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September 2012

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SEPTEMBER

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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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Food for thought

Should plants be grown to power cars or aircraft as a way of tackling climate change? For many policymakers the answer is a resounding yes. EU member states are required to raise the share of biofuels in the transport energy mix to 10% by 2020, while fuel from biomass to be blended into transport fuel in the US must reach 36 billion gallons by 2022.

Transport contributes around one-quarter of EU emissions each year – making it the second biggest greenhouse-gas (GHG) emitting sector after energy. Reducing the GHG intensity of transport fuels is, therefore, seen as a no-brainer.

Whether the burning of biofuels in internal combustion engines will help much in curtailing rising global temperatures is debatable, however. Scientists at the European Environment Agency reported in 2011 that the ability of bioenergy to reduce CO_2 in the atmosphere, compared with fossil fuels, is dependent on where and how the biomass is produced and harvested.

Legislation that substitutes fossil fuels by bioenergy, irrespective of the source, may result in an increase in CO_2 emissions – thereby accelerating global warming

"Legislation that encourages substitution of fossil fuels by bioenergy, irrespective of the biomass source, may even result in increased CO_2 emissions – thereby accelerating global warming," they concluded.

The drought across the US "corn belt" has highlighted other potential drawbacks: food shortages and higher prices. Some 40% of US corn output is targeted for biofuel, even though the drought will see yields this year plummet. Higher food prices fuelled partly by land given over to grow crops for biofuel will mean more people will go hungry. And with demand for biofuel from two of the world's largest economies rising, more and more land is being converted to grow biofuel crops.

A recent study claims that land acquisitions to grow biofuel feedstocks account for almost 60% of all large-scale land deals over the past decade, mainly in Africa and Asia. And, the World Bank warned in 2010 that such "land grabs" can pose social and environmental risks if not well managed.

So perhaps the answer to the original question is not quite so straightforward. It may be time for EU and US policymakers to make a U-turn.

Paul Suff, editor

Short cuts

Ministerial shuffle

Owen Paterson has replaced Caroline Spelman as environment secretary following David Cameron's first major reshuffle of cabinet ministers. Paterson, Conservative MP for North Shropshire, moves to Defra from the Northern Ireland office, where he was secretary of state. Jim Paice and Lord Taylor have also both left Defra. Liberal Democrat MP for Somerton and Frome, David Heath, replaces Paice as farming minister, while Lord de Mauley becomes the new parliamentary under secretary of state. Ed Davey continues as energy and climate change secretary, but energy minister Charles Hendry returns to the backbenches. John Hayes, Conservative MP for South Holland and the Deepings, has replaced Hendry. Also at DECC, Baroness Verma takes over from Lord Marland. In another change, Chloe Smith, who had been responsible for energy and environment policy at the Treasury, has moved to the Cabinet Office. Scottish first minister Alex Salmond has also reshuffled his cabinet, with Stewart Stevenson stepping down as minister for environment and climate change, to be replaced by Paul Wheelhouse.

Scottish compliance

New data from the Scottish Environment Protection Agency (SEPA) reveal a slight overall improvement in the performance of regulated businesses. The agency reports that 87% of operators, across various regulatory regimes, achieved a licence-compliance rating of excellent, good or broadly compliant in 2011. The data are from SEPA's compliance assessment scheme (CAS), which details how well permitted operators in Scotland have met the conditions of their licences. CAS changed in 2011 following the implementation of a new risk-assessment system, which has reduced the number of inspections for the lowest-risk permits. As a result, many of these sites have moved on to a five-year inspection cycle, reducing the number rated under CAS from 4,075 in 2010 to 2,691.

Defra to value nature

Ecosystems Plans for an accounting process to properly value natural capital are the subject of a consultation by the Office for National Statistics (ONS), in conjunction with Defra.

The environment department pledged last year in its natural environment white paper to develop a system of accounts to track changes in the stock of natural capital and the value of the services they provide. The consultation (lexisurl.com/iema13377) says the proposed framework would better show links between stocks of natural capital, flows of ecosystem services and economic activity, and would bring discipline to the organisation of environmental and related data.

"The accounts are aimed at providing the underlying data needed to understand changes in the stock of natural assets," says the consultation document, and claims that ecosystems accounting "will be a key tool for managing natural capital better".

The national ecosystem assessment (NEA), which was also published in 2011, will provide the basis for an accounting system under the ONS/Defra proposals. The NEA was the first analysis of the UK's natural environment in terms of the benefits it provides to society and continuing economic prosperity.

In England, the accounts will be used by the natural capital committee, which

provides the government with independent advice on the state of natural capital.

The ONS has established an expert group on natural capital and ecosystems services, which brings together more than 50 individuals, to consider the outcome of the consultation, although it acknowledges that developing ecosystems-based accounts will be an incremental process and unlikely to be completed until 2020. "We cannot do everything immediately. We will need to learn from the experience of others in this field, what is practically possible and how accounts might be used in practice," says the consultation.

Following the consultation, which closes on 30 September, the government plans to publish a roadmap by the end of the year and begin a draft accounting methodology pilot project in autumn 2013.

Low-carbon innovation will save billions

Energy Investing in developing carbon capture and storage (CCS), marine renewables and electricity storage over the next decade could be worth an additional £126 billion to the UK economy by 2050, according to new research backed by DECC and the business department (BIS).

Assessments by the Low Carbon Innovation Coordination Group – an alliance of government departments and bodies including the Carbon Trust, Energy Technologies Institute and the Technology Strategy Board (see p.23) – conclude that channelling hundreds of millions of pounds into cost-cutting innovations could save the UK between £17 billion and £72 billion by 2050 on top of the substantial savings that will be created by generating low-carbon energy. Green business opportunities worth a further £10 billion to £54 billion are also forecast.

According to the group, CCS technologies need the greatest level of investment and innovations should focus on ensuring the security of long-term storage of CO_2. The assessment estimates that innovation could drive down the costs of CCS by 15% by 2025 and 40% by 2050, saving as much as £45 billion.

The analysis of marine energy confirms that innovations are urgently needed to bring down generation costs by up to 75% by 2025. Investing in innovation now could be worth between £4 billion and £12 billion in 2050, the report concludes.

Meanwhile, the Technology Strategy Board launched a new £13 million research and development fund aimed at cutting marine energy costs and the Scottish government has named the five firms that will share £7.9 million of financial support to demonstrate prototype marine devices.

UK given resource warning

Resource efficiency Resource shocks will become more frequent and damaging to the UK economy unless the government takes urgent action on the pending raw materials crisis facing the country, warns a group of business and environmental organisations, including IEMA.

In a letter to both the environment and business secretaries, the Material Security Working Group (MSWG) warns that if the UK does not develop a stronger strategy to keep valuable raw materials circulating in the economy there will be significant consequences for UK industry.

The group, which also includes the manufacturers' organisation EEF and Friends of the Earth (FoE), claims increasing global demand – which will soar further as the population rises – coupled with rapidly degrading ecosystems is already putting pressure on supplies of some raw materials. According to the MSWG, the cost of raw materials has risen substantially in recent years.

"In future a greater number of materials – from wood, plastic and rubber to the rare earth metals used to make everyday electronic products and low-carbon technologies – are likely to be increasingly costly," says the MSWG. It cites the findings of a recent survey of businesses by the EEF, which reveals that 80% of senior manufacturing executives believe limited access to raw materials is already a business risk and a threat to growth, with one in three saying it is their top risk.

