planning; natural resources; waste; energy
- 16 **Laying down the law** Lawyer Ella Curnow summarises some of the recent legal developments on flooding

## IEMA members

- 34 **My career** Rick Gould, adviser on standards and certification, site-based regulation team, Environment Agency
- 35 More successful IEMA members

## Features

### 17 Breaking up is hard to do

Catherine Early finds out what might happen to environmental rules and regulations in the UK if the referendum on EU membership results in Brexit

### 20 A price worth setting?

With companies increasingly setting an internal carbon price, Alex Marshall tries to find evidence that such initiatives are having an impact on projects

### 23 Overcoming isolation

Silo working is common and can be a barrier to engagement on sustainability. Here, Nicola Stopps offers tips on improving inter-departmental working

### 27 Tunnel vision

Paul Suff discovers how a new sewer tunnel under London builds on the Victorian system and will significantly reduce discharges to the Thames

### 31 Biodiversity: time to quantify or say goodbye

Jonathan Baker reports on the assessment of Defra's offsetting pilots and how the planning system is failing to satisfactorily account for biodiversity

## Supplement

### Training focus – summer 2016

- New membership structure and skills map
- Is Twitter useful for your career?
- Latest training courses from IEMA providers







## PRIOR NOTIFICATION EXPRESSIONS OF INTEREST

### DR 4957 – EIA REVIEW CONTRACT

The London Borough of Tower Hamlets (LBTH) is an inner city London borough. Due to the number of environmental impact assessment (EIA) applications received, LBTH requires assistance with the review of these applications from external EIA specialists. LBTH is therefore seeking to procure a new 'EIA Review Contract', which will culminate in the appointment of two EIA consultants.

The role of the 'EIA Review Contract' is to provide LBTH with the confidence that the information submitted for all the stages of EIA process meet the statutory requirements of the EIA Regulations and relevant guidance.

Organisations wishing to express their interest are requested to register on the London Tenders Portal ([www.londontenders.org](http://www.londontenders.org)) where the tender documentation will be available for download from early June 2016.

## the environmentalist

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# Welcome to the new age of IEMA

After three years of talking, thinking and planning we have now launched a whole new look and feel to IEMA. Our memberships are now more relevant and valuable experiences, and more attractive and appropriate for each stage of your career. We also have a far stronger and readily recognisable look and sound, which has been created to fully represent the central ethics of our profession – bright, open and brave. Ultimately we have reshaped ourselves to become what you said you needed us to be. This is a very exciting time for the environment and sustainability profession. It is a real milestone that shows what a modern and influential profession this is. We are now describing ourselves as a ‘worldwide alliance of environment and sustainability professionals, working to make businesses and organisations future-proof’. That statement has the right impact and perfectly summarises who we are and what we do together. You are part of this alliance, and I am looking forward to working with you as we collaborate more than ever before.

This is not a gimmick or an emperor’s new clothes approach. We have rebuilt IEMA’s core mechanics to run on value, relevance and connections. The way we work together with organisations, employers and members – and the way members will be able to work together – will always focus on impactful outcomes and powerful partnerships.

While we have worked very hard to deliver this new-look IEMA, there is more to do. We roll out the new standards for Full and Fellow membership later in 2016. Also, later in the year we will be introducing a series of new training courses and assessment methods and a new framework for continuing professional development (CPD), which supports your learning and career progress. On that note, this month’s training supplement is the perfect opportunity to take a fresh look at your learning options in advance of the new CPD structure.

You can read more about the new memberships and why the new brand looks like it does on pp9–10. Some more in depth context on the membership journey is included in the supplement too (ppiii–vi).

Do visit to our new-look website to see just how much has changed. It is easier to navigate, has much improved functionality and looks fantastic. A perfect allegory for everything about IEMA as we are now, and how we will work in the future.

We are now describing ourselves as  
a ‘worldwide alliance of environment  
and sustainability professionals,  
working to make businesses  
and organisations future-proof’



**Tim Balcon,**  
CEO of IEMA

IEMA is the worldwide alliance of environment and sustainability professionals, working to make our businesses and organisations future-proof. Belonging gives us the knowledge, connections and authority to lead collective change, with IEMA’s global sustainability standards as our benchmark. By mobilising our expertise we will continue to challenge norms, drive new kinds of enterprise and make measurable progress towards our bold vision: transforming the world to sustainability.

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**Advertising, subscription  
and back-copy enquiries to**  
Customer services,  
tel: +44 (0) 845 370 1234  
The 2016 annual rate is £142.

**Printing**  
Headley Brothers Ltd, Ashford, Kent

**Published by**  
LexisNexis, Quadrant House,  
The Quadrant,  
Sutton, Surrey  
SM2 5AS.  
lexisnexis.co.uk

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ISSN 14727625



*the environmentalist* is  
printed by ISO 14001  
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55% recycled paper  
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## Shortcuts

## Chemical compliance

The European Chemicals Agency is consulting on 29 applications for authorisation covering: chromium VI compounds used in surface treatment, hard chrome plating, conversion coating, passivation, cooling systems; 1,2-dichloroethane (EDC) used as solvent in the production of biocide/pesticide, active pharmaceutical ingredient (API), paraffin waxes and polymers; Bis(2-methoxyethyl) ether (Diglyme) used as a carrier solvent in an etchant for fluoropolymer surface modification, in the manufacture of API and as a processing aid in the manufacture of a chemical; and formaldehyde, oligomeric reaction products with aniline (Technical MDA) used in an epoxy resin hardener. The consultation ends on 22 June ([bit.ly/1TqNaJl](http://bit.ly/1TqNaJl)). The agency has also reminded companies that the application deadline for approval of active substances in biocidal products that fall within the scope of Biocidal Products Regulation 528/2012 is 1 September. If an application is not made on time, the biocidal product cannot be placed on the EU market after 1 September 2017.

## New carbon standard

A standard for reducing whole life carbon emissions in infrastructure has been launched by the BSI and the Green Construction Board (GCB). PAS 2080 has had technical input from consultants at Arup and Mott MacDonald and is designed for practitioners including asset owners and managers, designers, constructors and suppliers. The document includes components on organisational leadership, baseline setting, measurement, reporting and continuous improvement. It is structured around the common work stages of infrastructure delivery. The document is accompanied by guidance and case studies. The GCB has also published a progress report on organisations that have made a commitment to reduce their carbon footprint through endorsing the government's Infrastructure Carbon Review. Arup is testing PAS 2080 out on its own projects.

## EA targets embedded carbon

The Environment Agency is aiming to reduce embedded carbon from its construction projects by 40% by 2020.

The goal is part of the regulator's new internal environmental strategy, which focuses on the wider impacts of its operations, as well as building on work to reduce its direct use of energy and water, travel and resources. It has developed a tool to help its engineers consider carbon at the design stage of a project.

Simon Dawes, head of internal environmental management at the agency, gave the example of building an earth bank covered in grass instead of a CO<sub>2</sub>-intensive concrete wall. But engineers would also have to factor in the impact of mowing the grass, the longevity of the project, its value for money and the effect on the local community. 'There's a massive range of things that get taken into account so it's really good that we have put embedded carbon into that,' Dawes said.

Other new targets include reducing the impact of its supply chain by 20% compared with 2014/15. The agency estimates that around 70% of its total impact comes from the goods and services it purchases.

The organisation mostly overachieved against its previous targets, according to an annual environmental statement for



2014–15, published in May. It cut its CO<sub>2</sub> emissions by 40% between 2006 and 2015, against a target of 33%. Transport mileage was cut by 37% against a target of 25%, while it reduced use of mains water by 39% compared with a 25% goal. Total office waste was cut by 50% compared with a 20% target. The agency did not achieve its target to divert all office waste from landfill, reaching 96%. 'The challenge was where we were just tenants and the landlord was responsible for waste,' said Dawes. Renegotiation of tenancy agreements would provide an opportunity to push for improvements, he added.

The agency and its contractors committed two serious incidents during 2014–15, the report said. These involved a reservoir being drained and the stranding of lampyres on a river bank.

## Reporting spreads confusion

Fragmentation is undermining the potential of sustainability reporting to help organisations meet evolving challenges, according to analysis by the Association of Chartered Certified Accountants and the Climate Disclosure Standards Board (CDSB).

The study, *Mapping the Sustainability Reporting Landscape* ([bit.ly/22lDPDq](http://bit.ly/22lDPDq)), examines the changing reporting environment over the past ten years.

It notes that new subject matter, such as social impact, supplier relationships and environmental management, have been introduced in response to demands from stakeholders wanting to assess an organisation's performance. At the same time, existing subject matter has been expanded, including how governance and remuneration practices are used to encourage particular behaviours. As factors that threaten society, the economy and the environment are increasingly

understood, demand is growing for information about how corporate activity jeopardises or contributes to long-term sustainability goals, the report states.

However, the absence of a universally accepted approach to categorising all the components of the landscape has confused reporters, while users of information increasingly complain that reports contain 'immaterial clutter'. Lois Guthrie, founding director at the CDSB, said: 'The past decade has seen the rise of a new order of corporate reporting. Despite this, we still lack an agreed way of describing the components of sustainability reporting.'

Recommendations to improve sustainability reports include: the development of shared objectives by reporting frameworks, such as the GRI and the CDP; greater clarity over what is considered material and organisational boundaries; and better alignment between different reporting requirements.



# UK climate change action relies on EU membership

Britain's membership of the EU is vital in the fight against climate change, according to the current and former leaders of the Labour party.

Speaking at a solar farm in Lincolnshire, Jeremy Corbyn and Ed Miliband said membership of the EU had not only raised domestic environmental standards but had enabled Britain to drive progress in tackling climate change across all member states. The UK had also benefited from the common product standards that regulate clean technologies, they said, noting that it was one of the top three recipients of financial support from the European Fund for Strategic Investments, which supports renewable energy and resource efficiency projects. Exiting the EU would leave the UK open to the Tory anti-environment agenda, Corbyn added.

Meanwhile, think-tank Chatham House outlined the risks and trade-offs associated with five possible options for a post-exit relationship. Becoming part of the European Economic Area (EEA) in a similar way to Norway would be the least disruptive, as there would be continued access to the EU energy market, regulatory frameworks and investment, its report states. However, EEA membership would entail accepting most EU legislation, while surrendering any say in its creation, giving the UK less sovereignty over energy policy.



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Another option would be to copy Switzerland, which is a member of the European Free Trade Association (EFTA) but not the EEA, and negotiate bilateral treaties for access to the single market on a sector-by-sector basis. This would result in more sovereignty in several areas, but would entail higher risks, with greater uncertainty over market access, investment and electricity prices, Chatham House said. Both EEA and EFTA membership would reduce or even eliminate the UK's contribution to the EU budget, but would also limit or cut off access to EU funding mechanisms, the authors stated.

However, Tony Lodge, political and energy analyst at the Centre for Policy Studies, told the parliamentary energy and climate change committee that the UK could join Norway outside the EU to develop interconnectors to meet its decarbonisation targets (see pp17-19).

## Short cuts

### Carbon price forecasts

The price of carbon is too low to meet global climate change targets, according to market experts. Members of the International Emissions Trading Association (IETA) said they believed that carbon should be priced at €40 a tonne, one third higher than their estimate in a similar survey last year. However, this contrasts with their expectations for prices in major carbon markets, which ranged between €6 and €15 a tonne by 2020. IETA chief executive Dirk Forrister said: 'The gap between price expectations and the price required to achieve the Paris goals reflects the difference between ambition and reality.' Jonathan Grant, director at PwC, said: 'With such low carbon prices, some will question whether the policy is working and changing business decisions or if it has become just an administrative burden on companies.' More than 80% of IETA members predicted that carbon markets would expand compared with 58% last year – before the Paris Agreement. They predicted new schemes in countries including Brazil, Chile and Japan.

### EMAS and 14001: 2015

The European Commission has published a factsheet on EMAS – the eco-management and audit scheme – and the revised international standard for environmental management systems, ISO 14001: 2015 ([bit.ly/27HwJgm](http://bit.ly/27HwJgm)). It outlines the revisions to the standard that are relevant to EMAS. They are: understanding the organisation and its context (4.1); understanding the needs and expectations of interested parties (4.2); leadership and commitment (5.1); actions to address risks and opportunities (6.1.1); and environmental aspects (6.1.2). The document advises that EMAS-registered organisations will need to make only a few formal adaptations to comply with the revised standard, and that the commission is working with member states to determine whether changes are required to the annexes of the EMAS Regulation (1221/2009). The commission said it expected to publish any amendments to the annexes in early 2017.

# Chemicals data still flawed

A 'significant proportion' of registration dossiers provided by companies to meet European rules on chemicals do not provide sufficiently detailed information, according to the sector's EU regulator.

In an evaluation of the REACH regulations, the European Chemicals Agency (ECHA) highlighted concerns about the quality of the registration data submitted. The main weaknesses highlighted were a lack of clarity about the identity of complex substances; insufficiently detailed information on the uses of and potential exposure of people to substances; and poor risk management measures by manufacturers.

The poor quality of some of the data provided is undermining the aim to place

the burden of proof regarding the safety of a substance on the manufacturer rather than national authorities, the ECHA said.

Susanne Baker, head of environment at Tech UK, said substandard data had resulted in at least one substance being incorrectly flagged as potentially the most harmful type, which was costly and time-consuming for those using it.

Silvia Segna, REACH executive at the Chemical Industries Association, said many companies often did not receive feedback on what was considered a good dossier. But Vito Buonsante, environmental lawyer at ClientEarth, said there was no financial incentive for companies to provide good data because the ECHA was still allowing those that did not do so access the market.

## Business plans

**Mars** has partnered with renewable energy company **Eneco** to open a wind farm near Inverness, Scotland. The 20-turbine Moy facility has a capacity of 60MW and an annual output of more than 125,000MWh, enough to supply renewable electricity to Mars's 12 UK sites. Mars already operates a wind farm in Lamesa, Texas, and is aiming to eliminate fossil-fuel energy use and greenhouse-gas emissions from its global operations by 2040.

**Unilever's** latest progress report on its Sustainable Living Plan (SLP) reveals that, compared with 2008, the firm's factories in 2015 sent 97% less total waste for disposal, emitted 39% less CO<sub>2</sub> from energy, and abstracted 37% less water per tonne of production. The fast-moving consumer goods company also said its 'sustainable living brands' such as Knorr and Dove – which make products directly linked to a sustainable purpose and contribute to its SLP goals – accounted for almost half of its growth last year.

Property business **JLL** (formerly Jones Lang LaSalle) has announced that, in 2015, the first year of its UK sustainability strategy, the company reduced its energy use by 38% per employee against a 2012 baseline – the target was 10%.

**Timberland** has released its 2015 corporate social responsibility results, as well as CSR targets for 2020. Highlights in 2015 include using 453 tonnes of recycled PET in its footwear products. Its 2020 targets include sourcing half the energy consumed in Timberland-operated facilities from renewable sources, such as onsite wind and solar power.

**Gatwick** has been awarded triple certification by the Carbon Trust for reducing carbon emissions and water use, and improving waste management. Compared with 2012–13, absolute CO<sub>2</sub> emissions declined 10% during 2014–15, while CO<sub>2</sub> and waste per passenger fell 20% and 9.1% respectively. Recycling and reuse rates increased from 40% in 2014 to 49% in 2015. Meanwhile, **Heathrow** has become the first airport to simultaneously hold Carbon Trust certifications for reducing carbon emissions, water use and waste output, and for working with suppliers to do the same.

## Damage to planet accelerating

Environmental change is moving more quickly than previously thought, according to UNEP, which has called on governments to act now to reverse the damage.

The UN Environment Programme has published regional reports highlighting the environmental issues affecting each of the world's six regions: pan-European, North America, Asia and Pacific, West Asia, Latin America and the Caribbean, and Africa. They reveal that, in almost all of them, population growth, rapid urbanisation, rising consumption, desertification, land degradation and climate change have combined to leave countries facing severe water scarcity. These worrying trends are making it increasingly hard for the world to feed itself, UNEP said.

