

» **INSIGHT** 21

Gas exploration

The potential environmental impacts of exploiting shale gas reserves in the UK

» **ENERGY** 24

A nuclear future

Following the disaster at Fukushima Daiichi, should the UK build new nuclear plants?

» **PROCUREMENT** 30

Purchasing plans

How organisations can ensure sustainability is at the core of their procurement strategies

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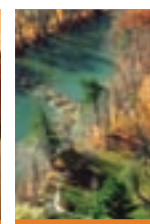


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MAY

» NEWS

- 4** Environment Agency to test EMS+ in cement, food and drink, and waste sectors
- 5** CBI report claims that renewable energy in the UK is a risky investment
- 6** Finance industry leads EU carbon rankings
Carbon floor price to cost £9.3 billion
In parliament Chris Davies MEP wants to turn up the heat on climate change deniers
- 8** Environmental offences cost paper-recycling firm St Regis £455,000
Ethical development crucial for biofuels
- 9** Landfill allowances to be scrapped
Case law Experts from LexisPSL on the verdict in the *Save Historic Newmarket Ltd v Forest Heath District Council* case
- 10** Heavy-fines warning for poor CRC reports
EIA update The latest from IEMA on environmental impact assessment

» BRIEFING

- 13** New regulations: waste, climate change, energy, conservation, flooding, planning and environmental protection
- 14** Latest consultations: pollution, marine environment, emissions trading, aviation and environmental regulation

» REGULARS

- 37** Reviews – *Corporate water strategies, The warming papers, Energy use and the built environment*
- 38** My career – Duncan Carthy, Sensible Risk Solutions

» IEMA NEWS

- 33** There's a welcome in the regions
IEMA conference 2011: booking details
- 34** New *environmentalist* jobs site goes live
Using your IEMA member's card
New IEMA handbook published
- 35** From the knowledge hub – keeping you up to date with IEMA services and events
- 36** The state of EIA practice in the UK – a glimpse of what the new report contains

» FEATURES

16 Greenest government ever?

Business groups and environmentalists provide a first-year assessment of the coalition government and its aim to be the greenest government ever

21 Fracking: in search of gas

John Barwise looks at the exploitation of shale gas reserves to see whether it provides a vital new energy source or risks potential environmental disaster

24 Do we need nuclear power?

The stricken Fukushima Daiichi nuclear plant has put a question mark against a renaissance for nuclear power. Two experts give their opinions

26 BAM builds a smart report

the environmentalist reports on how construction company BAM UK developed its bespoke online environmental reporting tool

30 Future-proof procurement

Sustainability is increasingly important when making purchasing decisions. Mark Whitman outlines an integrated approach to sustainable procurement

32 EIA and 'end products'

Stephen Tromans QC says that recent UK and EU case law may mark a new chapter in environmental impact assessment law and practice



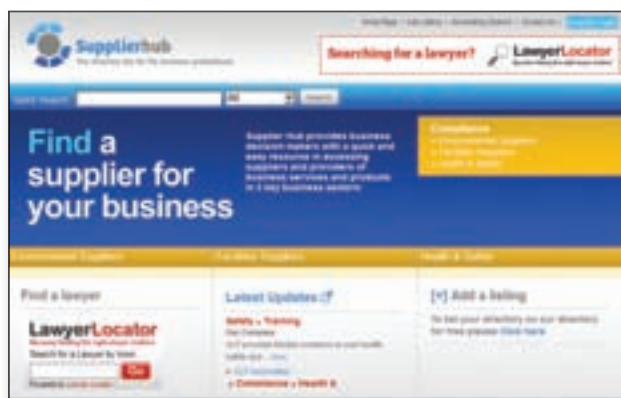
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IEMA works alongside government, the media and industry to enhance the recognition of the profession and promote the importance of practitioners in combating climate change, working towards a low-carbon economy and building a sustainable future.

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Dash for gas II

UK energy policy in the 1990s involved a big shift to gas power generation. Falling gas prices (due to the emergence of North Sea gas) and high interest rates were among a number of factors favouring relatively quick-to-build gas-turbine power stations over new coal or nuclear plants. Gas generation of electricity in the UK went from around 5% in 1990 to 35% today. This so-called “dash for gas” is now likely to be repeated. The exploitation of shale gas reserves in the UK (pp.21–23) and elsewhere raises the likelihood of cheap and plentiful future supplies of gas. Already this year, the government has given the green light to the construction of two new gas-fired power stations, at Werbergh in Kent and Willington in Derbyshire. Friends of the Earth estimates that around 20GW more potential gas-generating capacity is currently being considered by the Infrastructure Planning Commission.

But whereas the first dash for gas in the 1990s was important in helping the UK achieve its Kyoto Protocol target – as gas-fired power stations emit roughly half as

Whereas the first ‘dash for gas’ in the 1990s was important in helping the UK meet its Kyoto Protocol target, further expansion may have the opposite effect

much CO₂ per kWh as coal-fired power plants – further expansion may have the opposite effect. MPs on the Energy and Climate Change Committee warned in January that a second dash for gas could delay or even marginalise the development of renewables and make it impossible for the UK to achieve its emissions targets. The inclusion of gas-fired generation in plans for carbon capture and storage (CCS) signals that the government believes CCS is necessary for such power plants if the UK is to achieve its climate change mitigation targets. The only problem is that the UK will be relying on CCS when we still don’t know if it will ever be commercially or technologically viable, locking the country into a fossil-fuel-dependent pathway for decades to come without the means to abate emissions. We now also learn from scientists that shale gas releases at least 30% more methane into the atmosphere than conventionally sourced gas, so has a larger GHG footprint than coal.

Gas will certainly continue to play a role in the UK energy mix, but a second dash for gas would be a mistake.



Paul Suff, editor

Short cuts

US interest in EMAS

The charity CARE has become the first US organisation to demand that contractors have an environmental management system (EMS) that complies with the EU eco-management and audit scheme (EMAS). The Atlanta-based organisation's tender for the supply of plastic sheeting for use as temporary shelter in emergencies, such as war and natural disasters, states that all candidates will be required to provide certification from an independent body attesting conformity to environmental management standards in accordance with EMAS or the European standard BS EN ISO 14001. Martin Baxter, policy director at IEMA, says that CARE's move is a further indication that 14001 and/or EMAS are increasingly becoming standard contract requirements. EMAS was revised last year through EU Regulation 1221/2009, which came into force on 11 January 2010. At the end of March 2011, 7,934 sites and 4,659 organisations had EMAS certification.

Valuing ecosystems

A new guide on how to assess the potential impacts and benefits of ecosystems services has been published by the World Business Council for Sustainable Development (WBCSD). The framework aims to help businesses put a monetary value on the risks posed both to their organisation and the environment through biodiversity loss and ecosystem degradation. It provides a step-by-step guide to key issues and gives an overview of the level of compensation stakeholders are entitled to if a company harms an ecosystem. The WBCSD created the guide to help inform businesses' strategic decision-making and help to embed the value of natural resources into their overall approach. The guide includes findings from 15 pilot studies from around the world. It can be downloaded free from the WBCSD website (www.lexisurl.com/iema6824).

Environment Agency tests EMS+ All environmental regulations under review

Regulation The cement, food and drink, and waste sectors will pilot a new approach to site regulation over the next few months that could lead to more organisations adopting ISO 14001 certified environmental management systems (EMS).

Under the plans, being developed by the Environment Agency (EA), third-party auditors will assess a site against a compliance protocol drawn up by the EA. The agency will review the outcome, and sites that show good regulatory performance will be able to opt for a much-reduced inspection regime.

The aim of the scheme, being branded as EMS+, is to reduce regulatory inspections of sites with a good compliance classification score and which are already subject to third-party auditing of their EMS. It should mean lower charges and fewer visits for sites taking part in the voluntary scheme.

The cement industry welcomed the initiative. "As a sector we're very pleased with the development of EMS+. It builds on the agency's existing cement sector plan which seeks to improve the industry's environmental management and performance," says Dave Shenton, national environment manager at Lafarge Cement UK. He also believes the scheme will enhance the credibility of the EMAS-registered environmental management system at Lafarge and be a better use of resources. "EMS+ will be a more effective use of everyone's time," he says.

Martin Baxter, policy director at IEMA, hopes the scheme will increase the attraction of 14001 certified environmental management systems. "An accredited EMS certificate will be the entry point to lower EA fees and charges. Companies may have to pay certification bodies more, but they will reap enhanced benefits from having an EMS," he says.

The agency aims to have the auditing protocol ready by the end of May, with the training of auditors scheduled for June. The pilots will start in July.

The government hopes EMS+ will enable the agency – which has seen its budget for permitting work cut by 6%



The cement industry will trial the EMS+ scheme

this year, and faces a potential further 16% reduction by 2014/15 – to focus its diminishing resources on poor performers.

It also feeds into the government's ongoing review of red tape, which has taken a new twist following the decision to include all 278 existing environmental regulations in a public evaluation process. The "red-tape challenge" from the Cabinet Office provides an opportunity for interested parties to say which regulations should stay, be merged, or scrapped. The inclusion of environmental regulations such as the Clean Air Act and the Climate Change Act has provoked uproar among environmentalists.

Green MP Caroline Lucas described the initiative as "insidious", and said it was an attempt by the government to undermine the very principles of environmental protection. Adrian Wilkes, chair of the Environmental Industries Commission, said it is dangerously misguided and posed a potentially major threat to the UK's environmental industry. Defra, however, said there are no plans to remove important environmental protections.

The move comes as the first results of the GLOBE climate legislation study were unveiled. It finds that legislation is being advanced, to varying degrees, in all 16 study countries, with the most climate-change-related laws in the UK (22), and the fewest in South Africa (3).

Renewable energy in UK seen as risky investment

Energy The UK's ability to meet its renewable energy and climate change commitments is under threat because the country is failing to attract the necessary investment, according to the CBI.

To successfully move to low-carbon energy generation, the sector needs £150 billion of funding over the next 20 years, but investors are being put off by a perception of regulatory risk, says the CBI in its latest report, *Risky business: Investing in the UK's low-carbon infrastructure*.

"We need the government to set a clear direction of travel and to stick to it," said Katja Hall, the CBI's chief policy director. "It is particularly important that the planning system delivers timely decisions and there are no more sudden policy shifts as we saw with the Carbon Reduction Commitment Energy Efficiency scheme."

The CBI research reveals that businesses and investors believe conditions in the UK are "less attractive than elsewhere" and this, it claims, is proving to be a "significant barrier" to successful investment in renewable energy and green technology.

Recent research from the Carbon Trust confirmed that 29% of cleantech companies see the lack of access to finance, due to a risk-adverse investment climate, as the main obstacle to their expansion.

To win over investors, the government needs to develop a long-term strategy for green growth, deliver certainty in its reform of the electricity market and ensure that the localism Bill does not hinder energy infrastructure projects, recommends the CBI.

However, Charles Anglin, director of communications at wind and marine energy association RenewableUK, argues that the government does appreciate the industry's need for a stable policy framework. Citing the crucial impact the electricity market reform will have on investor confidence, he said: "There are risks associated with change, but we believe the government is getting it right so far."

Richard Nourse, joint managing partner of renewable sector investment



firm Novusmodus, went as far as to say that the CBI was focusing on the wrong problems entirely. "The key issue is how to deliver lower carbon emissions, rather than ensuring a certain level of renewable energy generation. The challenge is to [make a] transition to a low-carbon economy at the lowest possible cost. When we achieve that we will ensure that UK industry is competitive.

"The CBI needs to focus on getting its members to work efficiently to abate carbon at the lowest possible cost. It should also be challenging the government on the UK's commitment to producing 15% of its energy renewably by 2020, rather than calling on it to do things that it is already doing or are, quite frankly, some way from being the main issues."

Nourse's comments echo the Renewable Energy Foundation's (REF) sentiments when it confirmed in April that the UK had missed its 2010 target to generate 10% of electricity from renewable sources.

"The counterproductive target-led renewable policy agenda to 2020 has reached the end of the road, and should be replaced with a more feasible and reasoned strategy," said Dr John Constable, REF's director of policy and research.

Despite REF's comments and the CBI's concerns, many companies within the sector are feeling positive, according to figures from the Carbon Trust.

In March, 77% of cleantech firms surveyed confirmed they were planning to recruit staff over the next 12 months and 37% said they were hoping to move into new export markets within two years. Most also said that the UK was a "good country" for them to be located in, with many citing government support as a major strength.

Short cuts

Agency issues new permitting guidance

A new version of the Environment Agency's guide *How to comply with your environmental permit* has been published (www.lexisurl.com/iema6829). It is the fourth revision and contains new information on changes to conditions to take account of the Waste Framework Directive. These include changes to the sections on energy efficiency, waste avoidance and recovery, and waste acceptances. The previous version was published in November 2010. The agency has also published version 3.6 of its guide to the *Environmental Permitting Regulations Operational Risk Appraisal Scheme (Opra for EPR)* (www.lexisurl.com/iema6832). It provides an updated explanation of how Opra works and information on where to find the documents an organisation needs to apply for, or change, transfer or surrender a permit or close a landfill site. The agency also advises businesses to read its revised *Environmental permitting charging scheme guidance*, April 2011 (www.lexisurl.com/iema6831), which has information about different permit levels, known as tiers, that apply to various activities, and for charging details.

ISO finally gets 14001

The headquarters of the International Organization for Standardization (ISO) has achieved ISO 14001 certification for the first time, 15 years after the standard's first publication. The environment management systems certificate covers ISO's central secretariat in Geneva, and was awarded on 14 April, alongside its fourth ISO 9001 certificate. More than 220,000 organisations worldwide hold 14001 certifications to help lessen their environmental impact. For ISO, using the standard is helping it to meet its objective of reducing its carbon footprint by 4% by 2014. The ISO central secretariat currently manages the development of more than 18,600 international standards.

IN PARLIAMENT

A tougher target?



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

I hope it's going to be a very hot summer. I know it shouldn't make a difference, and I understand that climate and weather are not the same thing, but it could help shape the political debate in a positive way. Cold winters do not help those of us who want to see the EU be more ambitious in its CO₂ reduction goals. Climate change deniers seize upon them as proof of "the great global-warming conspiracy". They have loud voices in the European Parliament, and have influence in the EU's Council of Ministers.

Action to combat global warming peaked on the EU agenda between early 2007 and the end of 2008 in the run-up to the UN's 2009 climate change conference in Copenhagen. A pledge was made unilaterally to reduce CO₂ emissions by 2020 by 20% compared with 1990, and by 30% if an international agreement could be secured. The failure of the conference was a huge blow. Despite strong backing from the UK's Chris Huhne, climate action commissioner Connie Hedegaard cannot be sure of securing enough votes in the Council to have a 30% CO₂ reduction target adopted unilaterally.

