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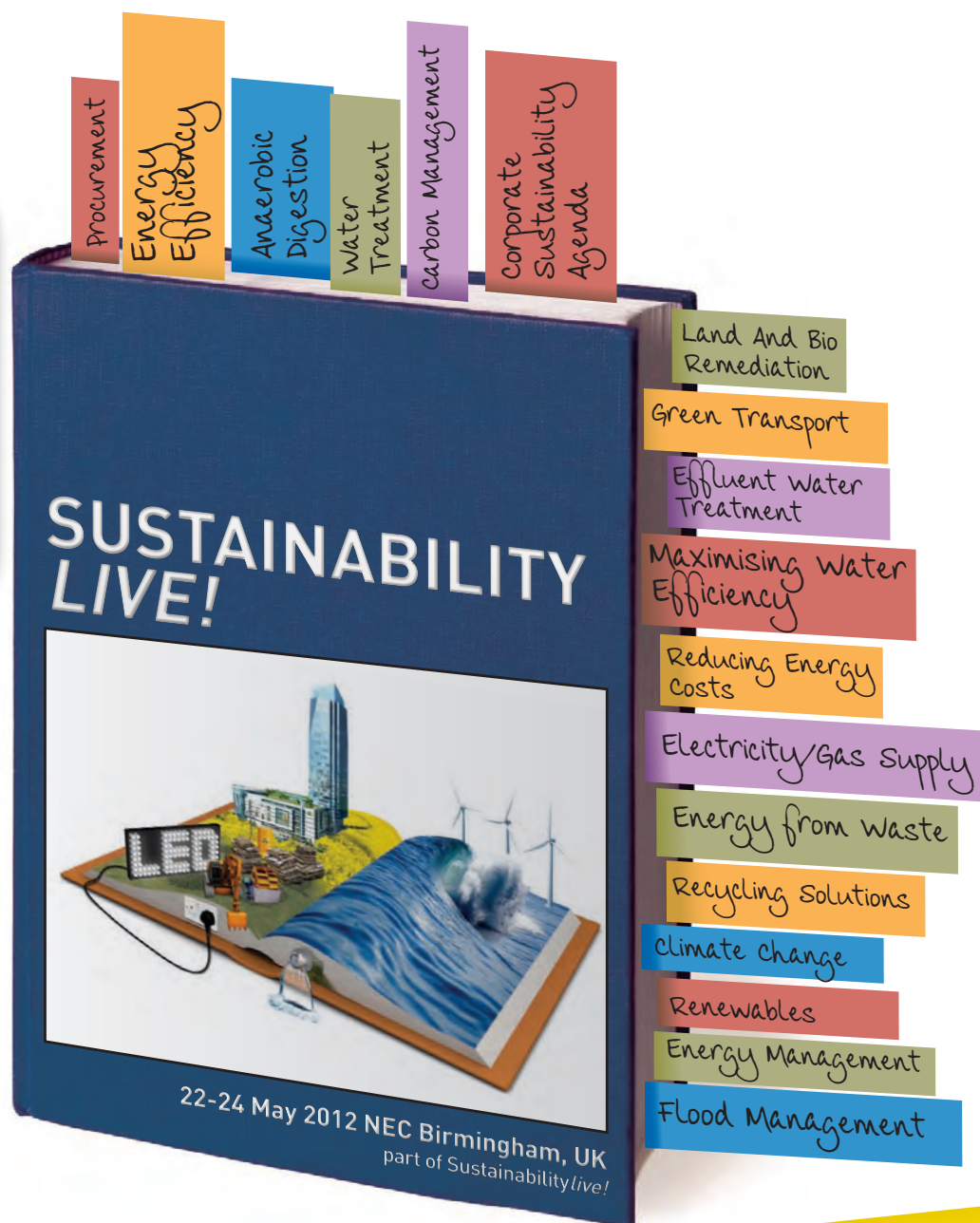
Environmental reviews are the starting point for an effective environment management system, says Paul Reeve, so it is important to get it right

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IEMA

St Nicholas House
70 Newport
Lincoln LN1 3DP
tel: +44 (0) 1522 540069
fax: +44 (0) 1522 540090
info@iema.net
www.iema.net

Editor

Paul Suff
paul.suff@lexisnexis.co.uk

Deputy editor

Sarah-Jayne Russell
sarah.russell@lexisnexis.co.uk

Managing editor

Louis Wustemann
louis.wustemann@lexisnexis.co.uk

Senior sub-editor

Adella Peyton

Group advertising manager

Sophie Wright
tel: +44 (0) 20 8212 1913
sophie.wright@lexisnexis.co.uk

Recruitment advertising

Elaheh Umeh
tel: +44 (0) 20 8212 1984
elaheh.umeh@lexisnexis.co.uk

Senior marketing executive

Victoria Newman
victoria.newman@lexisnexis.co.uk

Design

Jack Dougherty
jack.dougherty@lexisnexis.co.uk

Advertisement production

John Woffenden
john.woffenden@lexisnexis.co.uk

Director of content

Simon Collin
simon.collin@lexisnexis.co.uk

IEMA communications coordinator

Katrina Pierce
k.pierce@iema.net

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Little wriggle room

The outcome of the red tape challenge is not the disaster many environmentalists had feared. Yes, only 70 existing sets of regulations are left unscathed by Defra's plans, while 53 will be scrapped and 153 will be "improved" – mainly through "simplification" or merging (p.5). But most of the regulations being axed are largely obsolete. Others, such as the requirement for site waste management plans, have not been effective, although that's mainly owing to poor enforcement, and more perhaps could be achieved by showing construction companies just how much money could be saved by cutting down on waste.

One of the main reasons the government has not gone further is that the vast majority of environmental regulation originates in Brussels, leaving the UK with very little wriggle room to make changes. EU regulations, such as REACH for example, apply automatically. Transposing directives gives member states more control, as European policymakers set out

One of the main reasons the government has not gone further with its red tape challenge is that the vast majority of environmental regulation in the UK originates in Brussels

general rules and objectives, but leave it up to individual countries as to how to attain them. Domestic regulations must still comply with EU rules, however.

Some UK politicians believe that the transposition of EU legislation into national law often leads to requirements or procedures being added that are not required by the originating directive – so-called "gold plating". That allegation was made last November by the chancellor when he announced a review of the Habitats and Wild Bird Directives. George Osborne told MPs then that he would ensure that "gold plating of EU rules on things like habitats aren't placing ridiculous costs on British businesses".

The findings of Defra's review of the Directives (p.4) reveal that the chancellor was mistaken, and there was no evidence of gold plating: in most cases the regulations implementing the Directives were working well, allowing development of key infrastructure to proceed and offering significant environmental protection.

So, like the outcome of the red tape challenge, very little will change in practice. Now, perhaps, it's time to call a halt to demands for deregulation.



Paul Suff, editor

Short cuts

Coalition not seen as green, finds poll

Voters do not believe the government is meeting David Cameron's pledge to make it the most environmentally friendly administration the country has ever known. A poll of more than 1,700 British adults, carried out on behalf of Greenpeace and the RSPB, reveals that just 2% consider the Tory-Lib Dem coalition the "greenest government ever". More than half of those surveyed rate the government as average for its environmental policies, with just 10% stating that Cameron's ministers are doing more than other countries' administrations to improve the environment. Released ahead of the government's announcement on its proposed changes to environmental regulation (see p.5), the results show that only 4% of those surveyed believe existing legislation is too strong, with 40% arguing that the UK's natural environment needs far greater protection.

FITs appeal blocked

The Supreme Court has refused to allow the government to continue the legal case defending its attempt to change the feed-in tariff (FIT) rates retrospectively. In January, the Court of Appeal confirmed a High Court ruling that DECC had acted illegally in proposing to lower future subsidy levels for solar photovoltaic panels installed under the FIT scheme. The energy department had recommended lowering tariffs for installations erected after 12 December 2011 by up to 55% in a consultation that did not end until later that month. After the High Court decision, DECC pushed back the date from which installations would be affected (until 3 March), but appealed to the higher court, arguing that urgent changes to the FIT were needed to prevent the scheme from exceeding its budget. On 23 March, DECC's legal battle was ended by the Supreme Court. It rejected the department's application to continue its appeal saying that it did not raise "an arguable point of law of general public importance".

Defra plans resource security

Resources Greater recycling of products, particularly waste electrical and electronic equipment (WEEE), and more efficient use of materials during production and design will be crucial to ensuring the UK's future economic growth, warns Defra.

In its first resource security action plan (RSAP), the environment department argues that a failure by markets to accurately reflect the environmental costs of sourcing materials such as timber, palm oil, rare earth metals and minerals, has resulted in unsustainable business practices, and that organisations must take action to improve resource use.

Alongside more resource-efficient designs, improved recycling rates and the creation of sustainable alternatives, the RSAP states that the adoption of new business models incorporating greater stewardship of products is needed and proposes extending the Producer Responsibility Regulations to include WEEE.

Other actions outlined by Defra to help firms better understand the risks associated with particular raw materials include the creation of an online information hub on "insecure" resources.



HEMA, which contributed to the development of the RSAP, welcomed in particular recognition of the role environment professionals will play in businesses becoming more resource efficient. "The plan provides the basis for action to turn the risks posed by resource security into opportunities for innovation and competitive advantage," said director of policy Martin Baxter. "It recognises that such gains will only be achieved through a partnership approach which should include government, business and the skills of the environment profession."

With the RSAP focusing on English policy, the devolved governments in Wales, Scotland and Northern Ireland are responsible for developing their own plans.

Habitats legislation gets all-clear

Regulation A review of UK legislation implementing the Habitats and Wild Birds Directives has found that in the majority of cases the law is working well, allowing development of key infrastructure and ensuring that a high level of environmental protection is maintained.

In his autumn statement, the chancellor launched the review of the regulations, stating that he would ensure that the "gold plating of EU rules on things like habitats aren't placing ridiculous costs on British businesses". The outcome of the Defra-led review suggests that there is little domestic elaboration of either the Habitats Directive (92/43/EEC) or the Wild Birds Directive (2009/147/EC).

The environment department discovered only "relatively few" cases where the regulations were causing delays or additional costs for developers. It also reports that where problems have occurred this was often due to a lack of

clear guidance on certain key areas of the planning process. To help prevent potential future difficulties, Defra plans to publish revised guidance on the implementation of the Directives and create a major infrastructure and environment unit to support the delivery of important national infrastructure projects.

Environment secretary Caroline Spelman said the aim of the new guidance is to ensure the UK implementing regulations continue to provide effective protection for wildlife sites. "Central to that is ensuring that we maintain their integrity, and the best way of doing that is to make it as simple as possible for people to comply with them," she commented.

Carol Day, solicitor at WWF UK, said Defra's findings showed the chancellor's assertions were false. "Not only were his claims that environmental regulations are a burden on business unhelpful, they were completely wrong."

Overhaul of environment regulation not revolutionary

Regulation Despite pledging to scrap or change 70% of environment regulations, the majority of Defra's proposals to cut red tape have been accepted as just a sensible approach to tidying up UK legislation.

Following the red tape challenge review, Defra has outlined plans to revoke 53 sets of environment regulations and improve 132 more. While the proposed changes affect almost three-quarters of environment legislation, the majority of those being scrapped are generally redundant regulations on wildlife, and the improvements are aimed at the implementation of the legislation rather than significant changes to the law.

"The spectre of deregulation and removal of protection for species hasn't materialised," confirmed Richard Arnold, technical director at consultancy Thomson Ecology. "By and large, the proposals related to wildlife and countryside legislation are about improvement and consolidation." Angus Evers, head of the environment group at SJ Berwin LLP and a spokesperson for the UK Environmental Law Association, labelled the report an anticlimax. "There seems to be a lot of headline grabbing about not very much. A few redundant regulations will be revoked and some others streamlined, but the core body of environmental legislation is going to remain pretty much intact."

With most environment legislation dictated by Europe, the government was never going to be able to make massive



changes, according to Stephen Tromans QC. "In areas like waste, environmental assessment, habitats and industrial emissions, the government has no discretion to simplify or reduce the burden [of regulation]," he said. "If people think that they can do away with this legislation they are living in cloud-cuckoo-land."

The decision to revoke the 2008 Regulations requiring large construction sites to prepare site waste management plans was criticised, however. Evers disputed Defra's position that the Regulations should be scrapped because they are not being effectively enforced. "[Defra] should be asking why they aren't being properly enforced and what can be done to improve that," he argued. "If they revoked every bit of regulation that wasn't being properly enforced we wouldn't have anything left."

DEFRA DELAYS MANDATORY REPORTING

IEMA has been joined by industry representatives and environmental groups in expressing frustration at Defra's failure to come to a decision on whether to introduce mandatory greenhouse-gas (GHG) reporting for businesses. Under the Climate Change Act 2008, the government had until 1 April to introduce legislation mandating GHG reporting or explain why it had not done so. On 27 March, Defra confirmed it needed more time to examine responses to last year's consultation on GHG reporting and to weigh up the costs and benefits of the approach.

Martin Baxter, IEMA's director of policy, said the announcement was disappointing. "Both coalition parties when they were in opposition supported it. And yet, the government is now failing to make a decision and provide the clear leadership that will enable UK businesses to save money and deliver environmental benefits," he argued. "GHG reporting is a win-win decision for business and the environment – so why delay a decision any longer?" The business body CBI called the announcement frustrating, while Paul Simpson, CEO of the Carbon Disclosure Project, argued that the government was effectively making a decision not to introduce the mandatory reporting.

Short cuts

CO₂ footprint up 20%

The UK's carbon footprint in 2009 was 20% higher than in 1990, according to new data from Defra. They also reveal that the amount of CO₂ emissions associated with imported goods and services consumed in the UK accounted for 45% of the footprint in 2009 compared with 27% in 1990. The latest figures show that the economic downturn has stemmed the upward trajectory of the UK's embedded emissions, with the country's carbon footprint – defined as emissions associated with the spending of UK residents on goods and services wherever the emissions arise – shrinking by 9% between 2008 and 2009. Defra estimates that over the whole period, CO₂ emissions from imports doubled, while emissions from the consumption of goods and services produced in the UK decreased by 10%. The environment department says the domestic fall was due to a significant drop in emissions from power stations, largely because of a fall in demand as well as a large reduction in emissions from heavy-goods vehicles, and a noticeable fall in emissions from construction activity.

£25k fine for Falmouth Dock pollution

The director of a marine waste-management company has been fined £25,000 after being held responsible for his firm's illegal disposal of toxic silt during the £8.8 million redevelopment of Falmouth Docks. In 2007, Peter Frampton's company, Oil and Water, was hired by A&P Ports and Properties to demolish a wharf and remove the silt below. However, A&P did not reveal that the silt was highly contaminated with poisonous chemicals used historically on boats. Such silt can be removed under licence with special equipment, but Oil and Water had neither and instead dredged the dock, spreading the silt into a conservation area. In sentencing, Judge Clark QC said the case revealed a "public scandal". In 2010, A&P was ordered to pay more than £630,000 in fines and costs for its part in the incident.