'If current trends continue and the world fails to enact solutions that improve current patterns of production and consumption, if we fail to use natural resources sustainably, the state of the world's environment will continue to decline,' said UNEP executive director Achim Steiner (pictured). 'It is essential that we understand the pace of environmental change that is upon us and that we start to work with nature instead of against it to tackle the array of environmental threats that face us.'



© Flickr/ UN Geneva

The reports show that water contamination from human and industrial waste, including pharmaceutical and personal care products, is a major problem in the Asia and Pacific region, while in North America the coastal and marine environment is under increasing threat from nutrient loads, ocean acidification, sea level rise, and new forms of marine debris. Degraded land and spreading desertification are the most critical challenges in West Asia. About 500,000 m<sup>2</sup> of land in Africa is being degraded due to soil erosion, salinisation, pollution and deforestation, while indoor air pollution in Africa is responsible for 600,000 premature deaths every year.

## Firms need to address SDGs

Businesses should identify how they are contributing to helping countries in which they operate achieve the UN sustainable development goals, a study by PwC has concluded.

In a survey of more than 1,400 chief executives, 87% of respondents predicted that, within five years, businesses would prioritise long-term over short-term profitability, and that customer and other stakeholder needs would become increasingly important in successful organisations. Long-term thinking required firms to assess how their operations affect achievement of the goals, PwC's said in its analysis. As governments implement their plans, it was in the best interests of business to know how they helped or hindered the goals being achieved and to take action.

'The sustainable development goals and the Paris agreement on climate change put difficult challenges under the spotlight and signal a switch from short- to long-term

strategies to deliver change,' said Malcolm Preston, global leader, sustainability and climate change, at PwC. 'Significant investment will be required to tackle these major world issues and, in my view, business will be a critical player in their success.'

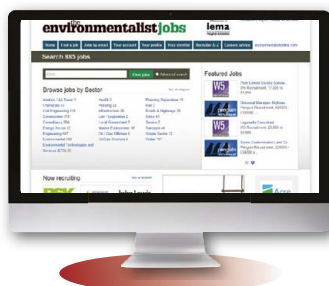
He said strategic planning should start now with a greater emphasis on many of the targets behind the goals: 'Identifying early on how a company's core operations impact a goal's achievement is a key way to shift from a shareholder to wider stakeholder model. It will inform how a business can adapt its strategy and respond to changing expectations of its role, and could substantially reduce regulatory risk shocks and unpredictability.'

Some 80% of respondents said they were implementing changes to minimise the social and environmental impacts of their business operations, while 76% agreed that business success was about more than profit.



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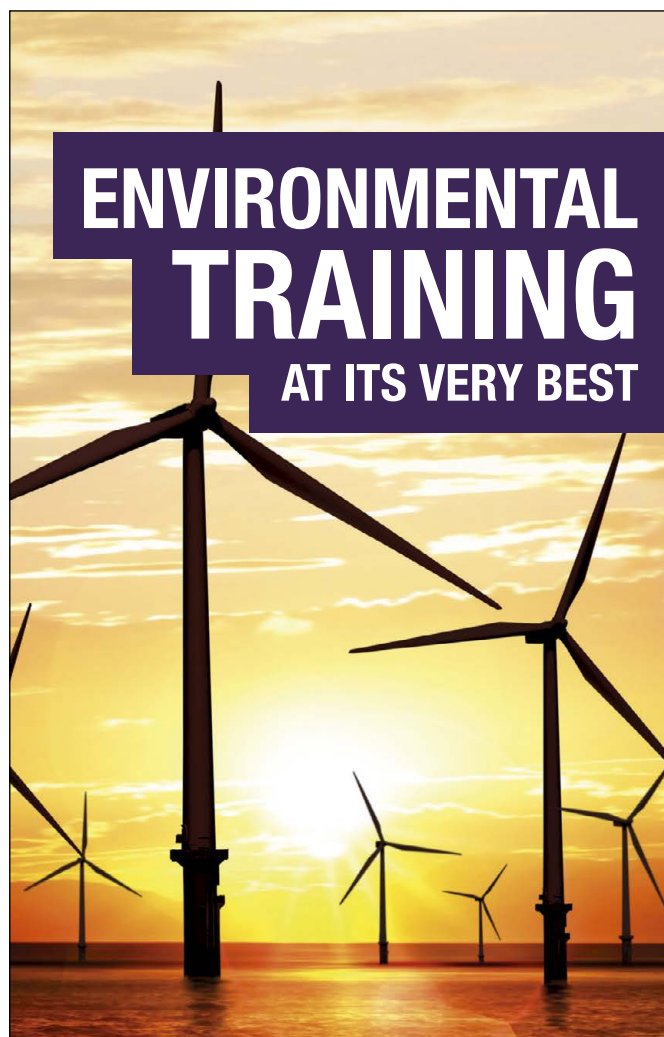
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# Bank calls for better risk assessment

The world is ill-prepared for an increase in disasters exacerbated by climate change, rising populations and urbanisation, the World Bank has found.

Its report, *The Making of a Riskier Future*, reveals that the annual cost of damage from disasters (averaged over ten years) increased tenfold between 1976 and 1985 and 2005 and 2014, from \$14bn to more than \$140bn. The bank said losses would rise further, with densely populated coastal areas in particular at risk. Many are sinking, and when coupled with rising sea levels, annual losses in 136 coastal cities could increase from \$6bn in 2010 to \$1,000bn in 2070.

A global sea-level rise of up to 0.6 m this century would increase disaster risk significantly in coastal areas, while subsidence, a major cause of which is groundwater extraction, would increase the likelihood of flooding locally, according to the report. In some coastal megacities, such as Bangkok (pictured) and Jakarta, sinking land will be a greater threat than flooding.

Taking into account change in precipitation, sea level, land use and subsidence, annual damage in 2030 is expected to increase globally by 263%, with subsidence alone contributing 173%.

The report advocates a radical new approach to assessing risk, one that includes extremely rapid changes in global disaster risk. It urges the world to move away from assessments that show risk at a single point in the present, which can quickly become outdated, and adopt assessments that can guide decision makers towards a more resilient future.

'With climate change and rising numbers of people in urban areas rapidly driving up future risks, there's a real danger the world is woefully unprepared for what lies ahead,' said John Roome, the bank's



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senior director for climate change. 'Unless we change our approach to future planning for cities and coastal areas that takes into account potential disasters, we run the real risk of locking in decisions that will lead to drastic increases in future losses.'

Meanwhile, consultancy Arcadis has published its first sustainable cities water index. Rotterdam is ranked the world's most sustainable urban water city, but Arcadis said most cities needed greater investment to improve their resiliency to extreme weather and unforeseen water shortages.

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

## Species at risk

Some 21% of plant species are at risk of extinction, according to the *State of the World's Plants* report, published by Kew, the Royal Botanic Gardens. Agricultural intensification and land-use change are the biggest potential causes of extinction – threatening 31% of at-risk species. Climate change is the main threat for only 3.96% of species. However, species needed to either genetically adapt to cope with climate change or migrate otherwise they faced extinction. There is already evidence of all three outcomes occurring. Kew's report is the first baseline assessment of global plant life. It identified 391,900 vascular plant species and said that about 2,000 new species had been discovered every year for the past ten years. Several of the species identified in 2015 are already presumed extinct, illustrating the extent of threat facing plants. A herb endemic to waterfalls had been destroyed after its only known habitat was used as the site for a hydroelectric dam, for example.

[bit.ly/22lsL99](http://bit.ly/22lsL99)

## Low-cost reply

Much of the work on climate change resilience by companies is being conducted without the need for extra funding, staff and skills, according to the Environment Agency. The regulator used responses to the CDP's climate change programme for 2013 and 2014 to analyse how businesses viewed the risks and opportunities presented by climate change and severe weather. It found that firms had put in place measures to manage around 85% of the direct physical risks they identified. More than one-third (34%) of these had been managed through low-cost approaches, the most common being the integration of climate change in standard business systems, such as continuity or risk management plans and processes. Most companies (86%) identified at least one direct climate-related risk, including extreme weather harming assets, operations and supply chains. Indirect risks included demand for goods and services and changes in regulation.

[bit.ly/1rP0SK0](http://bit.ly/1rP0SK0)

## Green firms

Scotland had a higher percentage of businesses engaged in the low carbon and renewable energy (LCRE) sector in 2014 than other parts of the UK, according to the Office for National Statistics (ONS). Eight thousand Scottish firms in 2014 reported operating in the sector, equivalent to 5.3% of all non-financial businesses in Scotland. They accounted for 2.4% (£5.6bn) of all turnover generated in Scotland and employed around 21,500 people in full-time equivalent (FTE) roles. By contrast, there were 83,000 LCRE businesses in England, or 4.4% of all non-financial businesses. They generated turnover of £37.6bn and employed 201,000 people. Meanwhile, there were around 3,500 LCRE companies in Wales, equivalent to 3.9% of all non-financial businesses, which had a turnover of £2bn and employed 9,500 FTEs; Northern Ireland had 2,000 LCRE businesses, 3.2% of all non-financial businesses. These generated £1bn in turnover and employed 6,500 people.

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# New report updates sustainability 'storm warning' to business



Organisations worldwide need to do more to address the combined force of global megatrends, according to an IEMA report on sustainability launched last month.

*Beyond the Perfect Storm: the corporate sustainability challenge* states that a business-as-usual approach is driving us past the planet's environmental and social boundaries. However, it is not too late for businesses to move away from 'sustainability trade-offs' into a new age of innovation and resolution of sustainability challenges.

Building on IEMA's 2014 report, *Skills for a Sustainable Economy: preparing for the perfect storm*, the new document includes an updated 'storm warning' to businesses. A series of business dependencies indicate the pressing need for business action and innovation, it says.

It calls for innovative business models and new ways to measure return on investment to enable businesses to transform, and highlights the need for organisations to make environment and sustainability professionals central to this change. The report also concludes work from IEMA's 2014 White Paper, *Defining Corporate Sustainability*, providing focus and clarity for the profession on key definitions, terms and sustainability descriptors.

Nick Blyth (pictured), IEMA's policy lead and the report's author, said that unless a transformative switch away from short-term thinking could be introduced, businesses, individually and collectively, would be unable to reap the

rewards. 'Organisations can transform and mature towards the ambition of the truly sustainable business, but they need to establish a long view and look way beyond the "perfect storm",' he said. 'The urgency is clear but so too is the opportunity with very real tangible, financial and reputational benefits for those organisations at the vanguard.'

Findings from a survey by IEMA, which are included in the report, indicate that sustainability roles are developing and practitioners are actively enabling business transformation programmes. It also reveals that the profession is maturing, with sustainability professionals now receiving a more positive than negative response to their work. More than 60% of respondents said they viewed corporate sustainability as a 'change process where the organisation seeks to understand material issues, impacts and dependencies in order to improve and transform their organisation.'

Blyth said the report showed that organisations were at a critical juncture: 'There is no doubt that some businesses are further on in their journey to sustainability than others. The innovations being spearheaded by such businesses are inspiring and show what can be achieved when a long-term horizon is used. Many more need to follow suit. *Beyond the Perfect Storm* captures this vision and encapsulates what is possible.'

Visit [iema.net](http://iema.net) to download a free copy of the report.

## Cities taking the lead on reducing air pollution



The growing need to tackle poor air quality in cities around the world is resulting in direct action to make improvements. Although central governments seem unable or unwilling to take the necessary steps to bring air quality within the 'safe limits' set out by the World Health Organization (WHO), more cities are facing up to the challenge and introducing control measures.

One of the first acts by the new London mayor, Sadiq Khan, was to commit to substantially increasing the size of London's ultra-low emissions zone (ULEZ) and to bring forward plans to implement it. The ULEZ will set new emissions standards for vehicles so that only the newest, cleanest diesel vehicles can be driven in central London.

The aim is to reduce the estimated 9,500 premature deaths in London every year due to long-term exposure to air pollution, and bring the capital's air quality within EU limits. Figures for the UK as a whole show that up to 40,000 people die prematurely each year from poor air quality (including from indoor air pollution).

Updated figures for London from the WHO air pollution database show that annual mean levels of PM10 are 22ug/m3 – just above the recommended 20ug/m3. Levels of PM2.5 are 15ug/m3, compared with the recommended 10ug/m3.

It is not just London where action is being taken. In Delhi, the sale of diesel cars with two-litre engines or higher have been banned, and city authorities have introduced alternate day access for cars based on odd/even number plates. Paris has taken similar action and introduced weekend car bans in many areas.

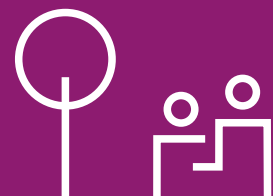
The UN projections are for the global population to grow by 2.5 billion over the next 34 years, reaching 9.7 billion by 2050. Mega-cities will become the norm and new forms of mobility will be required that are clean and low-carbon.

Martin Baxter is senior policy advisor at IEMA; @martinbaxter on Twitter





# New membership journey and brand revealed



On 13 June, IEMA switched on its revised membership structure, including a totally new grade, and fresh branding.

This 'new age of IEMA' comes after an in-depth consultation with members, which began in 2013. Members said they wanted the institute to adapt to make membership more meaningful and rewarding, and that IEMA should become far more recognisable and bold in its approach.

By working with members, employers and training partners, IEMA has created a new structure for its membership. The major changes include making Graduate membership a professionally recognised level and a new Practitioner grade, which bridges the gap between the revised Associate and Full membership.

IEMA chief executive Tim Balcon described the new membership levels as a 'journey' for practitioners throughout their careers: 'This is a huge milestone for IEMA. We've taken the hugely valuable feedback given by members and a lot of other interested bodies, and used it to break the mould of what professional bodies traditionally offer. Members' careers are far more about a constant moving journey of learning and development and we have taken the time to ensure each step along the way is rewarding and relevant for that time in their lives. I'm really excited that we can now share the outcome of this work with members.'

Now the new look memberships are in place, this means:

- More members can join at Student and Affiliate grade, aiding IEMA's future growth.
- Graduate members can now use the new GradIEMA suffix.
- The 8,000-plus Associate members can transition to the new Practitioner (PIEMA) level, a standard that better reflects their roles and experience.

The new membership standards for Graduate, Associate and Practitioner are in force, and the standards for Full and Fellow are being finalised to be implemented later this year. New training courses and assessments are to be rolled out over the next few months to help new members achieve Associate or Practitioner membership.

## My IEMA

username

password

[login](#)



understanding our membership levels

[find out more](#)

what can we offer you

[find out more](#)

we're always here to help you

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# IEMA

Transforming the world to sustainability

to depict real members, to show what the people in our profession look like and the energy

### New online look

At the same time as the revised membership structure was launched, a new logo and website was switched on.

The new look has been developed to reflect the feedback provided by members about the need to be clear, recognisable and bold, and mirrors IEMA's vision of transforming the world to sustainability. It is underpinned by three core values – bright, open and brave. These elements signify how IEMA should look, feel, sound, act and think. They encapsulate all that members said they wanted IEMA to become, and ensures the institute conveys the energy, passion and collaborative nature of the environment and sustainability profession.

The logo is bold and represents connections and impact. A key feature of the new look is a continuing 'horizon line', referencing possibility, optimism and the future. The clean white brand uses bold black type and is punctuated with pops of bright colours throughout. The strong black and white imagery used across IEMA materials and website is of real-life members, taken at an open photoshoot in May. 'We felt it was absolutely vital

they have,' explained Balcon. 'We are building a new level of recognition here, not only for IEMA but for the profession as a whole so what better way than to portray the faces of real members and show them working together?'

IEMA believes that the changes introduced on 13 June add up to a powerful proposition that will drive it to achieve its vision. The enhanced relevance and value will support current and future members on their membership journey and the 'bright, open and brave' approach will ensure IEMA represents members' own attitudes.

'This is about being future-fit and really owning our space,' said Balcon. 'Members gave us the right push to do this work and I'm so glad they did. We've now put in place everything needed to put us on the right road to transforming the world to sustainability.'

Find out more about the new membership structure and see the refreshed brand on the new-look website at [iema.net](http://iema.net). Further details about the revised structure can also be found on p11 and on pp111–vi of the training supplement inside this month's copy of *the environmentalist*.