The letter is the group's response to the publication by Defra earlier this year of a resource security action plan (RSAP). Although the MSWG describes the plan as a "welcome first step", it wants the government to go further, saying the RSAP fails to address the wider challenge of the future: using resources as efficiently as possible while living within environmental limits.

"The government's RSAP falls short of meeting the challenges we will face when obtaining new resources becomes more difficult and costly," commented Gareth Stace, head of climate and environment policy at the EEF. "[The] government must now step up its ambitions and produce a bolder plan of action that deals with the challenges, not just now but in the longer term. This is vital, not just from an environmental perspective but to ensure a long-term sustainable future for manufacturing and the wider economy."

Among the recommendations put forward in the letter is the creation of an office of resource management in the business department (BIS), which would coordinate activity that is currently spread across several departments and agencies, including Defra, BIS, DECC, the Environment Agency and WRAP.

"A new office of resource management would ensure all departments create jobs and boost the economy by slashing the waste of natural resources," said FoE resource campaigner Julian Kirby, who points out that the UK currently buries and burns at least £650 million worth of valuable materials a year.

Other suggestions include reviewing the packaging and producer responsibility regimes and realigning recycling targets to better reflect the quality of recovered waste. The MSWG argues that the packaging recovery regime incentivises the export of valuable waste overseas. It wants the government to consider setting separate targets for domestic and exported recovery and, potentially, lowering the value of export packaging recovery notes.

It also supports a rethink of producer responsibilities, suggesting that ministers consider offering rewards to electronics manufacturers that design products that are easier to recycle and reduced VAT rates for resource-efficient products.

Meanwhile, in an interview with *the environmentalist* (pp.16–21), EU environment commissioner Janez Potočnik warns: "When we use resources inefficiently, we open ourselves to fluctuations in their price and supply conditions. So in the end it's the economies that use resources more efficiently that are most competitive."

Short cuts

EU ETS links to Oz

High-carbon-emitting organisations subject to the EU emissions trading system (ETS) will in future be able to sell excess allowances to firms in Australia. The European Commission and the Australian government have confirmed that the EU ETS and the Australian carbon price mechanism are to be linked, enabling firms from across both continents to trade allowances and creating the world's largest carbon market. While the schemes will not be fully aligned until 2018, participants in the Australian trading system can begin to buy EU ETS credits to meet their liabilities from 1 July 2015. According to the authorities, the move will provide European firms with a wider market to sell excess credits; give Australian participants access to cheaper carbon allowances; and signal to the rest of the world the potential benefits of international cooperation in tackling carbon emissions. Connie Hedegaard, European commissioner for climate action, said linking the two schemes would help to build momentum towards the creation of an international carbon market.

Food wastes water

One-quarter of the world's water supply is being used to create one billion tonnes of food that is not being eaten, experts at World Water Week warned. In an urgent call to policymakers, farmers and manufacturers to do more to cut wastage throughout the food supply chain, Torgny Holmgren, executive director of the Stockholm International Water Institute, said: "Reducing the waste of food is the smartest and most direct route to relieve pressure on water and land resources. It's an opportunity we cannot afford to overlook." However, the International Water Management Institute argued that increased agricultural productivity and wastewater recycling were also critical. The conference also presented PespsiCo, which owns Walkers crisps and Copella fruit juice, with a water efficiency award for saving 16 billion litres of water across its operations since 2006.

IN PARLIAMENT

The blueing of the greens

Alan Whitehead is MP for Southampton Test

What, if anything, can we tell from reshuffles? There has been a hubbub of speculation during and following the recent government reshuffle (p.4) about what it all signifies. Much of the process of deciding who goes where, particularly in junior posts, can seem random, metaphorically done by moving Post-its around a table in time for the afternoon news.

So perhaps divining too many qualities in individuals is inadvisable, but looking at trends is even less so. I think we can divine a very clear intent in this reshuffle: "green" ministers have almost wholly lost out, and have been replaced by those who may surprise us but at first sight look to be far less signed up to the green and low-carbon agenda than their predecessors. Caroline Spelman at Defra, who most recently gave great personal endorsement to plans for sustainability indicators, has been replaced by Owen Paterson, known in environmental terms only for his very jaundiced pronouncements on planning and low-carbon energy. The committed and knowledgeable Charles Hendry at DECC has been replaced by John Hayes, who apparently thinks that "renewable energy needs to pass the twin tests of environmental and economic sustainability and wind power fails on both counts." In short, most ministers who might have reasonably been expected to "bat green" in their departments have gone, been demoted or have moved.

Whether these moves are fuelled by the Treasury's increasing antipathy towards all things low carbon, or by the prime minister cooling his enthusiasm for a green agenda is a matter for pure speculation. But one thing is clear: it doesn't bode well for a good outcome for electricity market reform, or for green investment, or the better embedding of sustainability across the government. In fact, I would say that it marks pretty much the end of the government's flirtation with green policy.

Counting miles can save £1bn

Transport With UK companies spending almost £11 billion annually fuelling their fleets, the Energy Saving Trust reveals that firms could save £1 billion and prevent 2.4 million tonnes of carbon being emitted by accurately tracking the distances travelled by staff.

According to the advisory body, installing mileage monitoring systems, which capture information on how far fleet cars travel, can cut business travel by up to 10% as they identify wasted journeys and encourage employees to drive more economically.

Food manufacturer Heinz, which has been working with the trust, has seen mileage claims from staff fall by 28% since installing monitoring software, generating significant saving on fuel bills and mileage allowances, as well as cutting carbon.

At the same time, researchers in the US have found that electric vehicles (EVs) can be cheaper over their lifetime than conventional fleet cars. In an assessment of the total costs of ownership of alternatively fuelled vehicles, including hybrid and fuel-cell-powered cars, the researchers concluded that the low costs of charging small and medium-sized EVs and hybrids brought their lifetime costs

below that of petrol equivalents. According to the report, battery electric vehicles, such as the Nissan Leaf, offered the lowest total costs of the 17 vehicles compared.

The news came as the government announced it was co-funding a new £13 million research unit at Warwick University to help the development of batteries for electric vehicles, to support the UK's burgeoning EV sector.

The government is also providing an additional £11 million of support to trial low-carbon heavy goods vehicles (HGVs) over the next two years. The money will fund 13 projects, including one by the John Lewis Partnership, which aims to cut carbon emissions from its HGVs by 70% through improved aerodynamics and by substituting diesel with biomethane.

Green economy powers on

Economy With overall economic growth continuing to flatline, the UK green economy is growing strongly, with turnover expected to be almost 40% higher in 2014 than in 2007, when the financial crisis emerged. By contrast, growth across the rest of the economy is likely to be below 5% by 2014, just in line with pre-recession levels.

These figures come from new analysis by the Green Alliance of existing data from government departments and the CBI. The environmental think-tank concludes that the transition to a green economy is already having a positive effect, contributing around £122 billion to the UK economy in 2011/12 and now employing more people than the automotive and telecommunication sectors combined.

"Quietly and without fanfare, green business has become a UK success story," states the report. "We are often told of the benefits that come from creating a greener economy. It is now clear that we don't need to wait for these benefits. The UK has moved and we are seeing the advantage."

According to the analysis, the green economy has grown by between 4% and 5% each year since 2008 and is projected to grow by at least 5% over the next few years.

It also reveals that, of the top 20 UK infrastructure projects confirmed or started in 2012/13, which are worth a combined £26.1 billion, low-carbon projects account for 88% of total spending.