» IN PARLIAMENT

Connie's uphill struggle



Chris Davies is the Liberal Democrat environment spokesperson in the European Parliament

These are tough times to be the EU's climate action commissioner. Governments across the world are protesting against Connie Hedegaard's demand that their airlines conform to the requirements of the EU emissions trading scheme (ETS). Threats are being made, including cancellation of orders for new planes from Airbus, the European aircraft manufacturer. The possibility of a trade war looms, even though the cost per passenger of buying ETS allowances will often be less than the price of an airline meal. The US and China are lobbying national capitals in a bid to weaken resolve, but so far the EU is holding firm, with the commissioner backed by both the Council of Ministers and the European Parliament. Hedegaard wants ICAO, the International Civil Aviation Authority, to end years of prevarication and put forward a plan to curb worldwide emissions that can allow a compromise to be agreed.

Meanwhile, her hopes of getting endorsement for the EU's low-carbon road map, the framework for measures to reduce CO₂ emissions by at least 80% by 2050, have been blocked in the council by Poland, despite support for the road map from the other 26 environment ministers. Hedegaard got a better hearing in the European Parliament, where – by a three-to-one margin – MEPs gave their backing to a cross-party deal I negotiated that specifically endorsed the road map. In doing so, MEPs accepted that to achieve a 40% CO₂ reduction by 2040 would require a 25% cut by 2025 – the most ambitious step agreed to date.

Together with the backing of most EU governments, the MEPs' vote gave Hedegaard the moral authority to bring forward specific proposals to reduce EU emissions even in the absence of an international agreement. She left parliament with a smile on her face, maybe the first for a while.

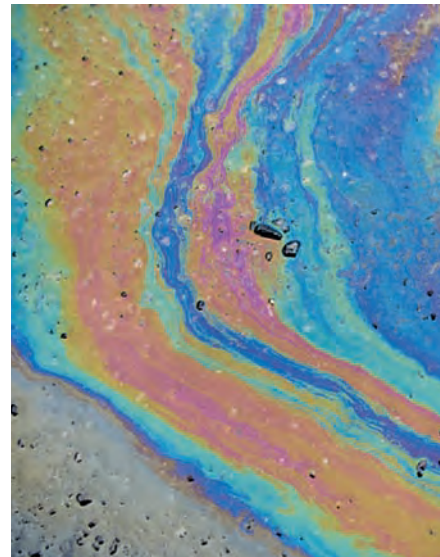
Firms doing well, says EA

Regulation Businesses regulated by the Environment Agency (EA) are improving their environmental performance despite the tough economic conditions. The agency's latest business report reveals that in 2010 the number of serious pollution incidents fell, more waste was recovered and there was a cut in emissions to air.

The data show that the number of serious pollution incidents in 2010 is the lowest ever recorded by the regulator in England and Wales. Serious pollution incidents were down 16% in 2010 on the previous 12 months, from 770 to 648. The agency also reports that serious incidents in 2010 caused by directly regulated companies totalled 145.

Compliance with permits is also at an all-time high, with 71% (9,477) of sites achieving an A rating under the operational risk assessment process, with just 4% scoring poor ratings (bands D–F). Air emissions from sites regulated by the EA are generally down, with nitrogen oxide and PM10 levels both 5% lower in 2010 than in 2009. Emissions of sulphur oxides remained stable. Waste from regulated sites has fallen by 18% since 2005, while the amount recovered has increased from 37% in 2000 to 66% in 2010.

Meanwhile, Scotland's environmental regulator, SEPA, has published a progress report on its proposals – set out in a consultation in December 2010 – to improve environmental



regulation. SEPA says its dynamic regulatory effort and assessment model, an integrated framework that works across environmental regimes and covers environmental risk assessment and operator compliance, and which is currently being piloted nationally, will go live in January 2013.

The regulator plans to adopt an audit-based approach to inspections, with the outputs of an environment management system helping to inform the evaluation. SEPA says it will undertake three-yearly intensive audits for all high-risk sites and failing medium-risk sites.

Businesses lack climate change plans

Adaptation Less than half of the UK's biggest firms have plans in place to ensure their business can adapt to the impacts of climate change, according to the Carbon Disclosure Project (CDP).

A CDP poll of FTSE 100 companies reveals that, while 80% of respondents agree that the changing climate brings substantial risks to their operations, only 46% have included adaptation plans in their overall business strategy.

The research, carried out on behalf of Defra, concluded that businesses have a poor understanding of the financial impacts of adaptation, and that failing to quantify these risks means they are being left out of corporate plans. Environment minister Lord Taylor responded to the research by calling on investors to pressurise companies into taking a more strategic approach. "Investors can provide

an incentive to businesses to not only consider the long-term risks of climate change, but also the opportunities that can be grasped now," he said.

The report came as the OECD warned that the impacts of climate change in 2050 will be "colossal" unless urgent global action is taken to improve environmental impacts. The Paris-based body predicts that with the global economy set to quadruple in size and the worldwide population to reach nine billion, energy demand will increase by 80%, water use by 55% and greenhouse-gas emissions by 50%.

As a result, it predicts that deaths attributable to air pollution will triple, 40% of the world's population will be living in areas of water stress, biodiversity will decline due to competing needs for land-use and global temperatures rises could hit 3°C–6°C.



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Budget special

Planning reforms get behind growth

Planning The chancellor pledged to provide the UK with modern infrastructure by introducing new growth-friendly planning rules. “You can’t earn your future if you can’t get planning permission,” George Osborne told the House of Commons. He claimed that global businesses had diverted investments that could have created hundreds of jobs in the UK, because they could not get planning permission here. “That is unacceptable,” he said.

The communities and local government department issued the new national planning policy framework (NPPF) for England following the Budget.

The plan reduces more than 1,200 pages of planning guidance to 49 and is designed to empower communities to ensure local development meets their needs. “Local plans will be the keystone of the planning system,” decentralisation minister Greg Clark said. Councils with no plans in place – around half – will implement the framework immediately and those with plans have 12 months to comply.

While the “presumption in favour of sustainable development” remains, and will see a development given the green



light unless it is against the “collective interest”, the final NPPF makes a number of concessions to environmental groups after last year’s draft was heavily criticised.

Protecting the green belt, sites of special scientific interest, national parks and other areas cannot be overridden by the presumption, declared Clark.

He also said the NPPF makes it explicit that councils’ policies must encourage brownfield sites to be brought back into use. In addition, the final version deletes the words “default answer is yes” to development. The document makes it clear

that sustainable development (SD) means taking “social and environmental, as well as economic objectives” into account when deciding whether to grant planning permission. It also strengthens its definition of SD, with more explicit reference to the Brundtland declaration, as well as the five guiding principles contained in the 2005 UK sustainable development strategy.

Despite the stronger definition of SD, there is concern that local authorities will adopt different approaches. “The problem is that the definition of ‘sustainable’ is notoriously woolly, and different local authorities will inevitably interpret it in different ways,” commented Paul Smith, director of Apex Planning Consultants.

John Box, associate at Atkins, said: “The real test of the NPPF in achieving sustainable development will depend on its interpretation by developers and planners in the context of new infrastructure and development projects.”

Short cut

Company cars

The chancellor extended the 100% first-year capital allowance on company cars with low CO₂ emissions from April 2013 to 31 March 2015, but lowered the threshold, so the relief will in future be available on cars that produce less than 95g of CO₂ per km, down from 110g/km. And it will no longer be available for leased cars. The exemption from company car taxation that currently applies for zero-carbon and ultra-low carbon emission vehicles – those that emit less than 75gCO₂/km – will cease in April 2015, when such vehicles will attract 13% tax, rising by a further 2% in 2016/17. The “benefit-in-kind” bands for company cars will also alter from April 2014, by 1% on cars emitting more than 75gCO₂/km to a maximum of 35%, and by 2% to a maximum of 37% in both 2015/16 and 2016/17. The 3% supplement on diesel cars will end from April 2016.

Osborne ignites new dash for gas

Energy Gas will be the largest source of UK electricity in the coming years, the chancellor announced, fuelling a second dash for gas by giving oil and gas producers £3 billion to help extract new reserves in UK waters.

The extra money follows the disclosure by energy and climate change secretary Ed Davey that gas-fired power stations, with a 450g/kWh-base level will not be subject to the planned emissions performance standard until 2045, so new plants coming on stream over the next few years can continue to emit CO₂ at existing levels for another three decades.

DECC says the “grandfathering” – whereby plants are exempt from new, more restrictive pollution laws if they remain below the 450g threshold – will provide investors with long-term certainty, even though the Committee on Climate Change said in January 2011 that the UK had to largely decarbonise its electricity generation to meet its carbon budgets. It estimated that average

emissions from electricity generation would need to fall to around 50gCO₂/kWh by 2030. However, the secretary said: “I want a decarbonised grid in the long term, but we can’t take our foot off the gas for some time yet. A fifth of the UK’s ageing fleet of power stations will close this decade and it’s not possible to fill that gap entirely with low-carbon alternatives in that timescale.”

“We need to recognise that gas will be a vital part of the mix in delivering affordable and secure low-carbon energy,” said the chancellor, who also claimed that gas was cheap despite rising wholesale prices recently pushing up UK energy bills.

“A new dash for gas will destroy the UK’s leadership on climate change and will leave UK citizens at the mercy of rising and volatile fossil-fuel prices. It’s staggering that the Treasury is bending over backwards to support a fuel that is to blame for 80% of the recent hike in energy bills,” commented Keith Allott, head of climate change at WWF UK.

CRC faces axe as carbon price floor rises to £9.55 in 2014

Emissions A failure to secure further savings for businesses in administering the Carbon Reduction Commitment Energy Efficiency (CRC) scheme will see it replaced by an alternative environmental tax, the chancellor announced in his third Budget.

Describing the CRC as cumbersome, bureaucratic and an unnecessary cost on business, George Osborne said he would bring forward proposals in the autumn for a new tax should significant administrative savings fail to materialise following another review (see panel below).

Although industry bodies welcomed the decision to attempt to further simplify the CRC, most want the scheme scrapped. Gareth Stace, head of climate and environment at the EEF, said: "We believe the CRC should be abolished. It is costly and no amount of tinkering with it will ever make it work."

LexisPSL's Malcolm Dowden said that the decision to persist with simplification efforts rather than immediately scrapping the CRC was largely driven by the time and costs already incurred by business in gearing up for compliance, and a reluctance to forgo the immediate revenue from the sale of allowances for 2012/13, which the chancellor confirmed at £12 per tonne of carbon dioxide.

Steve Elliot, chief executive at the Chemical Industries Association, is concerned that a new environmental tax will impose further costs on business. "It will be important to ensure that any replacement does not increase costs for energy-intensive industries that already face increased energy costs." But Martin Baxter, policy director at IEMA, fears that any change could derail action to cut emissions. "The government must ensure



that the CRC or any replacement continues to deliver significant carbon reductions," he commented.

Meanwhile, the cost of complying with the carbon price floor (CPF), which begins in April 2013, will now be more expensive. Energy firms will pay £9.55 per tonne of CO₂ in April 2014, a significant increase from the previously announced 2014/15 rate of £7.28. The change is largely due to the plummeting price of EU emissions trading scheme (ETS) allowances.

Last year, the chancellor set the carbon price floor at £16 per tonne, rising to £30 by 2020. Power companies pay the difference between the cost of ETS allowances and the CPF, so the lower the price of EU permits the more they will have to spend. Generators will pay £4.94 per tonne of CO₂ from next April and £9.55 the year after. The higher rate will push industrial electricity prices up a further 6%–7% and increase Treasury revenue from the CPF by £1.4 billion.

Short cuts

Green taxes

The chancellor unveiled several new environmental tax rates and confirmed changes to others. From April, the energy used in metal-recycling processes will be liable to a reduced rate of 20%, while electricity utilities will now be allowed to allocate climate change levy exemption certificates for combined heat and power (CHP) until 31 March 2013, to enable them to use up stocks. Under plans already announced, the CHP exemption would be removed from April 2013. Budget 2012 also increased the landfill tax by £8 to £72 per tonne from April 2013, although the lower rate remains frozen at £2.50 per tonne. To correct a mistake, Osborne said the government would introduce retrospective legislation, dating back to 21 March 2000, to align the position in Scotland with the rest of the UK. He also said the list of designated energy- and water-efficient technologies qualifying for enhanced capital allowances will be updated during the summer, subject to state aid approval.

Packaging targets

Legislation later this year will increase statutory packaging recycling targets by between 1% and 5%, the chancellor confirmed, following a Defra consultation. The proposed new targets include: an increase of 1% a year in the steel-recycling target, from 71% in 2012, to 76% in 2017; a rise of 3% a year in the aluminium recycling target, from 40% in 2012, to 55% in 2017; and a 5% a year increase in plastic recycling targets, from 32% in 2012 to 57% by 2017. Glass-recycling targets will be split into subcategories from 2013 to boost the amount of glass that is remelted, with the remelting targets for individual businesses with an obligation in glass rising from 63% in 2013–15 to 64% in 2016–17. Paper, card and wood recycling targets will remain unchanged. The Budget also set a 1% annual increase in the overall packaging recovery rate, from 74% in 2012, to 79% in 2017. The higher packaging recycling targets will stop 400,000 tonnes of packaging going to landfill by 2017, said Defra.

DECC ISSUES CONSULTATION ON SIMPLIFYING CRC

DECC has issued a consultation on its proposals to simplify the CRC (lexisurl.com/iema12157). Planned measures include: replacing the auctioning of allowances with two fixed-price sales a year; reducing the number of reportable fuels from 29 to four; scrapping the footprint report; reducing the requirements to maintain records; removing the residual percentage rule – the so-called 90% rule; and reducing overlap with the EU emissions trading scheme and climate change agreements. DECC claims the changes will reduce the administrative costs for CRC participants by almost two-thirds, saving around £330 million up to 2030. The consultation ends on 18 June 2012.

Devolved authorities reveal low-CO₂ energy plans

Energy The Scottish and Welsh governments have reaffirmed the crucial roles of renewable technologies, energy efficiency and carbon capture and storage (CCS) in decarbonising their countries' electricity supply.

In its draft electricity generation policy statement, the Scottish government confirms that by 2020, Scotland's renewable energy sector should be generating enough power to supply 100% of the country's total electricity demand.

According to its projections, the sector will need a generating capacity of 14–16 gigawatts (GW) to meet the target, and it already has 12GW of renewable capacity either deployed or in development and a further 17GW in scoping. The majority will be offshore and onshore wind, with marine technologies providing a growing proportion of the energy mix.

While confident in its renewables capacity, the Scottish government makes it clear that traditional oil, gas and coal power stations will remain

online, alongside existing nuclear generators, to ensure security of supply and enable Scotland to export renewable energy to the rest of the UK. Central to the continued use of fossil fuels is the development of effective CCS, with the Scottish government committing to have commercial-scale CCS demonstrated by 2020 and retrofitted to conventional power stations by 2030.