# The IEMA membership journey

## Student – a broad horizon

If your studies relate to environment and sustainability IEMA offers a bright vision and tremendous possibility.

IEMA believes there is a practical way to a sustainable future for everyone, and that the environment and sustainability profession has a critical role to play. If you share that ambition for change and are thinking of a career in environment and sustainability we want you to join us and make IEMA part of your learning experience. Student membership puts your studies in a real-world context, connecting you with the people, discoveries and challenges that are defining the sustainability profession today.

## Affiliate – stay connected

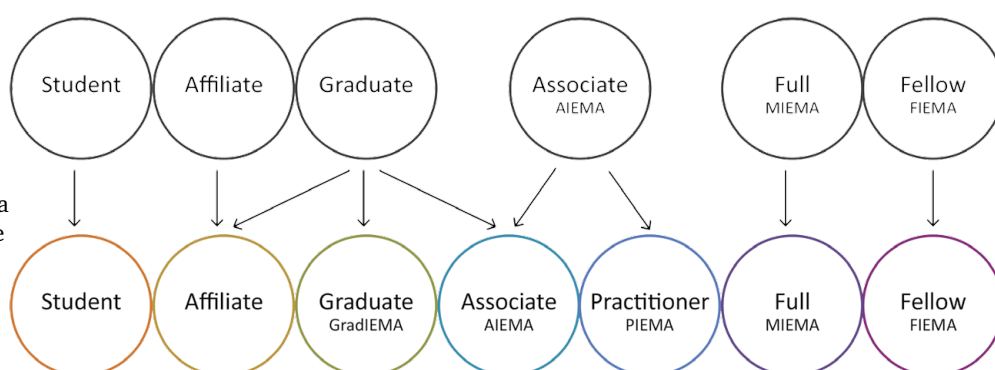
Affiliate membership gives the wider professional community a way to benefit from the connections IEMA can provide.

Our work resonates far beyond the environment and sustainability profession, and we are here to support everyone who shares our goal of a bright, sustainable future. By becoming an IEMA Affiliate you can tap into a wealth of information and expertise, while connecting your work with the world's largest network of environment and sustainability professionals.

## Graduate (GradiEMA) – leaders of the future

We are already looking to the next generation of sustainability professionals. IEMA is looking to you.

Becoming an IEMA Graduate is a decisive first step towards a transformational role in business. On the way you will encounter new opportunities, deepen your knowledge and build relationships to last a lifetime. You'll steadily gain recognition and earning potential too. IEMA is ready to guide and support you all the way because, by working together, we have a chance to reset the norms of business and uncover the way to a bright future for everyone.



## Associate (AIEMA) – make your mark

There is a whole new world of opportunity for environment and sustainability professionals – and this is your way in.

The drive towards sustainability has opened up new professional avenues across all sectors. If you're looking to start or make a change in your career and have real working experience to share, Associate membership of IEMA is your gateway into the profession. You do not need a conventional academic background in environment and sustainability. As part of our worldwide community you can quickly access training, support and industry knowledge, while gaining recognition and building your network within the profession.

## Practitioner (PIEMA) – taking action

At the heart of IEMA is a community of professional experts working to make the future better.

Practitioner membership makes you part of this community. It recognises everything you're doing to help make business future-proof while giving you practical support. We can help you deliver on your sustainability goals, with information and tools to put you ahead on ideas and innovation. You can also receive training to increase your knowledge and skills. You can expect to build your influence and connect with others like you across IEMA, as part of the Practitioner community.

## Full Member (MIEMA) – the power to influence

Lead change in your organisation – with the full force of IEMA behind you.

Full membership of IEMA is the gold standard for environment and sustainability professionals who are setting agendas and leading initiatives within their organisations. If you are working to turn a sustainability vision into action IEMA is with you.

And as part of the worldwide community of IEMA Full members, you can expect to build a more influential network, accelerate your career and enhance your earning potential.

## Fellow (FIEMA) – a new kind of leader

Join a new generation of ambassadors for sustainability – leaders who are challenging the norms and transforming the world.

The nature of leadership is changing: leaders increasingly need a strong sustainability record, while sustainability professionals are expected to step up and lead. IEMA Fellow is the definitive mark of these new advocates for change. Becoming a Fellow will put you at the forefront of our network of sustainability professionals – the largest and most established in the world. You will join a powerful alliance of ambassadors at the top of their profession, equipping you to live IEMA's vision and lead to your full potential.

## EIA research

## BIM and EIA

In an IEMA QMark paper, Natalie Moore, environmental consultant at Arcadis, considers how building information modelling (BIM) could benefit EIA co-ordination. She says there are two common misconceptions: that BIM is suitable only for buildings and is exclusively for 3D models. However, she points out that BIM can be used for all types of construction projects, not just buildings, and that the 3D model is only a small part of the process, with the most important being the 'i' – the information contained in it. Moore outlines how environmental work can contribute to this information, using the example of the M4 smart motorway scheme. The environmental BIM input included the integration of the environmental masterplan and vegetation clearance drawings into the model, to simulate areas surrounding the road structures. Protected assets, including heritage listed buildings, were modelled alongside ecology target notes and other planning features, such as designated sites and public rights of way. The presence of pre-existing and proposed environmental barriers were included too, together with other information, such as the locations of proposed otter fencing and mammal ledges.

[bit.ly/23KzISb](http://bit.ly/23KzISb)

## Risk assessment and EIA

Nigel Moore, principal consultant at TNEI Services, explores the differences between assessment of risks (ERA) and assessment of impacts (EIA) in an IEMA QMark paper. An ERA must be informed by a probability measure – risk of an impact is equal to its consequences multiplied by its probability – and address potentially significant environmental and human health risks. By contrast, an EIA addresses outcomes if the consequences of development are predictable and can be assessed with a degree of certainty. EIAs consider the impacts derived from both planned (impact) and unplanned (risk) events associated with development. Moore says the assessment of risks and impacts are indelibly linked. He recommends that ERAs inform EIAs.

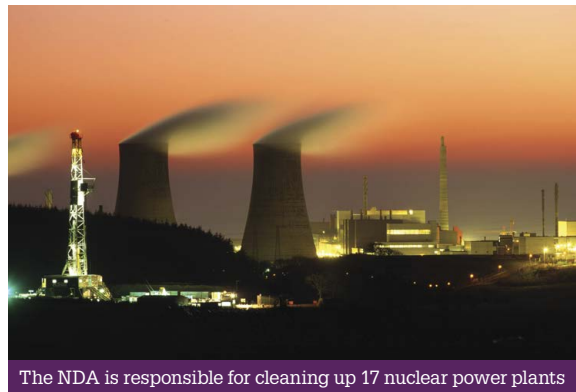
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## Consortia win NDA contracts

The Nuclear Decommissioning Authority (NDA) has awarded contracts worth up to £12m to ten consortia to provide innovative solutions to the technical challenges of cleaning up UK nuclear sites.

Six consortia, led by Amec Foster Wheeler, Arcadis Consulting, Arup, Eden Nuclear and Environment, Galson Sciences and NSG Environmental, will work on research into integrated waste management (IWR) and site decommissioning and remediation (SDR).

Amec Foster Wheeler will provide services over the next four years to support: site characterisation, engineering design and delivery of the UK geological disposal facility; low-level waste repositories in West Cumbria and Dounreay, Scotland; and environmental assessment. 'By combining our clean energy and environmental skills we are able to provide a world-class service to the NDA in its drive to manage the UK's



The NDA is responsible for cleaning up 17 nuclear power plants

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nuclear clean-up programme,' said Andy White, vice-president of the consultancy's nuclear business.

The NDA's clean-up responsibilities cover 17 sites – 14 in England and Wales and three in Scotland. IWR and SDR are key themes in the NDA's new strategy, which was adopted in April. The authority said that under current plans it would take around 110 years to complete its core mission of nuclear clean-up and waste management.

### Rufus Howard: a marine impact assessment group

Historically, IEMA has not been strongly associated with the marine environment. However, many members are involved in marine impact assessment and management. A good number work in organisations, such as The Crown Estate, the Marine Management Organisation (MMO), Natural England and Environment Agency, and in consultancies and industries providing services that operate in the coastal and marine environment. There is a need therefore to engage more with others operating in the seas around the UK and this is happening.

I recently presented on the need for evidence-based decision making in impact assessment for marine industries and renewables to representatives from Natural England and Defra's joint nature conservation committee. The event was organised by the Seabed User and Development Group, which represents marine organisations, including trade bodies Oil & Gas UK, Renewable UK and the Carbon Capture & Storage Association. I also took part in the European

Commission's summit in May on strategic environmental assessment (SEA), presenting marine case studies, including one on the excellent work by Marine Scotland in marine spatial planning. Finally, I spoke with the delegates from the MMO at the IEMA proportionate assessment summit on the use of evidence plans.

It has long been my desire to create an IEMA working group on marine impact assessment to develop good practice and share knowledge on the latest developments – these include marine protected areas, marine conservation zone stage 2 assessments, biosecurity plans and changes to the EIA directive. As chair of the impact assessment network, I am issuing a call for members interested in a marine impact assessment group to get in touch – I already have volunteers from the MMO, The Crown Estate and Royal HaskoningDHV. Email [ia@iema.net](mailto:ia@iema.net) if you want to volunteer your time to help develop a community of practice on marine impact assessment.





# Government wins parliamentary battles

New bills on energy and housing development have received Royal Assent after the government defeated amendments on renewables obligations, zero-carbon homes and flood prevention.

The Energy Act creates the Oil and Gas Authority as a regulator for onshore and offshore oil and gas operations; extends the Petroleum Act 1998 to Northern Ireland; and establishes fees for activities relating to oil, gas, carbon dioxide and pipelines. The government has used it to close the Renewables Obligation (RO) early for onshore wind schemes – from 12 May.

An amendment put forward by Labour peer Lord Grantchester sought to weaken the impact on developers that had already committed resources by making the proposed grace periods more generous. But it was defeated by 286 votes to 260. Energy minister Andrea Leadsom claimed that the UK would generate 35% of electricity from renewable sources by 2020–21, above the target of 30%. The proposed grace period would increase consumer bills, she said.

Meanwhile, the Housing and Planning Act contains measures to speed up house building, including automatic planning consent on sites identified by councils as suitable for development. Four peers, including former Environment Agency chief executive Baroness Young and a



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member of the Committee on Climate Change, Lord Krebs, put forward an amendment on behalf of a group of professional bodies including the Chartered Institution of Water and Environmental Management, the Institute of Civil Engineers and the Chartered Institute of Ecology and Environmental Management. The proposed amendment would have restricted developers' automatic right to directly connect new homes to existing drainage systems and instead require the use of sustainable urban drainage systems (SuDS), such as ponds. These were legislated for in the Flood and Water Management Act 2010 but never implemented. The amendment was defeated in the House of Commons, with a

provision added instead for a government review of planning legislation, national planning policy and local planning policies on sustainable drainage.

A further proposed amendment, from Baroness Parminter, would have required housebuilders to reduce carbon emissions from new homes after the government scrapped the zero-carbon target last summer. The proposal received strong support from the House of Lords, but the government defeated it by four votes. In its place, a clause committing to a review of the energy efficiency standard for new homes in the building regulations was agreed. The review clause contained neither timescales nor specific criteria for the review.

## Joined-up law enforcement required to tackle wildlife trafficking

The estimated value of EU imports in 2011 of species covered by the Convention on International Trade in Endangered Species of Wild Flora and Fauna was around £384m. According to a 2012 report from WWF, illegal wildlife trafficking is the fourth largest illegal global trade after narcotics, counterfeiting and human trafficking.

The EU acts both as a destination and a transfer region for illegal wildlife products. Seizures at EU borders consist mainly of reptile leather products, live reptiles, birds, corals, caviar, traditional Chinese medicine and ivory. A report in March from the European Parliament found insufficient and uneven levels of enforcement among member states. Key problems facing national enforcement authorities included: a lack of resources, technical skills, awareness and capacity among police

forces, prosecutors and judicial authorities; the low priority given to wildlife crime by enforcement institutions; and poor co-operation between agencies. Wildlife crime tends to be low priority for national enforcement agencies and judiciaries.

The European Commission's action plan against wildlife trafficking, published in February, recommends a minimum of four years' imprisonment for convicted traffickers. As I said in a previous column (*the environmentalist*, April), this is a strong position and sends a message to member states that they need to take a tougher stance towards people involved in wildlife crimes. Another issue hindering the EU's ability to tackle such activity is the administrative and organisational set-up of national authorities, which can vary. Member states that have a federal structure, such as Belgium, have

multiple police forces and authorities, so co-ordination is not always synchronised.

But when countries work together, major results can occur. In 2015, as part of operation COBRA III, 62 countries participated in the largest enforcement operation against wildlife crime. In the UK alone 50,000 wildlife items were seized.

My forthcoming report on the commission's action plan will look at how we can achieve joined-up law enforcement and what EU member countries need to do to support international agencies. There are many other issues and I welcome any suggestions ([bearder.eu](mailto:bearder.eu)) from practitioners in the field as I prepare my response to the commission.



Catherine Bearder MEP is a member of the European Parliament's environment committee.



## In court

### Yorkshire Water fined a record £1.1m for pollution incident

Leeds Crown Court has fined Yorkshire Water a record £1.1m for illegally discharging sewage that polluted the River Ouse near York.

The firm pleaded guilty to three environmental offences relating to the operation of its Naburn treatment works in Fulford. Problems at the site were identified first in August 2013, when officers from the Environment Agency carrying out a routine monitoring survey spotted effluent being discharged from the works into the Ouse. An investigation discovered that the discharge had been caused by the failure of a pump.

Three pumps are required to cope with the volume of sewage passing through the works. However, the backup had not been operational for five months, which was a breach of the site's environmental permit. With just two pumps working, around 6,000 cu m of sewage flowed into emergency storage tanks, before overflowing through an old outfall into the river. The agency said the pollution damaged water quality for up to 1 km.

Agency officers who inspected the works 13 months later found that the backup pump had been taken away for repair and had not been replaced.

Judge Guy Kearn QC said: 'The inability of a company with an annual turnover of £1bn to keep in its stores a replacement pump and spares, in the knowledge of the extended lead-in time for replacement parts and pumps plainly amounts to a reckless failure to put into place a system which could reasonably be expected to avoid the commission of the offence.'

Mike Riby, environment management team leader at the agency, said: 'Water companies have a legal duty to ensure that their operations do not pose a threat to the environment. In this case, Yorkshire Water failed to have in place appropriate pumping equipment needed to process sewage at its Naburn treatment works.'

Yorkshire Water said that since April 2015 it had been operating a distribution centre to supply spare equipment and parts so that it could replace and repair broken pumps.

Leeds Crown Court also ordered the company to pay £27,073 costs. In January, Yorkshire Water was fined £600,000 by the same court for a water discharge in October 2013, which polluted a lake with sewage at Walton Colliery Nature Park, Wakefield, and killed hundreds of fish.

### £370,000 penalty for waste offences

The owner of waste company Ward Recycling, has been fined £270,000 for persistent breaches of environmental permits at two sites in Derbyshire, and for illegally operating at another site in the county. Derby Crown Court also ordered Donald Ward to pay prosecution costs of £100,000. The fines included costs avoided by the company of £40,000.

The court was told that between March 2012 and June 2013 the company had failed to operate properly its two permitted sites. This resulted in fly infestation at the Griffon Road site, while the quantities of waste stored at Hallam Fields posed a fire risk. Meanwhile, waste, including redox fines and fragmentiser fluff, was stored at Old Stanton Iron works without appropriate permits or in accordance with exemptions.

Ward pleaded guilty to three offences under the Environmental Permitting (England and Wales) Regulations.

### Ford Mexico fined \$1.05m

Mexico's Federal Attorney for Environmental Protection, Profepa, has fined US automotive company Ford just over 18 million pesos (\$1.05m) for selling vehicles in the country without proper environmental certificates.