The EU's new low-carbon economy roadmap says that domestic emission reductions of 25% are needed by 2020 if the goal of 80%–95% savings by 2050 is to be achieved. Increased political emphasis is being given to the economic arguments in favour of low-carbon investments, especially now that China has adopted a five-year plan with a green emphasis that could leave Europe looking sidelined. But the commission's fallback position is that the target can be met simply by implementing all the policies already in place – plus some offsetting. It's a tall order. Latest estimates are that EU governments will achieve only half the energy efficiency goals that have been set.

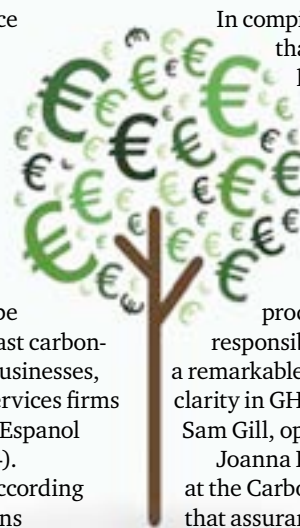
Time to raise the temperature!

Finance industry leads EU carbon rankings

Emissions Banks, insurance companies and investment firms are leading the way in reporting and cutting greenhouse-gas (GHG) emissions, according to new figures from the Environment Investment Organisation (EIO).

UK insurance giant Aviva topped the EIO's first ET Europe 300 Carbon Ranking as the least carbon-intensive of Europe's biggest businesses, followed by fellow financial services firms Aegon NV and Banco Popular Espanol (www.lexisurl.com/iema6814).

The EIO rates companies according to the amount of GHG emissions produced to create their annual turnover and the availability of information on those emissions. The aim of the list is to put pressure on businesses to share comprehensive and verified data on GHG emissions, with the EIO weighting the rankings in favour of those that do.



In compiling the list, EIO found that just 43% of Europe's 300 largest businesses publish independently validated data on their scope 1 and 2 emissions, as defined in the GHG Protocol, and 13% share no data on their emissions at all.

"Despite most companies producing corporate social responsibility reports, there remains a remarkable lack of transparency and clarity in GHG emissions reporting," said Sam Gill, operational director at EIO.

Joanna Lee, chief partnerships officer at the Carbon Disclosure Project, agrees that assurance of emissions data is important. "We have ranked companies in terms of disclosure for several years, through our Leadership Index, and it has proved a very effective tool in improving company reporting and in raising awareness of the importance of carbon management," she said.

Floor price to cost £9.3 billion

Energy A new report reveals that the planned carbon floor price (CFP) could reduce UK emissions by 5.3% by 2020, but cost businesses an additional £9.3 billion in higher energy costs, undermining competitiveness.

According to analysts Point Carbon, the introduction of the CFP, which was announced in the Budget, will cut carbon emissions by 67 million tonnes between 2013 and 2020, equivalent to the emissions from six 400MW gas-fired power stations.

They calculate that the CFP could rise by 2020 to €54 (£47) a tonne, well above the £30 claimed by the chancellor in his Budget announcement and a significant premium on the €36 (£31) the analysts predict the carbon price will rise to across the rest of the EU.

"This tax represents an additional £9.3 billion burden on UK business not faced by other European companies, impacting UK competitiveness as UK businesses will face higher power prices," said Point Carbon's Sebastian Mankowski.

The forecasts follow a warning from Tata Steel (formerly Corus) that the CFP is a potentially severe blow to the sustainability of steelmaking in the UK. "The CFP will impose additional unilateral emission costs specifically on the UK steel industry by seeking to artificially ensure that these costs cannot fall below government-set targets which no other European country will enforce. This is an exceptionally unhelpful and potentially damaging measure," said Karl-Ulrich Köhler, chief executive at Tata Steel's European operations.

Announcing the CFP, the chancellor said its introduction would play a very important role in providing incentives for investment in cleaner technologies as it is based on the "polluter pays" principle. It will apply to energy generators from 1 April 2013 and will initially be set at £16 per tonne, rising to a target £30 per tonne in 2020. This will drive £30–40 billion of new investment in low-carbon electricity generation, says the Treasury, equivalent to 7.5–9.3GW of new capacity.



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Short cuts

Biodiversity concerns

More than three-quarters of Britons are concerned about the loss of plants and wildlife in the UK, but less than half believe they can do something about it. Responding to a Defra survey of their attitudes and behaviours towards the environment, 79% of individuals said they “worry” about the extinction of species all over the world and 78% were particularly concerned with those native to the UK. While 73% confirmed the environment was important to them, only 45% said they believed there was something they could do personally to protect biodiversity in the UK, and just 13% had volunteered time to help a conservation project in the previous 12 months. The survey also revealed that fewer people felt they had a good understanding of climate change and biodiversity than in 2009. On a more positive note, more than 90% agreed that having public parks and other green spaces close to their homes was important, with 56% saying they visited them at least once a week.

Marine energy leaders

Marine energy could be worth £76 billion to the UK economy by 2050 and the country could capture nearly 25% of the global market for wave and tidal technology, according to analysis by the Carbon Trust. The government-backed organisation forecasts that total marine energy capacity in the UK could reach 27.5GW by the middle of the century, which would mean it is capable of supplying the equivalent of more than 20% of the country's electricity demand. It would also generate at least 68,000 jobs, mostly from growing exports for marine technology. Dedicated financial support for the marine sector recently ceased when the £42 million Marine Renewables Deployment Fund closed. However, the Scottish government operates a £13 million Wave and Tidal Energy Support Scheme in Scotland and the Welsh Assembly government has signalled its commitment to developing marine energy in Welsh waters.

Offences cost paper company £455,000

Prosecution Environmental offences including misleading the Environment Agency (EA) have cost paper recycling company St Regis £455,000.

Exeter Crown Court was told that records about the amount of effluent discharged into a stream from the company's mill in Cullompton, Devon were falsified. The EA, which brought the prosecution, alleged that St Regis and the site's technical manager Christopher Steer were involved in the deception.

The site, Higher Kings Mill, operates under a pollution prevention and control (PPC) permit. A condition of the permit is that St Regis monitors its own effluent treatment plant and reports the results to the EA. Stricter controls on effluent quality came into force in early 2005, but rather than invest between £300,000 and £1.2 million in upgrading the site's treatment plant, to ensure it complied with the new discharge limits, the company told the EA it planned instead to install an oxygenation system in an attempt to improve the quality of effluent discharged into the River Culm.

The company trialled the equipment in early 2005 and reported “positive” results. Subsequent effluent quality results submitted to the agency by St Regis

aroused suspicion because they were close to the permitted limits. In March 2008, an EA officer asked to see the company's daily environmental record sheets and noticed that one had been altered from a value well in excess (100mg/l) of the limit to just below the permitted maximum of 60mg/l. The court also heard that in order to assist its deception, the company installed a freshwater dilution system to dilute effluent with river water before it reached the sampling point. This dilution system was kept secret from the EA.

St Regis, the largest recycler of waste paper in the UK, was fined £162,000 after it was convicted of 19 charges under the PPC Regulations 2000. The judge also ordered it to pay £225,000 in a confiscation order under the Proceeds of Crime Act, and £68,000 in court costs.

In a statement, the company said new measures had been introduced, including more intensive environmental auditing and testing regimes, to ensure there is no repeat of the environmental lapses that led to the firm being prosecuted. However, it refutes the allegation that the firm intentionally made a false entry in a required EA record and says it is appealing against these charges and the associated fines.

Ethical development crucial to future of biofuels

Transport Biofuels will play a key role in reducing carbon dioxide emissions from transport, but their adoption must be carefully managed to protect natural habitats and ensure food supplies, warn experts.

In a new publication, the International Energy Agency (IEA) has predicted that biofuels could sustainably power 27% of the world's transport by 2050, up from just 2% today. However, it also cautions governments that they must be careful to ensure that the expansion in the cultivation of biofuel crops has no negative impact on land use or food prices and says that technological developments are needed to lower the amount of fossil fuels used in making biofuels.

“Competition for land between biofuel production and food, fodder, as well as fibre production needs to be carefully

addressed to avoid negative impacts from biofuel expansion on food security,” admitted Bo Diczfalussy, the IEA's director of sustainable energy policy and technology.

The IEA's report follows the announcement by the UK's Nuffield Council on Bioethics that current biofuel policies are unethical. “The rapid expansion of biofuels production in the developing world has led to problems such as deforestation and the displacement of indigenous people,” said Professor Joyce Tait, chair of the working party that produced the Nuffield report.

The council has set out six principles for legislation on biofuels development that considers the wider consequences of their production, including ensuring they are not created at the expense of basic human rights such as access to food and water.

Landfill allowances to be scrapped

Waste The UK scheme to reduce the amount of biodegradable waste reaching landfill sites looks set to be written off in the waste policy review when it is published by Defra this summer.

The Landfill Allowance Trading Scheme (LATS) was launched in 2005 to help the UK meet targets, set out in the EU Landfill Directive (1999/31/EC), but it is now widely thought to have reached the end of its usefulness.

"There is a strong likelihood that LATS will be abolished when Defra publishes the outcome of its waste policy review," confirmed Steve Lee, chief executive of the Chartered Institution of Wastes Management. "In line with many local authorities, we have advocated retaining LATS for 2013, the next Directive target year, but not beyond."

Under the LATS scheme, local waste-disposal authorities are able to trade allowances equating to the amount of biodegradable waste, such as food, paper, cardboard and garden waste, they can send to landfill. The scheme played an important role in ensuring the UK met its first target of reducing biodegradable



waste levels by 2010 to 75% of 1995 levels, but many now argue it is proving to be a hindrance, especially in light of the European Commission's recent redefinition of municipal waste to include waste from businesses as well as homes.

While Defra has refused to comment on the possible outcomes of the Waste Policy Review, it has been reported that the environment department has written to councils warning them against trading future allowances. In January,

Diana Linskey, Defra's deputy director of waste strategy, told sustainable business community 2degrees that local authorities wanted to provide business waste and recycling services, but that LATS was seen as a "barrier".

She also confirmed that Defra would be talking to ministers "about whether barriers can be reviewed".

"LATS has discouraged many local authorities from providing waste collection and recycling schemes for commercial and industrial customers," agreed Lee. "Furthermore, evidence suggests that landfill tax rather than LATS is proving to be the most influential driver encouraging the diversion of biodegradable waste from landfill into some form of recovery and recycling."

Merseyside Waste Disposal Authority (MWDA), which bought £3 million of LATS allowances in 2009, has confirmed it has not purchased any for beyond 2012. "The increased cost of landfill tax is the principal driver for our landfill strategy rather than LATS, which has served its purpose," said Neil Ferris, MWDA's director of strategy and development.

CASE LAW

Lexis®PSL

No more 'horsing around'

In *Save Historic Newmarket Ltd v Forest Heath District Council*, the claimant issued proceedings pursuant to the Compulsory Purchase Act 2004, s.113 seeking to quash the council's core strategy development plan. The successful claimant was concerned by the potentially serious adverse impact that a 20-year urban mixed-use development in Newmarket would have on the world-renowned local horse-racing industry.

The Act requires that the Local Development Framework (of which the core strategy is a component) must conform to the Strategic Environmental Assessment Directive (2001/42/EC) (SEA Directive). The Directive aims to "contribute to the integration of environmental considerations into the preparation and adoption of plans and programmes with a view to permitting sustainable development".

The central ground of challenge was that the council's core strategy had been adopted in breach of the SEA Directive and the associated Environmental Assessment of Plans and Programmes Regulations 2004. The claimant argued that the requirement to assess the effects of certain plans and programmes on the environment had not been met, and that the "environmental report" accompanying the draft plan was inadequate. Justice Collins held that: "It was not possible for the consultees to know from [the final report accompanying the proposed core strategy] what were the reasons for rejecting any alternatives to the urban development where it was proposed or to know why the increase in residential development made no difference." Consequently, the policies in relation to the urban extension were quashed.

This judgment applies the SEA Directive requirements to development plan documents and clarifies how they

are to be met. In submitting strategic environmental assessments, local authorities should:

- base environmental reports on proper information and cover all the potential effects of the plan in question;
- ensure that the treatment and rejection of alternative policies and sites is adequately explained and summarised and that those reasons are still valid; and
- identify earlier material relied upon in the report.

It is 10 years since the SEA Directive was created and, unless local authorities have properly resourced their departments to consider the issues it raises, decisions such as this are likely to increase pressure on development decisions that fail to consider sustainability issues properly.

Colleen Theron and Deirdre Lyons,
LexisPSL

Heavy-fines warning for poor CRC reporting

Penalties Organisations that fail to get right their first Carbon Reduction Commitment Energy Efficiency (CRC) scheme report face penalties equivalent to between 5% and 11% of their energy bills, warns consultant PwC.

CRC participants are required to submit footprint and annual reports by 29 July, detailing all energy supplies – electricity, gas, diesel, LPG and coal – used during the first year of the scheme. The organisation must verify the report and it can be spot-audited by the regulator.

Failing to submit a report on time will attract a £5,000 fine, plus an additional £500 for every day it is outstanding. Inaccuracies in reporting can earn fines of £40 a tonne for under- or over-reporting.

PwC estimates that a 20% mistake by an organisation spending £20 million a year on energy would result in fines of £1 million, while a company with a £1 million energy bill that submitted its reports 20 days late, and made a 20% error in the numbers in its annual report, would face fines of just over £80,000.

Despite the heavy potential penalties, analysis by PwC has found that a significant number of companies affected



Failure to submit a report on time will attract a £5,000 fine

by the CRC may not be adequately prepared. A recent survey of more than 160 large public and private companies by PwC found that 67% were CRC participants yet only 21% said they were currently reporting carbon emissions.

“Registration last year was the relatively easy part. Now the hard work

begins,” warns Henry Le Fleming, carbon reporting specialist at PwC. “Many companies won’t have stress-tested their processes, systems and controls for gathering the data. If they have large numbers of sites with shared responsibility for energy bills it could be more difficult than expected.

“The regulatory powers are wide, and while it’s not certain how strictly they will be enforced, with late reporting or incorrect data both attracting fines, the clock is ticking for companies to get this right over the coming weeks before the deadline,” said Fleming.

The footprint report will define the energy sources reported annually for the next three years, so its accuracy is important, advises PwC. The information will also be used to construct the first performance league table, which will be published in October.

Meanwhile the Environment Agency, the scheme’s regulator, published updated guidance for organisations in February on submitting annual and footprint reports (www.lexisurl.com/iema6926 and www.lexisurl.com/iema6927) to its online CRC registry.

EIA UPDATE

iema

A presumption in favour of sustainable development

The Budget confirmed the government’s intention to introduce a powerful new “presumption in favour of sustainable development” into the planning process in England. The consultation to define this “presumption” is expected to begin later this month. However, IEMA understands it is likely to have links to whether proposed development is aligned to a local authority’s core strategy. Given the role of sustainability appraisals (SA) in guiding sustainable plan-making by local authorities, the “presumption” has the potential to place greater emphasis on SA/Strategic Environmental Assessment (SEA) practice (see Case law, p.9). As such, IEMA members are encouraged to engage in the debate.