In the statement, which is open for consultation until 4 June (lexisurl.com/iema12200), Scottish ministers also highlight the importance of energy efficiency, setting a countrywide energy-saving target of 12% consumption by 2020, compared with 2005–2007 levels. As well as supporting public sector efficiency initiatives, the government pledges to create an energy- and resource-efficiency service to help Scottish businesses cut their energy use.

In a paper outlining its vision for a decarbonised energy supply, the Welsh Assembly government similarly agrees

that efficiency will play a vital role in ensuring a cost-effective transition. Alongside improving its advice to organisations on gaining energy efficiency, the government also promises to support energy-intensive sectors in managing the increasing costs of energy.

The Welsh Assembly also supports the development of CCS technology as important to decarbonising electricity generation, stating that without it natural gas cannot have a long-term future in the country's energy mix, despite being a much cleaner energy source than oil or coal.

While wind, both offshore and onshore, and solar have their place in its strategy, Wales focuses in particular on the potential of marine technology to provide a significant proportion of future energy supply. In its report, the Welsh government reveals that Wales's coastal waters have the potential to generate more than 10GW of electricity, and that it is strongly in favour of deploying tidal technologies in the Severn Estuary.

CASE LAW

Lexis®PSL

'Right' to conceal information

In *Birkett v Department for the Environment, Food and Rural Affairs* [2011] EWCA Civ 1606, the Court of Appeal held that public authorities relying on exceptions or exemptions under the Environmental Information Regulations 2004 (EIR) or the Freedom of Information Act 2000 to refuse to provide environmental information may subsequently rely on further exceptions, despite not having specified those in an initial refusal to disclose information.

The EIR implement EU Directive 2003/4/EC on public access to environmental information. Public authorities can refuse a request on the basis of statutory exceptions, subject to the public interest test. Exceptions include where the request or disclosure:

- involves the disclosure of internal communications (reg. 12(4)(e));
- would adversely affect the course of justice, the ability of a person to receive a fair trial or the ability of a public authority to conduct an inquiry of a criminal or disciplinary nature (reg. 12(5)(b)); and

- would adversely affect the confidentiality of the proceedings (reg. 12(5)(d)).

Article 6 of Directive 2003/4/EC provides a right of review before a court for any applicant who considers that a request for information has been ignored, wrongfully refused or inadequately answered.

Simon Birkett, director of Campaign for Clean Air in London, appealed against an Upper Tribunal (Administrative Appeals Chamber) judgment that Defra could "rely as of right" on new exceptions for refusing environmental information disclosure rather than the original reasons given to the Information Commissioner and/or the First-tier Tribunal proceedings.

The Court of Appeal dismissed the appeal, which was part of an ongoing three-year battle with Defra to obtain environmental information relating to discussions between the previous government and the mayor of London on air pollution and UK compliance with EU air-quality laws.

In the original case, Defra had refused an environmental information request on the basis of the reg. 12(4)(e) exception. Birkett argued that it was necessary to interpret the Directive on public access to environmental information, and in turn the EIR as preventing public authorities from relying on new exemptions after internal review. Without this, it was argued that the complainant would be denied an effective remedy because they would not know the public authority's reasons for refusing their request.

At appeal, Defra continued to rely on the reg. 12(4)(e) exception, but to the extent that the disputed information benefited from legal advice privilege, it also relied on the reg. 12(5)(b) and (d) exceptions. The court concluded that Defra could rely on the new exceptions and was entitled to refuse the request.

Consequently, the general rule is that public authorities can rely on any Environmental Information Regulations or Freedom of Information exceptions or exemptions at any time.

Colleen Theron and Deirdre Lyons, LexisPSL

Mining firm fails in CRC appeal

Emissions Energy and climate change secretary Ed Davey has rejected ATH Resources' appeal against its participation in the Carbon Reduction Commitment Energy Efficiency (CRC) scheme. The failure of the appeal could cost the company £4.2 million over the next three years.

ATH Resources, one of the UK's largest coal producers, argued that the electricity consumed by the 12km overhead conveyor at its Glenmuckloch mining site should be exempt from the CRC. However, Davey, following a recommendation by David Hart QC, dismissed the firm's reasoning. He explained that the equipment, which annually transports 2.8 million tonnes of coal to the company's Crowbandsgate rail facility, did not come under the transport exemption in the CRC and affirmed the enforcement notice issued by the Environment Agency on 8 February 2011 for failing to register in the first phase of the scheme.

Davey did not reach a conclusion on ATH Resources' other argument, that the CRC Energy Efficiency Scheme (Allocation

of Allowances and Payment) Regulations are unlawful because they create a tax that contravenes EU Directive 2003/96 – the European framework for the taxation of energy products and electricity.

"While it is clearly disappointing that our appeal has been dismissed, the outcome of ATH's contention that the entire CRC scheme is contrary to EU law has yet to be determined," said chief executive Alistair Black.

The Doncaster-based company, which operates four opencast mines in Scotland, has been advised it can now refer the matter, including its wider challenge, for judicial review. ATH Resources says it will be discussing its position with legal advisers and will not make any payments until further clarity on the legality of the CRC is received. "If the scheme is found to be in contravention of EU law it will have a major implication for the initiative's operation in its current form," said Black.

Under the CRC, organisations that fail to register risk being fined £5,000, plus a further £500 for each working day that passes before registration is complete.

European economic growth threatened by water scarcity

Water EU member states must improve water efficiency across all sectors, and cut leaks in supply infrastructure, if the bloc is to cope with increased water scarcity due to climate change, according to the European Environment Agency (EEA).

In the first of a series of reports looking at the impacts of water use in Europe, the EEA concludes that water resources are already over-exploited in many countries and that member states must take a more proactive approach to water management to balance the competing demands of citizens, industry and ecosystems.

Incentivising the adoption of more efficient technologies and the use of greywater, through taxes and subsidies, encouraging innovation in water treatment and setting overall targets for water use, are among the EEA's recommendations. It also calls for better implementation of existing EU regulation, such as the Water Framework Directive, and the integration of water into broader resource-efficiency strategies.

"Water resources are under pressure in many parts of Europe, and it is getting worse," said EEA executive director Jacqueline McGlade. "With climate change making water supply less predictable, it is extremely important that Europe uses water more efficiently for the benefit of all its users."

One of the key issues in the past, according to the EEA, is that water rates have not reflected the costs of supplying water. "Putting the right price on water can incentivise more efficient use of water and technological innovation," it states.

The EEA's report came as WWF published a new tool to help organisations better understand the risks posed by access to water across their operations and supply chain. The online "water risk filter" holds information on access to water in 235 countries. It uses information provided by water companies to identify any areas where water may be at risk and offers advice on how to mitigate that risk (lexisurl.com/iema12176).

Short cuts

Biodiversity offsetting

Defra's ground-breaking trials of biodiversity offsets began on 2 April. The plans see local authorities working with organisations to offset the damage caused by development projects through the remediation of land of "equal biodiversity value" elsewhere. The two-year pilots will run in six areas: Coventry, Warwickshire and Solihull, Essex, Devon, Greater Norwich, Doncaster, and Nottinghamshire. Natural England will manage the pilots, supporting the participating local authorities in their approach to biodiversity and ensuring the quality and consistency of offsets across the pilot areas. While Defra confirms that, in terms of mitigation of the environmental impacts of developments, offsetting should be a last resort, offsets could provide an effective way to provide the "net gain in biodiversity" aimed for in the government's new national planning policy framework (see p.8).

UK v Germany

Uncertainty in UK policy will harm the country's ability to compete with Germany to become a world-leading low-carbon economy, according to environmental think-tank the Green Alliance. In a comparison of the two countries' approach to green growth, the alliance reveals that Germany has invested almost three times more than the UK in renewable energy technologies over the past four years, and its more consistent regulatory approach has allowed it to create a renewables sector that is stronger than the UK's, despite the UK's geographical advantages in wind and wave power. More positively, the analysis also reveals that a higher proportion of the UK's GDP comes from low-carbon goods and services than is the case in Germany, and the UK exports £100 million more of these goods to Germany than it imports. However, the report concludes: "Without a clear strategy on green growth it will be difficult to maintain [the UK's] strong position in areas of current advantage, or regain ground on renewable energy."

Sustainabilitylive! 2012

the environmentalist previews what's on at the NEC this year

Next month, Birmingham's NEC will once again echo with the sound of sustainability professionals discussing the issues of green policy, regulation and tackling environmental impacts, as Sustainabilitylive! 2012 opens its doors. Held over three days, 22–24 May, the free event is made up of five shows bringing together hundreds of exhibitors and speakers from across the environment, water, land, energy and sustainable business sectors, under this year's theme of "leading the way for a sustainable future".

Sustainable Business (SB) – The Event

The main stage in the SB area offers a complete conference programme, including the event's opening keynote speech on sustainable transport to be given by Norman Baker, the parliamentary under-secretary for transport. Later in the day, Dr Matthew Brown, the head of energy and climate change at the CBI, will discuss what drives sustainability policy, before Katie Chapman, head of sustainability and reporting at Virgin Media, shares her thoughts on sustainability reporting. Other topics debated by panels throughout the event include: water-efficiency strategies, supply-chain management and engagement, and ensuring compliance with the Carbon Reduction Commitment Energy Efficiency scheme.

NEMEX – National Energy Management Exhibition

Now its 30th year, NEMEX is the UK's leading event for showcasing energy management, energy efficiency and renewable-energy technologies. Two theatres run seminar programmes simultaneously, offering more than 80 discussions covering topics as diverse as the renewable heat incentive, on-site renewables, smart metering, energy policy, behaviour change and demand management.

Speakers include *the environmentalist* columnist Dr Alan Whitehead MP, Ernst & Young's director of utilities Bill Easton, and Harrods' energy manager Aseai Zlaoui. The benefits and challenges of automatic meter reading will be debated on Tuesday, while the Carbon Trust will offer advice on engaging employees in energy management the following day. Thursday will see the Co-operative Group share its experiences of installing energy-saving lighting.

IWEX – The International Water and Effluent Exhibition

After a second dry winter has left large areas of the UK facing droughts this summer, the issue of water scarcity is becoming increasingly urgent for many organisations, particularly those in the utilities and food and drink sectors. The IWEX show offers delegates a chance to hear about the latest developments in sustainable water management. Seminars in the IWEX theatre this year cover topics including: innovations in water treatment technology, smart water networks, improving the water industry's resilience to climate change and incorporating ecosystems services into cost-benefit analysis.

BEX – The Brownfield Expo

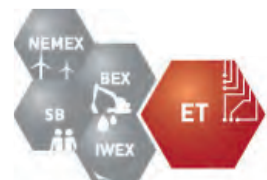
For environment professionals working on land remediation projects, BEX offers the best opportunity in the UK to research new developments in tackling contaminated land and construction on brownfield sites. This year, seminars will run on Tuesday and Wednesday mornings only, and will cover legislation, liability and risk assessment, with sessions examining how to manage health risks posed by former industrial sites and understanding biodiversity legislation.

The programme features a series of case studies including the creation of a new village on the site of an oil refinery in Wales and a National Grid development that was the UK's first multiple site, multiple consultant hub and cluster project.
















ET – Environmental Technology

While in previous years the ET element of Sustainabilitylive! has included exhibitors, from 2012 the exhibiting technology firms will be appearing in the IWEX and NEMEX areas of the event. The ET's popular seminar programme continues, however, hosted in the environmental and land remediation theatre on Wednesday afternoon and all day on Thursday. This year, sessions will examine resource efficiency and waste management, focusing in particular on driving efficiency through supply chains, changes to EU legislation on waste electrical goods and achieving zero waste to landfill. Sessions include: "What next after the waste review?" and "Delivering the zero waste vision".

For more information, visit sustainabilitylive.com.




NEW REGULATIONS

In force	Subject	Details
23 February 2012 	Emissions	The Storage of Carbon Dioxide (Inspections etc) Regulations 2012 form part of the implementation of EU Directive 2009/31/EC on the geological storage of carbon dioxide. In particular, they implement art. 15 of the Directive on the inspection of carbon dioxide storage complexes. lexisurl.com/iema12032
1 March 2012 	Climate change	The Forestry Commissioners (Climate Change Functions) (Scotland) Order 2012 amends parts of the Forestry Act 1967, modifying the functions of forestry commissioners in relation to land. lexisurl.com/iema12033
13 March 2012 	Planning	The Planning (Environmental Impact Assessment) Regulations (Northern Ireland) 2012 consolidate amendments to the 1999 Regulations. Changes include a requirement stating the reasons for negative screening decisions to be made available on request; a limitation on the requirement for subsequent applications to be subject to the screening process, and amendments to Schs. 1 and 2 to include sites for the storage of carbon dioxide. lexisurl.com/iema12022
1 April 2012 	Energy	The Feed-in Tariffs (Specified Maximum Capacity and Functions) (Amendment) Order 2012 amends the 2010 Order in relation to hydro-generating stations. lexisurl.com/iema12049
1 April 2012 	Energy	The Rates (Microgeneration) Order (Northern Ireland) 2012 amends the 1977 Order in respect of the various classes of plant and machinery listed in Sch. 12. lexisurl.com/iema12021
1 April 2012 	Environmental offences	The Environmental Offences (Fixed Penalties) (Miscellaneous Provisions) Regulations (Northern Ireland) 2012 prescribe the ranges within which the fixed penalties that district councils can levy must fall. lexisurl.com/iema12019
1 April 2012 	Nuisance	The Statutory Nuisances (Artificial Lighting) (Designation of Relevant Sports) Order (Northern Ireland) 2012 designates the sports deemed “relevant” for the purposes of s.65(15) of the Clean Neighbourhoods and Environment Act (Northern Ireland) 2011. The Statutory Nuisances (Appeals) Regulations (Northern Ireland) 2012 make provision for appeals to a court against abatement notices served under s.65 of the 2011 Act. lexisurl.com/iema12018 , lexisurl.com/iema12034
1 April 2012   	Planning	The Localism Act 2011 (Infrastructure Planning) (Consequential Amendments) Regulations 2012 amend a number of existing regulations, including the Infrastructure Planning (Environmental Impact Assessment) Regulations 2009, the Conservation of Habitats and Species Regulations 2010 and the Infrastructure Planning (Decisions) Regulations 2010. lexisurl.com/iema12041
1 April 2012 	Waste	Street Litter Control Notices (Amendment) Order (Northern Ireland) 2012 amends the 1995 Order so that premises used wholly or partly for the sale of food or drink for consumption are covered. lexisurl.com/iema12017
5/6 April 2012  	Energy	The Energy Performance of Buildings (Certificates and Inspections) (England and Wales) (Amendment) Regulations 2012 amend the 2007 Regulations. Regulation 12, revoking parts of the 2007 Regulations, came into force on 5 April 2012, while the remainder of the 2012 Regulations came into force on 6 April 2012. lexisurl.com/iema12046
6 April 2012  	Built environment	The Building (Amendment) Regulations 2012 amend the 2010 Regulations, inserting, for example, a definition of “excepted energy building”. lexisurl.com/iema12042