Profepa said 4,690 vehicles sold by Ford were missing 12 compliance certificates relating to gas emissions and noise levels. It said the fine, imposed under the General Law of Ecological Balance and Environmental Protection, was for each certificate that was not obtained before Ford and Lincoln brand vehicles (model years 2015 and 2016) were imported and marketed in Mexico.

In a statement, Ford Mexico said the vehicles met Mexican emissions standards and that penalty was due to it not obtaining the emissions certificates in time. It added that procedures had been updated since to prevent a re-occurrence.

## Case law

### Court of Appeal rules on building in the green belt

In *R (Lee Valley Regional Park Authority) v Epping Forest District Council*, the Court of Appeal considered the validity of planning permission for a 92,000 m<sup>2</sup> glasshouse in the green belt. The main issue was whether the development was appropriate in an area set aside to prevent unchecked urbanisation.

Paragraph 88 of the National Planning Policy Framework (NPPF) states that inappropriate development is harmful to the green belt and should not be approved except in 'very special circumstances'. The regional park authority argued that para 88 required the council to give substantial weight to any 'actual harm' to the openness of the green belt area, even though the development was appropriate development under the 'buildings for agriculture' exception in para 89.

The court rejected this interpretation and found that, as the buildings for agriculture exception was entirely unqualified, the openness considerations in para 88 did not apply. The court held that para 88, when read together with paras 79 to 92 of the NPPF, meant that appropriate developments, such as buildings for agriculture, were automatically regarded as not being harmful to the openness of the green belt and therefore did not need to be justified by very special circumstances.

The court stressed that appropriate developments under para 89 could still be rendered unacceptable for other planning reasons and that proposals for agricultural buildings would not be immune from other policies. These include those relating to the visual effects of development and the protection of the countryside or the character of the landscape.

Miranda Edwards

Lexis®PSL

# New regulations



In force	Subject	Details
1 Mar 2016 	Planning	The Town and Country Planning (Environmental Impact Assessment) (Wales) Regulations 2016 consolidate with amendments the provisions of the Town and Country Planning (Environmental Impact Assessment) (England and Wales) Regulations 1999. They introduce a requirement for the reasons for issuing a negative screening decision to be made public. Also, sites for the geological storage of carbon dioxide are now subject to environmental impact assessments (EIA). The regulations also raise and amend the thresholds at which particular types of development project will need to be screened in order to determine whether an EIA is required. <a href="http://bit.ly/1XoAPp0">bit.ly/1XoAPp0</a>
16 Mar 2016  	Environment protection	The Pollution Prevention and Control (Designation of Waste Directive) (England and Wales) Order 2016 designates the Waste Framework Directive (2008/98/EC) – as amended by Directive 2015/1127 – to the Pollution Prevention and Control Act 1999. Designation allows regulations to be made under the act to implement the directive. The purpose of Directive 2015/1127 is to apply a climate correction factor to the R1 formula on the recovery of energy from waste. <a href="http://bit.ly/1T9YGXL">bit.ly/1T9YGXL</a>
21 Mar 2016 	Natural resources	The Environment (Wales) Act 2016 brings into force the Environment Wales Bill. The act aims to support effective and sustainable management and use of Wales's natural resources. It requires Natural Resources Wales to perform its duties in line with principles of sustainable management of natural resources. Welsh ministers are required to set carbon budgets every five years between 2016 and 2050 and to ensure the country's emissions do not exceed the stated budget. Ministers also have greater administrative powers on marine licensing and have a duty, along with public authorities, to improve biological diversity. <a href="http://bit.ly/229JQRW">bit.ly/229JQRW</a>
21 Mar 2016 	Waste	The Producer Responsibility Obligations (Packaging Waste) (Amendment) Regulations (Northern Ireland) 2016 amend the 2007 Regulations. It is no longer necessary to produce operational plans when registering as a packaging producer. Further changes have been made to the management of compliance schemes and an operator of a scheme must notify the Northern Ireland environment department of changes to its membership. <a href="http://bit.ly/1s5dsoj">bit.ly/1s5dsoj</a>
24 Mar 2016   	Energy	The Renewable Heat Incentive Scheme and Domestic Renewable Heat Incentive Scheme (Amendment) Regulations 2016 amends the 2014 regulations to remove the need for a Green Deal Assessment report. They also allow biogas plants to be deemed to meet the renewable heat incentives sustainable biogas standard when it is used in an renewable energy obligation (RO) accredited installation with a capacity of at least 1MW, and complies with the RO's greenhouse-gas and land criteria. <a href="http://bit.ly/1ZMa8cF">bit.ly/1ZMa8cF</a>
1 Apr 2016 	Energy	The Renewables Obligation Closure Order (Northern Ireland) 2016 will close the Northern Ireland Renewables Obligation (NIRO) to new onshore wind generation schemes with at least 5MW of installed capacity, as well as existing large-scale generating stations adding additional capacity. <a href="http://bit.ly/1UYdudr">bit.ly/1UYdudr</a>
2 May 2016 	Environment protection	The Environmental Better Regulation Act (Northern Ireland) 2016 enables the country's department of environment (NIDoE) to develop regulations to protect and improve the environment. Parts 3–5 of the act amend the Clean Air (Northern Ireland) Order 1981, the Environment (Northern Ireland) Order 2002 and the Water and Sewerage Services (Northern Ireland) Order 2006. The Environmental Better Regulation (2016 Act) (Commencement No. 1) Order (Northern Ireland) 2016 brings into operation ss7–14 of the act. These relate to the powers of the NIDoE. <a href="http://bit.ly/1TJZrTw">bit.ly/1TJZrTw</a> ; <a href="http://bit.ly/23MMqhF">bit.ly/23MMqhF</a>

This legislative update has been provided by Waterman's Legal Register available at [legalregister.co.uk](http://legalregister.co.uk)

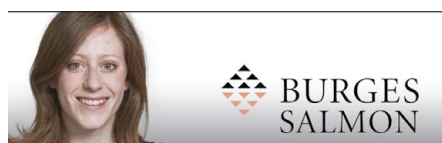




## Laying down the law

### Updating the law on flooding

Environment lawyer **Ella Curnow** summarises some of the key recent legal developments on flooding



**P**arts of the UK again experienced significant flooding during the winter as storms Desmond, Eva and Frank in particular triggered significant disruption to homes, businesses, agriculture and transport and utilities infrastructure. The Association of British Insurers estimated that the damage would cost insurance companies £1.3bn. In the aftermath of the floods, there have been three important legal developments.

#### Flood risk permits

On 6 April 2016, flood defence works were brought within the environmental permitting regime (EPR) in England and Wales. Flood risk permits have replaced the flood defence consents granted under the Water Resources Act 1991, and consents for land drainage and sea defence under byelaws.

Responding in January 2016 to the consultation on integrating flood defence consents into the EPR, the UK and Welsh governments confirmed that a standard rules permit would be available in many instances. Yet concerns remain that the new regime may increase the regulatory burden on individuals and businesses carrying out relatively minor maintenance of watercourses to prevent flooding. There are, however, activities that do not require a permit or can be carried out under a registered exemption. For example:

- **Exclusion** – carrying out minor works on or affecting bridges and culverts for highways and public rights do not require a permit.
- **Exemption** – operators are allowed to dredge a maximum of 1.5 km of manmade ditches, land drains and agricultural drains, subject to specified conditions to protect designated sites and sensitive water bodies.

More information can be found in the Environmental Permitting (England and Wales) (Amendment) (No. 2) Regulations 2016 ([bit.ly/1ShBLvc](http://bit.ly/1ShBLvc)). The Environment Agency and Natural Resources Wales intend to issue full guidance on flood risk permits later in the year.

#### Duties on local authorities: further warning from the courts

*Robert Lindley Limited v East Riding of Yorkshire Council*, heard by the Upper Lands Tribunal in January ([bit.ly/1VnxbMa](http://bit.ly/1VnxbMa)), highlights the importance of local authorities understanding their duties on flooding and their need to be proactive in dealing with the risk.

In this case, the local authority was held liable for damage to crops caused by an operation to pump floodwater out of a neighbouring village and into a stream. Pumps had been arranged by the Environment Agency, but the council oversaw the operation. The stream overflowed and damaged crops in a field. The council had assumed the agency remained responsible. The court disagreed and held that the council had been responsible because it had been acting under its powers in the Land Drainage Act 1991 to reduce the level of water in the village; the agency was merely providing assistance under the Flood and Water Management Act 2010.

This case follows the case against Rochdale Council in 2010 (panel, right), after a developer had caused flooding by blocking a culvert. However, the Court of Appeal held that the local authority was under a common law duty of care to assist, which included allowing others to have access to the land, co-operating with any relief works and possibly even carrying out works to its own land to alleviate the nuisance.

#### Flood Re launches

Flooding reinsurance, or Flood Re, launched on 4 April. Flood Re is a scheme to help about 350,000 householders in

flood risk areas to obtain affordable flood insurance with cover at a set price. Key things to be aware of are:

- The scheme is funded through an annual levy of £180m on insurance policies of UK homes. Flood RE has its own reinsurance policy to ensure it will be able to cope with significant or multiple flood events.
- The scheme works by providing insurers with the opportunity to purchase subsidised reinsurance against flood risk if they are not prepared to underwrite the risk themselves.
- Premiums are capped by reference to the council tax band of the insured property – from £210 for band A to £540 for band G homes – and rise in line with inflation.
- The scheme does not cover commercial or mixed use property. Nor does it cover all types of domestic properties, including leasehold flats and buy-to-let properties, and properties built after 1 January 2009.

Flood RE will continue until 2039. More information can be found in The Flood Reinsurance (Scheme Funding and Administration) Regulations 2015 ([bit.ly/1SNWxgb](http://bit.ly/1SNWxgb)).

#### Rochdale Council case

In *Lambert v Barratt Homes and Rochdale Metropolitan Borough Council*, the Court of Appeal overturned a court ruling that the council was liable for breach of a measured duty to take reasonable steps to abate the nuisance from water flooding on the claimant's land. The council had sold part of a school playing field to construction company Barratt, on which it built housing. During construction, Barratt negligently filled in a drainage culvert, causing flooding and damage. Although the appeal court said Rochdale was not responsible for the cause of the flooding, which was a result of Barratt's actions, it said the council should assist in constructing a catch pit on the land it retained, allowing excess water to be piped to the sewer by a different route.

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# Breaking up is hard to do

**Catherine Early** finds out how a vote to leave the EU might affect the environment profession

**T**he environment has largely taken a back seat in the referendum campaign, with the opposing forces arguing mostly over immigration and the economy. But with an estimated 80%–90% of environmental regulations originating in the EU, the sector and the people working in it stand to be among the most directly affected by a Brexit.

The precise ramifications of leaving are impossible to predict until the UK negotiates an alternative. The country could remain in the European Economic Area (EEA), along with Iceland, Norway and Liechtenstein, where most EU legislation continues to apply. The exceptions are the directives on birds, habitats and bathing water, and the common policies on agriculture and fisheries. Or it could leave completely, and not have to meet EU laws other than for products entering the bloc's single market or their supply chains. Each option results in different levels of say for the UK in future regulations and trade arrangements (see panel, p19).

'Big companies I've worked with are driving innovation and investment, which we are told endlessly by our chancellor is needed for economic growth. The thing that has driven those two things more than anything else is European rules on the environment.'

**Tony Juniper**

special adviser to the Prince of Wales's  
International Sustainability Unit

'UK manufacturers need to invest in the latest technological advances, they need to stay at the forefront of innovation and they need to collaborate closely with highly integrated supply chains. EU membership supports these goals.'

**Terry Scuoler**  
chief executive, EEF

### At risk?

Organisations have been busy assessing what a UK vote to leave would mean for their sector. Environmental lawyers are anticipating a bigger workload. EU environmental law is implemented by an array of legislation and measures, including management agreements, notices, consents and plans. Rose Oliver, working party adviser for the UK Environmental Law Association, pointed out in a recent edition of the organisation's newsletter that each of these would need to be reviewed and decisions taken about whether and how to preserve or unpick them if the UK decides on a complete withdrawal.

'Some knotty legal issues would arise, such as how to interpret and deal with legislation like the environmental permitting regulations, which adopts a referential drafting style, placing requirements on regulators and others to act "in accordance with Article X of Directive Y",' she wrote.

The UK Green Building Council (UKGBC) has outlined policies and regulations it believes are under threat from Brexit and those with a more complementary relationship. Indeed, some of the most ambitious EU policies actually follow the lead of initiatives introduced in the UK. The Climate Change Act 2008 should be safe, for example, since it is not dependent on EU membership, the UKGBC believes. The trade body points to the pledge by ministers that the government will legislate for net zero emissions in order to achieve the Paris climate agreement. This would be going further than any current commitments from the EU, the UKGBC says.

However, it warns that the UK's 2020 and 2030 interim targets for renewable energy, energy efficiency and emissions reductions could be discarded because they originate in the EU. Focus would shift solely to overall emissions rather than specifying for energy savings and renewables, but it would still lead towards the same levels of ambition for 2050, the UKGBC notes.

The organisation says the requirement for display energy certificates in public buildings, which stems from the Energy Performance of Buildings Directive (EPBD), could be removed given that the coalition government consulted on proposals to significantly dilute or scrap them. Another provision under the EPBD the UKGBC believes would be at risk is the Nearly Zero Energy Buildings (NZEBs) standard. When the directive

'We anticipate that a Brexit would trigger a re-evaluation of major infrastructure investments across the industry, from waste and recycling to resource management and energy recovery projects.'

**David Palmer-Jones**  
chief executive, SITA UK

was introduced, the UK had policies for all homes to be zero carbon by 2016, and for new non-domestic buildings to follow by 2019. These were thought enough to meet the NZEB requirements.

The zero carbon policy was cancelled in July 2015, however, and the NZEB 2020 target is likely to provide the next uplift in building regulations for energy-efficiency standards. The UK government must undertake cost-optimality analysis of current building regulations to establish whether changes will be needed to meet the standards. In light of the government's decision last year to scrap zero carbon, it is possible that it would not proceed with any increases in building standards for NZEBs if the UK withdrew from the EU, the UKGBC says.

### Going further?

Another key policy for businesses that is derived from the European Union is the energy efficiency opportunity scheme (ESOS). It transposes Art 8 of the Energy Efficiency Directive (EED). ESOS is currently under the policy microscope as part of the business energy tax review, although it is likely to continue as one of the primary reporting requirements for large UK businesses. If the UK was no longer covered by the EED, the UKGBC believes ESOS would be retained only if analysis of the scheme demonstrated that it had driven significant carbon reductions in the commercial sector, which would be crucial in achieving the UK carbon budgets.

Some UK measures exceed the requirements of the EED, the council points out. Combined energy reductions from government buildings in 2013 were already almost three times higher than those required by the directive, for example. 'As such it is unlikely



## Implications of the EU referendum

	EU membership	Inside the EEA	Entirely outside the EU
Do EU environmental laws continue to apply to the UK?	Yes	Most of them will, with some exceptions, such as the nature directives and Bathing Water Directive	No, but UK exporters will need to comply to export into the EU
Does the UK have a say in the formulation and amendment of EU policy on the environment?	Yes	EEA countries are consulted only during the preparation process for legislation. They do not take part in the formal negotiations, and cannot vote. They have no MEPs to influence legislative outcomes through the European Parliament	No
Would the UK continue to be subject to mechanisms to ensure compliance and penalties for non-compliance?	Yes	Yes, the European Commission retains enforcement powers and fines can be imposed for non-compliance	No
Would it be necessary to negotiate new trade arrangements that could have impacts on environmental standards?	No	In some areas, yes, including in relation to agriculture and fisheries	Yes, across a wide front
Could a future UK government lower current environmental standards in the UK?	Only by means of an agreement at EU level	Not in the majority of cases that are covered by EU obligations	Yes, although UK exporters would need to abide by EU product standards, as well as face tariffs in many sectors

Source: Institute of European Environmental Policy

'One of the reasons we would reach a Brexit situation is that the people who are against regulation have had quite an impact on the vote. It would be unlikely that the government would strengthen national legislation.'