The UK exported low-carbon and environmental goods and services (LCGSs) worth £11.8 billion to 52 countries in 2010/11, reports the think-tank, creating a trading surplus in LCGSs of £1 billion. The UK is also a leader in helping the global transition to a low-carbon economy, with one-third of all global asset-finance investment in new energy between 2007 and 2012 receiving both legal and financial advice from the UK.

The Green Alliance says the success of the UK green economy is the outcome of setting ambitious environmental targets.

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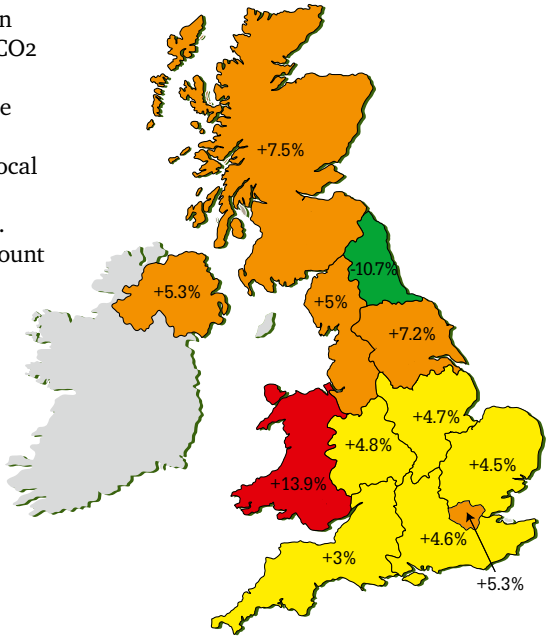
Carbon emissions up across the UK

Pollution Following a universal fall in emissions across the UK during 2009, CO_2 output rose in 97% of the UK's local authorities during 2010 according to the latest figures from DECC. Overall, emissions increased in 394 out of 406 local authorities in 2010, with emissions in Wales growing at triple the UK average.

In annual statistics detailing the amount of carbon generated in local authorities, excluding shipping and aviation, DECC confirms that output grew by 4.2% across the UK, after falling more than 10% the previous year. Emissions in Wales, however, rose by 13.9% on its 2009 output, reflecting a more positive economic situation. Wales, which generates approximately 7% of the UK's carbon emissions, had experienced a 12.7% fall in CO_2 discharges during 2009. However, the increase in Welsh carbon emissions in 2010 from industry and commerce was higher than elsewhere, rising 16.9% compared with the national UK average of 4.3%.

The other devolved governments also saw emissions grow above the average UK rate, with emissions in Scotland rising by 7.5% and in Northern Ireland by 5.3%. In England, which produces more than 80% of the UK's total CO_2, emissions were 3.8% higher than in 2009.



Overall, the biggest increases in carbon emissions came from the domestic sector, with the colder winter resulting in a 7.4% jump in emissions as more energy was used to heat homes. More positive signs in the data were that emissions from road transport remained static and that CO_2 emissions in 2010 remained below 2008 levels.

Provisional figures for 2011, published by DECC in March, indicated that carbon emissions fell by 8%, bringing the UK back in line with its longer-term downward trend.

As CO_2 emissions from towns in the UK rose, the European Commission has revealed that sulphur dioxide (SO_2) levels in EU ports dropped by an average of 66%, thanks to tougher restrictions on the amount of sulphur contained in ship fuel. An amendment to Directive 1999/32/EC, which came into force in January 2010, stipulates that all ships berthed in EU harbours must use fuels containing less than 0.1% of sulphur, where previously fuels with up to 4.5% sulphur were allowed. Air-quality monitoring in Mediterranean ports during 2009 and 2010 confirmed that concentrations of SO_2 fell by two-thirds year on year.

EIA UPDATE

iema

Delay to EU EIA and SEA guides

The European Commission has delayed the launch of its guidance on integrating climate change and biodiversity into environmental impact assessments (EIAs) and strategic environmental assessments (SEAs) until later this autumn. The launch has been revised to ensure it occurs after the commission's proposals for the new EIA Directive are released (expected later this month or October). IEMA is discussing with the commission how best to ensure that members have the opportunity to learn more about the guidance. One of the guide's authors is speaking at this year's EIA Quality Mark Forum on 17 October. A webinar setting out the main points of the guidance is also planned and will be delivered by commission officials.

HRA advice for Scotland

In August, Scottish Natural Heritage (SNH) updated its guidance on habitats regulations appraisal (HRA) of development plans (lexisurl.com/iema13390). The Scottish government has also published two complementary advice sheets (lexisurl.com/iema13391) to align with SNH's guidance. These cover the alignment of development plan procedures with HRA procedures, and screening general policies and applying simple mitigation measures.

Wales EIA consultation

The Welsh assembly is aiming to consult on updating its Town and Country Planning EIA Regulations after the summer recess. The revised Regulations take account of recent legislative and case law developments.

GLVIA3 progress

IEMA and the Landscape Institute (LI) have announced that the third edition of the *Guidelines on landscape and visual impact assessment* (GLVIA3) will be published in March 2013. IEMA and LI are planning for GLVIA3's launch to ensure both EIA and landscape professionals have opportunities to attend events setting out the key updates. Details of the launch and related events will be advertised to IEMA members in early 2013.

Consent

On 20 June, the Scottish government played host to a discussion on environmental assessment and energy consenting as part of the EU sustainable energy week events at Scotland House. A discussion paper and presentations from the event are available to view at lexisurl.com/iema13392.

Forthcoming webinars

- 27 September – Effective scoping practices in EIA
- 25 October – Presenting and communicating EIA findings

Society empowers its staff

Energy Nationwide and the Carbon Trust have developed a bespoke version of the trust's online behaviour change tool, Empower, as a way of engaging the building society's 15,000 employees with energy efficiency and helping it make financial and carbon savings.

The tailored edition of Empower features virtual representations of familiar locations and energy-efficiency tips designed specifically for the building society, while advice is provided across various business areas, such as retail branches and administration centres. There is also information on reducing travel, including transport options for getting to and from work and details on teleconferencing options instead of travelling to meetings.

Employees will be encouraged to pledge how they will help cut carbon as part of the initiative, enabling the building society to target the most effective places to change behaviour, as well as monitor expectations and progress.

"Our employees' support is vital for us to achieve our environmental targets and environmental sustainability must be embedded into the hearts and minds of everyone in the organisation for our strategy to be truly successful," commented sustainability manager Lynn Forrester.

In 2008, Nationwide stopped buying electricity that was generated solely from renewable sources, preferring to use the difference in price between so-called "green" and "brown" electricity to invest in improving the energy efficiency of its buildings and facilities. The society is currently rolling out building-management systems across its branch network with the aim of reducing energy use by 16%.

Meanwhile, the government has confirmed that it will contest European Commission legal proceedings against the UK for refusing to withdraw the reduced rate of VAT for energy-saving materials installed in residential accommodation, claiming the rate is consistent with EU law.

New WEEE rules drive targets up

Resources EU member states have to more than double recovery rates of waste electrical and electronic equipment (WEEE) in the next six years under new legally binding targets introduced by the recast WEEE Directive (2012/19/EU).

The Directive imposes tough collection targets to ensure that valuable resources such as rare earth metals, copper and gold used in mobile phones and computers are being recycled. Currently only one-third of WEEE is collected separately in the EU and under the new rules member states will have to ensure that 85% of WEEE is recovered annually by 2019, diverting 10 million tonnes of waste from landfill.