LATEST CONSULTATIONS

2 May 2012



Natural resources

 The Welsh Assembly government is seeking views on its proposals to create a single body for managing Wales's natural resources – air, land, water and biodiversity. It will bring together the functions of the Environment Agency Wales, the Forestry Commission Wales and the Countryside Council for Wales. The Welsh Assembly says the new body would have a key role in protecting the country's natural resources, supporting economic development, delivering products from forests to support rural businesses, reducing flood risks and helping ensure quality of life for Welsh people. It would also be expected to provide environmental advice and input to planning processes and to the development of legislation, helping the government to design new regulatory arrangements that aim to simplify processes and encourage investment, while maintaining environmental standards.

lexisurl.com/iema11746

3 May 2012

Water abstraction

  Proposals to end abstraction licence is varied or revoked on the grounds of serious damage are the subject of consultations by Defra and the Welsh Assembly government. The abstraction and impounding licensing system was established by the Water Resources Act 1991 and allows the Environment Agency to vary or revoke


abstraction and impoundment licences. Where a licence is revoked or varied without agreement, the licence holder may be entitled to compensation for loss or damage. Section 27 of the Water Act 2003 allows the government to remove the right to compensation in certain circumstances. Defra plans to cease compensation from 15 July 2012 if it is satisfied the grounds for varying or revoking the licence is to protect the environment from serious damage. The Welsh Assembly is mounting its own separate consultation.

lexisurl.com/iema11747

lexisurl.com/iema11752

4 May 2012

Carbon pricing

 The business department (BIS) is seeking evidence of the indirect costs imposed on businesses by the planned carbon price floor and participation in the EU emissions trading scheme. BIS says that responses will be used to shape the £250 million scheme it plans to introduce to help energy-intensive industries with their electricity costs. The government predicts that energy and climate change policies may increase the average electricity price paid by large energy-intensive organisations by up to 28% in 2020. The call for evidence asks companies and trade bodies to share information and data about their energy-intensity in order to help the government target compensation effectively. BIS plans to consult on its proposed energy-intensive industries package in September this

year, with implementation in spring 2013, subject to state aid rules.

lexisurl.com/iema12050

7 May 2012

Environmental noise

 Proposals for “quiet” spaces in large urban areas have been put out to consultation by the Welsh Assembly government as part of its implementation of the EU Environmental Noise Directive (2002/49/EC). The agglomerations for the first round of action planning are Swansea/Neath Port Talbot, Cardiff/Vale of Glamorgan (Penarth) and, from next year, Newport, extending partly into the Caerphilly authority.

lexisurl.com/iema11754

18 May 2012

Energy efficiency

 A consultation has been launched by the European Commission to obtain stakeholders' views on how to improve the financial support offered for energy-efficiency measures aimed at improving the energy performance of buildings at an EU, national, regional and local level. The latest forecast shows that the EU member states will fall well short of the 20% reduction in energy consumption by 2020 that was set in 2007, achieving just a 10% cut. Significantly improving the efficiency of buildings could get the EU back on track, as nearly 40% of final energy consumption – and 36% of greenhouse-gas emissions – is from houses, offices, shops and other buildings.

lexisurl.com/iema12051

NEW GUIDANCE

Employee engagement

The Scottish government has published a practical guide (lexisurl.com/iema12055) for businesses that want to reduce their carbon footprint. In particular, it provides information on what the critical success factors are for involving staff to drive change and how staff engagement offers real benefits that are much broader than just carbon savings. The guide outlines the business case for why employers should get involved in low-carbon activities, and the benefits of including staff in this process. It also provides a step-by-step approach to developing a low-carbon strategy, and what to consider when implementing low-carbon workplace activities.

Groundwater discharge

Under the Environmental Permitting (England and Wales) Regulations (EPR) it is now a legal requirement that groundwater tracer tests and the discharge of small quantities of substances for scientific reasons, as part of a specified remediation scheme, are controlled. The Environment Agency has published new guidance (lexisurl.com/iema12056) on complying with the EPR, aimed at anyone involved in designing and carrying out such activities. It explains that small quantities of substances discharged into groundwater for scientific purposes can either be excluded from control, registered as exempt or permitted under the EPR. The new agency document provides guidance on the legislative requirements for discharges and aims to help determine what degree of control is appropriate to ensure that activities are compliant.

EVENTS CALENDAR

Date	Course	Location and details
3 May 2012	The UK energy summit 2012: securing a sustainable energy future	The Grange St Pauls, London lexisurl.com/iema11765
8–9 May 2012	Responsible business summit 2012	Novotel London West Hotel, London lexisurl.com/iema12059
10 May 2012	LowCVP conference 2012	ExCel Conference Centre, London lexisurl.com/iema11760
22–24 May 2012	Sustainabilitylive! NEMEX, IWEX, SB, BEX, ET	NEC, Birmingham lexisurl.com/iema12058 (see p.34)
25–26 May 2012	Measuring, reducing and communicating environmental and social impacts	Bloomsbury Hotel, London lexisurl.com/iema12148
15–16 June 2012	Eco-technology show 2012	The American Express Community Stadium, Brighton lexisurl.com/iema11759
21 June 2012	Base London	Grange Hotel, Tower Bridge, London lexisurl.com/iema11761
4 July 2012	Pollution response in emergencies – marine impact assessment and monitoring	SOAS, London lexisurl.com/iema12150

Environmental Auditing

25 - 29 June 2012

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University of Brighton

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Green IT flies high

Becky Allen finds out how suppliers and users are broadening their understanding of sustainable IT

Earlier this year, sizeable crowds descended on Apple stores in Washington DC, San Francisco, London, Sydney, Bangalore and New York's Grand Central Station. They were not, however, seeking the latest iPad. Instead, they were protesting about labour standards in the company's component factories in China. But the fact that protesters could have targeted any number of manufacturers of information communications technology (IT) highlights the need to take a more holistic approach to the impacts of computers and other communications devices.

Many technology experts say it's time to consign the term "green" to the waste bin and focus on "sustainable" IT instead. According to Dr Gerard Briscoe of the systems research group at the University of Cambridge's Computing Laboratory (CCL), green computing tends to focus only on reducing e-waste, and not on wider sustainability concerns such as the economic impacts of the precious "rare earth" elements included in the technology, the social impacts associated with the health risks to third-world workers and the long-term environmental impacts attached to disposal.

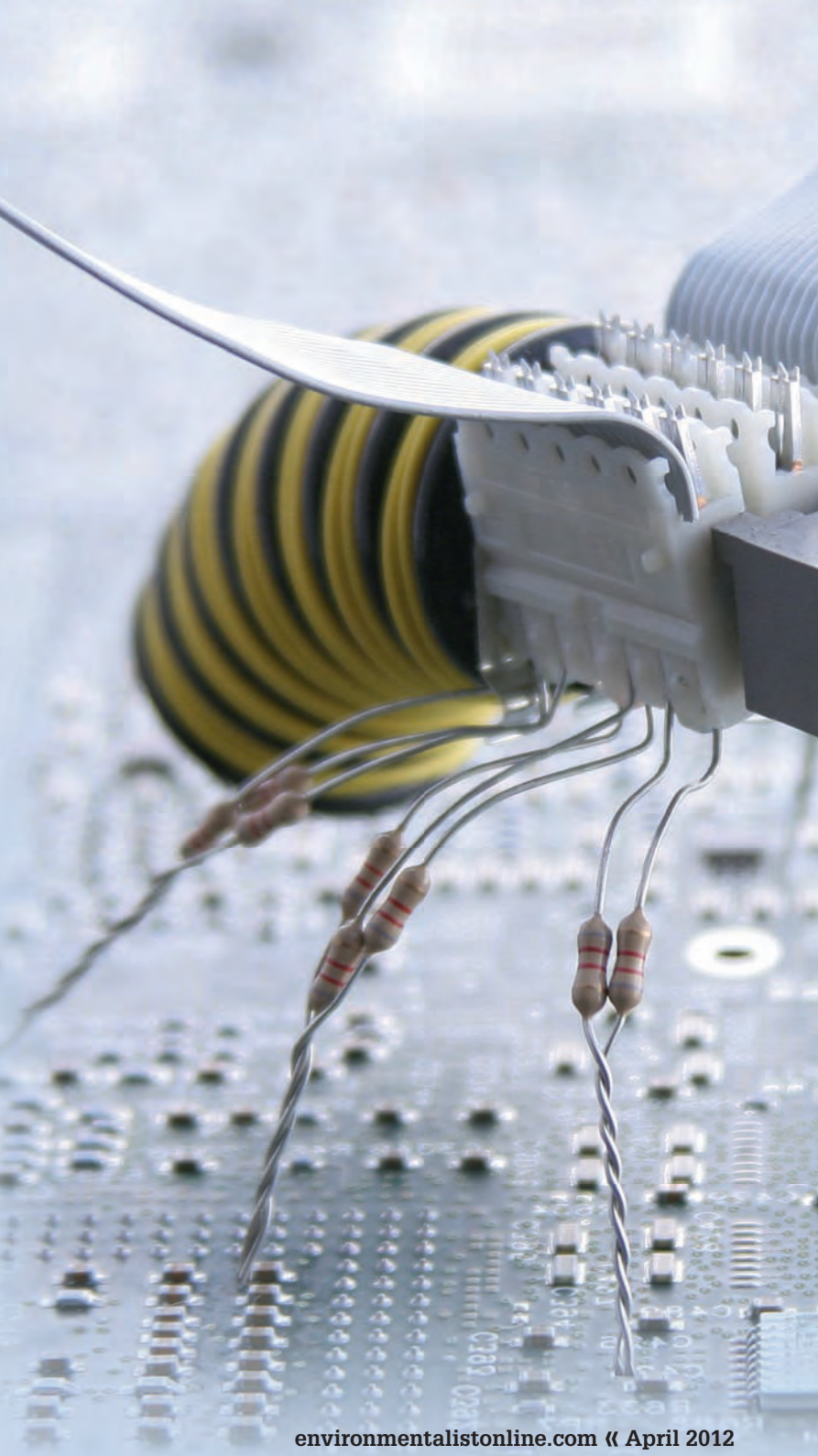
Matthew Bradley of Capgemini's sustainability team agrees. "The term 'green' is associated with 'greenwash', so for me it's about sustainability," he says. "Sustainability includes ethics. It's around environment but includes people and community as well. We need to understand the wider implications of IT and not just the carbon emitted while running a PC. It's also about mineral extraction, for example. Whatever you think about climate change, you can't dispute that we only have one planet and we're using finite resources at an unsustainable rate."

Environmental concerns

The environmental impact still matters though, not least because the carbon footprint of IT is set to equal that of aviation by 2020, according to research by consulting firm McKinsey, and IT accounts for 15%–30% of the electricity that offices consume.

As energy costs rise, environmental and economic arguments are converging. Tracey Rawling Church of Kyocera argues: "Sustainability is no longer about altruism, it's about costs, and organisations recognise that if they use less energy it will cost them less."

The cost savings can be considerable. A recent assessment by Externus for cruise company Carnival found that 36% of its office's carbon emissions came from IT and that by implementing all the



recommendations Externus made, Carnival could halve the building's carbon emissions and see a return on investment of more than £1.4 million after five years.

But as Apple's experience shows, customers want businesses to do more on several fronts. According to Fraser Muir, director of information services and the Learning Resource Centre at Queen Margaret University (QMU), where the introduction of thin client technology – computer systems linked to external servers – has saved about £47,000 a year thanks to reduced power consumption and heat output: “Our general strategy is to make the campus as environmentally sustainable as possible. That's what our students want.”

And as our love of IT increases, tackling these issues will become more and more important. “As the environmental, social and economic impact of IT continues to grow, its importance to the global sustainability agenda will increase,” claims Briscoe.

Government strategy

Given such a complex and often confusing set of issues, how should businesses best approach making their IT more sustainable? The new “greening government” strategy launched in 2011 has much to say about

IT, and demonstrates the importance of taking a strategic approach. It's a way of operating that many businesses think is important, but most are failing to act on, a 2008 survey found. Although nine out of 10 IT managers surveyed said the environment was important for their operations, only 38% had any environmental IT policies, let alone a strategy.

Divided into two parts, the “Greening government: IT strategy” sets out its approach to greening IT from manufacture, design and use to reuse and disposal, and also examines how IT can help make government operations more sustainable.

“The approach taken recognises the dual role of IT in respect of environmental issues. On the one hand, IT is part of the problem with the resources and energy it consumes generating significant greenhouse-gas emissions. On the other, IT is an enabler to change the way government operates and provides services, and thus to realise efficiency and environmental improvements on a much wider and larger scale,” the strategy explains.

Remembering that IT is part of the solution as well as part of the problem is important, says Briscoe: “Sustainable computing is concerned with both the use of computing in achieving sustainability aims, and the sustainability of the computing itself, the latter being necessary in achieving the former. Computing for sustainability can take many forms.”

One example is his own research for the EPSRC-funded C-AWARE project – on enabling consumer awareness of their own carbon footprint through mobile service innovation – that is using the CCL as a test-bed for developing new business models that use sensor networks integrated with smart phones applications to help reduce environmental impacts.

Along with using IT to cut consumables such as paper, the government is looking to technology to promote flexible, remote working and reduce travel via teleconferencing and collaboration tools. Environmental gains are already being made at Capgemini, according to Bradley: “Travel reduction is one of the biggest issues. At Capgemini we travel very little. I have softphone [VOIP software] on my laptop, and because I can whiteboard and share through my laptop, I can have collaborative meetings across the globe without travelling,” he says.

Life-cycle approach

Assessing the flip-side – the impact of IT – what lead can the government strategy give the wider business community? The first thing to do is take a life-cycle approach, as the strategy explains: “The environmental impact of IT is more than just the energy it uses in operation, it spans from design, manufacture and procurement, through operation to eventual reuse, recycling or disposal. It is essential that the government IT infrastructure is operated in a green and cost-effective manner, but also designed, procured, and reused in a way that embeds green IT principles across the life cycle.”

Although not the first, the most straightforward stage to tackle is the operational phase of IT, and one

where in-house monitoring and measurement can yield valuable information. According to Muir: "It's easier now than it was in the past. We measure power consumption using a £15 power meter for all desktops and something slightly more complex for the server room. This means we can look at power supplies and work out energy consumption per user."

Although some of QMU's 450 staff and 5,000 students still require PCs for video editing, most computing is done via thin clients. "They consume less power during their lives, have fewer parts so cost less to manufacture and, because they last between 1.5 and two times as long as a PC, they have less environmental impact," explains Muir. "The big selling point of thin clients is how long they last – we hope to get seven to eight years' life out of them."

Modern thin clients consume 5W–9W, compared with 40W–60W for some PCs, which can use as little as 5% of their capacity at any given time. "Our calculations comparing thin clients and PCs – even taking server energy consumption into account – suggest the numbers stack up. It's about making better use of the resources you have," Muir adds.