**Stanley Johnson**  
former vice-chair of the European Parliament's Environment Committee

that emissions targets for public authorities would be watered down as a result of the EED no longer applying to the UK,' the UKGBC said in a briefing.

UKELA's working group on energy and climate change has assessed the impact of Brexit on policy in this area. The UK's ability to meet its targets under the Climate Change Act depends heavily on reductions through the EU emissions trading system (ETS). The UK could opt in to the ETS without being a member of the EU, as Iceland, Norway and Liechtenstein have done. But Stephen Hockman QC points out that the UK would lose its influence in formulating policy for the system if it were no longer a member of the EU. Also, without encouragement from the UK, the bloc may be more inclined to adopt weaker climate policy, he warns.

### No speedy resolution

Whatever Brexit path the UK takes, there will be a lengthy period of uncertainty during negotiations. If the UK chooses to leave the EU altogether, many environmental regulations would need to be rewritten. Theoretically, they could be made tougher than existing EU laws, but the current government's eagerness for deregulation, dilution or removal of environmental legislation will give many professionals cause for concern.

# A price worth setting?



Firms are increasingly using internal carbon pricing. But evidence of these prices having an impact on projects is hard to find, reports **Alex Marshall**

One of the more surprising trends in green business is the continued growth of internal carbon pricing – surprising since you would think any business worth its salt would have long used a carbon price to shape investment decisions.

Over the past year, the CDP (formerly the Carbon Disclosure Project), the UN Global Compact and the International Emissions Trading Association (IETA) have all issued reports praising the growth of carbon pricing and encouraging others to follow – in the UN's case even publishing an executive guide explaining how to calculate it ([bit.ly/1N0Nnuv](http://bit.ly/1N0Nnuv)).

Some 435 companies set internal carbon prices last year, up from 150 in 2014, according to the CDP, and range from food retailer J Sainsbury to internet giant Google. The pricing goes from the very high (£251 a tonne in the case of Japanese spark plug manufacturer NGK) to the very low (67p a tonne for Brazilian power company CEMIG) (see panel, p21).

## A growing phenomenon

The number of firms using internal carbon pricing is expected to be more than 1,000 by 2017, the CDP adds.

Much of the growth is in China, South Korea and South Africa – countries that are only now implementing carbon markets. In those cases, setting an internal price makes sense since businesses are looking for ways to prepare themselves for regulation. But there is also growth in Europe where the EU emissions trading system (ETS) has been operating for more than ten years.

Some 60 UK companies told the CDP in 2015 that they used internal carbon prices, up from 23 the previous year. A further 21 said they expected to adopt a price soon. Unilever said it was 'considering the introduction of an explicit cost of carbon...to evaluate the business case for new investments and drive our [climate] performance even harder'. Meanwhile SUEZ Environnement, the French conglomerate that owns waste firm Sita, reported that it was in the middle of evaluating two pricing pilots.

Innovative schemes may also be on the way. 'Some companies have raised the idea of embedding carbon prices in revenue targets or taxing marketing budgets to incentivise low-carbon research and development,' says

the UN Global Compact's executive guide. 'Companies in the food and beverage and service sectors are [also]... considering options for pricing carbon in partnership with their suppliers or customers and clients.'

## Making a difference?

Despite the surge in firms using internal carbon pricing, a question hangs over all these schemes, and it is a large one: what do they actually achieve? The reports on internal carbon pricing tend to say that the schemes are influential in deterring businesses from involvement carbon-intensive projects. But they all lack examples. The CDP, for example, quotes 170 companies explaining how they use internal carbon pricing, but only one, National Grid, explicitly states it has influenced decisions. In its case, an internal price helped spur replacement of assets that use sulphur hexafluoride (SF<sub>6</sub>), an extremely efficient electrical insulator but also a greenhouse gas 23,000 times more potent than CO<sub>2</sub>.

'If you are looking for someone who's put a price on carbon and then changed x, y and z, they are honestly hard to find,' says Zoe Tcholak-Antitch, spokesperson at the CDP. 'A lot of the prices are too low to cause change right now. But this is a long-term game and these schemes will change how businesses think and plan, and that's incredibly important.'

The most celebrated internal carbon pricing schemes do not involve setting a price to evaluate new investments. Instead, they are more like a carbon tax applied to every unit in a company. Making carbon part of a unit's bottom line is intended to encourage them to consider energy-efficiency improvements, while creating a fund to spend on projects. Disney pioneered this approach in 2009; Microsoft followed in 2012. Both have used the funds generated to pay for carbon offsetting and renewable electricity purchases. Microsoft reports that it has used \$2m of the fund on internal carbon reduction projects in the past three years.

The latest adopter is US ice cream manufacturer Ben & Jerry's, a subsidiary of Unilever. In 2014, the firm re-evaluated its approach to climate change when, according to activism manager Christopher Miller, it realised it needed a long-term strategy to cut emissions

## The wide variety of internal carbon prices

	(£/t CO <sub>2</sub> e)
<b>Food and drink</b>	
J Sainsbury	£17.20 *
Nestlé	£10.87
Ben & Jerry's	£7.03
<b>Oil and gas</b>	
Exxon Mobil	£56.21
Royal Dutch Shell	£28.10
Total	£20.02 (€25)
<b>Energy</b>	
E.on	£16.02–£32.04 (€20–40)
Iberdrola (Spain)	£24.02 (€30)
Centrica	£13 (2014, based on cost of all carbon levies)
Abengoa (Spain)	£7.21 (€9)
CEMIG (Brazil)	£0.67
<b>Utilities</b>	
Pennon Group	£63–£224 **
National Grid	£63–£224 **
<b>Finance and advertising</b>	
WPP Group	£29.20
Société Générale	£8.01 (€10)
<b>Telecommunications</b>	
BT	£17.20 *
Sky UK	£17.20 *
<b>IT</b>	
Google	£9.84
Microsoft	£3.09
<b>Materials and chemicals</b>	
AkzoNobel	£40.04–£87.29 (€50–€109)
Anglo American	
Platinum (South Africa)	£2.29
<b>Manufacturing</b>	
NGK Spark Plug (Japan)	£251.08
Stanley Black & Decker	Varies depending on location, but from £16.79 (France) to £105.43 (Sweden)
Balfour Beatty	£17.20 *
Jaguar Land Rover	£17.20*, but around £4 for other parts of business ***
BMW	Around £4 ***

\* Carbon reduction commitment scheme compliance price for 2016

\*\* UK's non-traded price of carbon, 2015 prices

\*\*\* EU emissions trading system price, April 2016

Source: Putting a Price on Risk, Carbon Pricing in the Corporate World ([bit.ly/1j1bZex](http://bit.ly/1j1bZex)), CDP, September 2015.

– and that would require investment to tackle the supply chain. A lifecycle assessment revealed that 52% of the company's emissions came from its suppliers, largely dairy farms. It was a statistic that could not be ignored.

The firm decided to try to lower them by encouraging farmers to deploy better cropping techniques and help them to buy biodigesters and manure separators. These split manure into liquid and solid parts, to be reused as a fertiliser and animal bedding respectively. An internal carbon fee was seen as a 'slick and sensible' approach to raise the required funding, while also potentially lowering the company's direct emissions, Miller says. Each year, Ben & Jerry's decides how much it intends to invest in its supply chain and works out a carbon levy based on that. For 2015-16, the first year of its use, it stands at \$10 a tonne.

Miller insists the internal price was the only way forward. The firm cannot simply order farmers to cut emissions themselves because some are 'teetering on the edge' financially, he says. 'We felt that their footprint is our footprint so we should make investments together.'

Ben & Jerry's would prefer the US adopted a nationwide carbon price rather than having to use the company's own scheme, but Miller says the two should not be incompatible.

### The common approach

These schemes remain few, however, despite the publicity they attract. The more common approach involves simply adopting an internal price, or range, and using it as part of the process to evaluate potential investments. Some UK companies, including BT and Sky, base their price on the cost of allowances under the soon-to-be-abolished carbon reduction commitment scheme, so a maximum £17.20/t. Others use the far lower ETS price, which is about £4/t. However, from looking at the range of prices, many have seemingly plucked a figure out of the air.

It is this type of scheme that is hardest to evaluate since most companies appear unwilling to talk about them outside generalities. However, *the environmentalist* found one business that was willing to admit it had had little impact on its work. South West Water adopted its scheme in 2009 after sector regulator Ofwat ordered firms to take account of carbon in their business plans.

South West Water decided to use the government's shadow price of carbon (now known as the non-traded price) to assess all projects over a 40-year lifetime. Carbon pricing would, therefore, play a part in how

projects are ranked and deciding which ones go forward. The non-traded price is expected to have an impact because it is relatively high: £63/t this year, rising to £224/t in 2050 and increasing thereafter.

'Internal carbon pricing was exciting and new and we thought it was something important to do,' says David Rose, the firm's energy and carbon manager. 'But it's a bit fraudulent really [to say we still push it]. It was



### Carbon pricing at Capgemini

Matthew Bradley, global head of environmental sustainability, explains the multinational management consultancy's strategy: 'Capgemini originally looked into the use of carbon pricing in 2009. In the UK we decided to create a sustainability fund based on calculations of our own CO<sub>2</sub> footprint. This fund was used to invest in sustainability-related projects across our activities that impact on the environment, such as office energy and business travel.

'After a while the fund was absorbed into our cultural practices and every project was then agreed on the basis of the return on investment in terms of sustainability and economic benefits. We are now looking at ways to build on this success.

'This year we will continue to impose carbon budgets on the business but we are also then looking at ways to re-invest the money externally. This could be through environmental projects in the community or through our people creating a positive environmental impact outside the workplace.'



created to meet the requirement of the regulator and it is still part of all our cost benefit analyses, but it hasn't [ever] been sufficient to re-order our projects.'

This is partly because the water company's projects are so expensive. 'If we consider a pumping station for a water treatment works you're looking at, say, 10,000 tonnes of CO<sub>2</sub> for a project costing several million,' says Rose. 'Our price won't make a difference. We did some sensitivity analysis and, when we increased the price by ten it had quite a big impact, but below that you didn't see it.' The internal carbon price is not even likely to drive the company's engineers to focus more on cutting energy, Rose adds. 'Energy is our second highest cost after salaries, so it's always got a lot of attention.' The company has its own carbon and energy reduction targets that provide significant drivers too.

South West Water's experience does not appear unique. Last year, building materials firm Cemex told the UN Global Compact that, although it supported carbon pricing, 'in view of the high abatement costs in our CO<sub>2</sub>-intensive sector and competitiveness issues, the company has concluded that an internal carbon price that would materially reduce its greenhouse-gas emissions is currently unfeasible'.

National Grid's experience is similar to South West Water's. Stuart Bailey, its head of sustainability and climate change, admits that for '99 out of 100 projects, decisions are the same if you use the social cost of carbon [in cost benefit analyses] or if you don't'. However, in its case, an internal carbon price at National Grid has led to a few changes and that makes Bailey feel it is something all firms should consider worthwhile. National Grid's internal price was set up to help it cut SF<sub>6</sub> leakage in its electricity transmission business as well as methane escapes in its gas distribution arm and was part of a regulatory agreement with regulator Ofgem. The non-traded price of carbon has been applied to all projects in these areas and affects the order in which they are funded.

'It might not have changed the fundamental design [of projects], but it certainly justifies them being brought forward,' says Bailey. This included replacing SF<sub>6</sub> components at substations earlier than expected, and replacing gas compressors too, the latter now often powered by electricity instead of gas. These moves would not have happened had the firm used a lower price like that under the EU ETS, Bailey says.

Because of those successes, National Grid is 'exploring other situations where it might be applied', although, like South West Water, it is more likely that it comes to rely on other ways of ensuring emission cuts. These might include telling suppliers and contractors that carbon emissions will be assessed when evaluating tender submissions.

### The price is right

Jonathan Grant, director of climate change at PwC, insists National Grid is not the only company to have changed decisions on the back of its internal carbon price. But the others do not want to talk about them either for commercial sensitivity reasons or because the impact occurs in a project's design phase and so is difficult to tease out. Grant says: 'One of the advantages of an internal price if you are not regulated is that it raises awareness of the issue among project teams as you have senior executives suddenly asking about exposure to carbon price risk. So it drives work to mitigate that and try things teams wouldn't have previously done, like waste heat recovery.'

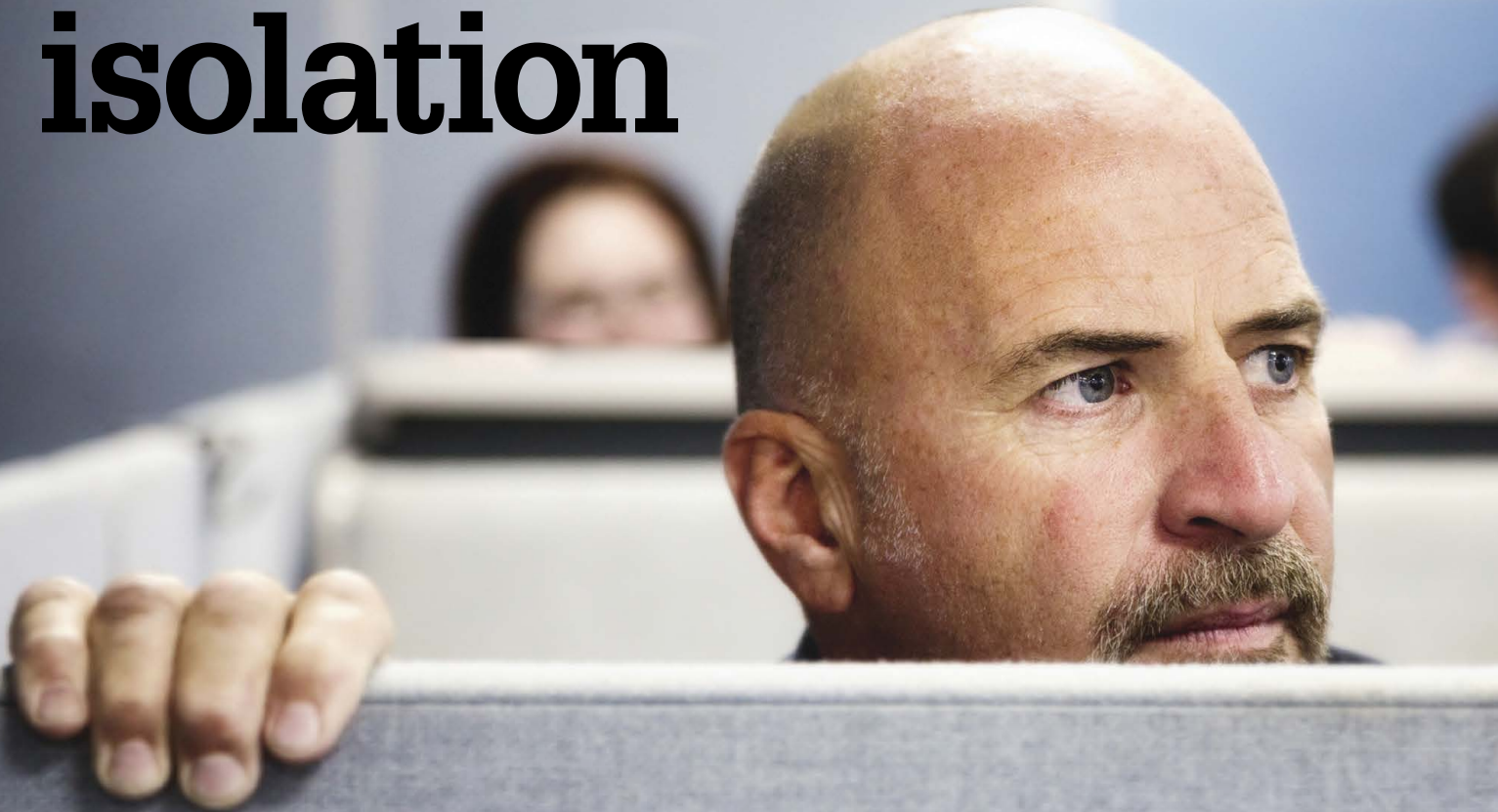
Since the Paris climate summit, PwC has had inquiries from firms looking to adopt a price. Grant primarily says these have been big industrial companies from emerging economies that are facing carbon regulations for the first time. He recommends these firms choose a price quickly rather than obsess over the right level because the main purpose of one is simply to acquaint staff with regulation and force them to think differently. 'You could pick a number from £20-£50/t. It doesn't really matter,' he says.