An intermediate target in 2016 means that EU countries will have to recover the equivalent of 45% of the new electronic products sold within their borders.

Meeting the targets will impose tougher obligations on electronics producers and these will be reflected in amendments to be made to the producer responsibility regime, a consultation on which is due in early 2013.

In a recently published report, the business department's WEEE advisory body concluded that the UK government needed to provide incentives for firms to design electronic products that were easier to repair, upgrade, reuse or recycle, and consider a producer responsibility scheme that weights the amount of WEEE required to be collected by firms in line with the costs of treating the products they put on the market.

Manufacturers' association EEF said the government must now rethink its WEEE scheme. "The Directive provides us with a great opportunity to understand whether we can put safeguards in that ensure that producers are paying a fair price for the treatment of WEEE," said Fergus McReynolds, EEF senior climate and environment policy adviser.

Short cuts

Waste guidance

New guidance on whether something is or is not waste has been produced by Defra, the devolved administrations and environment agencies in England, Wales and Northern Ireland. The guidance (lexisurl.com/iema13381), which aligns with EU guidelines (lexisurl.com/iema13382) on the revised Waste Framework Directive (2008/98/EC), aims to help organisations make the right (and legal) decision in difficult cases, such as where the substance or object has a value or a potential use, or where the decision is about whether waste has been fully recovered or recycled and has therefore ceased to be waste. The guidance is split into three parts: part 1 explains the background to, and the rationale for the guidance; part 2 is a practical guide for businesses and other organisations; and part 3 provides detailed guidance on the case law on the definition of waste.

Trust gets PAS 2050

The certification arm of the Carbon Trust has become the first organisation in the world to achieve independent accreditation from UKAS to provide greenhouse-gas verification services against the 2011 version of the standard for assessing the carbon footprint of products, the Publicly Available Specification 2050 (PAS 2050). The accreditation recognises the Carbon Trust Certification's competence, impartiality and capability to independently verify a product's carbon footprint. "The Carbon Trust has a long-term commitment to supporting the development of international standards in carbon footprinting, which we see as vital to address climate change," commented Darran Messem, managing director of certification at the trust. PAS 2050 outlines a framework for assessing the amount of carbon emitted in the creation of products and services. It also clarifies how recyclable materials should be assessed and includes emissions from biomass and other biogenic sources.

Prosecutions

Roundup of the latest environmental cases

CASE LAW

High Court says 'development' should include EIA projects

Following a recent court decision, local authorities will be expected to interpret the meaning of "development" broadly, so it also covers projects requiring an environmental impact assessment (EIA). This could have time and cost implications for developers, who may be required to carry out EIA in an increasing number of circumstances.

In *Save Woolley Valley* [2012] EWHC 2161 (Admin), a conservation group succeeded in overturning a local planning authority's decision that poultry units, each housing 1,000 laying hens, were not "development" subject to planning control and so did not require an EIA.

The Administrative Court considered that the approach adopted by the authority was too narrow in its definition of development in s.55 of the Town and Country Planning Act 1990. The court said that the authority should have considered whether a unit was an "erection" or a "structure", and therefore constituted a building for the purposes of s.55, bearing in mind the substantial size and weight of each unit. According to the court, this would involve carrying out a threefold test considering size, permanence and degree of physical attachment.

The definition of development in s.55 could, and should, be interpreted broadly by planning authorities so as to include, wherever possible, projects that require an EIA under the EIA Directive (85/337/EEC) or the EIA Regulations, said the court, otherwise the Directive would not be effectively implemented under UK law. Previously, authorities would consider whether the project was development before determining whether the EIA Regulations applied. The ruling means that authorities may now have to consider whether a project falls within Schedule 1 or 2 of the EIA Directive in order to conclude whether it is development under s.55.

Hayley Tam and Colleen Theron

Lexis®PSL

Chicken-processing firm roasted over water use

Moy Park has been fined £12,000 for twice exceeding the limit of its water abstraction licence at its Anwick factory in Lincolnshire, after the Environment Agency refused to increase the abstraction allowance.

The poultry-processing firm, whose brands include Jamie Oliver's ready-to-cook chicken products and Castle Lea, pleaded guilty to removing 119,000m³ more water than it was allowed to do under its licence during 2010/11, but denied the breach was deliberate. Lincoln Magistrates' Court was told the over-abstraction, which equated to 17% of Moy Park's annual 700,000m³ allocation, was the result of careless record keeping and a failure to check water usage against its permit. The firm then breached its licence again the following year, extracting an additional 2% above its permitted allowance. The agency, however, said that Moy Park was aware of the limits of its licence, having had its application to extend the amount it could abstract refused in 2009, and that the firm should have bought additional water from the mains supply. The extra water Moy Park used in 2010/11 would have cost more than £24,500.

The case highlights the agency's tougher stance on protecting water resources. "In the past, water wasn't such a big issue for government bodies, but under the Water Framework Directive, and with droughts on the increase, the agency is much better informed and in control," said Simon Colvin, senior environmental lawyer at Pinsent Masons. "It will be increasingly difficult for organisations to increase abstraction thresholds or to even get a new licence. And with ongoing water shortages we are likely to see more prosecutions like this."

Under proposals in the draft Water Bill, abstraction licensing will be included within the environmental permitting regime, which will mean tougher penalties for breaches in future, said Colvin. "The move means water abstraction breaches will be subject to civil sanctions that will enable the regulator to counter any financial benefit gained by illegally extracting water," he commented.

Gibson plays illegal note

Iconic guitar maker Gibson is to pay $350,000 in penalties for purchasing illegally sourced hardwoods, but has avoided criminal charges in a deal with the US Justice department.

The Nashville-based firm signed a "criminal enforcement agreement", admitting that it had bought ebony and rosewood illegally exported from Madagascar for its guitars, following months of legal wrangling. The company was facing prosecution under the Lacey Act, which makes it illegal for US firms to "trade in any plant taken, possessed, transported or sold in violation of … any foreign law that protects plants".

An investigation revealed that despite knowing it has been illegal for Madagascan firms to sell unfinished hardwoods since 2006, Gibson continued to take delivery of the timber through a third party until late 2009. In the agreement Gibson admits it should have been more diligent and forfeits any rights to the wood, which is worth $262,000 and was seized in raids at two of its factories in August 2011. However, Gibson's chief executive, Henry Juszkiewicz, said the company had only settled because defending the case would have cost it millions of dollars, and claimed that the firm had been "inappropriately targeted" by the US authorities.

Waste fines hit £1.7 million

Convictions for serious waste offences in England and Wales were up by 25% in 2011 and fines issued by courts increased by 45% to just over £1.7 million, according to the latest figures from the Environment Agency.

In a new report outlining how the regulator is tackling the illegal transport, storage and treatment of waste (lexisurl.com/iema13468), the agency also confirms that it closed 670 large illegal waste sites. However, it also revealed that another 1,175 sites are still in operation and that incidents of large-scale dumping were up in 2011. According to the agency, construction and demolition waste is most commonly found at illegally operated sites, followed by household and commercial waste. However, it also found that 4% of illegal waste sites work with hazardous materials.

The report includes a stark reminder to organisations that they risk being prosecuted and fined if they do not ensure their waste is being disposed of legally.

The report came as a Suffolk company contracted by a local housing authority to clear empty properties was fined £3,500 for storing and burning waste at its site in breach of its environmental permit, and for failing to provide the legally required waste-transfer documentation.