Court ruling redefines EIA

The Department for Communities and Local Government (CLG) has lost a

Court of Appeal case related to the application of Environmental Impact Assessment (EIA) to demolition activities. The case concerned the former Mitchell’s Brewery site in Lancaster, with the ruling referring to a European Court of Justice decision against Ireland, which related to demolition (Case C-50/09) (see p.32). The effect of the Court of Appeal decision means that planned demolitions could now be subject to EIA and may therefore require screening.

Commission takes UK to court over costs of access to environmental justice

The European Commission is planning to start proceedings against the UK for the perceived high and unpredictable costs of making a legal challenge related to environmental legislation, such as EIA. Under EU law, the possibility of challenging decisions affecting the

environment should be fair, equitable, timely and not prohibitively expensive. As EIA is designed to boost public awareness of environmental matters and ensure increased transparency, the current financial obstacles in the UK have led the commission to conclude that the laws covering this area have not been fully transposed and are not being properly applied.

U-turn on SEA of Regional Spatial Strategy abolition?

CLG has now decided to undertake an environmental assessment of the abolition of each Regional Spatial Strategy (RSS). Planning minister Bob Neill has indicated that the government is undertaking the assessment on a voluntary basis and that it intends to produce an environmental report for consultation in each region in the summer, which may further delay the formal revocation of RSS.

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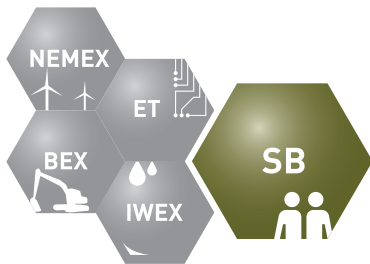
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NEW REGULATIONS

In force	Subject	Details
27 March 	Waste	The Waste Management Licensing (Scotland) Regulations 2011 consolidate the waste management licensing regulations; amend existing provisions; transpose the Waste Framework Directive (2008/98/EC); and amend legislation relating to waste carriers. www.lexisurl.com/iema6728
29 March  	Waste	The Waste (England and Wales) Regulations 2011 transpose the Waste Framework Directive (2008/98/EC). www.lexisurl.com/iema6733
1 April 	Climate change	The Climate Change Levy (Suspension of Transport Exemption) Order 2011 suspends the exemption from the climate change levy provided for in the Finance Act 2000, Sch. 6, para. 12, while the Climate Change Levy (Suspension of Recycling Exemption) Order 2011 suspends the exemption from the climate change levy provided for in the Finance Act 2000, Sch. 6, para. 18A(1). Both measures are in line with changes announced in the 2011 Budget. www.lexisurl.com/iema6730 www.lexisurl.com/iema6731
1 April 	Energy	The Renewables Obligation (Amendment) Order (Northern Ireland) 2011 amends both the Energy (Northern Ireland) Order 2003 and the Renewables Obligation Order (Northern Ireland) 2009. www.lexisurl.com/iema6734
1 April 	Energy	The Home Energy Efficiency Schemes (Wales) Regulations 2011 cover grants for work or advice to improve thermal insulation or to reduce or prevent energy wastage in homes. They revoke and replace the 2007 Regulations. www.lexisurl.com/iema6726
1 April 	Waste	The Landfill Tax (Amendment) Regulations 2011 change the amount of credit that landfill site operators can claim against their landfill tax liability for contributions to the Landfill Communities Fund, while the Landfill Tax (Qualifying Material) Order 2011 revokes the 1996 Order and provides an updated list of materials qualifying for a lower rate of landfill tax. www.lexisurl.com/iema6727 www.lexisurl.com/iema6732
6 April 	Conservation	The Conservation (Natural Habitats, &c.) Amendment (Scotland) Regulations 2011 amend the 1994 Regulations and require Scottish government ministers to classify Special Protection Areas for birds. www.lexisurl.com/iema6509
6 April 	Environmental protection	The Greenhouse Gas Emissions Trading Scheme (Amendment) (Fees) and National Emissions Inventory Regulations 2011 enable the Environment Agency to take over approval of projects covered by the Greenhouse Gas Emissions Trading Scheme (Amendment) and National Emissions Inventory from 1 June. www.lexisurl.com/iema6527
6 April 	Flooding	The Flood Risk Management Overview and Scrutiny Committee (England) Regulations 2011 cover the duties of entities that are required to give information to local authority overview and scrutiny committees. www.lexisurl.com/iema6519
6 April 	Flooding	The Flood and Coastal Erosion Risk Management Information Appeal (Wales) Regulations 2011 provide a right of appeal against penalties imposed under s.15 of the Flood and Water Management Act 2010. www.lexisurl.com/iema6735
6 April  	Planning	The Planning Act 2008 (Commencement No. 6) Order 2011 introduces s.14(1)(o) (wastewater treatment plants) and s.29 (waste water treatment plants) of the Act. www.lexisurl.com/iema6522

LATEST CONSULTATIONS

Closing date: 3 June


Pollution

 The Scottish government has issued a consultation on transposing the EU Directive (2009/126/EC) on stage II petrol vapour recovery during refuelling of motor vehicles at service stations to help control emissions of volatile organic compounds. The government wants stakeholder views on how to transpose the Directive into Scottish law under the Pollution Prevention and Control (Scotland) Regulations 2000, and the accompanying impact assessment. The Directive extends stage II controls to more service stations.

www.lexisurl.com/iema6739

7 June

Marine environment

 The Marine (Scotland) Act 2010, which received royal assent on 10 March 2010, requires the Scottish government to prepare and adopt a national marine plan. The government has published a draft national marine plan and is seeking views on its contents. It covers both inshore waters (out to 12 nautical miles) and offshore waters (12 to 200 nautical miles), and includes: measures for sustainable development of Scotland's seas; policies on nature-conservation marine-protected areas; economic, social and marine ecosystem objectives; and objectives for the mitigation and adaptation of climate change.

www.lexisurl.com/iema6736

10 June


Emissions trading

 To ensure the EU emissions trading scheme (ETS) functions effectively, the European Commission depends on reliable data for each participating installation. The commission is now consulting on proposals for an ETS monitoring and reporting Regulation and an ETS accreditation and verification Regulation. The regulations would replace the Monitoring and Reporting Guidelines that currently govern data collection from operators, competent authorities and verifiers, and are to be adopted by 31 December 2011. The key objectives of the planned regulations are to ensure an improved common approach throughout the EU, greater consistency, transparency, reliability and cost-effectiveness.

www.lexisurl.com/iema6865

14 June


Local authorities

 The Department for Communities and Local Government (CLG) has issued draft new statutory guidance for local authorities on the duty of best value for consultation. Under the duty of best value, authorities are required to consider overall value, including environmental and social value, when reviewing service provision. The proposed new guidance, which the CLG describes as "light touch", sets out clear expectations when councils consider cutting funding to local

voluntary and community organisations.
www.lexisurl.com/iema6744

30 September


Aviation

 The Department for Transport is seeking views on a scoping document that will provide a framework for discussions with stakeholders on the future direction of aviation policy. One section focuses on aviation and climate change, and areas for discussion include technological developments to improve fuel efficiency and reduce CO₂ emissions and the use of biofuels. Another section looks at aviation and the local community, and includes discussion of noise and air quality.

www.lexisurl.com/iema6738

Ongoing to April 2013

Environmental regulation

 All of the UK's 278 environmental regulations have been included in a list of so-called "red tape" that the Cabinet Office is asking individuals to comment on, to help identify which should stay and which should be axed. The "red-tape" challenge (p.4) aims to look at more than 21,000 existing statutory rules and regulations, with the priority given to regulations that are believed to place the biggest "burdens" on businesses. Once the exercise is complete, government ministers will have three months to decide which regulations to keep, and why.

www.lexisurl.com/iema6746

EVENTS CALENDAR

Date	Course	Location and details
14 June 2011	CBI energy conference 2011	The Royal Society, London www.lexisurl.com/iema6740
14–15 June 2011	The new politics of water: water security and economic growth in emerging economies	Chatham House, London www.lexisurl.com/iema6502
23 June 2011	The UK energy summit 2011	The Dorchester, London www.lexisurl.com/iema6505
24–26 June 2011	UKELA annual conference: sustainable development in an age of austerity	University of East Anglia, Norwich www.lexisurl.com/iema6741
29 June 2011	National migration strategies to 100% renewable electricity	57 North Wharf Road, Paddington, London www.lexisurl.com/iema6743
6–7 July 2011	UK AD and Biogas 2011	NEC, Birmingham www.lexisurl.com/iema6742

SPECIAL REPORT – GHG MANAGEMENT & REPORTING

BBC News Online, 30 November 2010

“The Institute of Environmental Management and Assessment (IEMA), whose own research shows that only 22% of FTSE-listed companies are fully reporting greenhouse gas emissions, urged the government to act swiftly, or risk being left behind by other countries.”

The ENDS Report, 27 November 2010

“IEMA, which represents environmental professionals, believes a step-change is needed to meet the UK’s carbon budgets.

A survey of more than 1,600 IEMA members found 80% supported mandatory reporting.

Firms that report their greenhouse emissions tend to have more ambitious targets and had cut emissions by 9% over the past two years, IEMA’s survey shows.”

Business Green, 30 November 2010

“Government needs to act now to introduce mandatory GHG reporting to ensure that UK businesses gain the benefits from embedding sustainability into their corporate strategy. Mandatory reporting is essential as it will create a consistent and clear framework to enable businesses to plan and benefit from GHG emissions reductions.”

edie.net, 30 November 2010

“The Institute of Environmental Management (IEMA) has been calling for the introduction of mandatory GHG reporting. In October it issued a report on this subject, with 80% of members calling for the introduction of mandatory reporting.

IEMA executive director of policy, Martin Baxter said: “Those businesses that publicly report on their greenhouse gas emissions are more ambitious and likely to want to become carbon leaders, moving beyond achieving legal compliance towards low carbon leadership.”

The Guardian, 8 February 2011

“The more businesses that report on their GHG emissions, the greater the financial and carbon benefits. Practicing professionals are clear that GHG reporting by businesses can make a unique contribution to overall energy and carbon reduction, to business competitiveness and in helping companies to adapt and prepare for the future green economy.”

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Greenest government?

Business groups and environmentalists pass judgment on the coalition government's first 12 months in power

Last May, the then new prime minister, David Cameron, promised that the coalition government would be “greener” than any of its predecessors. “I don’t want to hear warm words about the environment. I want to see real action. I want this to be the greenest government ever,” he declared.

Earlier this year, he reiterated this pledge in a message to WWF, supporting Earth Hour 2011 on 26 March. In it, Cameron cites the planned Green Deal (to make buildings more energy efficient) and Green Investment Bank (GIB) and electricity market reform as examples of the government fulfilling its green aspirations.

One year on, how do others rate the government's progress? Is it living up to its greenest-government-ever pledge? *the environmentalist* has asked the Aldersgate Group (the views expressed here are entirely those of the chair, Peter Young, rather than the group as a whole), EEF, Environmental Industries Commission (EIC), Environmental Services Association (ESA) as well as IEMA to pass their verdict and write a report card on the coalition's first 12 months in office.

Energy and carbon emissions

Overall rating: poor progress being made

Aldersgate Group rating: some progress being made, but could do better

Aldersgate Group comment: A very mixed bag, ranging from good progress (such as implementing the Renewable Heat Incentive (RHI) and carbon-floor price, and extending Climate Change Agreements (CCAs) to 2023) to going backwards (eg the Carbon Reduction Commitment Energy Efficiency (CRC) scheme losing all incentives and destroying the commitment not to harm the principles shifting to more environmental taxation by turning the CRC into a straight money-grabbing tax, and the destruction of investor confidence with the way the review of the feed-in tariff (FIT) has been handled). The overall picture looks like good intent, but until all government departments can be seen to be committed to moving in a consistent direction, especially the

Treasury and Cabinet Office, the value of good policy from the likes of DECC and Defra is devalued by market scepticism over permanence and resilience.

EEF rating: poor progress being made

EEF comment: Worryingly, it is impossible yet to make a judgment. On climate change policy, we are still in the dark as to the government's vision of the future of the CRC, the shape of the new suite of CCAs and whether it plans to mandate greenhouse-gas reporting. The lack of certainty must be addressed urgently. But it is important that government steps back and reviews the climate change policy landscape in its entirety. One thing is clear – manufacturers will be paying a lot more for their energy in future thanks to the proposed carbon-floor price, yet another layer of cost that the generators will pass through to manufacturers and other customers as a result of energy and climate policies. We have genuine fears this will see companies making future investments in regions of the world not subject to similar costs, which would be totally counterproductive.

EIC rating: poor progress being made

EIC comment: Insufficient commitment to the challenge of our age. The coalition government has been radical on cuts, but not on climate change.

ESA rating: some progress being made, but could do better

ESA comment: The government is working hard to try to square the circle of how a market-led electricity market can be counted on to deliver low-carbon energy, but it is not clear that it has found the answer. From the waste management sector's perspective, it is vital that market reform properly reflects the reliability and renewable content of heat and electricity produced by energy from waste in all its forms. The CRC also needs a rethink; the removal of revenue recycling from the scheme has created an insanely complex form of energy taxation that no one seems to like.



First-year report

IEMA rating: poor progress being made

IEMA comment: Progress is now being made in providing longer-term clarity and certainty over the regulatory framework for energy and climate policy, but there's an awful long way to go yet. The ongoing review of the CRC, following the decision not to recycle allowances, really served to undermine business confidence, but it also has the potential to deliver emission reductions much faster than would otherwise have been the case. The recent about-turn on the commercial use of FITs is another example of policy on the hoof – the tendency to tinker with newly established rules undermines credibility and trust. The snail-like pace towards getting the first commercial-scale carbon capture and storage (CCS) scheme up and running is also of concern.

Finally, the lack of urgency from the government to implement mandatory carbon reporting for companies under the Climate Change Act 2008 isn't exactly the hallmark of one that wants to become the greenest ever.

Investment and taxation

Overall rating: poor progress being made

Aldersgate Group rating: poor progress being made

Aldersgate Group comment: The £3 billion core funding and one-year acceleration for the GIB saves this from being a backwards area, but in green taxation the irrelevant penny off road fuel and changes to the CRC give a really regressive signal. Budget reductions are potentially worrying for the bodies at the lead of transitioning us to a low-carbon economy, probably most so for the Carbon Trust and the Environment Agency. The ability to deliver regional growth and exploit green competitive advantages around the country looks distinctly dodgy at the moment but it is too early to call if the government's chosen approach can ultimately be made to deliver at the scale required.

EEF rating: poor progress being made

EEF comment: The decision not to recycle payments under the CRC back to participants has blunted the policy considerably. We are left with a tax that will fail to provide the incentives that would

have been provided by an elegant mix of carrots and sticks, which was at the heart of the original scheme. The government, as a result, has shown it doesn't actually really understand business. The cut in services to businesses as a result of funding cuts to the Carbon Trust is deplorable. While there is little doubt the trust needed to revisit and refocus its offerings to manufacturing, to cut virtually all of its manufacturing-facing services is a step backwards. We are slightly more heartened by the progress made on the GIB, but we believe it will only make a real difference to the UK's low-carbon future if its investment remit is maximised to include low-carbon manufacturing of all types, as well as decarbonisation investments for existing manufacturing.