Any scheme should also be simple rather than include a variety of prices to reflect local regulations or abatement costs. Others have learned this from experience. Shell uses a \$40/t (£28.11) carbon price globally to evaluate projects. The oil giant previously tried different prices in each region, but this proved complicated, according to a report it wrote for IETA.

However, as much as Grant and others advocate setting internal carbon prices, it seems ultimately that their effectiveness comes down to the motivations of the organisation using them. If a company wants to drive change – as Ben & Jerry's does on its suppliers' farms or National Grid did with its SF<sub>6</sub> leakage rate – internal carbon prices can be set in a way that will achieve it. But, if used simply to assess the impact of existing or future regulation, carbon prices are likely to be ineffective. That applies in the case of PwC. 'We have a such low carbon footprint, an internal price wouldn't affect our decisions,' Grant says. 'Our investments in new buildings are about wanting a great building or doing the right thing and a carbon price wouldn't change that.'

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# Overcoming isolation



Silo working has become a common feature in many organisations, writes **Nicola Stopps**, who offers tips on increasing inter-departmental engagement

**A**ny corporate social responsibility (CSR) or sustainability practitioner who has worked for a large company knows too well how detrimental 'a silo mentality' can be to what they are trying to accomplish.

The *Oxford English Business Dictionary* defines a silo mentality as a 'mindset – present when certain departments or sectors do not wish to share information with others in the same company. This type of mentality will reduce efficiency in the overall operation, reduce morale, and may contribute to the demise of a productive company culture.' The consequences of this isolation are confused communication and a lack of transparency. Teams across the business may become inward-looking and focused on the short term, and fail to recognise new CSR and sustainability initiatives as organisational priorities.

Breaking down silos to remove the issues that cause conflicting priorities can be straightforward. At consultancy Simply Sustainable we developed a

loose, 'four-step model' on how to try to change the way inter-departmental teams view and integrate CSR and sustainability.

## 1. Align values and objectives

The first step is to align values and objectives. Two years ago Gregory Unruh, professor at George Mason University in Fairfax, Virginia, outlined in the *MIT Sloan Management Review* ([bit.ly/24tprO2](http://bit.ly/24tprO2)) how traditional managers often underestimate the worth of shared organisational values and objectives.

Much of management theory assumes that employees are inherently lazy and their superiors need to financially incentivise and monitor them. There may be an element of truth in this for some workers and in some workplaces. However, all great change is the result of a group of people driven not by financial reward but by a shared vision about the value of their collective endeavour. The sustainability team is integral to defining this vision.



## Breaking down silos at Interserve



**Colin Braidwood**, head of sustainability at Interserve, explains how the business support and facilities management firm tackles the silo mentality.

To establish a shared understanding of what sustainability means across a business is a complex and challenging task. Many accept that it refers to more than just environmental issues, covering a much wider range of social and economic considerations. Whether employees understand their own role within this wider context and how sustainability affects and influences their day-to-day activities is another matter.

Although the broader strategies and commitments usually come from senior management, it often falls to environment and sustainability managers to drive them through the business – and the larger the company is, the bigger this challenge can be. The silo mentality that can afflict larger, more diverse businesses can prove a real blocker for those trying to embed sustainable principles and protocols. This is exacerbated by the fact that many sustainability teams are under-resourced and often unable to engage with each department or division of the company with any real influence.

For sustainability professionals looking for ways to drive corporate sustainability, taking a closer look at the facilities management (FM) industry can be useful. The nature of outsourced FM contracts – with employees regularly transferring between providers when a new account starts – means companies in this sector tend to experience rapid and significant expansions of their workforce, which can already be large – Interserve employs more than 80,000 people worldwide. We have embraced a collaborative approach to develop a universal understanding of sustainability across the business. By working with different teams at all levels, we have been able to bring sustainability to life and align everyone with the company's vision and values.

### Start at the top

This has to start at the top; sustainability cannot be the responsibility of any one team or individual. You need broad ownership that is supported by key individuals and groups who can influence and promote it at every possible opportunity. The senior board must regard sustainability as a business-critical issue, establishing an action plan that clearly sets out the organisation's strategic goals and the key initiatives that will drive towards them. At Interserve, this came in the form of our 2013 SustainAbilities plan, which summarises the founding principles of our approach and sets detailed outcomes, goals and targets for the business up to 2020.

The next – and possibly more challenging – step comes in weaving this strategy through the rest of the organisation. Senior team members have an important role to play in driving support. Our group

finance director and head of sustainability, Tim Haywood, is the lead architect for SustainAbilities and his leadership and ongoing support helps to inspire employees at all levels.

Perhaps the most important consideration for large businesses, however, is the need to bring operational managers into the fold when it comes to sustainability. Many Interserve employees work directly on customers' sites so generic communication strategies are not always appropriate. When it comes to making sure that messaging reaches frontline employees, it is their direct line managers who have the greatest influence.

Those with a sustainability remit provide managers with the right tools to share best practice effectively within their teams. We hold regular meetings with representatives from across each of our different accounts. We simplify the language so it makes sense in a real world context and develop materials for managers to pass on information about our initiatives through their own existing forums, such as toolbox talks.

This works the other way too. It is through listening to teams on the ground that we have discovered some of our best innovations. For example, we are currently exploring the potential of a new non-chemical cleaning technology developed by one of our account teams, which has a lower environmental impact and also offers cost savings.

### Room for growth

It may sound counter-intuitive for an organisation with an overarching sustainability plan, but allowing room for flexibility in how individuals and teams implement sustainability is crucial to success. Of course, you also need to make sure that initiatives meet the organisation's wider sustainability objectives and do not stray from its core principles.

Social responsibility is central to Interserve's sustainability strategy, with the aim of going 'above and beyond in the communities' where we live and work. However, there is no one right way to achieve this and we encourage employees to support the charity and community causes that matter to them. All employees can take two days, paid leave every year to volunteer for a good cause of their choice. Employees are empowered to take ownership in an area they feel strongly about, which helps break down the view that sustainability is a directive from senior management.

There are few business leaders who would now dispute that sustainability is a business-critical issue, but imbuing this commitment through all levels of an organisation and achieving a consistent approach is no easy feat. The most important thing Interserve has learned is that driving sustainability is not down to one person or one team. You need to work with colleagues across all levels of the business – it is by doing this that sustainability professionals can inspire all employees to take responsibility and enact real change.





A prerequisite of a successful sustainability team is to forge good relationships with senior managers, working closely with them to define company values that can be intrinsically linked to company objectives. This, in some instances, is the first step in opening up the organisation to working collaboratively across different business areas.

Before trying to align values and objectives consider:

- What are the core values of the business? How have they been defined and are they material to business and stakeholder expectations? Do they link to overall individual performance? These points may seem obvious but it is surprising how many businesses use old or outdated values that have no clear link to the business strategy, causing a disconnect with employees and shutting down debate.
- How do the core values connect to performance management? HR has an integral role in helping to demonstrate how seriously the business is about adhering to its values and objectives.
- Is the corporate responsibility or sustainability strategy clearly linked to the business strategy? And do employees know what they or the business achieve if they take action?

An employee who understands their role in the company objectives and values develops a sense of motivation and drive for a collective vision.

## 2. Employee engagement

Once the organisational goals and objectives have been defined, engage employees across the business with what the sustainability team is working towards. Unmotivated, cut-off teams will block what sustainability practitioners are trying to achieve, no matter how well presented the values and objectives are on the company intranet.

Nadine Exeter, of the Doughty Centre at Cranfield Business School, says that, although committed corporate leadership for sustainability is a necessary condition for success, it is not in itself enough.

She says the key to a successful programme which defines the business as responsible is the enthusiastic engagement of employees at all levels. Simultaneously, engaged employees are critical for a company that wants to improve its overall performance as a responsible but successful business.

Three factors that encourage an engaged workforce are:

- **Recognition** – employees need to recognise their role in delivering the company's objectives and executing its values to be responsible. The company enables this in a way that builds and maintains a sense of inspiration among staff for being part of a sustainable organisation.
- **Discussion** – there is a constant two-way relationship and conversation between employees and employer to develop a shared understanding of responsibility and commitment to sustainability and business objectives.
- **Empowerment** – the organisation empowers employees to be actively committed to corporate responsibility and sustainability, with the business's objectives and success in mind. This will be linked to performance management and remuneration.





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### Tips for an internal communication strategy

- **Identify your message** – evaluate your current initiatives to determine which would be the best to communicate.
- **Internal assessment** – be open to working with a communications or consultancy to examine the current offering. CSR communications may be placed at the bottom of the pile internally so be willing to go elsewhere to express the right tone and messaging. However, do work to strengthen your relationships with in-house communications experts.
- **Develop clear expectations** – what do you imagine the results of your communications to be?
- **One size does not fit all** – no two communications strategies will be the same. Do not be afraid to be different.
- **Be genuine in your efforts** – communication is a powerful tool. If you are authentic in your sustainability efforts and in how you communicate them, your initiatives can become an internal and external competitive advantage.

### 3. Holistic measurement

CSR and sustainability practitioners have been measuring and reporting on cross-company key performance indicators (KPIs) for years. But, with companies' activities increasingly subject to public scrutiny, there is an expectation that businesses must be more transparent and disclose what they are adding to society. Simply, every company makes a significant contribution to society. At the most basic level, businesses offer goods and services people want. In the process, they provide capital, jobs, skills, ideas and taxes, and much more.

Drilling down to how the business is growing responsibly is crucial to stakeholder expectations. This demand from stakeholders can help open silos further – a materiality review can be used to demonstrate to the organisation's business leaders and teams what should be measured, reported and, most importantly, why.

Once this is completed, a system of integrated KPIs that evidence the true value of the organisation can be developed collaboratively and embedded throughout the business as stage three.

Companies with large economic footprints, such as Manchester Airports Group, successfully disclose their total economic impact as part of their social reporting, making the information relevant for investors and community stakeholders. This has proved not only to improve transparency but to engage different business teams with the sustainability agenda.

According to consultancy McKinsey & Company, firms that succeed in building a profitable relationship with the external world tend to think very differently: they define themselves through what they contribute holistically. This approach does not mean changing purpose; it means being explicit about how fulfilling that purpose benefits society. Nor does it mean abandoning a focus on shareholder value; it means recognising that you generate long-term value for shareholders only by delivering and demonstrating true value to society.

### 4. Art of communication

Ultimately, clear and consistent communication (see panel, left, for tips) is key to ensuring the previous three steps are successful in opening up silos. Apart from senior management, two of most important relationships sustainability teams need to nourish are those with internal communications and media relations. These are the people who have the tools to articulate effectively what sustainability practitioners are trying to achieve.

Sustainability teams need to communicate their ambitions and 'story' to employees. Why is it so important staff take time out of their busy days to help you? How will it benefit them? Information should flow up and down. Once employees are aware of what benefit it is to them, the information flow should begin to reciprocate, allowing the sustainability team to be as well informed about what other departments are trying to achieve – hence diminishing silos.

**Nicola Stopps**, AIEMA, is chief executive of consultancy Simply Sustainable; [simply-sustainable.co.uk](http://simply-sustainable.co.uk).



# Tunnel vision

**Paul Suff** learns how a new sewer tunnel under London builds on the innovative system constructed by the Victorians

**I**n a typical year, 39 million cu m of sewage is discharged into the tidal River Thames as the existing system, built nearly 150 years ago, struggles to cope with runoff from land development and waste from a rising population. However, when the Thames Tideway tunnel opens in 2023, completing the London Tideway improvement programme, the amount discharged is unlikely to exceed 2.4 million cu m.

‘The sewer system developed and constructed by Sir Joseph Bazalgette was designed for a population of four million. We’re now at eight and it is expected to rise to ten million by 2031,’ says Roger Bailey, asset management director at Tideway, the company responsible for delivering the tunnel project.

Without the planned 25 km tunnel, dubbed the ‘super sewer’, improvements to sewer treatment works (STWs) and the recently opened Lee tunnel, annual combined sewer overflow discharges into the Thames would have been expected to reach 70 million cu m in the 2020s.

## Dealing with the problem

Bazalgette’s is primarily a combined system, transporting wastewater from buildings and industry as well as surface water runoff. It has a built-in failsafe mechanism, consisting of 57 combined sewer overflows (CSOs). These allow waste to overflow into the river to prevent sewage backing up and flooding buildings and streets. Storm runoff frequently triggers overflows, with those in the summer, when it is hot and the river level low, causing most ecological damage. Storms in August 2004 and June 2011 both resulted in the deaths of significant numbers of fish.

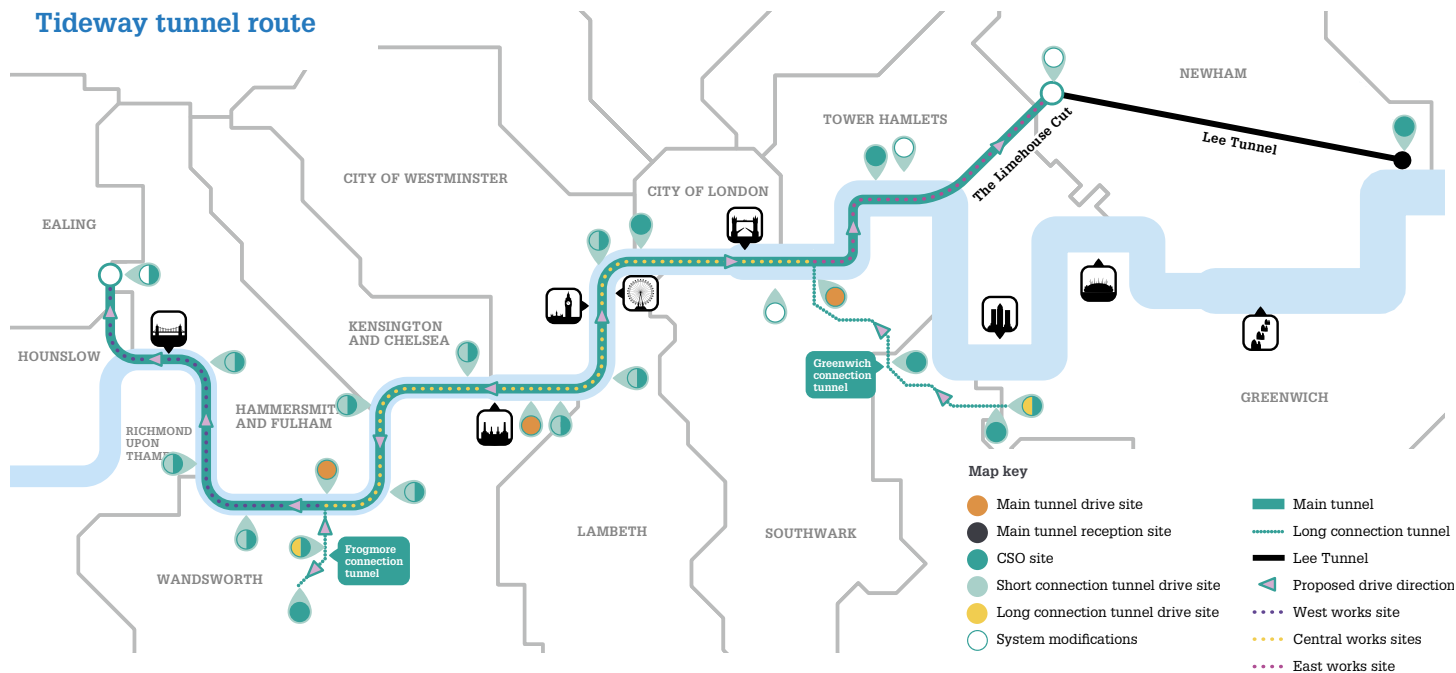
Bailey says most long-established major cities suffer similar problems and it is only relatively recently that sewage and runoff have been separated in urban environments, with foul sewage transported to treatment works and storm run-off allowed to discharge into watercourses. ‘Newer parts of London are like that,’ he says. ‘But to separate the existing combined system into separate foul and storm systems would cost about £14bn and take about 20 years.’