CORPORATE RISK SYSTEMS
SAFETY HEALTH AND ENVIRONMENT

CRS Environmental Training Courses

The need for businesses to address environmental issues has never been greater. Tendering requirements, changing needs of lenders and investors and increasing legislation are forcing businesses to address their environmental performance.

CIEH Level 2 Award in Environmental Principles and Best Practice

This qualification has been designed for all employees. This course has been designed as a great introduction to provide an appreciation of significant environmental impacts that affect businesses in the UK and is a one day course.

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The NEBOSH National Certificate in Environmental Management is designed to provide a sound foundation in environmental management knowledge and practice. The course is designed for managers, supervisors and employees based in the UK, who have responsibility for managing environment issues as a part of their day-to-day work. The qualification focuses on UK environmental laws and International management systems, such as ISO 14001 and is a five day course.

MIEMA – Full Membership of IEMA incorporating Associate Certificate of Environmental Management.

This unique course to CRS is designed to offer you a route to Full Membership of IEMA without any exams, via an evidence based portfolio to demonstrate not only your understanding of all the criteria, but an ability to apply them in a work based setting. The applied learning delivery method allows you to work at your own pace, and work commitments, whilst still achieving a high level qualification.

Environmental Consultancy and Support

CRS has a team of sector leading specialists ready to help you understand the ever-growing requirements of environmental legislation. If you need to implement a management standard such as ISO 14001, or you are looking to re-energise an existing environmental management system, we can support you.

We offer a wide range of Environmental Consultancy services including, audits,environmental management systems implementation and support, issues based guidance in areas such as waste management, carbon foot printing, and Corporate Social Responsibility, as well a broad range of training to support Management, Workforce and those seeking to become an Environmental Practitioner.

Our Commitment

As an organisation we have a policy of minimisation and offset of our carbon emissions. We also support local and global environmental charities - the National Forest, Pacific Whale Foundation and Sea Shepherd.

If you would like more information please contact: 01283 509175 or Email: Ros Stacey – rs@crsrisk.com

NEW REGULATIONS

In force	Subject	Details
19 July 2012	Environmental protection	The Natural Resources Body for Wales (Establishment) Order 2012 establishes a new statutory body, the Natural Resources Body for Wales, and provides for its form, purpose, membership, procedure, financial governance and initial functions. lexisurl.com/iema13259
20 July 2012	Flooding	The Designation of Features (Notices) (Wales) Regulations 2012 relate to the Flood and Water Management Act 2010 and require notices issued under Sch.1 of the act to specify a minimum notice period before they have effect. lexisurl.com/iema13250
22 July 2012	Environmental protection	The Advisory Committee on Hazardous Substances (Abolition) Order 2012 abolishes the Advisory Committee on Hazardous Substances. The Order also makes repeals and revocations (including repealing the power to appoint a committee) associated with the abolition. lexisurl.com/iema13256
24 July 2012	Flooding	The Designation of Features (Appeals) (England) Regulations 2012 provide a right of appeal against designations and enforcement notices under Sch.1 to the Flood and Water Management Act 2010 and against related decisions under paras 6 and 9. lexisurl.com/iema13253
31 July 2012	Energy	The Renewable Heat Incentive Scheme (Amendment) Regulations 2012 amend the 2011 Regulations by introducing a mechanism restricting access to the scheme if the forecast for total expenditure reaches a certain point. lexisurl.com/iema13260
31 July 2012	Reporting	European Commission Regulation 601/2012 on the monitoring and reporting of greenhouse-gas (GHG) emissions under the EU emissions trading scheme (ETS) will replace commission decision 2007/589/EC, which established guidelines for reporting GHGs covered by the ETS. The provisions of decision 2007/589/EC continue to apply until 1 January 2013, when phase III of the ETS starts and Regulation 601/2012 applies. Regulation 600/2012 on the verification of GHG emission reports and the accreditation of verifiers also applies from 1 January 2013. lexisurl.com/iema13246; lexisurl.com/iema13247
1 August 2012	Energy	The Feed-in Tariffs (Specified Maximum Capacity and Functions) (Amendment No.2) Order 2012 amends the 2010 Order by altering art.13 to include a new duty on the Gas and Electricity Markets Authority to publish a quarterly table outlining payment rates to apply to solar photovoltaic installations in the following quarter. lexisurl.com/iema12886
1 August 2012	Flooding	The Flood and Water Management Act 2010 (Commencement No.7) Order 2012 brings into force the remaining provisions of s.30 (designation of features) and Sch.1 (risk management: designation of features) of the Flood and Water Management Act 2010. lexisurl.com/iema13258
2 August 2012	Capital allowances	The Capital Allowances (Environmentally Beneficial Plant and Machinery) (Amendment) Order 2012 amends the 2003 Order and revises the Water Technology Criteria List (lexisurl.com/iema13073) and the Water Technology Product List (lexisurl.com/iema13074) issued by Defra. The Capital Allowances (Energy-saving Plant and Machinery) (Amendment) Order 2012 amends the 2001 Order and revises the Energy Technology Criteria List (lexisurl.com/iema13076) and the Energy Technology Product List (lexisurl.com/iema13077) issued by DECC. lexisurl.com/iema13075; lexisurl.com/iema13078
6 August 2012	Waste	European Commission Regulation 674/2012 amends Annex III and IIIA of Regulation 1418/2007 on the export of certain waste to specific non-OECD countries. lexisurl.com/iema13245

LATEST CONSULTATIONS

17 October 2012

Greenhouse-gas reporting

Following the announcement in June that mandatory greenhouse-gas (GHG) reporting will be introduced next year for companies listed on the London Stock Exchange, Defra has produced draft GHG reporting regulations, providing more information on what, and how, businesses will have to report in the future. The government plans to review the reporting requirements in 2015 before possibly extending them to more firms from 2016. The consultation also proposes introducing the regulations in October 2013 alongside new regulations amending the narrative reporting framework.
lexisurl.com/iema13264

22 October 2012

Pesticides

Defra has produced a draft UK national action plan (NAP) on pesticides as part of its implementation of the EU Directive on the sustainable use of pesticides (2009/128/EEC), which was transposed into UK law on 18 July by the Plant Protection Products (Sustainable Use) Regulations 2012. The NAP, which is subject to consultation, aims to ensure that plant protection products can be used sustainably in the UK.
lexisurl.com/iema13263

25 October 2012

Resource efficiency

The European Commission is consulting on a series of indicators under its roadmap to a resource-efficient Europe (Com 571). The indicators will enable the commission to benchmark and compare the performance of member states. The indicators follow a three-tiered approach to measuring progress. The commission proposes "resource productivity" as a provisional lead indicator as it is deemed the best available proxy for resource efficiency. This indicator is accompanied by a second-tier dashboard of complementary macro indicators on land, water and carbon. Finally, theme-specific indicators measure progress towards specific key objectives and actions, as well as milestones set out in the roadmap.
lexisurl.com/iema13267

25 October 2012

Persistent organic pollutants

European Commission Regulation 850/2004 on persistent organic pollutants requires the commission to draw up a plan for the implementation of the EU's obligations under the Stockholm Convention and, when appropriate, to review the plan and update it. Since the 2007 plan, a number of further actions have been identified as well as the addition of several new substances under the Convention. The commission is now consulting on altering its plan.
lexisurl.com/iema13266

30 October 2012

Habitats Directive

Article 6(4) of the Habitats Directive (92/43/EEC) allows plans or projects that may have an adverse effect on the integrity of a European site to go ahead on grounds of "imperative reasons of overriding public interest" when there are no alternative solutions and compensatory measures have been secured. Defra is now consulting on draft guidance on the application of art.6(4).
lexisurl.com/iema13262