While buying less and making it last longer sounds like good practice, it may not always be the case. "This

needs. One widely quoted study by US researcher Dr Jonathan Koomey estimated that, in 2005, the total power used by servers amounted to 0.6% of total US electricity consumption. When cooling and auxiliary infrastructure were included, that figure jumped to 1.2% – equivalent to five 1,000MW power plants.

Unsurprisingly, QMU is working to make its data room more energy-efficient. "We're making nuts-and-bolts changes, like adding partitions and physical separation so that we're only cooling what needs to be cooled rather than a whole load of air," says Muir. "We've increased the air temperature in the room to 25°C, and when we get new kit we get stuff that can run at higher temperatures."

Peripherals, too, need to be taken into account, Rawling Church points out. Using its ceramics expertise, Kyocera launched its first cartridge-free printer 20 years ago. "Most cartridge-based printers are a very wasteful design – you're binning several components that have consumed energy in manufacturing and transport simply because the black ink has run out," she explains. "[Our design means] when the toner runs out all you replace is a plastic cassette of toner. The other components remain there, often for the printer's lifetime."

Improving technology, however, can only achieve so much. "Research on printing commissioned by Kyocera suggests that 60% of what businesses print or copy isn't necessary," Rawling Church says. "However energy-efficient we make our products, we still have to rely on users to use them responsibly, so we invest a lot in communicating with them."

Demonstrating how to use print-preview functions in text documents, set print area functions in spread sheets, and reducing font size and margins all save paper, as can more coercive approaches, such as restricting access to colour printing, diverting large documents to specific printers, and using "print and follow" technology.

"The best way of cutting printing is removing people's personal devices. If you have to get up to retrieve documents you tend to print less," she explains.

Because thin clients consume less power, have fewer parts and last between 1.5 and two times as long as a typical PC, they have less environmental impact

highlights the need to balance the different natures of sustainability and computing, specifically the long-term perspective of sustainability with the innovative and transformational nature of IT," says Briscoe. "Computing technology innovation needs to embrace sustainability concerns as a potential source of, rather than a constraint on, innovation."

Sustainable working

As well as what sits on desks, server rooms are also a key consideration, not least because of their cooling



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Reusing IT

Compared with measuring and reducing energy or paper consumption during the use phase, improving sustainability in IT manufacturing and in reuse is more problematic. For most businesses, this involves decisions about buying new and disposing of old equipment. According to computer reuse charity Computer Aid, only 20% of the total energy used during a computer's life goes into its running; the rest has been used before it is turned on for the first time.

Since it was founded in 1998, the charity has provided almost 200,000 high-quality computers to schools, healthcare projects and charities in 100 less-developed countries, mainly in Africa and South America. "The social benefits of reuse are massive. There's still loads of value in a working PC," says Computer Aid's Anja French. "We asset track every piece of equipment that comes in – everything is bar coded – so we can tell donors exactly what happened to each piece of equipment."

While reuse makes social sense, some question the environmental impact of reuse outside Europe. According to Muir: "The challenge is what happens when these computers reach the end of their life in Africa. Are they landfilled or broken up by child labour exposed to toxic chemicals? It's a fine balance, and we're bound by legislation to do things appropriately."

"It's a real, real challenge," Bradley agrees. "We don't allow IT outside the EU because it's so hard to track and at the end of three years needs to be shipped back to Europe in a container. Re-marketing and resale in the UK is better."

Given the amount of resources used in IT manufacture – Computer Aid estimates 1,500 litres of water go into making one PC, and so-called "conflict minerals" go into IT products – similar ethical dilemmas face those making procurement decisions and their suppliers.

According to Muir: "Whenever we think of technology – procure new equipment or services – we're aware of our environmental impact and looking at our suppliers' environmental credentials – we're not just looking at power consumption. We get a variable response: some firms don't get it and are still confused about what they're being asked, but others are better and more aware. But the only way it will change is if we keep asking."

More sustainable supply chains

There are subtleties, says Muir, in such procurement exercises. At QMU, sustainability and other criteria are weighted at the start of the process: "What we weigh most is cost but sustainability can tip the balance between two companies offering otherwise similar products or services. It's a balancing act."

Outsourcing is another way of tackling sustainable IT, either for certain functions, such as print services,

or for larger areas of IT. The biggest shift in printing, for example, is the move from products to services that allow users to scan, exchange, annotate and archive documents, rather than print them.

"It's changing the way people work and the way these devices are sold," says Rawling Church at Kyocera. "My number one tip is to stop buying printers – buy managed print services instead. You'll get a more cost- and carbon-efficient print solution. Buying printers is outdated thinking. The best way to get more efficient solutions is to allow suppliers to be creative and take advantage of all the technologies available. Have a conversation – tell them what energy, paper, environmental savings you'd like to make."

This is what the Environment Agency (EA) has done in its £336 million seven-year deal with Capgemini, which was signed in 2009. Under the contract, Capgemini has responsibility for the agency's IT infrastructure, and application management and maintenance services, including some key applications such as flood warning and waste management.

Through the deal, the EA became one of the first customers of Merlin – Capgemini's new Swindon-based "greenest data centre in the world" – and the contract is designed to minimise environmental impact from purchase through to disposal, as well as reduce the agency's carbon emissions from IT by 50%.

The partnership is described as the first UK IT contract to lay down green metrics. "With the EA we enshrined sustainability in the contract and there are 18 sustainability measures in our contract linked to [its] objectives, such as reducing our carbon footprint and having an ethical supply chain," Bradley explains.

Each target is scored from 1 to 5 quarterly and annually, and the scores translated into a bronze, silver or gold band associated with rewards. "Meeting targets is important for us as once we hit silver we can use the EA as a reference client," Bradley explains.

It is a contract the agency hopes others will learn from, and Bradley's top tips for those interested in outsourcing are centred on communication. "It's about understanding what's important and why," he says. "Get a clear understanding of what you want to achieve over the life of the contract and in the shorter term."

Communicating externally – and learning from others – is also crucial. "For me, it's also about engaging with our supply chain and small businesses – the wider community – not thinking we can do it all. There's a huge wealth of knowledge out there," Bradley concludes. "And it's about sharing what you can do outside work – taking sustainability home with you."

Becky Allen is a journalist in the field of health, safety and the environment, and is a regular contributor to *the environmentalist*.

The dangerous domino effect

Former lead UN climate change negotiator **Yvo de Boer** tells **Paul Suff** why firms need to get ready now for the big sustainability challenges

The way different major sustainability trends such as potential food shortages, water scarcity, rising energy demand and climate change are converging presents a frightening picture of the future that will require businesses and policymakers to work together to find solutions. That is the assessment of Yvo de Boer, the former executive secretary of the UN Framework Convention on Climate Change (UNFCCC).

Since leaving his UN post in 2010, de Boer has been working as special global adviser on climate change and sustainability for KPMG. It predicts, in its recently published report *Expect the unexpected*, that the pressure on businesses to pay the full cost of their environmental impacts will increase over the next 20 years as governments address the effects of what KPMG describes as “sustainability megaforces” (see panel, p.23). These 10 significant environmental and social changes will provide both risks and opportunities.

Coming together

According to KPMG, the megaforces will impact each and every business over the next 20 years, acting in unpredictable and interconnected ways. As a result, the resources that businesses rely on will become more difficult to access and more costly; there will be increasing strain on infrastructure and natural systems as patterns of economic growth and wealth change; and physical assets and supply chains will be affected by the unpredictable outcomes of a warming world.

“I think organisations have been aware of these megaforces and how they’ve been developing, but there’s been a tendency to look at them individually rather than how they are interacting,” says de Boer. “If you start to consider the interaction between the different megaforces, the picture becomes quite frightening.”



De Boer uses population growth – set to rise by 20% by 2032 – to illustrate how the different megaforces are connected. “We’re heading for nine or 10 billion people by the end of the century. That poses the challenge of increasing food production by 70% by 2050. That’s no mean feat by itself,” he explains. “But if you then look at the issue of water, how do you increase supplies, which we don’t have, to ensure food production on that scale? Then add into that mix the impact of climate change on water. There’s also energy, where biofuels are replacing food crops in the move to more renewable forms of energy. Some countries are focusing more on using hydropower, but you could ask where will the water come from for that? Because in the future there will be more evaporation from lakes that fuel hydropower plants.

“Because we’ve tended to look at these trends individually we don’t think the impact is that great,” warns de Boer. “We’ve pushed them to the back of our minds.”

The failure to look at the bigger picture and how emerging trends connect is exacerbated by the tendency to see some sustainability challenges as of little immediate concern, de Boer says.

“There’s been an inclination, certainly in the West, to see some issues as other people’s problems rather than our own: to think of them as far away and something that can be dealt with at a later date.”

He cites climate change as the classic example, where the major impacts, both now and in the future, are in the poorer parts of the world rather than in industrialised countries.

“That means there is less urgency to deal with the issue,” argues the man who headed the UN climate change negotiations for four years before stepping down in the aftermath of the Copenhagen talks in 2009. He believes the continuing financial and economic crisis has played a significant role, using Europe to highlight how sustainability has dropped down the policymaking agenda. “The focus is on the euro and financial crisis, and other things – particularly sustainability – are being pushed to the margins. The desire to cope or grapple with these things is being sidelined.”

Corporate response

The KPMG report reveals that some industries are more at risk from the sustainability megaforces and have further to go in their response than others. The food industry, for example, is particularly exposed to energy and fuel volatility risks, and water scarcity is a major issue for food producers.

De Boer is confident that companies can make the necessary adjustments, however. Coca-Cola in Brazil provides a very good example, he says: “It’s planting forests to guarantee rainfall to replenish an aquifer that supplies the water used to make Coca-Cola.”

He also points out that some companies are making millions of pounds by responding to the megaforces in ways that reduce bottom-line costs. “There are companies that see these trends as an opportunity to put new products and services in the market, and to enhance their brand,” says de Boer. “Unilever, for example, wants to double its profits and reduce its environmental footprint by 50%.”

Another response is collaboration, with businesses working together to stretch the boundaries of what is possible. “The three main drivers of deforestation are cattle rearing, growing palm oil and soya plantations, but a number of consumer-goods firms have now said that, as of 2015, they will no longer use unsustainable sources of beef, soya and palm oil.

“I think you’d have had to spend 200 years negotiating through the UN to even agree a definition



of sustainability, let alone agree such objectives,” comments de Boer. “So, that’s an example of companies collaborating to change the rules of the game because of their significance in the marketplace.”

Despite examples of corporations taking positive action to address the emerging sustainability megaforces, de Boer warns that other firms, and countries, are responding by cornering the market in resources. “Agricultural land, particularly in Africa, is increasingly being bought or leased long term by other countries to secure food supplies in the future, while more and more companies have natural resource contracts going far into the future. So, both countries and companies are trying to secure supplies of food, wood and raw materials.”

He fears such a strategy could lead to possible conflict. “If you sign a deal with a country to grow something there and the deal includes first access to water supplies, what happens when supplies start to diminish to the point where the country has to decide whether to provide water to local communities or the production of your crop?”

To prevent conflict arising, KPMG recommends public-private partnerships, where the two work together to combat specific issues. “We are seeing examples of mining companies increasingly having to compete for energy. That challenge can be met through private-public partnerships,” he explains. “If a mining company begins to look at the solution to its energy needs, not only in the context of its own operations but also the local communities’, then there is no conflict.”

De Boer acknowledges that public-private partnerships – such as private finance initiatives – often attract a negative press, but says such deals can be a force for good. “It depends on the nature and quality of the deal,” he argues. “There are things companies can do alone. There are things they can do together. And there are things they can do together in public-private partnerships with government.”

Polluter pays

The KPMG report reveals that companies would lose 41 cents, on average, in every \$1 they earned if they had to pay the full environmental costs of production. It also reveals the environmental costs on business are doubling every 14 years. “Firms are not internalising environmental costs at the moment,” claims de Boer. “By and large, you can pump greenhouse-gas emissions into the atmosphere at almost no cost, even in Europe. In many countries, water is not priced properly. In other words, all of these are simply externalities that are not included in the price of the product.”

But de Boer believes pressure will mount on polluters to internalise more of these costs, as governments look to cut subsidies on input commodities, such as fossil fuels and water, and demand that companies pay for the costs of environmentally damaging outputs.

“So, unless you can get the environmental or sustainability footprint of your product down it’s going to get far more expensive for consumers. And price influences the consumer’s choice as to where, and on what, to spend their money.”

10 GLOBAL MEGAFORCES

- **Climate change** – the megaforce that directly impacts all others.
- **Energy and fuel** – fossil-fuel markets are likely to become more volatile and unpredictable.
- **Material resource scarcity** – global demand for material resources is predicted to increase dramatically.
- **Water scarcity** – by 2030, the global demand for freshwater will exceed supply by 40%.
- **Population growth** – the world population is expected to grow to 8.4 billion by 2032.
- **Wealth** – the global middle class is predicted to grow 172% between 2010 and 2030.
- **Urbanisation** – by 2030, all developing regions, including Asia and Africa, are expected to have the majority of their inhabitants living in urban areas.
- **Food security** – in the next two decades the global food production system will come under increasing pressure from megaforces including population growth, water scarcity and deforestation.
- **Ecosystem decline** – making natural resources scarcer, more expensive and less diverse.
- **Deforestation** – forest areas will decline globally by 13% between 2005 and 2030.

Source: KPMG, “Expect the unexpected” (lexisurl.com/iema12139).

He wants companies to be more transparent about sustainability risks, believing that the current separation of financial and so-called non-financial information is a barrier to greater understanding of the real environmental costs of goods and services. “One of the things that bothers me most is that we keep referring to sustainability information as ‘non-financial’. Walmart went through a big exercise on packaging and transporting dairy produce and saved itself millions

There are things companies can do alone and things they can do together. And there are things they can do in public-private partnerships with government

in the process. I think that is a real piece of financial information,” says de Boer.

“We need to be moving towards more integrated reporting. I don’t think you need a separate financial statement and sustainability report. Why do you need a sustainability report to be listed on the South African stock exchange, but not on the London or Frankfurt stock exchange?”

Political interference

De Boer is very much in favour of government-backed market mechanisms to address the failure by some firms to embrace relatively cheap ways of reducing energy use and cutting greenhouse-gas emissions.

“The international science community has been telling us for something like two decades that we can reduce global emissions by 20%–30% through energy efficiencies that pay for themselves through lower energy bills in two to three years’ time,” he explains. “So

FUTURE OF CLIMATE AGREEMENTS

Having been at the forefront of negotiating global treaties for a number of years, Yvo de Boer believes that international agreements such as the Kyoto Protocol provide investors and businesses with a degree of confidence that national policy simply cannot match.

"Look at EU energy policy over the last two to three years," says the man who was the EU chief negotiator at Kyoto before taking up the UN role. "We've seen feed-in tariffs retrospectively scrapped in Spain, Germany suddenly abandon nuclear energy, and most countries looking to scrap favourable tax rates for renewables. In other words, it is very, very difficult to plot an investment course based on what national governments say. International treaties can provide much more certainty about the direction of travel."