EIC rating: going backwards

EIC comment: The Treasury needs to get fully behind the transition to a green economy. Environment Agency cuts must not reduce proper enforcement of regulatory standards or we'll be giving a competitive advantage to the laggard polluters.

ESA rating: some progress being made, but could do better

ESA comment: The landfill tax escalator has unquestionably been a significant driver in improving the UK's recycling performance. The government's post-2014 landfill tax floor-price guarantee helps to provide some longer-term certainty, which should help the development of more recycling and recovery infrastructure for the nation's waste. The proposed GIB could also be a significant help for the development of green infrastructure if it is able to fill the post-financial crisis lending gap and get hard-to-finance waste management projects off the ground.

IEMA rating: poor progress being made

IEMA comment: There has been some good news, although this is only in the context of a relative position given the poor state of the public finances: research funding for science, technology and innovation has fared better than other areas of public sector expenditure. However, in international terms, UK government support looks poor. There is a missed opportunity with the GIB not having the power to quickly harness and leverage private investment. The commitment from the chancellor [in the recent Budget] to increase the proportion of total tax revenue from environmental taxes is welcome. Budget cuts to central government programmes mean that the environment bodies have been hit hard. While the intention to integrate environment and sustainability

into all government departments is one that should be supported, it's far more likely that the people with the necessary skills and capability across government will not be seen as "delivering frontline services"!

Planning and regulation

Overall rating: poor progress being made

Aldersgate Group rating: poor progress being made

Aldersgate Group comment: The one in, one out regulation rule stands out as being the most odious policy. There is plenty of merit in reviewing, and then removing or simplifying inferior regulations but this should be entirely based on merit. And in an environment where we have some massive market failures, the need to turn to more regulation is inevitable, even if all other measures are considered as well. We needed an overhaul of a constipated planning system, but to use the Budget to announce planning policy does not seem right. The Sustainable

The one in, one out regulation rule stands out as being the most odious policy. There is merit in removing inferior regulations but it should be based on merit

Development Commission (SDC) may well have outlived its useful purpose but the notion of Defra bringing big departments to account on sustainability is not credible. At the moment, the single most important outcome is to ensure that the definition of "sustainable", in the presumption in favour of sustainable development, is drawn wide and deep – and not reduced to a *de minimus* definition, barely hiding a rabid commitment to support any economic development. Such a failure would be a far more serious blow to sustainability than the unwelcome demise of the SDC.

EEF rating: going backwards

EEF comment: One in, one out sounds good, but we've yet to see it. Given that the government can only really apply this approach to domestic legislation, it really is not clear how far this can be applied in the environmental policy arena. We are still seeing more legislation for environmental professionals to contend with rather than any real effort to simplify and streamline what exists. Climate change policy is a clear area where government can put its rhetoric into practice: manufacturers are subject to overlapping and complex policies that are all trying to achieve the same thing but pulling in different directions, at great cost. We need more than one in, one out. We need to see regulatory balance being sought in this crowded policy arena.

EIC rating: poor progress being made

EIC comment: Plans for "better" and "smarter" regulation must not be a smokescreen for deregulation and weakening of environmental protection.

ESA rating: poor progress being made

ESA comment: The government is struggling to reconcile its laudable wish to devolve power to local communities while still facilitating investment in infrastructure upon which the quality of life of citizens depends. Waste management infrastructure is a classic example. Without the deployment of several billion pounds worth of investment in new facilities it will not be possible to meet the environmental targets set out in EU Directives, yet most types of waste infrastructure have a hard time in the planning system. The Budget did seem to herald a belated recognition that a more positive planning system can benefit everyone but, as always, the proof will be in the pudding.

IEMA rating: going backwards

IEMA comment: The new government has attacked the planning system with passionate ideology. However, its attempts to dismantle regional planning have ended up in the courts for failure to properly assess environmental impact. And when the government does get its way (as it will) in removing this layer of planning, there is little evidence as yet that local enterprise partnerships will be able to fully embrace the environment: how are we going to optimise waste management infrastructure to enable a resource-cyclical economy? The government's statement that it will "introduce a new presumption in favour of sustainable development, so that the default answer to development is 'yes'" is of real concern. In terms of deregulation, all the focus in terms of environment seems to be on using third parties to support regulatory inspections. There's a complete lack of vision around business responsibility, deregulation and environment.

Waste and resource efficiency

Overall rating: some progress being made, but could do better

Aldersgate Group rating: some progress being made, but could do better

Aldersgate Group comment: At least the landfill tax is now creating new investments; we could do worse than build on these to set carbon targets for resource management as well, as Scotland looks set to do after publishing its protocols for calculating carbon footprints of waste. It remains to be seen if the changes to the support for anaerobic digestion are sufficient; until



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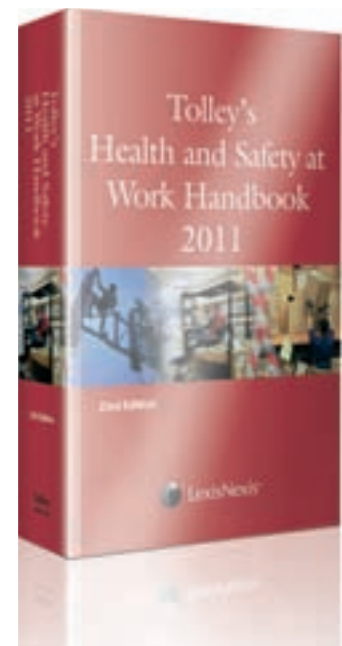
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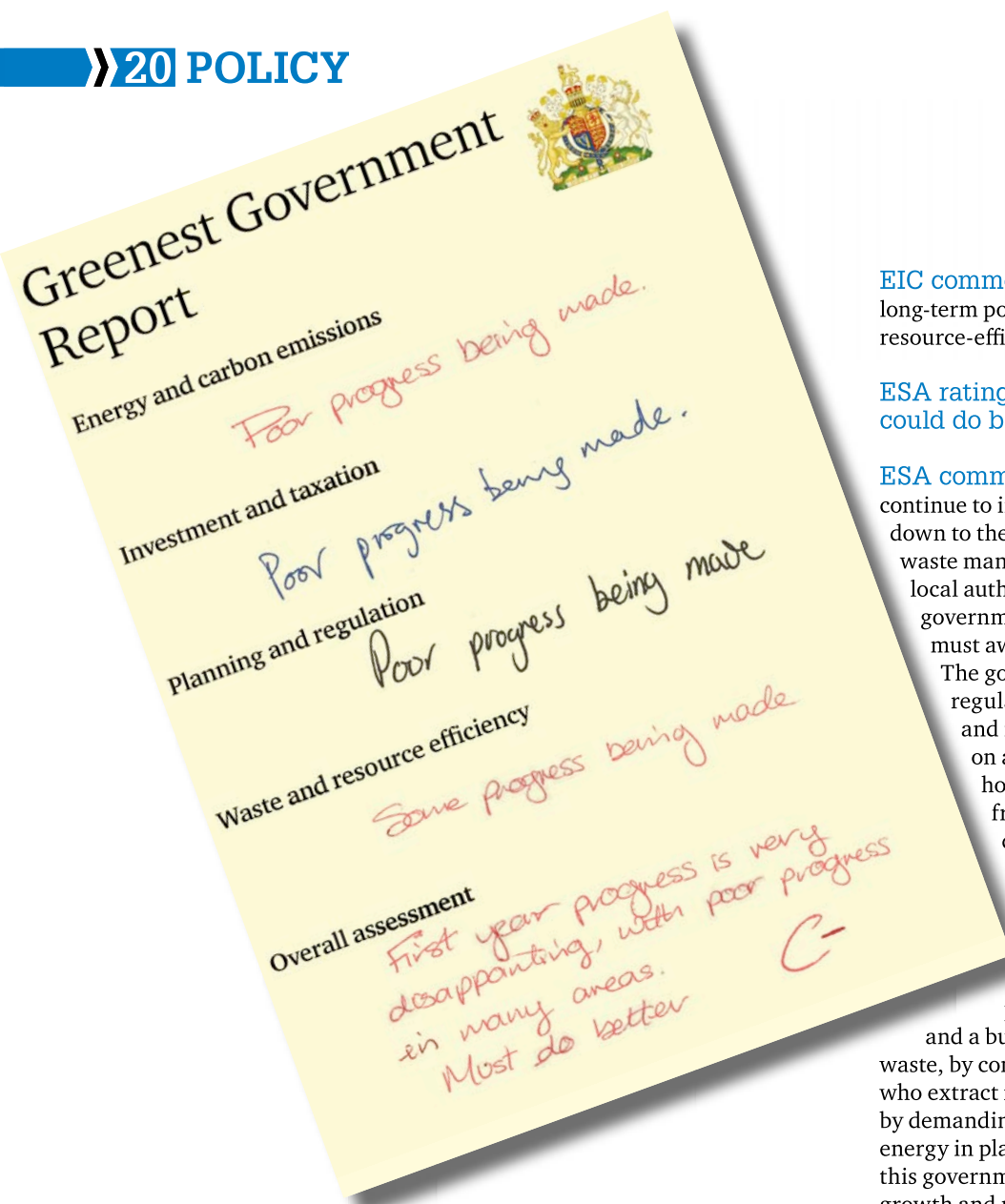
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the other reviews are complete most of the outcomes remain uncertain, so we'll give the government the

The lack of urgency to implement mandatory carbon reporting for companies isn't exactly the hallmark of a government that wants to be the greenest ever

benefit of the doubt as the intentions on waste and resource efficiency are sound. The cry to support truly sustainable procurement, however, looks forlorn, with nothing tangible in place to make this a reality.

EEF rating: poor progress being made

EEF comment: We get a sense that the government is struggling to make the most of the opportunity to consider waste regulation in the round. We need the government to radically review this regulatory domain so we can make the most of the resources that are within our reach. That means a focus on the barriers faced by businesses of all sizes – not just issues around municipal waste. Tinkering around at the edges is of little value.

EIC rating: some progress being made, but could do better

EIC comment: All of British industry needs long-term policy targets to drive the transition to a resource-efficient economy.

ESA rating: some progress being made, but could do better

ESA comment: Recycling and recovery rates continue to improve, although this is mainly down to the combined achievements of the waste management sector, households and local authorities. A real judgment on the new government's performance in waste policy must await the outcome of the Waste Review. The government must provide a policy and regulatory framework that enables the waste and resource management industry to focus on ambitious targets without prescribing how those are to be achieved. Every option, from co-mingled collections to anaerobic digestion, has a role to play in maximising resource efficiency – the government must support the whole family of waste technologies. It also needs to think much harder about how it can better use its own market power as a procurer of waste management services and a buyer of products. By seeking to reduce waste, by contracting only with quality operators who extract maximum value from the wastes, and by demanding recycled product and waste-derived energy in place of virgin materials and fossil power, this government has the ability to catalyse green growth and resource efficiency.

IEMA rating: some progress being made, but could do better

IEMA comment: Generally going in the right direction. The key test will be the results of the Waste Review. IEMA would like to see a shift in thinking and approach away from waste to one more clearly centred around the sustainable use of resources and the creation of a circular resource economy. IEMA believes that the government should recast the current waste policy as a national resources policy.

Conclusion

The government has made good decisions in several important areas, but its overall performance is poor. Extending CCAs, setting a carbon-floor price and confirming the start of the RHI is progress. Turning the CRC into a carbon tax and its plans to reform the planning process and introduce a "one in, one out" strategy for regulation are all considered retrograde steps. The only policy area that receives a favourable rating is waste and resource efficiency. But even then our panel suggests that the government could do better. One year in, and the coalition has a very long way to go to meet its commitment to be the "greenest government" ever.

Fracking: the search for gas

Is shale gas a vital new fossil fuel resource or an environmental disaster in the making? **John Barwise** reports

Revolutionary drilling techniques developed in the US in the 1990s have started a shale gas bonanza that will deliver most of America's gas for the rest of this century.

South America, China, parts of North Africa and Europe all have significant shale gas reservoirs and could soon be using the new techniques to tap into previously unworkable gas resources.

Drilling for shale gas involves horizontal directional drilling combined with hydraulic fracturing ("fracking" or "hydrofracking"), which is particularly suited to opening up gas deposits that have been locked for millions of years in tightly bound shale rock formations. Fracking can also be undertaken vertically, and in the UK work has already started on the Bowland Shale formation in Lancashire using this method.

But evidence from America suggests fracking can damage local environments, pollute rivers and groundwater and create unnecessary risks to human health.

What lies below?

Shale is produced from the weathering and erosion of rocks, which create clays and silts to form sedimentary deposits. As more layers of sediment are added over time these become compacted. Some shales contain significant amounts of organic material that eventually break down to form natural gas or oil. Low-density shales allow the oil and gas to migrate upwards to be trapped in overlaying reservoir rock – these are known as conventional reservoirs and can be easily exploited.

Shale gas is natural gas trapped within tiny pore spaces of more compacted shales that cannot migrate. These source rocks are referred to as unconventional reservoirs and are much more difficult to exploit. In the 1990s, gas-drilling companies developed fracking techniques to liberate gas trapped in unconventional reservoirs and unlock some of the largest gas deposits in the world.

Fracking creates fractures in the shale to get the gas out of the ground. A mobile rig drills down vertically to the target layer or shale gas layers, which can be several thousand metres below ground. The technique

enables the drill pipe to then curve gently to a horizontal position as it reaches the shale band. Drilling then continues, creating a horizontal well through the shale band. Preparing for fracking requires both vertical and horizontal wells to be lined with alternate layers of metal sheathing and cement casing. The drilling process is completed using controlled explosions along the length of the pipe that open up fractures in the surrounding rock.

The actual fracking process involves pumping millions of gallons of water, sand and chemicals in solution under high pressure to open up the fractures. This releases the gas and allows it to flow back into the pipe more easily. Some of the wastewater returns to the drill head but most stays underground.

The new gold rush

The Barnett Shale play, in Texas, was the first major natural shale gas field to be exploited using hydraulic fracking techniques. The Barnett play extends over 15 counties with more than 5,000 wells which, according to the Bureau of Economic Geology at the University of Texas, compares favourably with the biggest of the oil booms of the early 20th century.

The exploitation of shale gas using fracking techniques has expanded rapidly across the US in what the *New York Times* (NYT) describes as the "new gold rush". Historically, US natural gas reserves have been concentrated around Texas and the Gulf of Mexico. But with the recent advances in fracking, the number of states exploiting new shale gas-producing deposits has expanded rapidly, and includes New York State, Pennsylvania, Arkansas and Oklahoma, as well as Texas and Louisiana.