31 October 2012

Flood plans

The Environment Agency is consulting on its approach to delivering flood-risk management plans in England and Wales. The agency has to produce these plans for rivers, the sea and reservoirs in both countries and the consultation focuses on working with lead local flood authorities – which also have to produce flood-risk management plans in flood-risk areas – to produce plans.
lexisurl.com/iema13265

NEW GUIDANCE

Energy	The Carbon Trust has published the first in a new series of guides designed to help businesses and the public sector to take control of their energy spend and carbon emissions. The first, *CTV069 Building fabric* (lexisurl.com/iema13269), provides a technology overview of building fabric – floors, ceilings, windows, doors and walls. According to the trust, examining building fabric can be one of the most effective ways to save money on bills; an industrial building can, for example, lose as much as 75% of its heat through the building fabric. The guide provides an in-depth look at opportunities for energy saving, with a particular focus on options for insulation and the importance of maintenance.
Climate change agreements	DECC has issued a series of interim guides (lexisurl.com/iema13270) for climate change agreements (CCAs) starting in April 2013. One, *Interim guidance for new CCA scheme*, covers, among other topics: the 70% rule; applying the "bubbling" rules; varying absolute targets where throughput has dropped; conversion factors; rules for hybrids; accounting for renewable energy; and reporting energy consumption. The guides take applicants through a series of logical steps, including how to set up a CCA, eligibility criteria, ensuring baseline conditions are established correctly, and how to report CCAs. DECC says the guides will be removed when the Environment Agency publishes the final versions from autumn 2012.
Climate change risks	US investor-action groups, including CERES and Oxfam America, have published a guide (lexisurl.com/iema13268) for companies and investors on the disclosure and management of climate impacts. It includes information on physical climate risks facing seven sectors – agriculture, food and drink; clothing; electric power; insurance; mining; oil and gas; and tourism. There is also a section on risk management strategies, as well as a physical climate risk disclosure checklist.

EVENTS CALENDAR

Date	Course	Location and details
3 October 2012	Water Scotland	Hilton Edinburgh Grosvenor lexisurl.com/iema12918
9–11 October 2012	6th European water and wastewater management conference and exhibition	Lancashire CCC, Manchester lexisurl.com/iema12919
10–11 October 2012	Energy solutions	Olympia, London lexisurl.com/iema12641
10–11 October 2012	Microgen 2012	Stoneleigh Park, Warwickshire lexisurl.com/iema12323
11–12 October 2012	The Auditing Roundtable's international workshop 2012	London Marriott Hotel, Marble Arch lexisurl.com/iema13271
18 October 2012	Responsible procurement and supplier engagement 2012	CBI conference centre, London lexisurl.com/iema13272
23 October 2012	The carbon show 2012	Business Design Centre, London lexisurl.com/iema13063
23 October 2012	Environmental law: regulation, compliance and litigation	Central London lexisurl.com/iema13344
30 October 2012	Corporate water risk 2012	Hallam conference centre, London lexisurl.com/iema13273
30 October– 1 November 2012	RenewableUK 2012	Scottish Exhibition and Conference Centre lexisurl.com/iema13062

When less means more

How should European policymakers and businesses respond to the challenge of resource security? ***the environmentalist*** asks commissioner Janez Potočnik

Commodity prices have risen 147% since 2000 and are likely to continue to soar, despite the economic slowdown. Jeremy Grantham, co-founder of asset management company GMO, told the Re|Source 2012 conference in Oxford about 33 commodities that lost 70% of their value over the course of the 20th century, but in the past 10 years their price had, on average, tripled in value, something he describes as a "paradigm shift" and the most important event since the industrial revolution.

Grantham warned delegates to expect a lot of volatility in the future, with short-term falls followed by rises, as prices continue on an upward trajectory.

The reasons for the increases include population growth – global population is forecast to reach nine billion by 2050 – and the rise of China as an industrial powerhouse. The Chinese economy currently consumes 59% of the world's cement, 48% of all coal and 45% of all steel. The rising population, coupled with greater affluence in developing countries – the global "middle class" is forecast to grow by 172% between 2010 and 2030 – is feeding the worldwide demand for material resources, forcing countries and companies to compete for what is available.

Rising demand also puts additional pressure on the environment. Higher prices act as an incentive for mining and oil companies, for example, to exploit new and less conventional sources, which can have an adverse impact on the environment. Exploitation of the Canadian oil sands highlights the dangers, as excavation is energy intensive and the oil produced more damaging to the environment than that from traditional oil wells.

The European Commission has published an action plan – a roadmap to a resource-efficient Europe – to address potential resource problems (see panel, p.21). It aims to transform the EU economy into a sustainable one by 2050, with progress milestones by 2020.

Here, environment commissioner **Janez Potočnik** (**JP**) answers questions from ***the environmentalist*** (**Env**) on the importance of the EU and its member states improving resource security.

Env: What are the main physical and geopolitical risks that the EU faces in terms of resources?
JP: Our economies depend on natural capital – metals, minerals, biodiversity and ecosystems services such as food, timber, clean water, fertile soils and clean air.

When I say economies, I actually mean you and I, all of us in fact. And we are all using natural resources at an unsustainable rate, bringing our environment, both globally and locally, to tipping points that may be irreversible. Climate change is one well-known example. There are plenty more: overfishing and increasing damage caused by flooding, due partly to the loss of natural flood plains and increased channelling of rivers. There is mounting evidence that the numbers of insect pollinators are falling sharply all over the world. Many food resources depend on pollination by bees and other insects – in the EU, insect pollination has an estimated economic value of €15 billion a year.

When we use resources inefficiently, we leave ourselves open to fluctuations in their price and supply conditions. So in the end it's the economies that use resources more efficiently that are most competitive. That's why I keep trying to pull the idea of sustainable growth into the picture.

Env: Research indicates that resource efficiency can save businesses considerable amounts of money. McKinsey reported in 2011, for example, that potential global savings of between $2.9 trillion and $3.7 trillion could be achieved by 2030 through a range of resource-productivity measures, 70% of which would have investment returns of 10% or more per year. So why are many companies still wasteful, and what can policymakers do to support greater efficiency?
JP: The failure by some companies to address efficiency is partly due to our mind-set – we aren't yet used to high resource prices, and we still worry about high labour prices instead. But the recent upward trend in resource prices is likely to become more pressing as demand grows for energy, food, metals and minerals, driven by the rise of emerging economies, population growth and other geopolitical factors.

RESOURCE SECURITY

- By 2050, more than two planets will be required to sustain the current human population if we carry on using resources at the existing rate.
- Demand for food, feed and fibre is set to rise by 70% by 2050; 60% of the world's major ecosystems that help produce these resources have already been degraded or are used unsustainably.
- Business demands for water are predicted to increase by more than 200% in developing countries by 2050.
- In 2007, the total amount of material directly used in the EU economy was more than eight billion tonnes.
- Each year, the EU produces 2.7 billion tonnes of waste, 98 million tonnes of which is hazardous. On average, only 40% of solid waste is reused or recycled, with the rest going to landfill or incineration.
- 88% of EU fish stocks are fished beyond maximum sustainable yields and only 11% of protected ecosystems are in a favourable state.
- The World Business Council for Sustainable Development estimates that by 2050, at least a fourfold increase in resource efficiency will be required, with significant improvements already needed by 2020.
- A study for Defra estimated that simple resource-efficiency actions, which would pay back in less than 12 months, would produce around £23 billion of cumulative savings each year for UK companies.
- The emissions associated with mining and refining a kilogram of platinum and palladium is around 14,500kgCO_2e and 10,000kgCO_2e respectively, while secondary recovery of both metals generates about 750kgCO_2e per kg.