Asked whether multilateral agreements require a legal basis to be successful, de Boer says the compliance process should include every available enforcement tool. "The Kyoto Protocol is only about countries taking on a legally binding target in the context of an international treaty. And that, to me, is a bit like saying: OK, we're going to introduce a maximum speed limit, but we're not going to police it; there will be no patrols, radar guns, courts or penalties. Legally binding should mean applying the whole legal toolbox."

Does he see the voluntary national commitments of the type made at Copenhagen and Cancún as the best way of reinvigorating the international climate change negotiations? "The fact of the matter is that those commitments are nowhere near good enough to stabilise temperature rise at the necessary 2°C," he says, highlighting several problems with such an approach. "The first is that you have no guarantee that your competitors will act in the same way as you plan to do. You also need a global process that allows you to measure effort against goals so you can see how far you are from the target. There needs to be a mechanism in place to ensure that you regularly revisit performance in order to get to the target."

He does, however, offer the reminder that Kyoto started in a similar fashion. "Kyoto did not impose targets on countries. Governments came to Kyoto with offers to reduce emissions that they had formulated themselves," he says. "They then negotiated and compared each others' efforts and then came a voluntary proposition that was written into the treaty. So the Kyoto process was not top down."

we have the potential to significantly reduce emissions without really costing us anything through action that will save us money.

"The question then is how do you ensure you open up those free or cheap opportunities? I think market-based mechanisms, like the EU emissions trading scheme [ETS], are an important way of doing that. It changes the investment equation in a way that all of the so-called low-hanging fruit is actually picked and eaten."

Although the EU ETS has been criticised for providing energy-intensive industries with a financial windfall, de Boer defends its design, comparing the EU scheme with how Kevin Rudd (Australian prime minister between 2007 and 2010) tried to introduce a similar scheme. "The Europeans started by including a small number of companies, while Rudd tried to focus on a much larger number," de Boer says. "The EU began with an over-allocation of permits, while the Australians went for an under-allocation. The Europeans also gave away a lot of permits free of charge; the Australians proposed to charge from day one."

"The outcome was a great deal less resistance in Europe and more time for European companies to get used to the system. Now, over time, Europe is moving from an over- to an under-allocation, introducing

greater auctioning of allowances and increasing the number of companies involved. So, I think the EU, in a very intelligent way, eased Europe into an emissions trading system rather than try to shock [it] into it."

He also points out that the financial crisis means that EU economic activity has gone down, so companies need fewer emissions permits. "You can't blame the European Commission for that," argues de Boer. "Should the commission take the 'windfall' away from companies already struggling in the economic climate?" he asks. "I think the answer to that is no."

Level playing field

De Boer would, however, like to see policymakers become more articulate in championing the benefits of action to improve sustainability. "I think if you were to ask most politicians they wouldn't be able to tell you how you can realise strong economic growth and sustainability at the same time," he states.

"One of the first conversations I had in my UN role was with an Indian minister, who said 'the people who have elected me don't give a damn about climate change, they don't even know what it is. What they are worried about is where their next meal is going to come from. And unless I can show that their next meal will probably come later and will definitely be more expensive as a result of climate change, I will not get their support for tackling it.'"

He rejects the argument put forward by some industries that unilateral environmental regulation risks carbon leakage because companies relocate to countries with less stringent controls. "First of all you get a lot of people talking about wanting a level playing field. I don't think there is such a thing," he argues. "No two countries have the same labour costs, VAT, energy costs etc, so in that sense there is no level playing field. However, there is a desire to see that there is fair engagement; that your competitors are acting as well."

"You do need to give businesses the confidence that if they 'stick their neck out' on something, their competitors are not simply going to run away with consumers through lower-cost but worse [for the environment] products."

So, with the sustainability megaforges gathering strength, what advice would de Boer offer sustainability professionals as they help to prepare their organisation's response? He offers the following recommendations:

1. Understand your risk and vulnerability, so you can understand your exposure.
2. Prepare a strategy that allows you to reduce your risk and vulnerability.
3. Make a business case for the strategy. Don't develop the strategy to save the planet, but to save or enhance the company. Unless you take this third step, you're not going to be taken seriously. If you can't make the business case, then you need to stop.
4. Make sure the strategy can be implemented. Don't make it too complicated. It's much better to identify five key performance indicators than 50, or you won't be able to see the wood for the trees.
5. Reward the strategy properly. Reward people for their efforts in realising and achieving the strategy and goals.

Building ambition

How the property company Lend Lease is meeting its sustainability aspirations

Lend Lease founder Dick Dusseldorp called in 1973 for companies to “start justifying their worth to society, with greater emphasis placed on environmental and social impact rather than straight economics”.

That approach continues to underpin everything the company now does, from building the athletes’ village for the London 2012 Olympics and the redevelopment of the Heygate Estate in London’s Elephant and Castle, to managing the Bluewater shopping centre and fitting out its own new UK head office. “It’s about creating a future built on sustainable practices and lasting relationships,” says Pascal Mittermaier, head of sustainability for the Europe, Middle East and Africa (EMEA) region.

Sustainable aspirations

Lend Lease aims to be a sustainable business and industry leader. These goals are supported by 23 global sustainability aspirations, including the following five long-term environmental objectives:

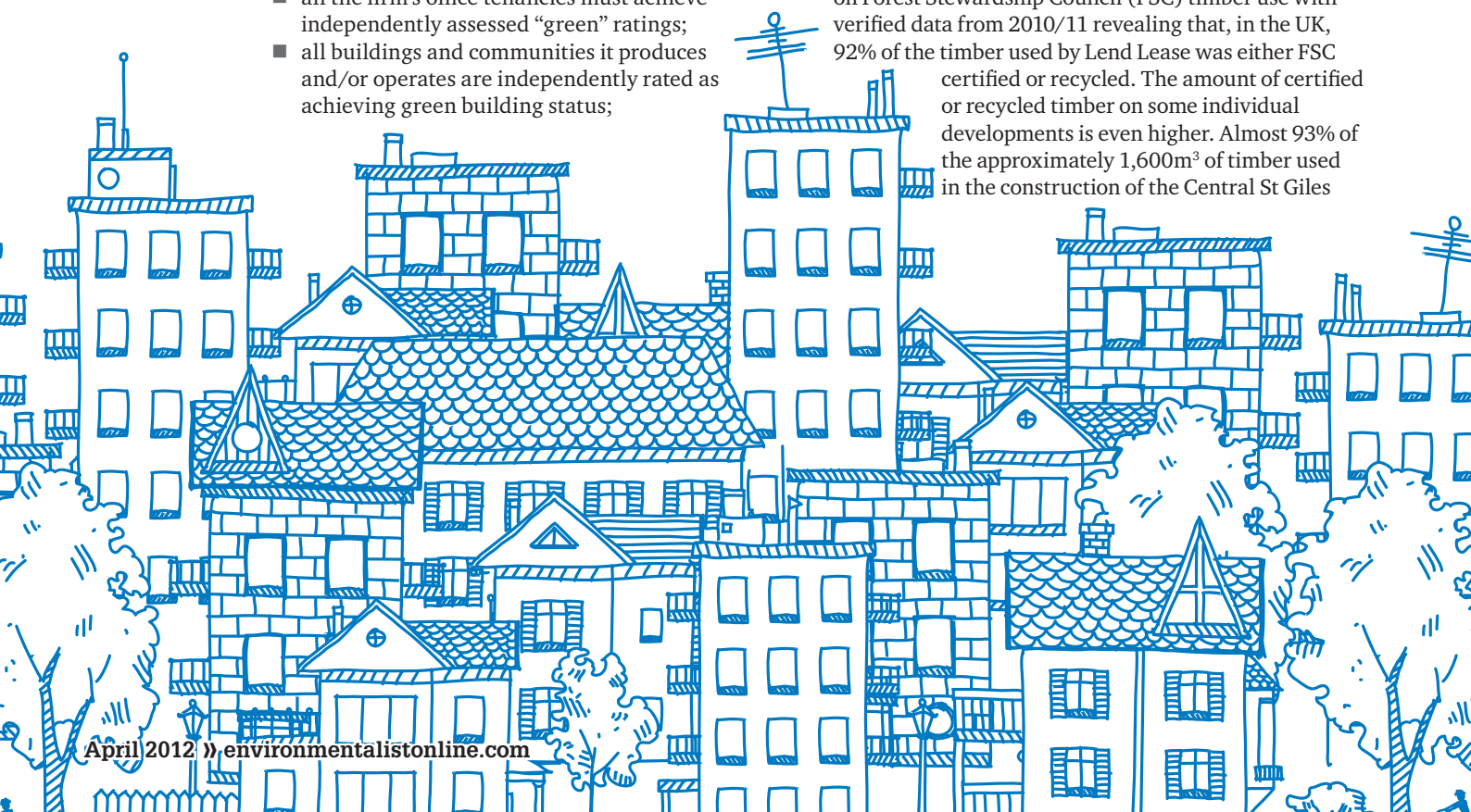
- environmental considerations are to inform all its investment decisions;
- all the firm’s office tenancies must achieve independently assessed “green” ratings;
- all buildings and communities it produces and/or operates are independently rated as achieving green building status;

- all Lend Lease tenancies are zero-net carbon, water and waste, as a minimum; and
- all buildings the firm develops and/or operates are zero-net carbon, water and waste, as a minimum.

Its ambitions mean the Australian-owned business is focusing on improving operational efficiency and achieving its environmental goals, which include reducing the carbon impact of its operations, minimising the amount of waste going to landfill, cutting water consumption and embedding responsible sourcing.

Lend Lease is already making headway in these areas. During the 2010/11 financial year, the firm reported that it had reduced the carbon footprint (scope 1 and 2 emissions) of its occupied offices, assets under management and construction operations in the UK by 27% over the previous three financial years. In 2009, Lend Lease in the UK set a target to reduce the total waste sent to landfill by 50% by the end of the 2012/13 financial year compared with 2008/09 levels. By 2011, it had already achieved a 48% reduction and is now well on target to meet the 50% reduction.

Water consumption in assets under management was also down in 2009/10, by 9.6% against the 2008/09 levels, slightly below its 10% target. Lend Lease has since set a 2013 target to cut the amount of water consumed in its construction and project management business in the UK by 20%. And all projects now report on Forest Stewardship Council (FSC) timber use with verified data from 2010/11 revealing that, in the UK, 92% of the timber used by Lend Lease was either FSC certified or recycled. The amount of certified or recycled timber on some individual developments is even higher. Almost 93% of the approximately 1,600m³ of timber used in the construction of the Central St Giles

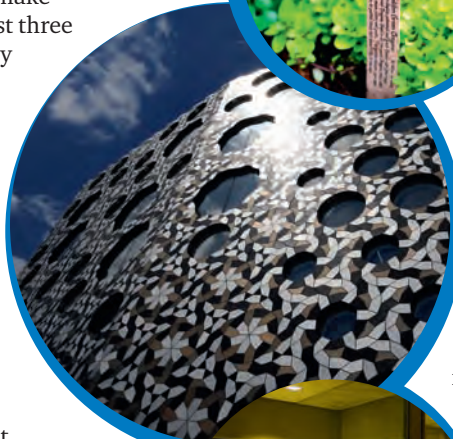


development in London, for example, was certified as FSC or recycled, with the remaining timber from well-managed sources. As a result of Lend Lease's commitment to FSC, in 2010 the company directly influenced eight suppliers to gain accreditation.

EMEA environment operations manager, Gemma Bourne, says that better measurement of environmental impacts is helping Lend Lease identify where best to make savings. "We've spent the past three to four years measuring every aspect of our environmental impact, from every construction site to every managed building. That includes water, waste, timber [sourcing] and CO₂, and we are also starting to measure embodied carbon," she explains.

Lend Lease has developed a reporting tool as part of its environment management system, called "Insight environment", to collate information and help the business to better understand its environmental performance. Its indicators comprise atmosphere and climate change, land and biodiversity, water, waste and environmental incidents.

These indicators are supported by more than 78 environmental metrics and 69 attributes. For example, the related metrics for the atmosphere and climate change indicator are: electricity and natural gas use; other energy purchased – heating oil, steam, petrol and diesel; refrigerant use; on-site power generation; employee business travel – air, taxi and company vehicle travel; emissions from waste; and embodied emissions from products and materials.



Up and running

The construction of the athletes' village at Stratford is a good example of how Lend Lease is turning its sustainability aspirations into action.

Over the course of a two-year building programme, Lend Lease needed 9MW of temporary power. It had the choice of either diesel- or gas-powered generators. Most construction projects use diesel generators, but Lend Lease opted for those powered by natural gas, something that had not been tried for temporary power generation in the past. "It was a first for a construction project in the UK," says Mittermaier. "Too many construction companies simply look at the cost of diesel generators compared with gas-powered ones and opt for the former because hiring them is significantly cheaper. But we looked at the overall picture, including that the cost of diesel is higher and the environmental impacts are greater," he explains.

The preference for gas generators resulted in better air quality in the local community, a reduction in CO₂ emissions of 10,552 tonnes (22% less than using comparable diesel generators) and, importantly, a cost saving of about £13 million. "We're now using gas-powered generators wherever we can," confirms Mittermaier.

The athletes' village project also provides a further example of how sustainability is driving innovation throughout Lend Lease and its supply chain, and leading to wider environmental benefits. The Code for Sustainable Homes target for the village was level 4, forcing the developer to seek innovative energy-efficient lighting systems rather than use 60W halogen light bulbs. Lend Lease teamed up with bulb manufacturer Philips to find an alternative. The Dutch electronics company brought forward its development of 7W LED light bulbs so that they could be installed in the village. "The payback is less than 12 months," says Mittermaier.

Standard practice

Of its 81 construction and project management schemes in progress in the UK at the end of 2010, Lend Lease had either achieved, or was on target to achieve, BREEAM rating of very good, excellent or outstanding in 85% of projects. To ensure Lend Lease projects meet the highest sustainability building standards, an increasing number of design staff are receiving training in benchmarks such as BREEAM. Across the firm, a greater proportion of its 17,000-strong workforce is being trained or accredited in BREEAM or similar green building schemes. In addition, the firm's project management and construction business is rolling out a three-stage sustainability core skills programme for all employees, covering the broad understanding of sustainability and technical requirements of specific roles.

Other ways of embedding sustainability include conducting an environment, health and safety risk assessment before the start of and throughout each project to identify the potential environmental impacts. The risks are documented and a plan is developed and implemented to improve environmental performance. But even before projects get the go-ahead, the company's investment decisions are subject to a process known as the corporate investment pipeline, with proposals, bids and tenders considered against criteria that include assessing risks to biodiversity and the potential for the project to generate toxic or significant solid, liquid or gas wastes or emissions.