When Bazalgette designed the system, many parts of London were still market gardens and orchards, and discharges were infrequent. Now there are between 50 and 60 a year and are breaches of the EU urban wastewater directive and UK legislation. Untreated sewage can stay in the river for up to three months before the tide takes it out to sea. The Tideway tunnel, working in conjunction with the Lee tunnel and the improved STWs, will control about 95% of discharges each year from the most polluting CSOs.

The project has encountered opposition and some critics called for sustainable urban drainage schemes (SuDS), such as green roofs to absorb water and reduce runoff, to be used instead. Bailey says SuDS can provide benefits to alleviate flooding and are encouraged for new developments, but to retrofit the developed areas of London would be problematic. Studies have shown that, even if retrofit SuDS converted significant land – for example, almost 40 times the area of Hyde Park – this would not control CSO discharges to an acceptable level. It would also cost at least four times the cost of the Tideway tunnel and be immensely disruptive to property owners.



### Tideway tunnel route



One complication that the planners have to address is the variance in the volume of discharge along the river. The construction of the 6.9 km Lee tunnel in east London, between Abbey Mills pumping station in West Ham and the Beckton STWs, will help prevent more than 21 million tonnes of sewage mixed with rainwater overflowing into the River Lee each year. The Lee tunnel opened in January and, combined with improvements at sewage treatment works along the Thames, including increasing capacity at Beckton by 60%, was the first step in reducing overflows into the Thames. However, control of CSOs throughout London is only achieved with the completion of the Tideway tunnel.

### Designed for life

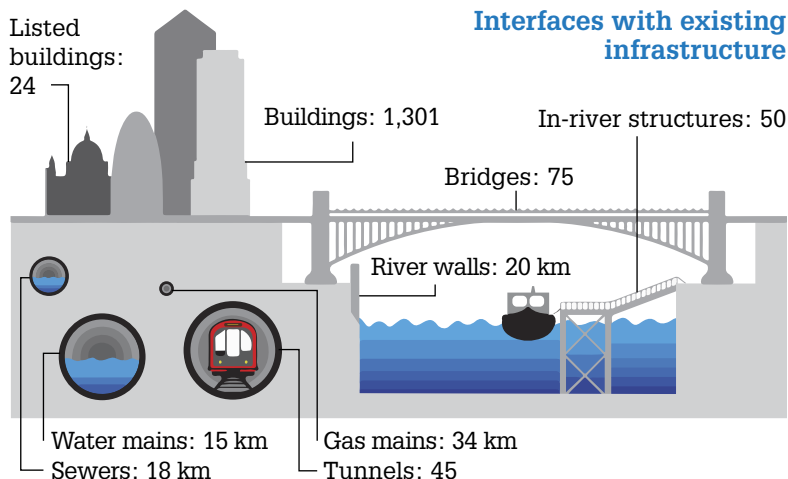
The Tideway tunnel starts in Acton, west London, and ends at Abbey Mills. It drops 1 m every 790 m across its 25 km, the tunnel depth falling from about 35 m at Acton Storm Tanks to 66 m at Abbey Mills, where it connects to the Lee tunnel. Due to the storm flow operation of the Tideway tunnel, it is predominantly self-cleaning. There are no intermediate pumping stations,

with the new one built as part of the Lee tunnel project capturing flow for treatment at the Beckton STWs.

The tunnel will pass through variable ground conditions, such as London clay, Thanet sands and chalk as well as areas of high water pressure. 'It spans London's entire geology, but central London is the most challenging,' says Bailey. Tunnelling is split into three sections (west, central London and east). The geology of the central section, between Carnwath Road in Fulham and Chambers Wharf in Bermondsey, is more variable than in the west or east.

Most of the 1,301 buildings the tunnel passes underneath are in the western section, between Ealing and Hounslow, and the south east, between Greenwich and Bermondsey, although the 24 listed buildings along the route are mainly in the central region. However, unlike Crossrail (*the environmentalist*, July 2014), which includes 42 km of tunnels, the Tideway tunnel passes under comparatively few buildings. 'Because it follows the river, more than 90% of the tunnel is under water,' says Bailey. Even where it breaks off to connect to Abbey Mills it follows the Limehouse Cut, a canal linking the lower reaches of the Lee Navigation to the Thames.

The existing sewers rely on gravity (and pumping stations) to allow sewage to flow eastwards, but Bailey says the large drop for water into the new system would generate a lot of energy and pockets of air. These can cause hydraulic surges and geysering at the surface, so the Tideway tunnel uses a vortex drop pipe and specially designed chambers to dissipate energy and minimise air entrapment. 'At Blackfriars Bridge there will be about 50 tonnes of water dropping per second. That's a massive flow and would create a huge amount of energy at the bottom of the shaft,' says Bailey. 'Our solution is to create a vortex and spin the flow of wastewater, which is then controlled at the bottom of the shaft before entering the main tunnel. At each [drop] shaft there are facilities to treat the air that will be released from the tunnel during operations.'





## The route to consent

Anna Sutherland joined Tideway in 2012 and was a member of the team that put together the information for the planning application. It was submitted in February 2013 and consisted of 50 documents, including a 25,000-page environmental statement (ES). A further 70,000 pages of information was submitted. Consent, under the Planning Act 2008, was granted in September 2014.

Sutherland says the team endeavoured to keep the ES as short as possible, while ensuring it contained crucial information, such as how the project would comply with regulations and evidence to back up the environmental assessments.

Two public consultations were staged, eliciting 9,400 responses. Sutherland says community engagement was a priority, and the team worked closely with resident groups. 'Some sites are in residential areas and noise impact was a major concern, particularly around the main [tunnel] drive sites, such as at Chambers Wharf in Bermondsey and at Greenwich, where the site is in the town centre,' she says. 'We presented our assessment findings and have worked with residents and regulators to develop plans to mitigate noise impacts.'

Sutherland's role now includes visiting sites to ensure contractors are delivering on the commitments made in the planning application. She is also part of a team providing assurance checks for contractors' permit applications. 'We work with officers from the 14 boroughs the project passes through and regulators, such as the Environment Agency, and check everything before a contractor submits an application to a consent-granting body authority,' she says. 'Our role is to check but also to facilitate relationships between the contractors and the boroughs.'

## The science of behaviour

Tideway has adopted a behavioural science approach to developing the right culture across the project. It is based on the concept that people who know why they are carrying out an activity in a particular way are more likely to perform better than if they are just told what to do.

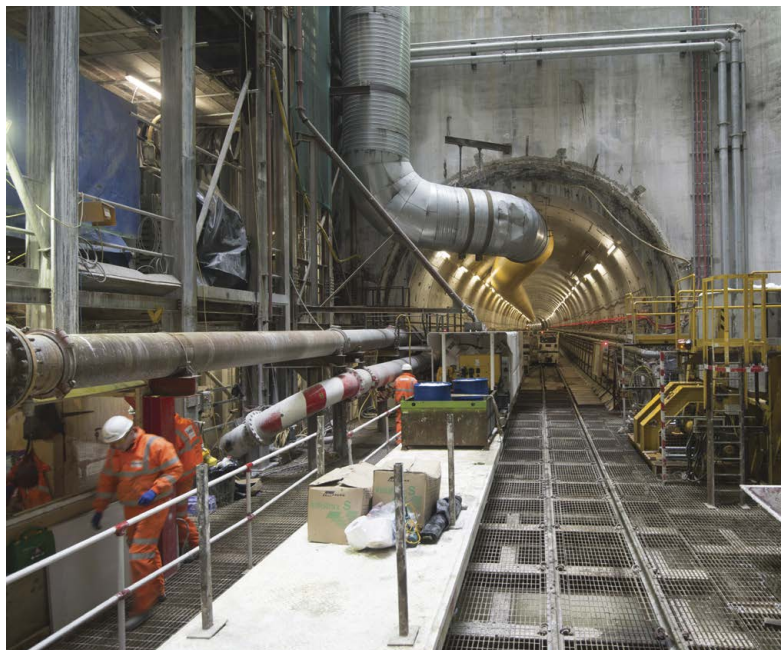
'The approach begins with our "EPIC" induction, an interactive day based on the principles of: tell me – I forget; show me – I might remember; teach me and I'll do,' says environmental sustainability manager Darren White.

Although behavioural science is used to develop a safety culture among the workforce, White says the principles can be transferred to environment or sustainability because they give people the confidence to challenge decisions, whether it is poor practice or traditional design options.

Tideway is also linking behavioural science into its leadership and coaching training. The areas covered include:

- **Working with people** – a range of units, including how to deal effectively with stress and conflict, manage remote workers and build excellent customer relations.
- **Managing yourself and personal skills** – including units that focus on assessing your own leadership performance and developing critical thinking.
- **Providing direction** – such as leading teams to achieve organisational goals and objectives, and making strong and informed management decisions.
- **Facilitating innovation and change** – for example, building a culture of continuous improvement and leading people through change.
- **Achieving results** – such as managing efficiency and effectiveness, and managing projects that bring results.
- **Using resources** – including managing facilities and information.





### Starting work

Bazalgette's system consists of more than 132 km of main interceptor sewers as well as 1,800 km of street sewers. It took about 16 years to complete, cost £4.2m and comprises around 318 million bricks. The main construction work for the Tideway tunnel started in February, including piling for a new pier near Blackfriars Bridge. Tunnelling is due to begin next year and the system is expected to open in 2023. It will be constructed of pre-cast concrete tunnel segments, similar to those used by Crossrail, and cost £4.2bn.

Some 2.5 million cu m of earth were excavated to construct the Victorian system. Tideway aims to transport around 4.2 million tonnes, or 90% of excavated material, from 11 sites along the Thames by barge or ships.

The sewer system has operated for almost 150 years and has contributed to improving the health of Victorian Londoners and subsequent generations. Completion of the super sewer should help keep the Thames clean, allowing marine species to thrive and enable the capital to cope with its ever-expanding population.

## Sustainability matters

The main objectives of the Thames Tideway tunnel are to improve the environment, ecology, public health, appearance and reputation of London as its population rises. Given its environmental ambitions it is not surprising that sustainability is integral to the delivery of the tunnel. 'Sustainability was a fundamental component of the planning application and the development consent,' says Darren White, the project's environmental sustainability manager. He describes Tideway's approach as holistic, covering environment, social and economic issues. 'The aim is to achieve the best balance across the three factors.'

The commitment to sustainability is reflected in the project's vision, which was set out in a sustainability statement: '[To] deliver a world class infrastructure project fit for the low-carbon economy, which benefits the community, supports a healthier, cleaner River Thames and demonstrates best practice performance in sustainability across the project lifecycle.' The statement, which was published in 2013, also said: 'Achieving a sustainable outcome for the project requires taking a balanced approach to social, economic and environmental objectives, whereby objectives for all three principal components of sustainable development can be successfully achieved.'

The project has 15 sustainability objectives, including minimising the carbon footprint. Early on, the footprint of the tunnel over its 120-year design life was assessed to identify interventions that could be incorporated into the design to reduce greenhouse-gas emissions. The footprint was calculated to be 840,000 tonnes of CO<sub>2</sub> equivalent emissions, most of which were during the construction phase. Embodied carbon in materials accounted for 84% of total emissions, while 10% were from construction plant and machinery, including from tunnel boring. By contrast, emissions over the operational life of the tunnel represented just 2.5% of the overall total. Measures adopted to reduce GHG emissions include minimising the length of the tunnel and using low-carbon materials where possible.

There are 20 members of the environment and sustainability team, although the number and make-up have fluctuated since work started in 2010. White says during the environmental impact assessment (EIA) phase the team consisted largely of EIA managers led by Thames Water, who looked after specific sections of the route and particular topics of the assessment.

'They were supported by some of the best consultants in the country, some of whom were used as expert witnesses during the examination,' he says.

Now that the project has moved into the delivery phase, the environment and sustainability team operates as a matrix function. This comprises three environment and sustainability specialists in each area delivery team, mostly from consultancy CH2M, Tideway's programme management organisation, supported by nine subject matter experts in the core team from various consultancies, such as AECOM and Arup.

The in-house team boasts several environment practitioners who have returned to work after a career break as part of Tideway's returners programme. One in particular, Ines Faden, who works in the corporate finance function, was part of the team that developed the Equator Principles, the framework used by banks to manage environmental and social issues in project financing. White and asset management director Roger Bailey are part of the senior leadership team at Tideway and have responsibility for environmental sustainability. As well as the in-house function, each of the three contractor joint-ventures has at least three full-time environment and sustainability specialists, supported by consultants and consent advisers.

White says: 'All the teams are supported by a raft of monitoring and testing consultancies that are carrying out baseline assessments and real-time environmental monitoring to ensure compliance to the various thresholds that are set in the development consent order or specific consents. Aside from the tried and tested systems, we're also trialling new and innovative technology to see what improvements can be made.'





# Biodiversity: time to quantify or say goodbye

Assessment of the offsetting pilots reveals that the planning system is not working for biodiversity, writes **Jonathan Baker**

**A**s management maxims go, 'you can't manage what you don't measure' is one of the more obvious. Astonishing, then, that this simple rule is not applied to biodiversity in our planning system.

That is not to say that the planning system ignores biodiversity. Look at any local plan, environment statement or planning application and you will be facing a glut of lists, databases, maps and designations. Despite, or perhaps because of, this abundance of information there is little clarity about exactly what biodiversity is being lost and specifically what is being done to mitigate, and, if necessary, compensate for any loss. Providing this information would seem necessary to demonstrate compliance with the 'net gain' aspiration for biodiversity, as set out in the National Planning Policy Framework (NPPF).

Practical experience of biodiversity offsetting has been limited in England, as has evidence on its efficacy. To address this, Defra developed a pilot programme in 2012 and commissioned an independent evaluation of the pilots. Six local authority areas were awarded pilot

status and they tested tools and processes to feed into the evaluation. This finished in 2014, and Defra published the final report in February ([bit.ly/1SRMVfb](http://bit.ly/1SRMVfb)).

## Panacea or Trojan horse?

One approach that has been considered to contain biodiversity loss is offsetting. As Defra stated in 2013: 'Biodiversity offsets are conservation activities that are designed to give biodiversity benefits to compensate for losses – ensuring that when a development damages nature (and this damage cannot be avoided) new, bigger or better nature sites will be created.'

Within the UK, biodiversity offsetting has polarised opinion. Some view it as a panacea, others as a neo-liberal Trojan horse. This polarisation is a result of proponents overselling the concept as revolutionary. The truth is that biodiversity offsetting represents an evolution of the existing system, something that is often overlooked.

The 2010 Conservative party general election manifesto introduced biodiversity offsetting, then termed conservation credits, citing their success in the US and Australia. Since then biodiversity offsetting

has increased in profile, gaining the avid support of Owen Paterson, Defra secretary of state between 2012 and 2014. He is on record as seeing it as a tool that 'has the potential to grow the economy and improve our environment at the same time'. His enthusiasm has been mirrored by the Ecosystem Markets taskforce, which, along with others, noted it could provide millions of pounds of investment for nature conservation while potentially streamlining planning processes.

Meanwhile, some conservationists feel it offers a 'licence to trash' and fails to recognise the local and implicit value of green spaces.

### Offsetting steps

Defra has been building the evidence base and creating a proto-system for offsets. Assessment of the pilots between 2012 and 2014 have fed into this.

Creating a national system of biodiversity offsetting is a complex undertaking but at a project level it can be simplified to a few steps:

- Defining what biodiversity is at the location.
- Understanding the total impact of the development, including any mitigation and onsite compensation.
- Quantifying how much biodiversity will be lost – or gained – from the development.
- If there is loss, identifying how and where biodiversity could be improved to compensate.
- Delivery of biodiversity compensation.

Superficially, these steps appear similar to what we do now. But there is one crucial difference: the use of a metric to quantify the net impact. This has been developed by Defra and Natural England since 2010 and has been further refined and adapted through the experiences of the pilots.