There are also hidden barriers such as counterproductive economic incentives that need to be overcome. They make it difficult for individual companies to take the necessary steps.

A third reason is that natural resources such as clean water, fresh air and healthy soils are not valued properly in our market economy. So businesses have neither the knowledge nor the incentive to use them efficiently. A forest is valued for the wood it contains, but it provides numerous other ecosystem services that don't currently have a market value.

As I see it, policymakers should develop awareness of the need for resource efficiency but, more fundamentally, they need to look for ways to develop the right incentives. One good way to improve resource efficiency is to increase recycling rates, but this needs to be done in an intelligent manner. It's often hard to recycle complex goods: the appropriate collection infrastructure has to be in place. Ultimately it's a question of time – we won't adapt to high resource prices overnight. We need new design rules that factor in dismantling and recycling, and stable price levels that create robust economic incentives to recycle.

Env: The EU resource-efficiency roadmap talks about the need for a combination of instruments to support greater efficiency, including legislation and market-based instruments. Can you provide some examples of what the commission means?

JP: There are many examples. Fiscal instruments on pollution (including greenhouse-gas emissions), resources and energy use can help balance public finances, for instance. Moving taxation from employment to environmental impacts can stimulate long-term employment, and phasing out environmentally harmful subsidies could lead us to a situation where we focus more financial support on environmentally friendly sectors and help them grow so they can absorb more employment.

It's often a question of awareness. Many of the arguments for green growth are still not fully recognised, even by some governments, so more work is needed to highlight the real economic benefits of becoming more resource efficient at national, EU and international level.

Env: Should producers be obligated to take back all products when consumers have finished with them? And should companies be obliged to manufacture products in a way that materials can be easily extracted at the end of their life?

JP: Legal obligations will help, and I think the market will get the message in any case as resource prices rise. However, much more needs to be done in terms of awareness, knowledge, infrastructure, institutions and policy to help get the incentives right for the market to react properly.

There is little doubt that extending producer responsibility could act as an incentive to design products in a way that makes dismantling and recycling economically feasible. More cooperation in the value chain would help too, so that we cut down waste wherever we can. Good recycling infrastructure ensures that waste has a value, making it economically advantageous for companies to recycle the materials that are embedded in waste and allowing them to re-enter the market. That's why we are so keen on making sure all member states follow the waste hierarchy, with reuse and recycling at the top of the pyramid. And of course we need to ensure that resources and raw materials used are harvested in a sustainable way.

Env: Waste electrical and electronic equipment [WEEE] contains a number of very valuable materials, including rare earths metals, but only 16% of WEEE is recovered. How can we make it easier for consumers to recycle goods? And would a payment system for electrical and electronic equipment that is no longer wanted, similar to those mobile phone companies operate, be a good way forward?

JP: Small WEEE is harder to collect, as many people are tempted to throw it out in their unsorted rubbish. But we don't want light bulbs containing mercury going to landfill for obvious reasons, and, yes, small WEEE, such as mobile phones and USB sticks, often contain a lot of secondary raw materials than can be recovered.

Some member states collect small WEEE at the door; others have municipal collection points; and others encourage people to take it back to retail stores. The new WEEE Directive gives member states plenty of discretion regarding the method of collection, and it specifically asks for collection at retail stores as this is underdeveloped in many countries, and it can be very effective. Regarding payment systems, it's clear that financial incentives to bring back WEEE can work. Some shops already reduce the price of new equipment when WEEE is brought back; some phone retail outlets give cash for old mobile phones; and there are even firms

Carbon (GHG) Accounting and Management

An IEMA-Approved 2-Day Training Course

Conestoga-Rovers & Associates (Europe) Ltd (CRA) is pleased to announce the continued delivery of its IEMA-approved Carbon and Greenhouse Gas (GHG) Accounting and Management course. This two-day course is aimed at professionals responsible for measuring, reporting, and managing carbon dioxide and other GHG emissions for their organisation. Also, this course will help organisations develop accounting processes and reduction initiatives for the future introduction of mandatory GHG reporting. The course modules will equip you with:

- *An appreciation of the background to climate change, and the business and socio-political drivers for addressing GHG emissions*
- *The capability to present business cases to senior management to gain commitment for initiatives to measure, reduce and report emissions*
- *An understanding of the key standards and protocols for GHG measurement and reporting*
- *The skills to develop a carbon (GHG) accounting system and to capture your organisation's footprint*
- *An understanding of techniques to reduce carbon and GHG emissions*

The next course in the UK is planned for 20th-21st November 2012 in Liverpool.
For more details, please visit www.cra.co.uk or contact us on:
0115 965 6700 or training@cra.co.uk

CRA's training partner, SHEMSI, delivers our IEMA-approved carbon course in Southeast Asia. For details, contact *mail@shemsi.com*.

CRA Europe opens North West office

CRA Europe is pleased to announce that it has opened a new office in Liverpool, to extend the availability of our environmental consultancy services to the North West of England and North Wales. A number of CRA staff have transferred to the Liverpool office, but we need to recruit additional staff to be based there and also for our head office in Nottingham. We are looking for environmental management and compliance specialists, with 3-5 years experience. Please see www.cra.co.uk/careers-list for more details.

CRA Europe certified to ISO 14001 and OHSAS 18001

CRA's integrated environmental, health and safety management system (EHS MS) is now certified to ISO 14001 and OHSAS 18001. This year, we took the decision to integrate our existing environmental management and health and safety systems, and have them certified. We also modified the system to conform to the likely structure of ISO 14001 when it is republished in 2015, which required us to expand the provisions for leadership, commitment, stakeholder engagement and improvement. We may be the first organisation in the world with a certified system that adopts the new structure. For more information on the revision of ISO 14001, please contact Nigel Leehane (nleehane@cra.co.uk).

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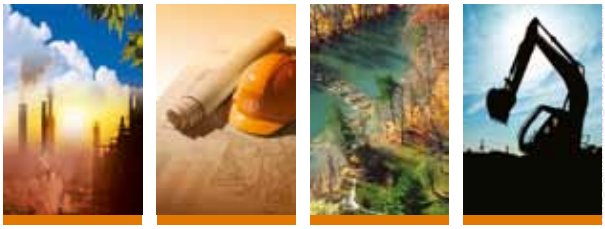


Bringing sustainability and safety to the world's most complex environments

that specifically buy WEEE for reuse and recycling. The different systems can learn a lot from each other, and it's good to see them becoming more widespread. The right measures take us a step closer to a truly circular economy. Some countries are doing very well – the overall collection rate in Sweden is already close to the 2019 collection target of 85%.

Env: Does the EU have sufficient/the right facilities to recover/reuse goods/materials? And should the EU stop all export of waste?

JP: The EU has one of the world's best networks of recycling and recovery facilities. Landfilling has all but disappeared in some member states, meaning that waste is used as a resource. Others are still landfilling almost all their waste, and a lot of work will be needed before they meet the legally binding targets they have signed up to in EU legislation.