A US Department of Energy report (www.lexisurl.com/iema6689) on shale gas development states that recoverable resources could provide enough natural gas to supply the US for the next 90 years. A separate report



(www.lexisurl.com/iema6690) from the American gas industry think-tank, Potential Gas Committee, says that the amount of natural gas in the US is 36% higher than in 2006 and that shale gas now comprises 33% of potential natural reserves.

The Marcellus Shale formation is the biggest of the shale plays in the US, extending from Tennessee in the south of the country, through Pennsylvania, all the way to New York State in the north. The Marcellus Shale is estimated to hold up to 365 trillion cubic feet of natural gas – enough to supply the nation's gas needs for up to 15 years (www.lexisurl.com/iema6691).

Fracking has revolutionised the US gas market and the country could become a significant net exporter rather than a net importer of natural gas in the near future.

Risky business

But the new dash for shale gas in the US is not without its risks to human health and the environment. The small town of Dimock in Pennsylvania was the centre of much media attention in 2010 because of water pollution problems believed to be caused by fracking. A local aquifer that provided fresh water for the local community became contaminated and many residents became ill. One resident's water well exploded and other wells had to be vented to prevent a dangerous build-up of methane gas. In a recent legal settlement, Cabot Oil and Gas Corp agreed to demands from the US Environmental Protection Agency (EPA) to pay \$1.4 million in compensation to local residents affected by the pollution.

At the other end of the process, fracking produces millions of gallons of wastewater that can contain high concentrations of dissolved solids (salts), heavy metals and naturally occurring radionuclides – as well as other chemical pollutants used in the drilling process. Some wastewater is recycled, but much of it has to be disposed of at wastewater treatment works.

An investigation by the NYT reported that dangers to health and the environment from fracking are greater than previously understood. The newspaper claimed that a number of rivers and other waterways that serve public water systems have been contaminated by wastewater from drilling waste, because many sewage treatment plants are unable to cope with some of the high levels of pollution. This is a particular worry because some treatment plants discharge into major river basins, which in turn provide drinking water. In 2010, the New York State Assembly voted for a six-

month hold on fracking to allow the EPA time to conduct an assessment of the effects of the process on the environment and watersheds. Last October, Pennsylvania State governor, Edward Rendell, banned further natural gas development on state forest land, and in March this year the Maryland House of Representatives followed suit with its own moratorium on fracking of the Marcellus Shale in the western part of the state.

Lawsuits have been filed against a number of companies for drinking water contamination, well blowouts and gas leaks and for inadequate wastewater recycling. US investor groups are also worried about potential risks, and earlier this year filed shareholder resolutions with nine oil and gas companies pressing them to disclose plans for managing pollution, litigation and regulatory risks.

With public concerns growing, the EPA has embarked on a major \$1.9 million two-year study to identify the potential impact of fracking on human health. But some states are already calling on the Federal government to tighten regulations on fracking.

In a 2010 report (www.lexisurl.com/iema6693), Paul Stevens points out that the US Energy Policy Act 2005 exempts hydrofracking from the Safe Drinking Water Act 1974. To deal with this oversight, senators tabled the Fracturing Responsibility and Awareness of Chemicals Act, dubbed the FRAC Act, which was introduced to both chambers of the US Congress in June 2009. It would have required energy companies to disclose the chemicals they use in the fracking process – which are currently protected as trade secrets. The Bill was opposed by the gas industry and failed to become law. It has been reintroduced in 2011, but not yet approved.

The UK picture

With growing concern in the US over the potential health and environmental impacts of fracking, gas companies are turning to Europe and its abundant shale gas reserves. Here in the UK, Cuadrilla Resources was the first company to drill for shale gas when it was given a licence to drill into the Bowland Shale formation. After exploratory drilling at its Preese Hall site in Westby, east of Blackpool, the UK-registered company confirmed the existence of gas in the shale formation more than 5,000 feet below ground.



John Barwise is a director at QoL, an environmental management and communications consultancy

After completing its exploratory work, Cuadrilla started vertical fracking at Preese Hall on 29 March. It was a cautious start, with fracking due to take place for a few hours at a time over a three-week period. That was the plan, but a minor earthquake on the Fylde coast a few days later, measuring 2.2 on the Richter scale, forced the company to temporarily halt the process. Despite the setback, Cuadrilla is confident the process (see diagram, right) is safe.

"We do a lot of testing on the front end, so we have tested groundwater, we have tested water from water wells and ponds, streams and soil samples, and we are even testing for things like radioactivity at outcrops. We are just trying to get a baseline of everything that is out there," the company's chief executive Mark Miller told the Energy and Climate Change Committee's shale gas inquiry in March.

The Environment Agency has itself responded to growing concerns about the drilling and fracking operations. Tony Grayling, head of climate change and sustainable development at the agency, also spoke to the committee, telling it that the UK had a "robust" regulatory regime that was capable of regulating shale gas operations, including fracking.

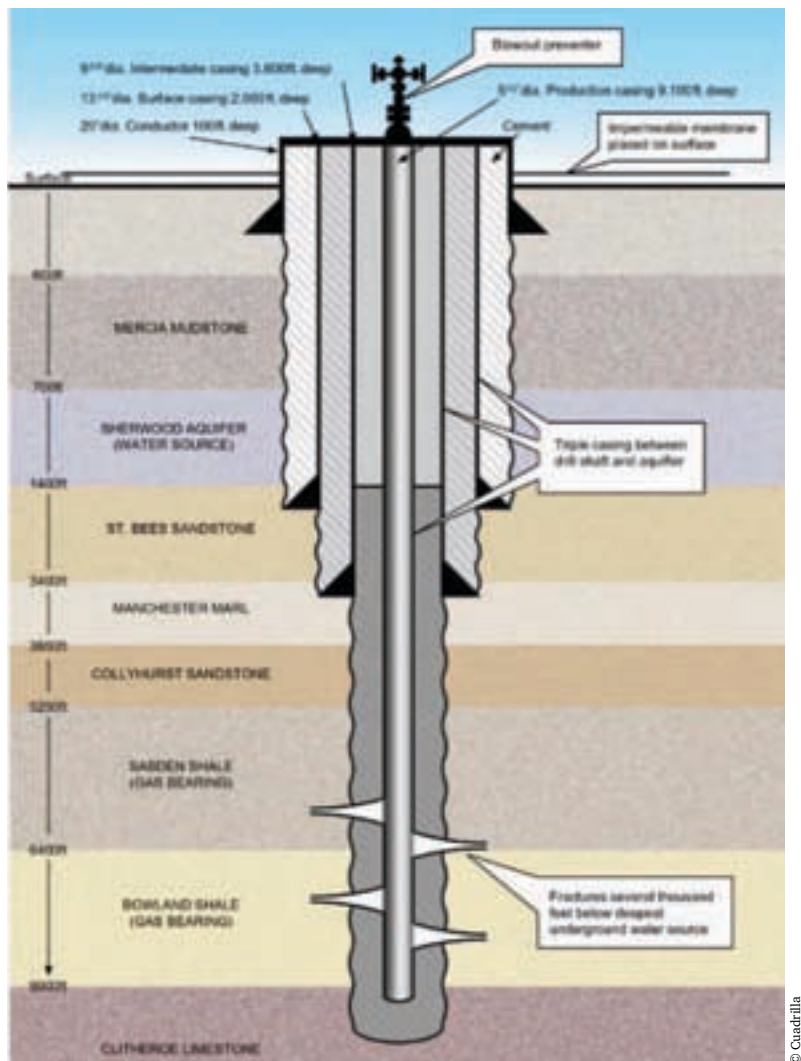
Grayling added that, unlike the US, companies planning to use chemicals in fracking would have to declare them all to the agency and these would be placed on the public register. Wastewater from the well will be taken to treatment facilities capable of handling waste residues, he said.

But not everyone is convinced. Philip Mitchell, chair of the Blackpool and Fylde Green Party, is worried about independent monitoring. He said: "Measurements have been reported to have been taken, but press and industry statements, as well as comments by residents living close to the rigs, suggest that this monitoring has been done largely by the company, not by the regulators. I also wonder how much independent expert knowledge is held by those responsible for the public and the environment."

A 2010 report (www.lexisurl.com/iema6694) from DECC estimates that the total UK shale gas reserve potential could be as large as 150 billion cubic metres. The Bowland formation offers the greatest potential but shale gas reservoirs have also been identified under the Weald Basin in the south of England, with other prospects in Scotland and Wales. Cuadrilla has permission to explore for natural gas at five onshore locations in Lancashire and is currently assembling an extensive exploration portfolio of shale gas in other parts of Europe.

Greater transparency

The Tyndall Centre for Climate Change Research recently carried out an assessment (www.lexisurl.com/iema6695) of both the risks and benefits of shale gas development in the UK and concluded that a precautionary approach to development is needed. The Tyndall Centre called for a moratorium on further development and to wait until the EPA produces its results from its fracking research programme in the US. The government has rejected the call for a moratorium



(something currently being debated in France), arguing that all onshore oil and gas projects, including shale gas exploration and development, are subject to a series of checks. But the Energy and Climate Change Committee has stepped in to criticise the government for not being more transparent on the policing of shale gas.

Committee chair, Tim Yeo, who had earlier said he didn't believe there were any unacceptable risks, told DECC ministers: "The suspicion in the US of the environmental impacts of shale gas has been greatly increased by the reluctance of the companies, and in some cases the regulators, to disclose to the public what's actually happening."

All the evidence shows that there are significant reservoirs of shale gas in the UK and tapping into this resource would reduce dependency on imports. But the UK shale gas industry is still in its infancy and there is very little previous experience of shale hydrofracking here to demonstrate that the process is safe.

All eyes will be on the Environment Agency to see whether regulatory powers are sufficiently robust to ensure transparency of operations and, perhaps more importantly, whether procedures currently in place are suitable to deal with the potential environmental impacts and health effects if things go wrong.

Does the UK need

In light of the disaster at the Fukushima Daiichi

My position on nuclear power is very simple: I don't think environmentalists should oppose any viable source of low-carbon power.

This is certainly the lesson of history: there were many nuclear plants planned or even built in the 1970s and 1980s that were opposed by environmental activists and were instead converted to coal.

Thanks to the anti-nuclear movement, countless billions of tonnes of extra carbon dioxide have now accumulated in the atmosphere and are contributing to accelerated global warming. I sincerely hope that the Fukushima accident does not force us into repeating this epochal ecological mistake at just the time that the nuclear industry was looking forward to a wider renaissance.

Just to be clear: nuclear is only part of the solution anywhere, and is certainly not appropriate in every country.

In my work as adviser to the president of the Maldives, I do not advocate nuclear as part of the energy mix as this sprawling nation of low-lying islands aims towards carbon neutrality. The Maldives needs solar energy primarily, with some contribution from wind, marine energy and, of course, the necessary dispatchable backup power. I'm an enthusiastic solar advocate for Australia and North Africa too. Better and more long-distance grid connections in Europe mean that a much higher proportion of renewables can be brought onto the grid here too. Hydropower in Norway can balance out the intermittency of offshore wind produced in the North Sea. But we will still need nuclear in the UK mix, for as long as we have a baseload demand that would otherwise be supplied by coal or gas. As the French have demonstrated, it is possible to manage a balanced power grid with up to 80% nuclear energy, and to provide cheap and safe electricity at the same time.

Fukushima demonstrates that nuclear – like any energy technology – has risks, but that they are not nearly so large as much of the public, egged on, it must be admitted, by unscientific exaggerations propagated by green groups, fears. The elevated levels of radioactivity released by Fukushima will not have an effect on the health of any members of the public anywhere in the world, and we should be thankful for that. Oil, gas and coal are vastly more dangerous, as a litany of disasters with death tolls in the hundreds have demonstrated.

My conclusion? Keep nuclear in the mix, and do everything possible to run down and then eliminate humanity's use of fossil fuel.



Fukushima demonstrates that nuclear, like any energy technology, has risks, but that they are not nearly so large as much of the public and some environmentalists fear

Mark Lynas is the author of two major books on climate change



nuclear power?

plant, two experts give their opinions

Of the many arguments for phasing out nuclear power, the three most troublesome for nuclear advocates involve economics, timing and proliferation.

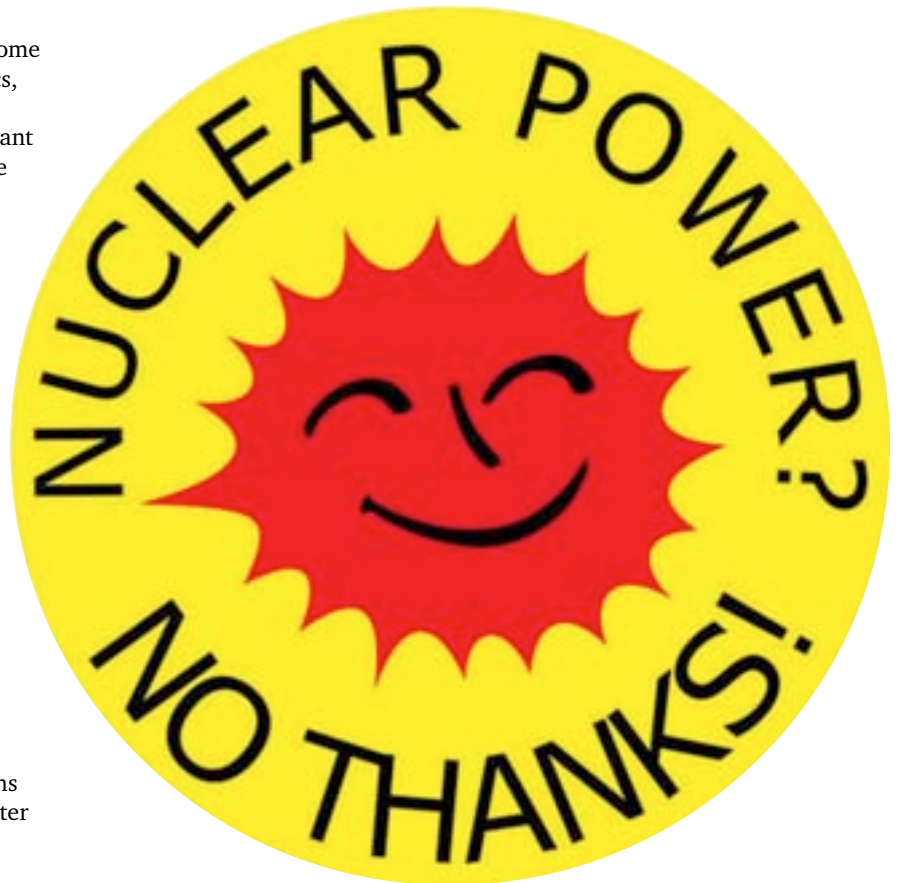
To give the economics of a new nuclear power plant a chance to work, a subsidy is required that is unlike a feed-in tariff (FIT) for renewables in two ways. First, it extends decades into the future without declining. A FIT declines to zero within a matter of years as costs come down. Second, the nuclear subsidy is of unknowably huge magnitude. This off-balance-sheet prop must socialise the cost of waste disposal, decommissioning, security, transportation, accidents and clean-ups.