Everyone who works for Lend Lease has their own set of sustainability roles and responsibilities that are agreed with their manager, and formal sustainability processes which they have to work to in their part of the business. In August 2011, Lend Lease introduced a traffic-light system for its projects, similar to display energy certificates, so managers at each site know how they are performing against their peers in terms of the firm's sustainability priorities. Under the scheme, red signals poor progress, amber indicates that progress is being made, and green demonstrates good progress. Monthly performance reports go to the senior management team.

"It's a powerful tool to generate improvements," says Mittermaier. "You don't want to be in the red." There is also a financial element, with rewards linked to performance.



LEND LEASE AT HOME

Lend Lease moved into the new head office of its Europe, Middle East and Africa division, 20 Triton Street, London, in summer 2010. The newly refurbished offices – Lend Lease occupies 80,000 square feet over four floors – enabled the company to put into practice its sustainable ethos. The building itself has an excellent BREEAM rating, scoring 73.4%, and its energy performance certificate classification is "B". The recent fit-out achieved the first BREEAM excellence award for a UK fit-out. "We've made sure the design, materials, equipment and layout reflect our thinking on sustainability and help engage with our employees and visitors about sustainability," comments sustainability manager Duncan Young.

The flooring is made from recycled 100-year-old French oak, originally from railway wagons. The 15mm oak has been remilled, cut down and lacquered, and attached to Forest Stewardship Council plywood. Birch FSC plywood is also used in the vertical wall panels. The modular carpet tiles have a BREEAM "A" green product rating, while the fabric for the booth seating has an 80% recycled content. There is LED lighting throughout and the office also has a 260m² green roof and employee allotment. To improve air quality, Lend Lease has reduced toxins entering the workplace, for example volatile organic compounds, and there are approximately eight plants to every employee – 4,000 in total. "There is mounting evidence that plants provide a healthy and more productive workplace, by absorbing dust from carpets and toxic fumes from printers," explains Young.

Like all of Lend Lease's offices, Triton Street adheres to the firm's global environment management system, which supports all corporate activities, from sustainable procurement to green travel plans, to reducing waste, carbon emissions and consumption of energy, water and paper. And along with its other facilities, the London head office implements the company's green office guides, which are integrated into the environment management system and complement the building's existing green rating by providing an operational focus on the key environmental areas, such as energy, water and waste.

The value chain

Making sustainability everyone's responsibility is the key to Lend Lease meeting its sustainability aspirations. Engaging staff and making them aware of what is expected is having an impact, with employees more willing to invest in the right behaviour.

The company's EMEA head office, 20 Triton Street in London, provides a glimpse of what is possible (see panel above). From its design and materials to how staff use the building, the office is a very visible demonstration of Lend Lease's sustainability

Is CO₂ offsetting

Experts debate the environmental value in

While carbon offsetting is becoming an increasingly popular way to cut emissions, questions remain over whether it really is effective in achieving genuine reductions. This is because offsetting doesn't reduce our emissions at all, it simply lowers someone else's, and that should be their responsibility. Are we not simply muddying the waters as to which activities are causing emissions and then justifying business-as-usual activities that may not be sustainable?

To use an analogy, let's say I've decided to be self-sufficient, using my garden to feed my family. I intend to grow all my own food, but find at harvest time I don't have enough. I look in my neighbour's garden and see he has lots of fruit trees and no family to support. So, I put my hand through the fence and help myself to the low-hanging fruit next door. I get through the year claiming to be self-sufficient and declare my model for feeding the family is sustainable, but it isn't: I have simply offset my shortfall with my neighbour's excess.

In the world of personal carbon offsets we do this all the time. We pay to offset emissions from flights, for example, and avoid considering whether such activity is sustainable. Offsetting can therefore discourage the consumer from making beneficial carbon choices.

Other concerns around offsetting include:

- the robustness of the accounting methods used;
- the acceptability of using an initial, possibly exaggerated, benchmark to measure offset savings;
- the variability of carbon savings and the use of averaging when offsets are sold; and
- its value hinges on the balance of carbon savings generated elsewhere compared with those missed by avoiding actions and behaviours at home.

There's also an ethical argument; assuming we will one day move to global CO₂ reduction targets, should an organisation in one country really be claiming the low-cost emissions savings of another in a different country? It's odd that we can move our manufacturing out of Europe and use the CO₂ savings to meet our targets, but still consume the embodied carbon of the same goods as imports, then claim further savings through offsets.

It would be better to reduce our emissions to the lowest possible level, and then be honest about what remains. If this is above what is sustainable then perhaps we should abstain from those activities, rather than hiding them under a veil of offsetting and neutrality. There's no shame in accepting we cause CO₂ emissions, but to be sustainable we need transparent accounting for carbon. This means scientific analysis based on a life-cycle approach, product footprinting and practical actions; it doesn't mean confusing the picture by taking someone else's low-hanging fruit.



Chris Reynolds is a business adviser on climate change and competitiveness, and an IEMA Fellow

unsustainable?

firms claiming the carbon reductions of others



Dr Wendy Buckley is the director of Carbon Footprint, a carbon management consultancy

A growing number of FTSE 100 companies are making commitments to be carbon neutral – six have already done so and at least 20 more are on their way. They are achieving it through a combination of their own carbon reductions and robust offsets.

The reality is that very few businesses can achieve carbon neutrality by reducing their own emissions to zero, even with the best renewable technologies and supply-chain efforts deployed. Offsets offer a pragmatic and rapid way to achieve neutrality across individual products or services or even whole organisations.

But offsets are not simply about achieving neutrality, they are an integral part of carbon management. Long gone are the days of firms simply offsetting their emissions alongside their guilt. Offsetting must be used only as part of an organisation's overall carbon strategy, which involves a cyclical process of robust carbon footprint assessment and reduction targets. Offsets are then used to remove the firm's residual carbon footprint, which should be diminishing year by year.

While critics question the quality of offsets, the reality of the situation is that the market is highly regulated. Rigorous international standards, such as the verified carbon standard and the certified emission reduction scheme, provide businesses and consumers with assurance that the savings being made are new, permanent and measurable. BSI's publicly available specification PAS 2060, which provides a framework for demonstrating carbon neutrality, includes standards for offsetting. Along with the many excellent and free online tools available, which use internationally accepted methodologies and conversion metrics to help businesses evaluate their CO₂ emissions, there is no excuse for organisations to be offsetting their carbon against inaccurate calculations.

Aside from the obvious carbon savings made through offsets, the approach can have other, more broadly positive impacts. Investing in offsets often helps firms to place a value on carbon. For example, many organisations employ internal schemes that charge back the cost of offsetting to the emitting function, putting a tangible value on CO₂. Forward-thinking firms use this as a means of engaging staff with the true costs of their choices and to instigate behavioural change. Some companies also visit their offsetting projects and get involved with them, which further helps staff buy-in.

Furthermore, offset projects often have strong socioeconomic dimensions, with many helping communities in developing nations – supporting renewable energy or avoiding deforestation, for example. These projects would not have been possible, nor the positive outcomes achieved, without the creation and sale of carbon credits to fund them.

Man-handled

Richard Campen asks whether it is right to interfere with the Earth's natural systems through so-called geoengineering to avoid climate change

Geoengineering concerns the intentional manipulation of the environment in order to moderate global warming. An example would be the dispersal of sulphate aerosols in the upper atmosphere to reflect sunlight. The methods of geoengineering raise many questions about their likely effectiveness, possible side effects and international governance.

The *Guardian* reported recently that a small group of climate scientists, with backing from figures such as Bill Gates, were lobbying governments to back experiments that manipulate the climate as a way of avoiding catastrophic global warming. Considering what we know of human impacts on the environment, is it right to further interfere with the Earth's natural systems?

Moral hazard

Many environmentalists are worried about manipulating the climate, even if the goal is to prevent climate change. For example, a British project, Stratospheric Particle Injection for Climate Engineering (SPICE), was postponed in October 2011 due to objections from environmental groups.

The SPICE experiment involved pumping water through a hose to a balloon and dispersing droplets one kilometre above the Earth's surface. The plan was to eventually pump sulphate aerosols to even higher altitudes to reflect sunlight and cool the planet. The postponement was somewhat lightheartedly reported as "SPICE on ice". Nevertheless, the experiment is an example of geoengineering research, an area of technology that is set to develop.

The methods of geoengineering fall into two main categories: solar radiation

management and carbon dioxide removal. The former might include techniques such as "cloud seeding", a kind of weather modification, and space sunshades, which divert the Sun's rays. Carbon dioxide removal techniques include fertilisation of the sea with iron, to stimulate the growth of algae and the capture of CO₂. Geoengineering methods might prove ineffective, have unknown side effects or even be used as weapons. Also, it is not known how these "technologies" would be governed.

A US task force on climate remediation research has published *Geoengineering: A national strategic plan for research on the potential effectiveness, feasibility, and consequences of climate remediation technologies* (lexisurl.com/iema11840). It follows the UK Royal Society's 2009 publication *Geoengineering the climate: Science, governance and uncertainty* (lexisurl.com/iema11841).

Both publications propose mitigation and adaptation strategies as priorities, but recognise the uncertainties associated with geoengineering. Both also emphasise the issue of international governance. It is a fact that the technologies exist and there are calls for further research into them, but the social and environmental impacts of most geoengineering methods have not yet been adequately evaluated.

As the dominant species on Earth, human beings have exploited and manipulated the natural environment to get to where we are now. Humans have sought to produce the best outcomes for their species en route to a seven-billion-plus population. Around the globe, humans have drained, irrigated, cleared, levelled and reclaimed land in the name of development.



For many populations these actions have improved overall public health and wellbeing. Some of the general outcomes have been as planned (such as food production), but many have generated new problems, such as desertification, dust storms, flooding and pollution. Each adverse consequence presents health and environmental challenges which are addressed by a combination of short-term measures – for example, dealing with the immediate effects of famine and outbreaks of disease – and longer-term measures, such as legislation for conservation and controlling pollution.

Patchy record

In environmental terms, the track record of the human species is certainly not good; we are seeing a dramatic decline in biodiversity as a result of the increase in the human population and there is general scientific consensus that our exploitation of fossil fuels will cause climate change to some degree.

From an environmental and health perspective, the 2005 Millennium Ecosystem Assessment concluded that the damage to human health caused by environmental changes may be mitigated through strategies that reduce the driving forces of consumption, population increase and inappropriate technology use. The last item, “use of technology”, should be of great interest to environmentalists and engineers alike, especially in the context of the ongoing debate about the appropriateness

of geoengineering options and their potential impact on people and the planet.

We already struggle with the uncertain consequences on human health and wellbeing of exploiting and manipulating the environment, and of climate change. Humans’ abstract reasoning and problem-solving characteristics are leading us inextricably towards the moral and ethical challenges surrounding the new ways in which we can manipulate the environment through geoengineering methods.

A group of scientists have identified nine “planetary boundary processes” as part of a framework for global sustainability, namely: climate change; rate of biodiversity loss; interference with nitrogen and phosphorous cycles; stratospheric ozone depletion; ocean acidification; global freshwater use; change in land use; chemical pollution and atmospheric aerosol loading. They propose these Earth system boundaries provide a safe operating space for humanity.

The question arises as to why human beings think they can or should further interfere with these systems? Especially bearing in mind what we already know about their importance in relation to our health and welfare, and that of the environment.

Richard Campen is director of operations at the Peak District National Park Authority.



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A high degree of scrutiny

Paul Reeve looks at how to compile an environmental review

Whether it's called an initial, preliminary or preparatory environmental review, the review is the start point, en route to an effective environment management system. A review investigates an organisation's environmental aspects and impacts, collecting and reporting information that can answer the basic management question: "Where are we now?"

As such, the environmental review has a different purpose to an environment management system audit, which aims to find out whether management processes are properly implemented and working. The audit should put the basic management question: "How are we doing?" And the answer should inform recommendations for further action to improve the management system.

A question of scope

It is vitally important to define the scope of an environmental review. It must reflect the activities, products and services to be covered by the environment management system.

A key question is whether a review will include products and services, or keep to site-based activities. Assuming the review is on-site, copies of the site plan will be invaluable. The site plan can be used to highlight essential features, such as:

- **Inputs** – water meters; gas and electricity meters; delivery points; oil and chemical storage tanks; and material storage areas.
- **Processes and activities** – production, assembly and finishing; on-site power generators, refrigeration and boilers; unloading, marshalling, materials and product storage/transfer/loading; packaging operations; administration offices; and car parking.
- **Outputs** – discharge points to the sewer or to natural waters; chimneys; skip yard; and waste despatch points.
- **Environmental controls** – effluent treatment; oil/water separators; emission abatement; waste storage, treatment and segregation; on-site waste recovery or reprocessing; and site screening and landscaping (for noise/visual aspects).



SIGNIFICANT ASPECTS

An organisation may have many actual (and potential) aspects and impacts. It's essential to assess which are "significant", and organisations working to an environment standard – such as ISO 14001 – must have a systematic approach to assessing significance.

There is no standard method for establishing significant environmental aspects but, in general, they should include aspects that:

- are subject (or potentially subject) to regulatory control, or a code of practice signed up to by the organisation;
- are of particular interest to key stakeholders; and
- have the potential for a substantial impact on human health and/or the environment (perhaps owing to large volumes or toxicity).

Even within significant aspects, some further prioritisation for action may be required.

In addition, a local map can help to identify any significant environmental pathways and receptors. For example, how close is the site – and its access routes – to:

- residential neighbours and sensitive communities, such as hospitals and schools;
- local water courses – streams or rivers, for example;
- local ecosystems, such as woodlands or lakes, and notable nature reserves or special conservation sites; and
- local cultural heritage sites?

It's also important to consider site exposure and orientation, for example its position relative to the prevailing wind and any slope direction, which would affect run-off.

The review should identify and report on a range of quantitative information. For instance, annual data on: energy consumption; water and materials; storage volumes of substances; amounts of recoverable waste and destination of other waste; and emission levels and effluent discharges. It is a truism that, no matter what an environment practitioner does, "they should always know where the drains go."

Although sites offer the advantage of a physically defined boundary, the assessment of significant aspects and impacts may need to extend further, to include transport, supplier activities and product-related aspects. Broadening the scope of the environmental review can be part of the "continual improvement" of the environment management system, a key requirement in ISO 14001.

In practice

Having agreed on the scope, an environmental review should cover:

- regulatory requirements;
- significant environmental aspects (see panel);
- environmental practices and procedures; and
- records of any previous incidents.

The review should then enable an organisation to establish a relevant and effective environment policy and assess how well current arrangements are dealing with significant aspects. It should also help identify meaningful areas for improvement and provide a blueprint to implement an action plan to deal with polluting and other significant environmental aspects. Last, it should support regulatory compliance and continual improvement.

Ideally, the review should encourage the participation of site representatives to broaden understanding of the key elements of an environment management system. It also needs to highlight areas for more investigation and inspection. Documentary requirements may include:

- **Regulatory** – process authorisation/installation permit; discharge consent; waste documentation (see below); register of relevant legislation/guides to legislation; details of regulatory non-compliance; and any complaints.