At its simplest, the measure defines biodiversity by its extent (hectares), importance (as described in biodiversity action plans) and condition (quality of the habitat). These three values are combined and a single figure is produced ([bit.ly/1We3PAO](http://bit.ly/1We3PAO)). It is explicit about what is: onsite; being lost; mitigation; and compensation for this loss. If there is a net loss after the onsite mitigation and compensation, the metric specifies the amount and type of biodiversity that needs to be created or improved to compensate. This system is guided by supplementary rules, about what can and cannot be compensated for, the location, type and duration of any offsite compensation.

Although the evidence from the evaluation has nuanced messages on the costs and benefits of offsetting as a whole, it is clear on one thing: that using the metric on all applications and all habitats has huge potential for improving how we manage our natural heritage and our ability to achieve net gains for biodiversity. The reason for this is simple – the metric provides a clear, quantified and transparent message about the biodiversity impact of a development – something currently missing.

### Huge underestimation

This is important because evidence collected in the evaluation suggested that just 0.1% of planning applications are required to undertake any form of compensation. This is fine if only 0.1% of



A metric to quantify the net impact of biodiversity loss has the potential to improve how we manage our natural heritage



developments result in a net loss of biodiversity. In fact, evidence from the pilots suggests biodiversity losses are hugely underestimated and that the metric reveals that most applications have some net impact, which is not consistent with the NPPF's net gain policy.

To understand why this is the case, it is necessary to review how decisions about biodiversity impacts are made. Understanding the impact of a development involves an impressive weight of evidence about what is onsite and likely to be lost. But in the cacophony of considerations for planners this detailed evidence is often overlooked. This is not just because of the volume of evidence, but its qualitative nature too. Current planning applications involve various parties trading evidence about the impact of the development and whether onsite activities reduce this. Evidence from the pilots found that applications seldom state what is being lost, how that specific loss is being mitigated, what the total impact of a development is or how losses are being compensated. It is difficult for planning officers, who have to consider matters as diverse as sewage management and demands on schools, to form a clear message from these qualified and often conflicting opinions.

### Helping hand

Most of those involved in the pilots felt that the clear message from the metric – that  $x$  amount is going to be lost – helped planning officers, ecologists, developers,

stakeholders and consultants cut through the mass of information and understand the likely impact of an application. In many instances, the information presented by the metric caused developers to improve their design to reduce onsite impacts, often by increasing onsite mitigation and compensation.

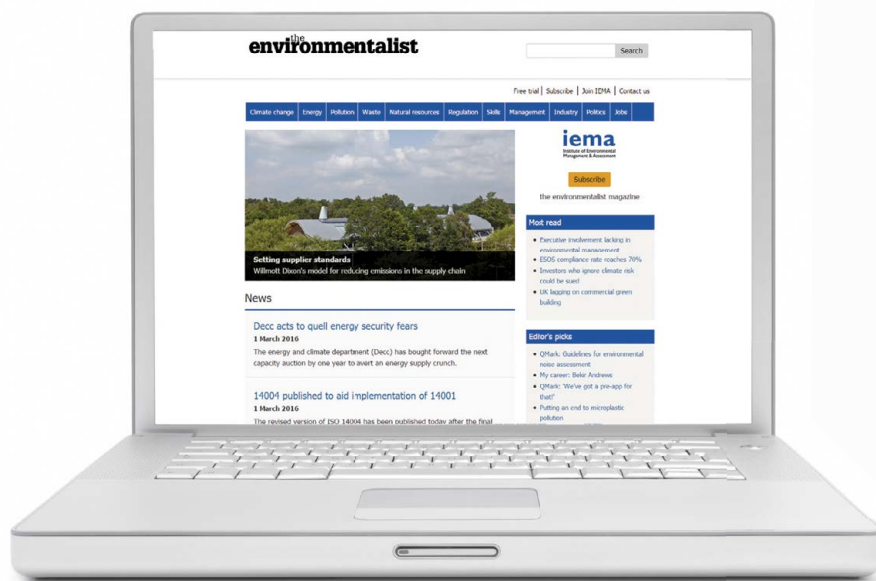
The metric is not perfect. Some participants in the pilots felt it was too simple; others that it was too complex. Using it would incur some cost while users familiarised themselves – although the evidence from the evaluation suggested this would not be substantial. The potential of the metric to streamline planning applications was not thoroughly tested in the pilots but there was evidence it was more efficient than the processes already in use.

How any identified biodiversity impacts are compensated for is not straightforward. But it is clear from the evaluation of the pilots that the current system is deficient and the country is far from achieving net biodiversity gain, which is essential to meet the government's commitment to leaving the environment in a better condition than it found it.

The evidence from the pilots shows that, if we do not start to quantify biodiversity in our planning applications, we are at risk of losing it.

**Jonathan Baker** works at the Country Land and Business Association. He was project manager on the Defra-commissioned evaluation of the biodiversity offsetting pilots.

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# Rick Gould

Adviser in standards and certification, site-based regulation team, Environment Agency



## Career file

### Qualifications:

CEnv, MIEMA, CSI, MInstMC, MISTC, BSc, PhD, DipFM (ACCA); principal environmental auditor

### Career history:

**1999 to date** Environment Agency  
**1998-99** environmental specialist/assessor, British Standards Institution  
**1990-98** environmental consultant, various consultancies  
**1989-90** researcher, Swedish Environmental Research Institute  
**1986-88** researcher, US Department of Agriculture and US Environment Protection Agency

**Why did you become an environment/ sustainability professional?** In the mid-1970s, I went on a school field-course to measure polluted water near a local oil refinery. Then I read Rachel Carson's *Silent Spring*. These propelled me into voluntary conservation work and a career measuring pollution.

**What was your first environment/ sustainability job?** I worked in a US group investigating forest decline. I developed methods to measure CO<sub>2</sub> uptake and the impacts of pollutants, such as nitrogen dioxide and low-level ozone. The group's work contributed to new laws in air-pollution control.

**How did you get your first role?** I wanted to work abroad so my PhD supervisor put me in touch with some research leaders in the US. Three of them were visiting the UK and coincidentally came to my university on the same day I gave a presentation.

**How did you progress your environment/sustainability career?** In two ways: I moved from measuring impacts to dealing with the sources of pollution; and I learned to foresee game-changers and adapt to them, adding to my skills. For example, I saw that environmental impact assessment, management systems and auditing would become important. When climate change was becoming mainstream, I had already been working on carbon-capture projects. I now think that the circular economy and green bonds will become major issues.

**What does your current role involve?** Mainly giving advice on monitoring. This gets me into lots

of things, like site work, permitting, developing and applying standards, certification and accreditation, problem solving, emissions trading, training and auditing.

**How has your role changed over the past few years?** Greater variety and more responsibility: for example, in certification scheme management, permitting and strategic regulation. Recently, I have been working on monitoring potential releases from circular economy processes.

**What's the best part of your work?** Apart from my colleagues, who are a dedicated and inspiring group, I relish the site-based work. I apply what I know, working constructively with industry and seeing pollution fall.

**What's the hardest part of your job?** Environmental 'triage'.

**What was the last training course you attended?** A CQI distance-learning course on models for quality management systems.

**What did you bring back to your job?** Automotive and aerospace quality-standards require tools like statistical process control and traceability management. I now use such techniques to verify monitoring data.

**What is/are the most important skill(s) for your role and why?** Communicating and influencing: we need to help others understand what is needed and then persuade them to do it willingly.

**Where do you see the environment/ sustainability profession going?** As a foundation for all activities. I have

seen the environment go from a research and fringe activity to an added-extra and now an embedded, non-negotiable element of operating.

**Where would like to be in five years' time?** Spending more time passing on my experience to others. I would also like to contribute further to work in the circular economy and economic instruments.

**What advice would you give to someone entering the profession?** Working on being outstanding in at least one particular field and add complementary skills. Then apply these abilities in as many areas as you can. Never stop learning.

**How do you use IEMA's environmental skills map?** For my own continuing professional development. I am an IEMA mentor, so I use it with those I mentor. I also recommend it to local students on an MSc course, where I do some training in auditing.

## More successful IEMA members

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

### Associate

**Katherine Agapitos**, HS2

**Cheryl Andrew**, Iberdrola Engineering and Construction

**David Atkinson**, Arcadis UK

**Thomas Begley**, Roadbridge

**Patrick Bissell**, Brakes Group

**Nadia Bizinska**, Laing O'Rourke

**Jez Brinkley**, Spence

**Michael Browne**, WSP Global

**Vincent Cavanagh**, Crane

**Adam Cooper**, Tata Steel Projects

**Stephen Cox**

**David Crisp**, Fresenius Medical Care

**Jo Davis**, LGSS/Northants Fire

**Francesca Dimmock**, Brewers

**Alan Dunne**, Roadbridge

**Silvia Fiorini**,

Ferrovial Agroman UK

**Clare Flanagan**, CSC

**Christopher Flynn**, GAC Logistics & Shipping Agency

**Shane Foley**, Roadbridge

**Jason Gawronski**, Vanderlande Industries

**Steven Graham**, Scottish Power Renewables

**Ryan Griffiths**

**Daryl Heath**, Vauxhall Motors

**Sarah Hutchinson**, Tata Steel Projects

**Steph Jackson**, Environmental Monitoring Solutions

**Gary King**, Mitie Group

**Thomas King**

**Robin Kirkpatrick**, Graham Construction

**Olav Lawrence**, Raymond Brown Construction

**Alex Marshall**

**Debbie Mitchell**,

The Blue Cross

**Mark Moloney**, Roadbridge

**Gavin Morgan**,

International SOS

**Victoria Myers**, Molnlycke Health Care

**Irina Niculicea**, Accenture

**Kim O'Meara**, Roadbridge

**Stephanie Osborne**,

Porsche Cars Great Britain

**Jerome O'Sullivan**,

Roadbridge

**John O'Sullivan**,

SSE Renewables

**Conor Paul**, Roadbridge

**Penelope Pickerin**, AECOM

**Stephen Poole**, Network Rail

**Roisin Reidy**, Waterman Infrastructure and Environment

**Gareth Richards**, Scottish Power

**Victoria Rose**, Oxford University Press

**Robert Rowe**, Skanska UK

**John Sayers**, Hodgson Sayers

**Hannah Scott**, CBRE

**Patricia Sevilla**, HS2

**Summreen Sheikh**, Reading Borough Council

**Ronny Strickland**,

Novacraft

**Stuart Swainson**, Costain

**Danielle Symmons**, AECOM

**Clara Trant**, Crest

Nicholson

**Barry White**, Skanska

**Richard Whitehead**,

Signal House Group

### Full and Chartered environmentalist

**Alice Bowles**, ABP Marine Environmental Research

**David Brayne**,

Brayne's Eco Consultants

**Juliette Callaghan**, AECOM

**Efetobore Egborge**, Subsea 7

**Natalie Frost**, ABP Marine Environmental Research

**Hywel Jones**, Atkins

**Rhian Locke**, Crossrail

**Conor McCone**

**David Morgan**, Royal HaskoningDHV

**Susan Morgan**, Anglian Ecology

**Etia Ndarake**,

Rizzani De Eccher

**Cathal Redmond**,

Technip Offshore UK

**Karen Wallis**,

Newground CIC

**Oliver Warner**,

Environmental Resources

Management

Upgrading your IEMA membership is important in ensuring you gain the professional recognition you deserve, it can help you secure the job you want and achieve a higher salary. To progress your membership visit [iema.net](http://iema.net) or call IEMA on +44 (0)1522 540069 to discuss your options with an adviser.

## IEMA events

Date	Region/Time	Topic	
28 Jun	Yorkshire and Humber	Getting the most out of ISO14001: 2015	
7 Jul	South East	Regional social	
3 Aug	Wales	Full member and CEnv mentor forum	
Webinars			
15 Jun	The environment and the EU referendum		
5 Jul	Corporate sustainability in practice – strategy and reporting		
External events			
15 Jun	Leeds	Eco Fair 2016	eco-fair.co.uk
16 Jun	Watford	Circular economy conference 2016	bit.ly/1RaYtOh
5 Jul	London	Resouce revolution conference	bit.ly/1TjiYAa
6 Jul	London	Sustainable supply chain conference	bit.ly/1TrxhiU



## Get in contact

For more information regarding any of these opportunities or to apply please call 01296 611341 or email [rob.jolly@shirleyparsons.com](mailto:rob.jolly@shirleyparsons.com)



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## SELECTION OF CURRENT OPPORTUNITIES

### Associates Director EIA

**LONDON £50,000 – £55,000 + PACKAGE MB 8526**

A major UK property and real estate organisation is seeking an Associate Director EIA. You will have overall responsibility for the management of large scale EIA projects, assisting the project teams with technical guidance and maintaining the highest standards. Suitable candidates must have experience within a consultancy role, hold a degree within a relevant field and be a full member of IEMA.

### Sustainability Consultant

**LONDON £45,000 + CAR ALLOWANCE + BONUS PACKAGE LO 8635**

A leading compliance consultancy is currently seeking a Senior Sustainability Consultant. The successful candidate will be responsible for supporting numerous sustainability and corporate responsibility assurance projects and will be joining a team where there is significant opportunity to progress. Candidates must hold a degree in a relevant subject and have experience in either UN Global Compact, CDP Climate Change, AA1000 series or GRI Guidelines.

### Environmental Advisor

**SOUTH WALES £45,000 + CAR LO/MB 8736**

An opportunity has arisen for an Environmental Advisor to join a regional contractor who specialise in civil engineering and construction. You will be responsible for providing on-site environmental management advice on a number of active infrastructure projects as well as guidance on matters relating to ecology. Candidates must have experience on major infrastructure or linear projects.

### Sustainability Consultant

**WEST MIDLANDS £35,000 – £40,000 + PACKAGE MB 8730**

We are working with a major consultancy that is seeking a Sustainability Consultant to join their team. You will provide high level advice and guidance to small, medium and large clients and take a lead role in designing, assisting and developing the ISO 14001 and client training needs. Candidates must have a degree within an environmental discipline or related area and have experience of ISO 14001 and training delivery.

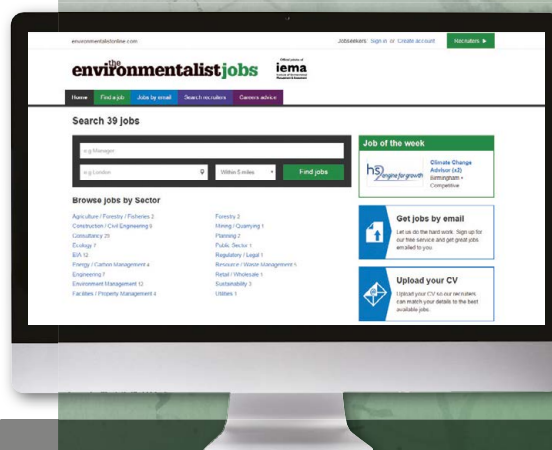
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Dean Chapman: T 020 8212 1913 E [dean.chapman@lexisnexis.co.uk](mailto:dean.chapman@lexisnexis.co.uk)

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to sustainability

MARY PERSUADED  
HER COLLEAGUES TO  
SWITCH OFF THE LIGHTS  
AND SAVED HER  
COMPANY £20,000



**People  
like Mary  
say:**

I'm an Energy Manager and I've been looking at our wider sustainability strategy to introduce a more holistic approach. It's a shift from thinking about environment as a compliance issue to ensuring that sustainability is at the heart of what we do.

We've been massively creative in our approach and linked our sustainability performance to our bonus scheme. We basically said "Turn off the lights, print on both sides of the paper, take the train and you'll

get a share of the savings." Along with a range of other initiatives – some of which were suggested by staff members – we're making a real difference. It's a brilliant way to raise awareness of how every individual can have a positive impact within a business and can make change happen.

It's definitely working. Just one of the changes I've introduced - reusing the card cores within our product packaging - has saved £30,000!

**Keep making a difference. Renew your membership  
at [www.iema.net/mystory](http://www.iema.net/mystory)**

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