Existing estimates give a feel for the eventual multi-hundred-billion-dollar scale. The latest estimates for decommissioning just 19 British reactors exceeds £70 billion. No estimate for waste disposal is yet possible, given that plans for large-scale high-level waste disposal are still incomplete. When nuclear advocates state a price for nuclear electricity, they ignore all these costs. They assume that our descendants will pay for them, somehow – not the companies building and operating the plants. Meanwhile, the plunging costs of many cleantech industries ensure that there will be multiple options cheaper than nuclear power, even allowing the latter its off-balance-sheet voodoo economics.

By the nuclear industry's own admission, given the current operating conditions in Europe, it needs a minimum of 10 years to build a next-generation reactor. This period is now bound to extend, for two reasons. First, the post-Fukushima audits announced by many governments will undoubtedly tighten and lengthen permitting periods. Second, the industry seems to have forgotten how to build nuclear power plants efficiently. Areva's two pilot next-generation power plants in France and Finland are both billions of euros over budget and years behind schedule. The point about timing is that we don't have the 10 years needed for either of the two main crises that nuclear power would need to address: climate change and energy security.

The proliferation risk builds by the year if western countries cannot fashion an energy future without nuclear power. This is because it is difficult to hold a piece a paper between civil- and military-capable nuclear programmes. If western nuclear companies are allowed to continue pushing their technology into the developing world, it will become harder and harder to enforce safeguards.


A next-generation of nuclear power plants (eventually) is not worth the loss of a city.



When nuclear advocates state a price for nuclear electricity, they ignore the costs of decommissioning plants, assuming that our descendents will pay for them, somehow



Jeremy Leggett is founder and chair of Solarcentury, the UK's largest solar solutions company



BAM builds a smart report

the environmentalist reports on construction company BAM UK's online environmental reporting tool

January 2010 saw the launch of BAM Construct UK's online Sustainability Measurement and Reporting Tool, or BAM SMaRT. According to environment manager Charlie Law, it is the most comprehensive environmental reporting system in the construction industry.

The bespoke software application was developed to meet the unique sustainability needs of the company and can calculate, at any second, BAM's carbon footprint, its waste and recycling performance and what amount of timber used on its construction sites is sustainable, as well as energy and water environmental outcomes. Used by the company as a "one-stop shop" for reporting on environmental key performance indicators (KPIs), BAM SMaRT is based on the industry research

body Building Research Establishment's (BRE) well-established smart waste platform. BRE, as the preferred supplier, worked in partnership with BAM to design and build BAM SMaRT.

Going online

The passion of the senior management team for sustainability combined with the stricter environmental reporting requirements being established every year for the construction industry were key drivers for the development of a centralised, online system. The company also wanted to record the increasing number of sustainability requirements now included in its projects, such as Energy Performance Certificates (EPCs), BREEAM (Building Research Establishment (BRE) Environmental Assessment Method) scores and sustainable technologies.

In 2009, the company allocated a £30,000 budget to develop and launch the tool but ended up paying BRE just £20,000, an amount that BAM is well on its way to recouping through the considerable administrative savings made possible by BAM SMaRT. "Previously, the information we recorded for waste, water, electricity

and other environmental areas was put onto individual Excel spreadsheets, which was a laborious process,” says Law. “With the launch of BAM SMaRT, data entry at project and regional level takes less than a quarter of the time.” Sites and offices simply enter waste production figures, and energy and water consumption, directly into the web portal and the information is instantly available to run reports. The new system also eliminates the need for sites to send in quarterly data returns for external reporting.

At the early research stage, BAM looked at a few different environmental reporting systems in use but found that none were construction-focused. The company was already familiar with BRE's smart waste platform and, with waste production and recycling representing the most complex and heavily regulated environmental area, it made sense to base BAM's own bespoke tool on an already tried and tested model. BAM had already worked closely with WRAP and the Environment Agency to develop an industry-wide waste protocol, and was keen that the new system should also comply with those requirements. Even though BRE's SMARTwaste programme was the starting point for the project, Law says that, in the end, the bespoke BAM product is very different, and even the web pages dealing with waste are significantly altered.

As well as meeting the growing range of environmental reporting requirements, a key aim was for the online tool to be reliable and user friendly. This was achieved by working closely with BRE throughout the project to create a tailor-made system for BAM that covered a wider range of areas besides waste production and recycling, including energy use (converted into CO₂), water and timber use, and BREEAM and EPC ratings. A project team involving key people from the environment team at BAM and others at BRE worked for more than a year to bring the project to fruition. Law and his team drew up detailed specifications on Excel spreadsheets to outline what they needed from the tool, and software specialists at BRE converted these into a web portal.

“Working in partnership with BRE has been a mutually beneficial process,” says Law. “We wanted to create a custom-made system for BAM but also want to help develop a standard for the industry.” More concerned with having a system that delivers good, reliable data for itself and its regulators than having exclusive rights over it, BAM is more than happy for BRE to market the now completed tool to the wider industry.

Timely data

The homepage of BAM SMaRT has four vertical columns that hold up-to-the-minute data for the main reporting areas:

- waste – construction waste (m³);
- carbon dioxide – CO₂ production (kg);
- water – mains water use (m³); and

- timber – percentage from sustainable sources and chain of custody information.

The dashboard shows all project data to date, broken down into BAM's seven regions as well as two other business units, BAM Offices and BAM Plant. Central staff access all regions through this homepage, from where they can navigate to the readings for each region or for each current or completed project such as a school, hospital or college that BAM has built or is building.

There is one screen for each region or project from which the user can drill down into more detailed information within the four key areas. When a regional adviser, with responsibility for the environment, logs in, they will immediately be sent to the appropriate regional homepage, which is a project dashboard. From there, the adviser can monitor any gaps in project data for the individual projects within that region, and chase up any missing data, such as an out-of-date water or electricity meter reading. Traffic light indicators show whether data are up to date:

- green – a green light means that data have been entered within the past 30 days;
- orange – signals a warning that data have been entered within the past 60 days; and
- red – no data have been entered in more than 60 days.

“We wanted a traffic light system so that we could see in one glance, at project, regional or national level, if any data are outstanding,” Law explains. “Regional advisers are reviewing the project data within their areas daily and will follow up on any amber or red warnings: this is how we are able to assess real-time performance against our targets.”

The predetermined targets against which BAM's performance is monitored are set nationally, based on historical data and averaged out across all the firm's live projects. But at a project level, those responsible can either use the centrally allocated targets or set bespoke ones. The overarching aim is that targets are met on a regional basis rather than merely at a project level.

At a site level, one individual is typically responsible for inputting all the environmental data. The relevant environmental information will be gathered from the same sources as previously – for example, fuel data will be derived from fuel tickets from BAM and subcontractors, timber data from delivery tickets and electricity data from EDF (as supplier) energy reports, SMART meter readings and automatic meter reader data.

Putting the tool to use

About 500 people – one-fifth of the workforce – have some level of access to BAM SMaRT. While designated central users of the tool, such as the environment team and most directors, have access at a company, regional and site level, access is restricted to what is needed for other users. There is also a “read only” access level – for example, for clients and BREEAM assessors to view figures and reports for their projects where required. Contractors will have access in future.



data related to a certain contractor. Law says the tool's reporting capability goes far beyond what was in place previously and allows reporting in a format requested by BAM's clients, thus enhancing the level of service provided. It also provides the platform for the company to meet its carbon-reduction commitments.

The BAM SMaRT portal holds a wealth of detailed information that can be accessed at the touch of a keyboard. For example, on the legal compliance side for

Functionality was a core priority for the new system. As Law comments: "We wanted the functionality for users, particularly those responsible for data entry, to be second to none." Because a prime focus was to make the task of data entry as smooth and speedy as possible at a site level, it does mean that regional advisers have more upfront data-entry work, for example setting up bespoke drop-down menus for most categories. There are defined lists of possible destinations for waste, bespoke to each project, for instance. "Having a range of options to choose from when entering project data at a detailed level minimises the room for human error, and the system will also flash a warning if it thinks the wrong information has been inputted, such as if a person has accidentally stipulated that soil and stones are 'construction' waste as opposed to 'excavation' waste," explains Law.

The frontloading of project-specific data has also speeded up the data entry process considerably. Law estimates that it takes someone less than one minute to enter the details for one waste entry. Laura Hatfield is BAM site secretary for the University of Strathclyde Biomedical project and the Glasgow Royal Infirmary intensive care unit. She is a huge fan of the new system, having seen a 75% reduction in the time it takes her to log data.

According to Law, BAM SMaRT is so user-friendly that day-to-day users have required a minimal level of training. Those responsible for inputting data at site level have generally received about two hours' on-site training, with more support on hand if needed. A one-day training course was delivered to those with a greater level of responsibility for "frontloading" project data, such as BAM's regional advisers.

On report

BAM SMaRT's reporting function allows users to run reports using a range of different parameters. As well as performance reports charting progress against overarching environmental targets at a company or regional level, the system can produce detailed statistics – for example, the percentage of waste diverted from landfill between specific dates by region or the waste

waste it is possible to search by carrier or facility or broker and the system holds scanned-in copies of the waste licences for all those used by the company. The information BAM SMaRT holds forms part of the data sent by its licensed waste facilities to environmental regulators. The system is so integrated that it can also monitor other environmental KPIs, including timber sustainability and BREEAM scores.

All data relating to one project are held in one place and so, for example, EPC performance ratings and recommendations are detailed on the dashboard for each project, if applicable. It is also possible to download the EPC for each project on completion where it has been possible to obtain it from the client. Again, the traffic light system will indicate whether or not this is the case, with a green light indicating that a copy of the certificate has been obtained and held on the system.

While BAM SMaRT has the capability to calculate the environmental performance of the company, a region or a project in real time on a daily basis, there is a monthly reporting cycle to the BAM board. This regular monitoring report covers the main KPIs relating to energy, water, waste and timber. Law converts these performance figures into monetary costs so that board members can appreciate the statistics in financial terms. A planned upgrade of the system will enable this conversion to be done at the click of a key rather than via Excel spreadsheets as is the case now.

Manifold benefits

The benefits of BAM SMaRT to the business are manifold. "I do believe we have the most comprehensive reporting system in the industry," says Law. "It has taken our environmental reporting capability to a new level and means we can cross-check data using all sorts of different parameters."

A primary goal that has been achieved, says Law, is that BAM now has reliable and timely data to pass on to its regulators. Because there is now such a tight, almost daily grip on monitoring environmental performance, the company's environmental performance itself has improved, although more years of using the system need to be accrued before its true impact can be demonstrated.

BUTTERWORTHS ENVIRONMENTAL LAW NEWSLETTER

keeps you from looking 'green' in front of colleagues and clients

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Future-proof procurement

Mark Whitman outlines an integrated approach to sustainable purchasing

Procurement is the process by which an organisation goes about acquiring goods and services. Unsurprisingly, the emphasis within procurement departments is on price and quality – often referred to as value for money.

Most large businesses go through a five-stage procurement process to maximise these benefits. First, someone in the business makes a sourcing decision, contacting the procurement department to initiate a request for information (RfI) procedure. The RfI is used as a filter to identify a shortlist of potential suppliers who are then invited to pitch for the contract based on a detailed specification. Proposals are then assessed against selection criteria before a purchasing decision is made.

The process is tempered by a number of factors, including the level of strategic importance of the purchase, supply and demand constraints and purchasing economies of scale. More recently other factors, such as sustainability, have come to feature prominently on the procurement agenda – leading to the term sustainable procurement (SP).

Sustainable purchasing

Sustainable procurement was initially seen as a public policy initiative. Although there is no agreed definition, in essence the term takes into account both financial and socio-economic and environmental factors in making a purchasing decision. Now, many public and private sector organisations practice SP, albeit with differing levels of success.

SP can drive significant value for a business. The benefits include savings on the bottom line due to whole-life costing, management of legal and reputational risks associated with unsatisfactory suppliers, and access to existing or new markets through improved performance. It can also help an organisation achieve its wider sustainability objectives, as well as being a catalyst for change internally and externally in a business.

Organisations that have adopted sustainable procurement principles have encountered several barriers to implementation, however.

These include:

- *Short- v long-term cost:* price premiums for sustainable goods and services are often measured against short-term budget targets, which don't internalise long-term "total" costs.
- *Setting a standard:* establishing criteria that are challenging yet balanced can prove difficult. Overly taxing criteria tend to constrain purchasing options, whereas basic measures lack integrity and are seen internally and externally as mere "tick box" exercises.
- *Valuing sustainability costs and benefits:* the tools and mechanisms to demonstrate the economic value of social and environmental costs and benefits are either lacking or not embedded in the procurement process.
- *Prioritisation and focus:* for organisations procuring thousands of goods and services, knowing where and what to focus on is a challenge.

An integrated approach

An integrated approach to SP covers each stage of the purchasing process, from the sourcing decision and RfI to specification, assessment and supplier engagement. Aligning every part of the



Mark Whitman is senior consultant at strategy consultancy forward thinking inc

business to reinforce and support an SP process ensures that the business can consistently deliver on it.

Focusing effort on a prioritised list of high-impact goods and services can create momentum and quick wins. Often these goods and services map conveniently with an organisation's key suppliers and therefore existing engagement can be strengthened through the implementation of sustainability principles. A useful way to identify high-impact goods and services is to use a materiality test and assign scores to predefined impact variables. For example, goods and services that account for a large proportion of procurement spend and have high associated environmental and social impacts should be prioritised over less strategic purchases with latent impacts (see example panel, below).

The implementation of sustainability principles should seamlessly align with broader business objectives. In the context of SP, this requires effective collaboration between the procurement department and the wider business. A good way to achieve knowledge sharing and support is by developing a set of pragmatic tools, guides and processes, which can be consistently applied across the business.

Key considerations at each stage include:

- **Sourcing decision:** the most sustainable decision is not to buy at all – it is also the most economically beneficial. The sourcing decision should be well founded on a qualified need. This can be achieved by directing the sourcing decision through an authorisation process that establishes the need.