- **Site** – site plan; map of surrounding area; organisation chart; process flow charts; emergency response procedure; previous audits or surveys; environment policy; staff environmental responsibilities; procedures; and records.
- **Utilities** – supplier invoices; metering records; and fuel bills and renewable-energy tariffs.
- **Waste** – duty of care transfer notes; hazardous waste consignment notes; waste management permit; waste storage facilities; and waste/recovery data.
- **Contaminated land** – records of operations or incidents on-site; historic site plans and maps; and contaminated-land surveys.

Other considerations

Life-cycle assessment (LCA) is not easy, nor particularly common. It compiles information (if it is available) on material, energy and waste inputs and outputs linked to a product or service, throughout its life cycle.

A product life cycle spans the extraction of various raw materials, through various stages of manufacture, transport and use, to end-of-life – when the product is discarded or materials recovered. LCA tends to be a complex exercise, which may rely on assumptions as well as hard data – for example, if the average number of times a product is reused is not known, an educated guess may be used. As such, LCA differs markedly from other forms of environmental assessment, such as the environmental review, which usually considers a particular location or life-cycle stage, such as manufacturing or use.

Features of a good LCA include transparency, impartiality, credible scoping, and communicating the limitations of data, assumptions and conclusions. Embodied carbon – the amount of CO₂ released as a result of material extraction, transport, manufacturing and related activities, from product cradle to grave – is a particular, and increasingly used, type of LCA.

Whatever the scope, an environmental review is the bedrock of the management system. A good-quality review will make the environmental management that follows much easier for all, and far more effective.

Paul Reeve is an IEMA Fellow. With Paul Hyde, he originally conceived and produced the Associate membership course and exam. Future articles will focus on aspects of the revised Associate membership standard (see p.34).

Big changes ahead for Associate standard

With demand for Associate members rising, IEMA is working to ensure the AIEMA level continues to raise professional competence

Development Business and industry increasingly tell us that Associate IEMA membership is the minimum level they want from their environment and sustainability professionals. And with more than 9,000 Associate members, almost two-thirds of IEMA's membership, able to demonstrate their environmental knowledge and understanding, the AIEMA level has a gravitas and a reputation all of its own.

As demands from business have changed, the number of Students, Graduates, Affiliates and non-members wishing to achieve the AIEMA suffix has steadily grown over the past decade.

Current trends indicate that applications and assessments will continue to accelerate as the profession grows and the reputation of Associates spreads further. To ensure the Institute has the systems, standards and people in place to manage the expected rise in Associate candidates, IEMA has spent the past 12 months working to make some positive changes to the AIEMA programme.

Resetting the standard

As part of this programme, IEMA has appointed a new chief examiner, Helen Manns – interviewed in the March issue of *the environmentalist* (lexisurl.com/iema12173).

The Institute has also worked collaboratively with members, IEMA's professional standards committee, the AIEMA assessors, approved training providers, businesses and other employers to identify any gaps and to future proof the Associate standard and assessment method.

"The Associate standard is really very robust but essentially, given the speed at which the environment landscape in which environment professionals operate is changing, and having been in place for more than 10 years, it was in need of a revisit and revision," says Claire Kirk, IEMA's professional standards manager. "We've spent some time revising the standard to ensure it continues to equip Associate members with the knowledge and skills relevant to, and valued by, organisations."

Manns, who describes her new chief examiner role as one of quality assurance, explains how the changes to the standard and the new assessment route came about: "This all happened as a result of a working group looking at the Associate standard; we put forward recommendations for how we felt it could be improved and serve a better purpose moving forward."

The structure and content of the Associate standard is largely unaltered, with very little removed. However, several key additions have been made as a result of modernised practice and the wide range of skills now required of an environment professional working in an organisation. Most notably, the additions include the ability to describe the main components of an environmental business case; explain the importance of environmental sustainability across an organisation's value chain; and improve sustainability through influencing behaviour and implementing change.

From now on, candidates will also be required to be able to collect, analyse and report on environmental information and data, and to describe important ecosystems services in order to successfully pass the Associate assessment, either through independent study or via an approved training provider.

Kirk says the new standard is "driven by IEMA's skills map" (lexisurl.com/iema11446), which was launched in June last year. This is because the skills map is rapidly becoming central to IEMA's standards, services and training, and ensures consistency.

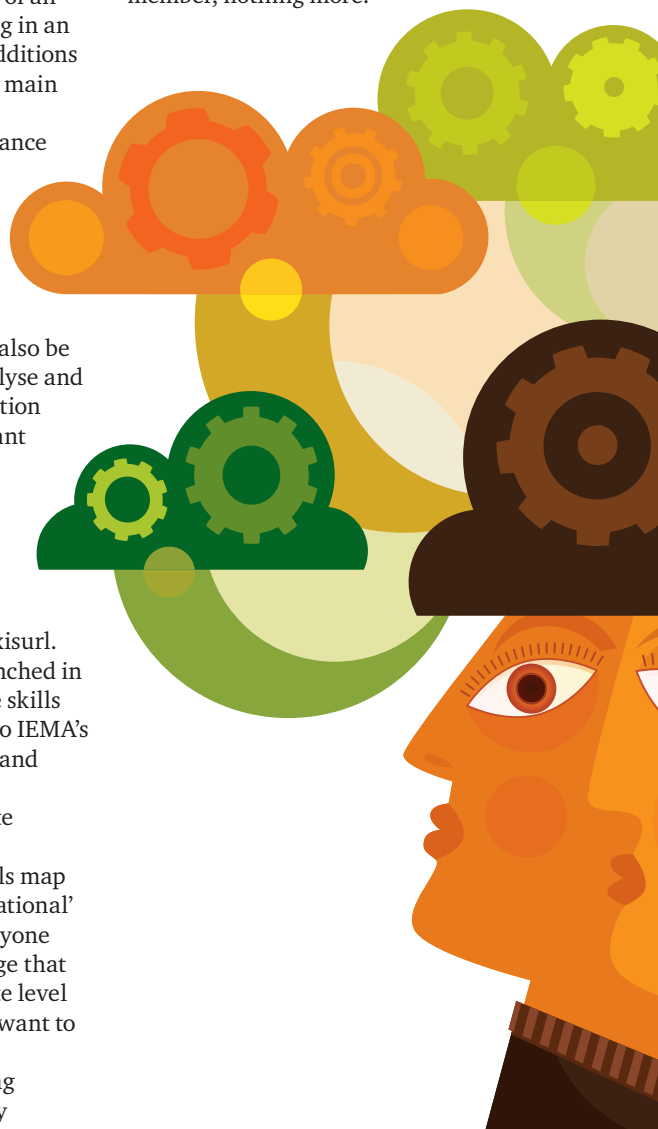
"We have aligned the Associate standard with the competence requirements outlined in the skills map for individuals fulfilling an 'operational' role, making it very simple for anyone wanting to map out the knowledge that they need to achieve the Associate level against the job they are doing or want to do," she explains.

Kirk is keen to reassure existing AIEMAs – those who have already

successfully passed either the open book assessment or an Associate certificate course – that the changes will not affect their qualification.

"The modifications we have made to the AIEMA standard do not take anything away from our 9,000 current Associate members," she says.

"They have already demonstrated that they have a good level of knowledge and understanding. The revisions do not mean that anyone who is already an AIEMA needs to resit or reapply to maintain their Associate status. All they have to do is renew each year to remain as an Associate member, nothing more."



A faster, more convenient assessment process

The recommendations from the same Associate working group that instigated the changes to the standard also suggested an overhaul of the assessment method. While the open book assessment (a two-week, 10-question exam) and training route have worked well for many years and allowed several thousand members to become Associates, IEMA recognises that, in an increasingly digital age, it could be more accessible and streamlined.

Members have told us the open book assessment is time-consuming and that it can be a frustrating four-month wait for the results to be distributed. To overcome these issues and to ensure continued fairness, convenience and ease of access, the Institute is introducing a new online examination.

From 1 May 2012, the Associate entry examination will be available online,

Going online

Be one of the first

If you are planning on becoming an Associate member in the coming months without taking a course and want your results quickly then the new Associate entry examination is your best option. If you register with IEMA by 30 April, you will become one of the first people to take the new assessment and you will receive your results in July. To download a registration form, visit lexisurl.com/iema12203.

Members will receive further details on the changes later this month and in May, but you can find out more about the Associate standard and the new examination at lexisurl.com/iema12203. Alternatively, why not contact your professional development adviser, Victoria Douch, on 01522 540069, who will talk you through your Associate assessment and support options and answer any questions.

allowing candidates to take the exam anywhere with an internet connection, at their own convenience.

There will still be two central routes to becoming an IEMA Associate member. Anyone wanting to be taught the principles required to be an Associate member in a learning environment can still take an Associate certificate course from any one of IEMA's approved training providers – a full list is available at lexisurl.com/iema12206.

The online entry exam is open to anyone who feels they have achieved the required level of knowledge independently, and offers them the opportunity to have that know-how assessed.

Candidates for the entry exam will register with the Institute as before and all details and results will be secured in line with the Data Protection Act 1998.

Once they have registered, candidates will be emailed a private link and unique log-in details that will grant access to the examination. Individuals have 28 days from receiving the access details to take the timed 2.5-hour examination, which comprises a series of question-and-answer screens. Users can have complete confidence in the online platform as it captures every letter typed, ensuring that, even in the case of a power or internet connection fault, no answer entered will be lost.

While still requiring the set 80 hours of study, the candidates are not alone in preparing for the exam. IEMA will be providing a solid suite of support, including online materials, pre-recorded presentations, signposting to useful resources and advice from the Institute's team – specifically from its recently appointed professional development adviser, Victoria Douch.

The online examination also frees candidates from the long duration of the previous process, as it takes just 2.5 hours to complete and, under the guidance of Manns, the results will be available in just six weeks – three months sooner than the old open book assessment, and at no additional cost.

The quicker turnaround is a result of the new assessment method. As exams can now be taken at any time, examiners are able to grade papers in a steady, more manageable stream instead of in three large batches each year.

Through rigorous testing and stringent regulation, IEMA, the professional standards committee, examiners and our trusted online provider have made sure the new entry exam is just as robust as the open book assessment and maintains the standard expected of an Associate member. It is simply a quicker and more convenient method.

As Manns explains: "The centralised exam is very rigorous and I know that it will guarantee that we have equity across all routes."

More choice

The Associate entry examination will replace the open book assessment at the end of June. So that, from July, anyone wishing to move up to Associate IEMA membership independently – that is, not through a training route – will only be able to do so via the online examination. However, any members wanting to take the open book assessment still have time to make use of this route.

The June round of the open book assessment will run as timetabled and there is still time to register by contacting Tammy Benson on 01522 540069. The number of individuals able to register for the June open book is limited so if that is your preference you are urged to register by 25 May. The choice is yours.

Revising 14001: the way forward

The member survey to inform IEMA's position on changing ISO 14001 has closed and the outcome will now help to revise the international standard

Standards 14001, which is used by more than one-quarter of a million organisations in 155 countries around the world to improve their environmental performance, has been in place since 1996 and operating in its current format since 2004.

ISO – the International Organisation for Standardisation – began a second review of the standard in June 2011. IEMA is now preparing its position on the proposed changes and improvements to help shape the overarching UK view.

The survey builds on the results of IEMA's 2011/2012 series of workshops – which were attended by more than 400 members from across the UK and Ireland – on environment management systems and its questions tested draft positions that the Institute has developed.

Members could specify how strongly they agreed or disagreed with statements such as: “The revision to ISO 14001 should put environment management in the context of sustainable development” and “Maturity matrices should be included in ISO 14001 to help organisations



track and plan the development of the environment management system, in order to continually deliver improvements in performance.”

While the UK contribution is just one voice among many from around the world that will develop the revised standard, the survey findings will now be collated and presented to the ISO mirror committee

– the body that develops consensus on what changes to implement – by IEMA's executive director of policy, Martin Baxter (pictured), the UK's appointed representative on the international revision group, on behalf of BSI British Standards.

The next set of ISO working group meetings are in Thailand in June 2012 and the fully revised standard is due to be implemented in 2015. The revised standard is likely to be in place until at least the middle of the next decade.

IEMA would like to thank all the members who contributed to this vital research. Responding to such surveys is your opportunity to make a difference and potentially allow organisations worldwide to benefit from the Institute's knowledge and experience of the environment. It also strengthens the “expert” voice of the IEMA membership as a whole.

Further details on the membership's response to the survey will be published in the May issue of the *environmentalist* and updates on the progress of the revision to 14001 will continue throughout the year.

IEMA skills map needs volunteers

Skills The IEMA environmental skills map was launched in June 2011 and is now being used by members, employers and universities to plot the skills and experience needed to fulfil defined environmental roles and responsibilities. The depth of the map does not stop at the level members currently see, however; work is continuing on developing the underlying levels of the map. Over the coming weeks, members will be invited to attend one of a series of webinars to introduce the skills map development project. We are also seeking members who are willing to be interviewed about their knowledge and skills. Members do not have to have particular experience or knowledge of the map to be eligible for interview, or to take part in the webinars. Interested members should contact Tara Cox at t.cox@iema.net.

Council elections 2012

Voting The current term of office for elected members of the IEMA council of representatives ends at the beginning of June, and the voting to elect a new council begins at the end of April.

Up to three representatives from each of the individual members' sectors (business, consultancy, education and public) and one representative from each of the Institute's corporate membership grades (also business, consultancy, education and public) will be elected this year.

All valid IEMA members will have received nomination forms from Electoral Reform Services, a specialist organisation contracted to manage the election on behalf of the Institute. Members with an email address registered with IEMA will have been contacted via email, while those without a valid email address on their membership record will have been contacted by post.

It is your right as a member to nominate and vote in the election, so please do take the time to participate if you can.

For full details including nominations, voting procedures and detailed rules, visit lexisurl.com/iema12204.

Election timetable:

27 April – 12pm	Closure of nominations
27 April – 12pm	Cut-off date for members to be eligible to vote in the election ballot
11 May	Election starts
1 June – 12pm	Election closes
6 June	Election results declared

MORE SUCCESSFUL IEMA MEMBERS

In our second look at IEMA members who successfully upgraded their membership in 2011, the Institute would like to congratulate the following individuals on achieving Associate, Full and Dual (Full and Chartered Environmentalist) membership of IEMA last year.

Associate (AIEMA)

Illana Adamson
Oluyinka Adedapo Adeoti
Abhishek Agarwal
Graham Ainge
Tekaya Tewon Akerejola
Akinniran Akinjo
Nooshin Akrami
Declan Alder
John Howard Alderson
Joshua Allen
Ali Amiri
Kyla Archer
Olajumoke T D Ayanda
Roy Bailey
Eve Ballard
Faye Bennett
Cigdem Berrett
Andrew Best
Francis Binney
Caroline Birkett
Ponfa Roy Bitrus
William Booker
Joseph Philip Booth
Lisa Borghesi
Alexander Bozmoski
Alison Briggs
Kirsty Budge
Michael Calderbank
Victoria Case
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