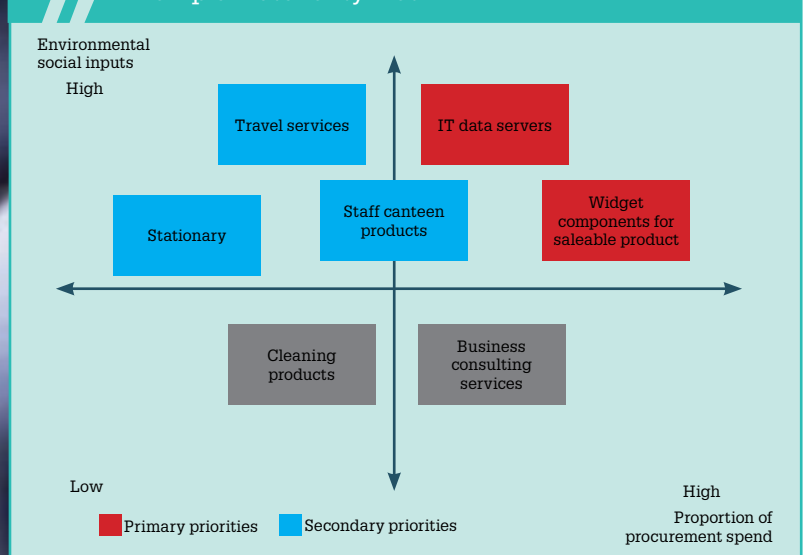
This seems like an obvious point; however, many purchases in an organisation are made without due consideration to stock levels or indeed the alternatives to purchasing, such as rental, reuse, sharing, temporary use and future use.

- **Supplier shortlist:** general sustainability criteria should be incorporated across all supplier-selection procedures. At a minimum, policy evidence, standard compliance and legal history should be investigated.
- **Specification:** engagement with the wider business is critical at the specification stage to ensure relevant criteria are incorporated in the Request for Proposal. Departments with high procurement spend or technical requirements should be engaged at an early date and encouraged to contribute to the specification process.
- **Assessment:** shortlisted suppliers should be scored against sustainability measures that are specific to the product or service being procured.
- **Supplier engagement:** suppliers should be engaged at an early stage to help drive continual improvement. An approach that is both collaborative and supportive and not intimidating or threatening is key to success. The carrot instead of the stick approach requires repositioning SP as an opportunity for suppliers to drive business value through their performance improvement.

Focus and fit

Changing an existing process that is tried and tested is challenging. This is particularly true of a process that is built to optimise economic considerations, often at a cost to society and the environment. For many procurement professionals, sustainability adds an additional layer of complexity to what is already a relatively complex process. However, opportunities to drive real long-term benefits in terms of socio-economic and environmental objectives are largely underpinned by the principles of SP.

Example materiality matrix



EIA and 'end products'

Recent case law may mark a new chapter in EIA law and practice, says **Stephen Tromans**



Stephen Tromans
QC, 39 Essex
Street.

Environmental impact assessment (EIA) continues to require fundamental reappraisal of long-held tenets of UK planning law. Only recently, in *R (Save Britain's Heritage) v Secretary of State for Communities and Local Government* ([2011] EWCA Civ 334), the Court of Appeal (CA) held that demolition of a building may be a "project" requiring an EIA (p.9). The decision renders the direction given in 1995 by the secretary of state for the environment that much, if not most, demolition is not "development" as void. In reality, the CA had little alternative but to follow the decision of the European Court of Justice (ECJ) in the case of *The Commission v Ireland* (Case C-50/09), which was handed down on 3 March 2011. The ECJ ruled that such works can be a "scheme" or an "intervention in the natural surroundings and landscape" in terms of art. 1.2 of the EIA Directive (85/337/EEC).

The case provides a striking textbook example of how EU law makes it necessary to think outside established "boxes" in terms of planning law and policy. Another possible European case, which has yet to make its mark, is *Paul Abraham v Région Wallone* (Case C-02/07). It concerned a claim for compensation for nuisance for residents living near a former military airport that had been refurbished with improvements enabling it to be used 24-hours a day, 365 days a year.

The case raised a number of points to do with the EIA Directive, which was referred to by the ECJ. One was whether the competent authorities had an obligation to take account of the projected increase in the activity of an airport in determining for screening purposes whether the change to the existing airport must be made subject to an assessment of its impact on the environment.

The ECJ concluded that there was such an obligation to take account not just of the effect of the actual works but of the effects of the project – the improvement of the airport and its consequent expanded use. The court said "Directive 85/337 seeks an overall assessment of the environmental impact of projects or of their modification", adding that: "it would be simplistic and contrary to that approach to take account, when assessing the environmental impact of a project or of its modification, only of the direct effects of the works

envisaged themselves, and not of the environmental impact liable to result from the use and exploitation of the end product of those works."

The environmental impact of the end product of the works in that case was, of course, noise and disturbance from more intensive airport use. However, the passage emphasised above might be taken as having further implications depending on how far it is pressed. A new development may produce or market goods or services, the consumption of which has environmental effects. Or it may consume products, the production of which may have environmental effects. This approach finds echoes in the recent planning appeal decision by the secretary of state for communities and local government (CLG) on the former Sevalco site at Avonmouth, which was reported in *the environmentalist* in March.

The proposal was for a biofuel renewable-energy plant. The CLG secretary invited representations after the close of the inquiry on the source and sustainability of the fuel to be used, including whether that was a material consideration in determining the appeal. His conclusion was that, while the sustainability and geographical source of a fuel would not be a material consideration for a non-renewable generating station, the sustainability of bioliquid fuels was a material consideration relevant to his decision.

It is interesting to consider how EIA practice might develop if such an approach was more generally adopted outside the rather specialist regime of renewable energy. In principle, such matters are indirect effects and accordingly within the scope of the Directive, but their meaningful assessment may present challenges. The comment in the *Abraham* case could potentially be read as limited to the facts of the case, involving as they did works which would change an airport's use in such a way as to have *direct* effects. But EU environmental law has a habit of developing in sometimes unexpected, incremental ways, and it would not be the first time a loosely framed comment in a judgment has been picked up and developed into new jurisprudence in later cases.

A second edition of Stephen's book "Environmental Impact Assessment: Law and practice" will be published in 2011.



There's a welcome in the regions

The regions New members who have come to IEMA via a training route can now look forward to receiving a warm welcome from their Regional Steering Group (RSG).

The Institute receives almost 2,000 membership applications a year from individuals who undertake an IEMA-approved training course, yet we find that many of these new members do not get the most from their membership. Attending events, engaging in our surveys and reading *the environmentalist* are just some of the ways to make membership work hard for all members, but networking within the regions is an invaluable benefit.

From the start of this year, new members via the training route are being contacted by their local RSG to welcome them to IEMA, let them know which events may be useful and invite them to meet other members in their area. This initiative has come about because of direct feedback from the RSG.

Recently the RSGs told IEMA that they wanted to move from driving regional event delivery and become involved in



more activity, such as policy development. Because the 13 UK and Ireland (and international) groups give up their time freely, they expressed a desire for IEMA to use this time more effectively and strategically.

As a result, the RSGs are now central to welcoming new members (initially

the new members via training) into their "regional family" as well as moving towards these other areas of work:

- policy engagement – contributing to horizon scanning, and holding May and June Sustainable Business Practice workshops;
- professional development – broadening RSG input away from events to activities such as supporting the mentoring scheme; and
- raising the profile of the profession – involving RSGs in the development and launch of frameworks, such as the forthcoming IEMA Competency Framework schemes and other campaigns that demonstrate the value of the profession.

IEMA is looking forward to supporting the enhanced role of the RSGs in action and wishes to thank the individuals within each group for their feedback and enthusiasm to make a real difference.

If you are interested in getting involved with your RSG or just curious about what events are coming up in your local area, simply visit www.iema.net/regions.

IEMA conference 2011: Have you booked your place yet?

Conference Planning for IEMA's flagship conference of 2011 – titled "Sustainable business: environmental professionals driving change" – is now fully under way, with speaker names and workshop titles due to be announced at the start of June.

The focus of the two-day event, which takes place on 15–16 November 2011 at Savoy Place in London, is the sustainable business agenda.

As well as an excellent line-up of speakers and workshops, conference delegates will also be able to take advantage of our new exhibition "zones" and extensive networking opportunities.

The IEMA conference team will be formally inviting readers of *the environmentalist* to the conference

over the coming weeks, but members can book online at any time at the special early bird rate (valid until 31 July 2011), taking advantage of an exclusive £100 discount.

So book today to secure your place at IEMA's next major event!

Booking details are available at www.lexisurl.com/iema6873, where the full programme and list of keynote speakers will be revealed in June.

Our 2010 Environment and Business conference was a tremendous success and we hope to see as many IEMA members as possible at the 2011 event.

Conference costs

	Day 1	Day 2	Both days
IEMA member	£159	£159	£249
Special early bird rate Book before 31 July			
IEMA member	£199	£199	£349
Book after 31 July			
Non-member	£249	£249	£449

More successful IEMA members

IEMA would like to congratulate the following individuals on the success of their Full (MIEMA) and Dual (MIEMA and CEnv) membership applications.

Full

Zaur Hasanov, BP Azerbaijan
Tom Head, Select Plant Hire
Ian Hill, BT Openreach
Steven M Lamb, Halcrow
Nicola Solly, Royal Haskoning
Gabriella Stewart, PT McWilliams
Shaun Wilson, Barclays Capital

Dual

Sarah L Bunting, Eon
Amy Clark, Royal Haskoning
Daniel O'Kelly, Jacobs
Richard Lewis, BP International
Martha A McBarron, Jacobs
Jenni Murphy, Environ
James Pomeroy, AON
Helen Seagrave, Envirolink
Philip J Shaw, Jacobs
Fiona Syme, Mouchel

New green jobs website

Anyone looking for a new challenge should visit IEMA's new jobs site to find their next role



IEMA's new jobs site went live on 13 April and features a number of enhanced facilities that make searching for a job easier, quicker and more dynamic. The site allows visitors to search by sector, region, length of contract, company, salary band or by keywords in a more advanced way than ever before.

IEMA's previous jobs site was one of the largest in terms of the number of job listings, and the new

site, which sits alongside the recently launched environmentalstonline.com, includes a CV upload service and "Apply Now" button for each job. Both of these new facilities let IEMA members and other environment professionals speed up their application process and let employers find them.

Those who wish to have jobs delivered to their inbox each week can register and ask to be notified of any

suitable vacancies as they are posted on the site. Users can also save their job searches for future reference.

As the employment market is possibly at its most competitive ever, members are encouraged to visit the site to explore the options to ensure they find a role which reflects their knowledge, skills and talent. Visit the site at www.environmentalstonline.com/jobs.

The Guardian Sustainable Business Quarterly

Networking Senior IEMA members are invited to apply for a place at the next Guardian Sustainable Business Quarterly (GSBQ) events.

GSBQ is a series of thought-provoking evening events for sustainability professionals and the next ones take place on 15 June, 22 September and 16 November. A free evening event for corporate sustainability professionals, GSBQ is split into three sections:

Think – a panel of experts addresses the big issues in corporate sustainability, from behaviour change to managing complexity and sustainable consumption.

Practise – join one of the sector discussion groups, facilitated by expert chairs. They give you the chance to engage with other sustainability professionals on specific challenges, from water to communications and employee engagement to commercial real estate.

Connect – the evening culminates with informal networking with peers over refreshments.

For more information and to apply for a free place at the next GSBQ, please visit www.lexisurl.com/iema6861.

Putting your IEMA member's card to use

ID Members were notified in March that IEMA is suspending automatic distribution of the current membership card; a single act that will save thousands of sheets of partially laminated paper a year. We have taken this decision because as our membership is currently around the 15,000 mark, the impact of our communications and materials (letterhead paper, certificates, membership cards etc) has increased to a point where we must appraise the usefulness of each piece of paper we send out, just as you would expect us to. We know from the "What do you value" survey earlier this year that members want to see a more modern version of membership ID. Over the past month, more than 2,000 members have taken the time to let us know via a short survey how they use their card and what alternative they would like to see introduced. All members will be notified when the new IDs are ready for launch and available to use.

In print

New IEMA handbook

The latest edition of IEMA's vital publication, the IEMA handbook, has been published. This new version, entitled *Environmental management in organizations*, provides all the management tools, performance measures and communication strategies that organisations need to manage their environmental responsibilities effectively. Leading experts on each topic provide focused explanations and clear practical guidance, as well as setting out the key environmental and management drivers.

This edition significantly updates the original handbook to take account of developments in the environmental agenda, including new, dedicated chapters on climate change, energy, transport, biodiversity and chemicals.

Environmental management in organizations is a core text for the Associate Open Book Assessment (OBA), so if you are planning to take the June OBA paper, this publication is likely to prove invaluable.

Members can purchase *Environmental management in organizations* from Earthscan (www.lexisurl.com/iema6874) or Amazon (www.lexisurl.com/iema6875).



From the knowledge hub

Keeping you up to date with IEMA services and events

IEMA's events, conferences and workshops are typically driven by members for members. Through consultation with the membership, feedback from ongoing research projects and Regional Steering Group activity, IEMA is able to deliver a valuable programme of events that not only gives members the chance to network, but also to build their knowledge.

IEMA events are at the heart of member benefits and if you have never attended one, you may not be getting the most from your membership. Annually, the range of events varies in style, format, location, topic and size, so there is usually something for everyone. They are generally free to attend and bring together an interesting mix of members from diverse backgrounds, sectors, roles and levels of experience.

Here we feature two very different events organised by the Regional Steering Groups that took place in March of this year.

Deerdykes site visit

On 22 March, 20 IEMA members gathered at Deerdykes anaerobic digestion (AD) facility (see image above) in Cumbernauld to find out how AD transforms food waste into green energy. The group learned that Deerdykes, a former wastewater treatment works owned by Scottish Water Horizons, became Scotland's largest AD facility in 2010 at a cost of £7.5 million. Designed predominantly to recycle food waste, it is the first facility in the UK to combine AD and in-vessel composting technologies on the same site, increasing flexibility and capacity for waste handling.

The in-vessel composting diverts about 42,000 tonnes of waste away from landfill each year, with a further 30,000 tonnes diverted through AD annually. These figures are going a long way to achieving the Scottish government's target of only 5% of all waste going to landfill by 2025.

During the tour of the site, the IEMA group were told that Scottish Water Horizons, through its environment division, accepts garden and food waste from household collections, as well as waste from food manufacturers and supermarkets. This helps waste producers cut costs and improve their environmental credentials by diverting waste away from landfill and saving the environment from further methane emissions, which are up to 20 times more harmful than carbon dioxide.



Members visited the Deerdykes anaerobic digestion plant

The process captures the energy produced during the natural breakdown of the waste and converts it into usable green electricity and heat through 2 x 500kW combined heat and power units. The AD process also creates a biofertiliser that can be used in agriculture as a natural alternative to chemical fertilisers. The energy produced on-site is used back in the AD process, with excess electricity feeding back into the National Grid. The site is currently in the process of applying for Renewable Obligation Credits, and Scottish Water Horizons is also exploring uses for surplus heat.

The visit was highly interesting and informative. Many thanks to Donald McBrayne and Kristine Leitch from Scottish Water Horizons for facilitating the day.

Thank you to Claire Chapman for this review.

Business case for climate change and resource efficiency

Resource depletion and climate change are some of the biggest issues we face as environment practitioners. However, few IEMA members know how to secure the investment needed for our organisations to respond appropriately. IEMA's East of England Steering Group decided to address this by organising a conference at Homerton College in Cambridge on 29 March.

Rob Hopkins (Transition Totnes and Transition Network) opened the event by explaining what the transition movement is doing globally to respond to climate change, peak oil and other vulnerabilities. He issued a challenge to the environment profession to use its skills to accelerate

change in these areas. Martyn Seal, PepsiCo Europe's sustainability director, followed with a fascinating presentation entitled "Making the business case for sustainability". He outlined the challenges PepsiCo currently faces and described how support from the top of the organisation helped make the business case for achieving the company's sustainability vision.

Ali Claburn, founder of Liftshare.com, which connects people wishing to share journeys, gave an entertaining and inspiring account of the origins of his company and explained how the Liftshare model is evolving.

The rest of the day was dedicated to three practical workshops, during which delegates were invited to complete relevant parts of a business case template. The workshops titles included:

- Supply chain – delivered by Saad Rashid (Trucost) and Rob Bresler (URS/Scott Wilson).
- Markets – delivered by Michael Gell (Xanfeon) and Dan Vivian (Vivian Partnership).
- Business risk and finance – delivered by Stuart Bowman (hurleypalmerflatt) with Darren Chadwick and Alex James (both Brite Green Consulting).

Allen Norris, group director of environment, health and safety at NSG Pilkington and chair of the IEMA Council, demonstrated his skill as a chairperson by ensuring that the conference completed its full agenda on time.

Thanks also go to the East of England Steering Group and IEMA's regions team for arranging the day.

Thank you to Steve Marsden for this review.

The state of EIA practice in the UK

25 years of EIA – special report from IEMA will be launched in June

Over the past two years IEMA has been researching the current state of environmental impact assessment (EIA) across the UK through discussions with practitioners, planners and developers. The study involved numerous events, attended by more than 800 members, and an EIA survey in August 2010, which attracted more than 1,800 responses. In a few weeks' time the findings of this study will be available in the form of IEMA's latest special report, *The state of EIA practice in the UK*, which members will be able to download for free from www.iema.net.

The report – divided into three sections – will launch in June, with the first section setting out the basis for EIA in the UK and looking at major developments that occurred over the past 25 years. This section also acts as an introduction to EIA for those members, and wider readers, who are less familiar with this assessment tool.

The second section addresses current trends in EIA practice, from screening, through scoping, engagement, design, significance and mitigation to the length of Environmental Statements and real-world outcomes.

The final section scans the future by looking at the European Commission's review of the EIA Directive (85/337/EC). Research by the commission has identified a number of concerns with the Directive, for example, repeated examples of member states exceeding the limits of discretion when establishing EIA thresholds.

The final section also focuses on developments in UK regulations and potential issues related to developing case law – such as the 2000 Court of Appeal decision (*R v Durham County Council*) that an individual affected by a planning decision could challenge it on EIA grounds where UK law was defective.

The report concludes by establishing a vision for EIA practice in the UK which indicates that EIA must influence future development to ensure it delivers for all parties, including the developer, community and environment.

The report not only looks at the drivers behind key issues in EIA practice (eg broad scoping) and the consequences that result (ie longer environmental statements),

but also explores potential solutions, generated through discussion with practitioners. As such, the report provides both a reflection of the views held by UK EIA practitioners and a clear vision for its future development.

After the report's launch, IEMA will present its contents and its vision for EIA during a series of environmental impact assessment workshops that will be held

across the UK, making this the third year in a row that the Institute has run a summer series of environmental impact assessment workshops.

The workshops will also include presentations from practice by EIA Quality Mark registrants (www.iema.net/qmark) as well as providing an opportunity to reflect on 10 years of the Strategic Environmental Assessment Directive.

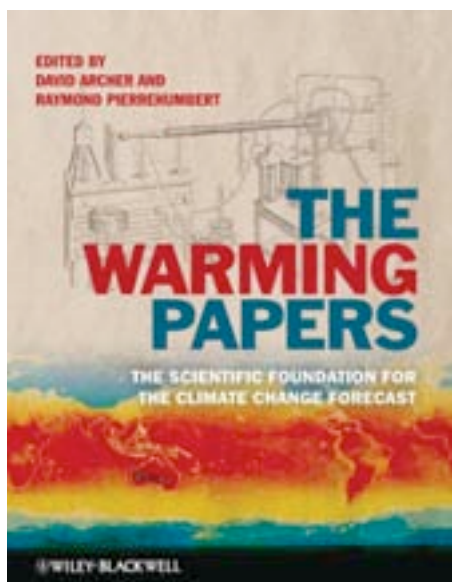
IEMA EVENTS

Date	Region	Topic
Regional events		
25 May	Wales	Water footprinting
25 May	South West	Green drinks
1 June	South East	Social
8 June	West Scotland	Sustainable business practice workshop
9 June	Scotland North	Sustainable business practice workshop
9/10 June	North West	Sustainable business practice workshop
16 June	Yorkshire & Humber	Business practice workshop
20 June	Yorkshire & Humber	Sustainable business practice workshop
21 June	North West	Eco-house visit
21 June	East of England	Sustainable business practice workshop
22 June	Republic of Ireland	Sustainable business practice workshop
23 June	South West	Sustainable business practice workshop
Membership workshops		
29 June	Central Scotland	Associate Open Book workshop
29 June	Central Scotland	Full and CEnv
CPD workshops		
25 May	South East	Change management
9 June	Midlands	Best practice in environmental auditing
15 June	Yorkshire & Humber	Ensure your waste management practices are compliant and sustainable
22 June	South West	Environmental law and legislation

Corporate water strategies

William Sarni / Earthscan / Hardback: £49.99 / ISBN: 978-1-84971-185-2

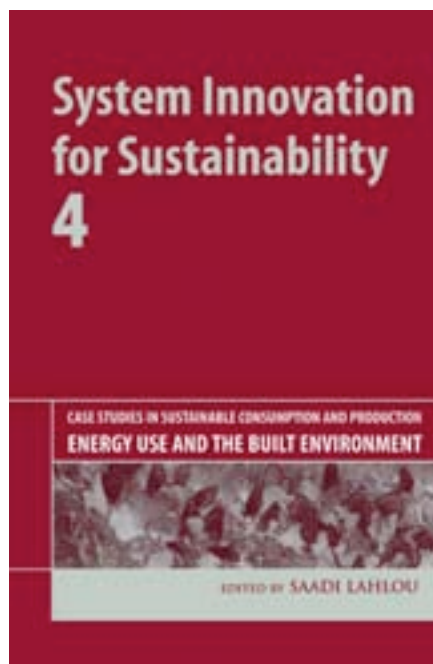
BOOK Just 3% of the world's water is fresh water, and two-thirds of that is either frozen or buried deep underground, leaving only 1% readily available for human use. Most businesses rely on supplies of fresh water to some extent and water scarcity is increasingly a concern. In this book, David Sarni argues that organisations can no longer continue to view water as a minimal operational cost rather than a strategic issue. He explains why businesses need to embed water stewardship into their long-term strategies, claiming that those adopting a smart-water strategy can gain competitive advantage. Sarni provides a roadmap for organisations wanting to develop and implement a successful water strategy, using corporate examples from various sectors with high water-use, including the food and beverage, and semiconductor industries. Importantly, Sarni highlights the difference between carbon and water, and explains why organisations cannot simply transfer their carbon or energy strategies to water. An excellent introduction to global water issues, as well as a good guide to how a business can address increasing water scarcity. Recommended.



The warming papers: The scientific foundation for the climate change forecast

Editors: David Archer and Raymond Pierrehumbert / Wiley-Blackwell / Paperback: £37.50 / ISBN: 978-1-4051-9616-1

BOOK Most people with an interest in the impact of greenhouse gases on the Earth's temperature will have heard of the physicist Joseph Fourier, who is generally credited with discovering the "greenhouse effect" – basically, the natural process by which the atmosphere traps some of the Sun's energy. This book is a compendium of the classic scientific papers – including Fourier's 1827 paper – from the past 184 years that provide the foundation for our understanding of global warming. As well as Fourier's paper postulating a greenhouse effect, the book also includes Svante Arrhenius's 1896 paper on the influence of carbonic acid in the air on the temperature of the ground – in which the Swedish physicist is the first to speculate that changes in the levels of CO₂ in the atmosphere could substantially alter the surface temperature through the greenhouse effect. Fascinating, but only of interest if you want to really understand how the science of global warming has evolved.



System innovation for sustainability 4: Energy use and the built environment

Editor: Saadi Lahlou / Greenleaf Publishing / Hardback: £35 / ISBN: 978-1-906093-25-9

BOOK The fourth in a series of books examining how systems need to change to become more sustainable, this looks at energy use in buildings. Like the other three in the series – on consumption and production, mobility, and food and agriculture – the latest volume uses a case study method to illustrate how different approaches to reducing energy use in the built environment have been implemented. The examples include: the design of zero-energy residential buildings in Boston; a solar housing estate in Freiburg; the innovative approaches used by Woking Borough Council to deliver affordable and sustainable energy; and the adoption of energy-saving performance contracting for federally owned public buildings in Austria. Each case study contains a thorough description of the initiative, from its development to implementation, and the aftermath, including the lessons learned. There is also a very useful concluding chapter outlining the key steps required to make the transition to more sustainable energy use in buildings.

Duncan Carthy

Managing director, Sensible Risk Solutions



Why did you become an environment professional? I have always been passionate about protecting the world's natural resources and thought that I could be most influential by entering the environment profession rather than becoming an activist or a politician. Thank goodness, I made the right choice.

What was your first environment job and how did you get it? Local environment representative at Rolls-Royce. I asked to assist with the ISO 14001 programme and wouldn't take no for an answer. I got involved in more and more meetings and got more training programmes under my belt.

How did you progress your environment career? I paid for myself to do Open University environmental courses, and then got involved with the 14001 audit programme. A position then became available in another division of Rolls-Royce as assistant health, safety and environment (HSE) adviser. A lot of people said that I wouldn't get it, but I did and they were proved wrong. Then I progressed within the turbines business, finally becoming HSE manager in 2006.

What does your current role involve? I have recently set up my own consultancy business. So now I'm my own boss rather than advising Rolls-Royce. I advise my clients on the best ways to manage risk, including environmental issues, and how best to become more sustainable and cost-effective as a business. I suppose I now have more opportunity to improve a broader spectrum of companies with regards to their management of HSE topics.

How has your role changed over the past few years? If I talk about the role at Rolls-Royce: when I first got involved, many of the systems were just being implemented for 14001 and in many respects that is the easy

part. During my last years there as HSE manager I was involved with governance of the process, and advising multiple sites. It also involved thinking more strategically to get the best fit for the business and my vision of where sustainability should take it.

What are the best and the hardest parts of your work?

The best bit is finding a solution to a problem, building the business case and seeing it come to fruition. The worst bit is dealing with managers with different agendas and trying to pull them all together.

What was the last development/training course/event you attended? From a purely environmental point of view it was my MSc. I'm also about to complete carbon action adviser training, so the continuing professional development "bus" keeps on moving and you need to make sure you're continually up to speed.

What did you bring back to your job? From my MSc, a broader, more rounded outlook on HSE issues.

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

Without a doubt, it's communication. There are so many people with differing key performance indicators or expectations that good communication is key to getting the message across to different audiences.

Where do you see the environment profession going? I am pleased to say that I see it as a growth area. With many "green" technologies coming on stream and the heightened awareness of the public regarding the fragile state of the planet and its resources, I believe that good advice and management can enhance the position of the profession. I think the days where we were seen as the "green welly" or the "Jesus sandal" brigade have passed and we need to ensure that the professionalism continues.

CAREER FILE

Qualifications: MSc health, safety and environmental management, CMIOSH, MIEMA, MIIRSM, MIFSM, MRSPH, MCMI, AEPs

2010 to now:
Managing director, Sensible Risk Solutions

2006–10:
Health, safety and environment (HSE) manager, Rolls-Royce

2001–06:
Principal, senior and HSE adviser, Rolls-Royce

1997–2001:
Skilled machinist and local environment adviser, Rolls-Royce

1982–97:
Toolmaker, skilled machinist, various

Where would you like to be in five years' time? I would like to think that I can grow my business portfolio and client list and develop myself to get Chartered Environmentalist status.

What advice would you give to someone considering going into the environment profession?

Don't give up when you get knocked back as you inevitably will in business from time to time. Be patient with your development; I completed the IEMA certificate in 2002 and became an Associate in the same year. It has taken another eight years to become a Full member and to obtain the relevant levels of experience and additional qualifications, such as the NEBOSH specialist Diploma in environmental management and my MSc. Always remember to pick your battles but not to miss the small improvements that all add up to make the sustainable business.

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with Temple Group



Temple Group was established in 1997 and is an independent multi-disciplinary consultancy providing environmental, planning and management services. We have an enviable reputation as an industry leader and innovator and a prestigious client list including Defra, FTSE 100 companies (various), Network Rail, TfL, BAA and HS2 Ltd.

In response to significant growth in the business, we continue to develop and strengthen our multi-disciplinary, technical and management capability and there are a number of outstanding opportunities, based at our office near Shad Thames, Central London, for individuals with experience in:

- Climate & Carbon
- Environmental Impact Assessment
- Energy & Renewables
- Equality Impact Assessment
- GIS
- Health Impact Assessment
- Programme & Project Management
- Socio-economics
- Stakeholder Management
- Strategic Environmental Assessment
- Sustainability
- Town Planning/Master Planning
- Transport & Works Act

Business Development Director: £80,000 - £110,000 + bonus

Operations Director: £80,000 - £110,000 + bonus

Technical Directors: £65,000 - £100,000 + bonus

Technical Director (Head of Acoustics): £65,000 - £100,000 + bonus

Principal Consultants: £40,000 - £70,000 + bonus

Senior Consultants: £33,000 - £45,000 + bonus

Consultants: £25,000 - £35,000

Junior Consultants: £20,000 - £27,000

Marketing & Sales Manager: £35,000 - £50,000

We are also in the process of expanding our **Associate Network**. If you are interested in joining our network, please send your CV to recruitment@templegroup.co.uk

Closing date for applications: Friday, 27 May 2011. Early applications welcome - please note that interviews will be programmed before the closing date in response to early applications. For further information, job specification or application with covering letter and CV please email recruitment@templegroup.co.uk or contact **Evy Skinner** on **01825 790964**. To find out more about Temple and the work we do, visit our website at www.templegroup.co.uk

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TEMPLE

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The purpose of the role will be to provide the full range of occupational hygiene consultancy services to a very diverse client base. Professional development will

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- Provide the full range of occupational hygiene consultancy services including:
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 - Personal exposure assessments
 - Local exhaust ventilation assessments
 - Lighting and non-ionising radiation assessments
 - Thermal environment surveys
 - COSHH assessments
- Prepare proposals for clients
- Write clear, detailed technical reports
- Provide staff training
- Provide external training to clients

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If you match the requirements or are just looking for a new challenge, then please contact **Sam** at SER Ltd for an initial discussion regarding this and other opportunities, tel: **01282 777414**, or alternatively please send your CV to sam@serlimited.com

WATA

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