Economic conditions need to be altered before the required waste management facilities are put in place. Top-performing member states got there by using a mix of economic instruments, such as landfill taxes and bans, pricing policies for incineration, producer responsibility schemes to finance separate collection and recycling, and "pay as you throw" schemes to get the infrastructure in place and get it widely accepted.

Regarding export, EU legislation prohibits the export of hazardous waste to non-OECD countries and bans the export of waste for disposal outside the EU and EFTA countries. But banning the export of non-hazardous wastes destined for a recovery operation would contradict international trade rules and might also be detrimental to developing a circular economy.

Env: How can Europe best close the loop? Are there existing examples in the EU where this is happening?

JP: Closing the loop – when one sector's waste becomes another sector's raw material – is the ideal. If we want to make it a reality and see a large-scale shift to a circular economy, we are going to need to remove a lot of institutional and behavioural barriers that hold back resource efficiency.

It will also require the right incentives for sustainable production and consumption decisions. We need markets, prices, taxes and subsidies that reflect the real costs of resource use, more long-term innovative thinking in business, finance and politics, and research to fill the gaps in our knowledge and skills. It can happen. Industrial symbiosis and design for reuse or recyclability is already a reality in numerous industrial sectors. Slags once discarded by the steel industry and fly ash from coal-fired power stations are now used in cement production. Waste paper, textiles and tyres are all reused or recycled. But there's a long road ahead.

Env: Is leasing products, rather than purchasing them, a better business model?

JP: New business models may help to improve resource efficiency, but there is no one-size-fits-all solution. Leasing may be attractive for consumers who wish to buy a service instead of a product, and it also helps if we dematerialise – such as renting a film by downloading it instead of buying a DVD, for example. But these things happen slowly. Organisations have to develop the business models we need, and consumers must be weaned off the endless accumulation of physical goods. But it won't happen especially fast.

Env: Some countries, worried about food security and having access to sufficient raw materials, are leasing or buying land in other parts of the world, including Africa and Southeast Asia. Should the EU/member states be doing deals with other countries rich in resources to gain access to them?

JP: Access to resources is clearly important for the EU economy, especially in this era of resource dependency. Member states are already involved in ensuring access to key resources such as oil and gas, but it's generally private companies that make the decisions on the basis of market economics. That's why the commission has proposed setting up the European innovation partnership on raw materials, with a view to increasing the availability of raw materials for Europe.

International raw materials markets should operate in a free and transparent way, but many countries are now applying measures that distort the markets. We try and block those actions through the appropriate channels. What we also need to avoid is situations where different players take advantage of lax environmental legislation around the world. We need raw materials, but not at any price, and we need to observe our commitments in areas such as biodiversity protection, for instance.

Env: The Rio+20 summit document talks about making better use of natural resources and includes a commitment to further reduce, reuse and recycle waste. But are you disappointed no concrete targets were agreed to improve resource use?

JP: There is no denying that the EU was hoping for a more ambitious outcome in a number of areas. But the result still remains close to a range of initial objectives. The Rio document provides a set of priorities and a pathway for further work. It's only a beginning, but it is a beginning we can build on. It is up to us to make the best of the results we did obtain.

The recognition of the need for green growth was, to my mind, the most remarkable achievement of the conference. The world came around to the idea that the time has come for a move towards a green economy, towards a sustainable growth model; the need to make this shift is embedded in the final document. Also, the EU did manage to integrate most of its proposed targets into the main text in the form of express commitments, for example on future action concerning extending the protection of marine biodiversity beyond national jurisdictions.

But there is no sense in looking back and regretting what might have been. We have to look forward, and that means focusing attention on things like resource efficiency in the coming months as we go about creating EU-wide sustainable development goals.

And we need to use these goals to consolidate our efforts to eradicate poverty, and to secure sustainability within our planetary limits.

EU RESOURCE-EFFICIENCY ROADMAP

The European Commission believes it is possible to produce more value with fewer inputs, to lessen the EU's impact on the environment, and to consume in a more intelligent fashion. Its *Roadmap to a resource efficient Europe* (lexisurl.com/iema13234) was published in 2011 and aims to transform the EU economy into a sustainable one by 2050. The roadmap proposes ways to increase resource productivity and decouple economic growth from resource use and its environmental impact.

According to the commission, each person in the EU currently consumes 16 tonnes of materials annually, of which six tonnes are wasted, with half going to landfill. The roadmap sets out a vision for a number of areas and milestones towards achieving those objectives. These include:

Consumption – Changing the consumption patterns of private and public purchasers will drive resource efficiency as well as generate cost savings, says the commission. By 2020, it wants incentives in place to encourage citizens and public authorities to buy the most resource-efficient products and services. It also plans to set minimum environmental performance standards to remove the least efficient and most polluting products from the market.

Business support – Europe has the world's highest net imports of resources per person, and its economy relies heavily on imported raw materials and energy. By 2020, the commission aims to establish a system of incentives that rewards business investments in efficiency and stimulates innovation in resource-efficient production methods.

Waste – Although overall waste generation is stable in the EU, some waste streams, such as construction and demolition waste, sewage sludge, marine litter and waste electrical and electronic equipment, are still increasing. By 2020, the commission wants waste to be managed as a resource, with recycling and reuse economically attractive due to widespread separate collection and the development of markets for secondary raw materials. It also aims to have eliminated landfilling and limited energy recovery to non-recyclable materials.

Research and development – The transition to a green and low-carbon economy will require significant innovation – from small incremental changes to major technological breakthroughs. By 2020, the commission wants to see that scientific breakthroughs and sustained innovation efforts have dramatically improved how we understand, manage, reuse, recycle, substitute, safeguard and value resources.

Price signals – Market prices often fail to reflect the true cost of using resources, while some subsidies distort prices and discriminate against sound environmental practice. The commission says that subsidies with potential negative impacts on the environment – notably in the areas of fossil fuels, transport and water – are worth $1 trillion per year globally and wants these harmful subsidies phased out by 2020.

Taxation – By 2020, the commission wants a major shift to have occurred away from taxation of labour and towards environmental taxation.

Natural capital – The commission notes that economic prosperity and wellbeing are dependent on natural capital – including ecosystems that provide us with a flow of essential goods and services, such as fertile soil, fresh water, clean air and pollination – that is often regarded as "free" because its economic value is not properly accounted for in a market economy. By 2020, says the commission, natural capital and ecosystem services should be properly valued and accounted for by public authorities and businesses (see UK plans, p.4).

Biodiversity – The commission acknowledges that biodiversity underpins many ecosystems and is vital to their resilience. By 2020, the commission aims to have halted biodiversity loss in the EU and the degradation of ecosystem services.

Built environment – According to the commission, better construction and use of buildings in the EU would significantly lower energy use and greenhouse-gas emissions as well as reduce material extraction by more than 50% and water consumption by 30%. By 2020, it wants the renovation and construction of buildings and infrastructure to be at high resource-efficiency levels, with all new buildings using virtually zero-energy and being highly material-efficient.

CORPORATE RISK SYSTEMS
SAFETY HEALTH AND ENVIRONMENT

CRS LAUNCH MIEMA

Sahara Force India Formula One HQ, Silverstone, the home of the British grand prix, was the venue chosen by Corporate Risk Systems (CRS) to launch a scheme that guides delegates towards Full status of a leading environmental professional body.

On 11 July, CRS launched a mentoring programme towards achieving Full membership of IEMA (Institute of Environmental Management Assessment). This new scheme has been launched in response to demand from many industries requiring independent guidance towards gaining Full membership (MIEMA) of IEMA.

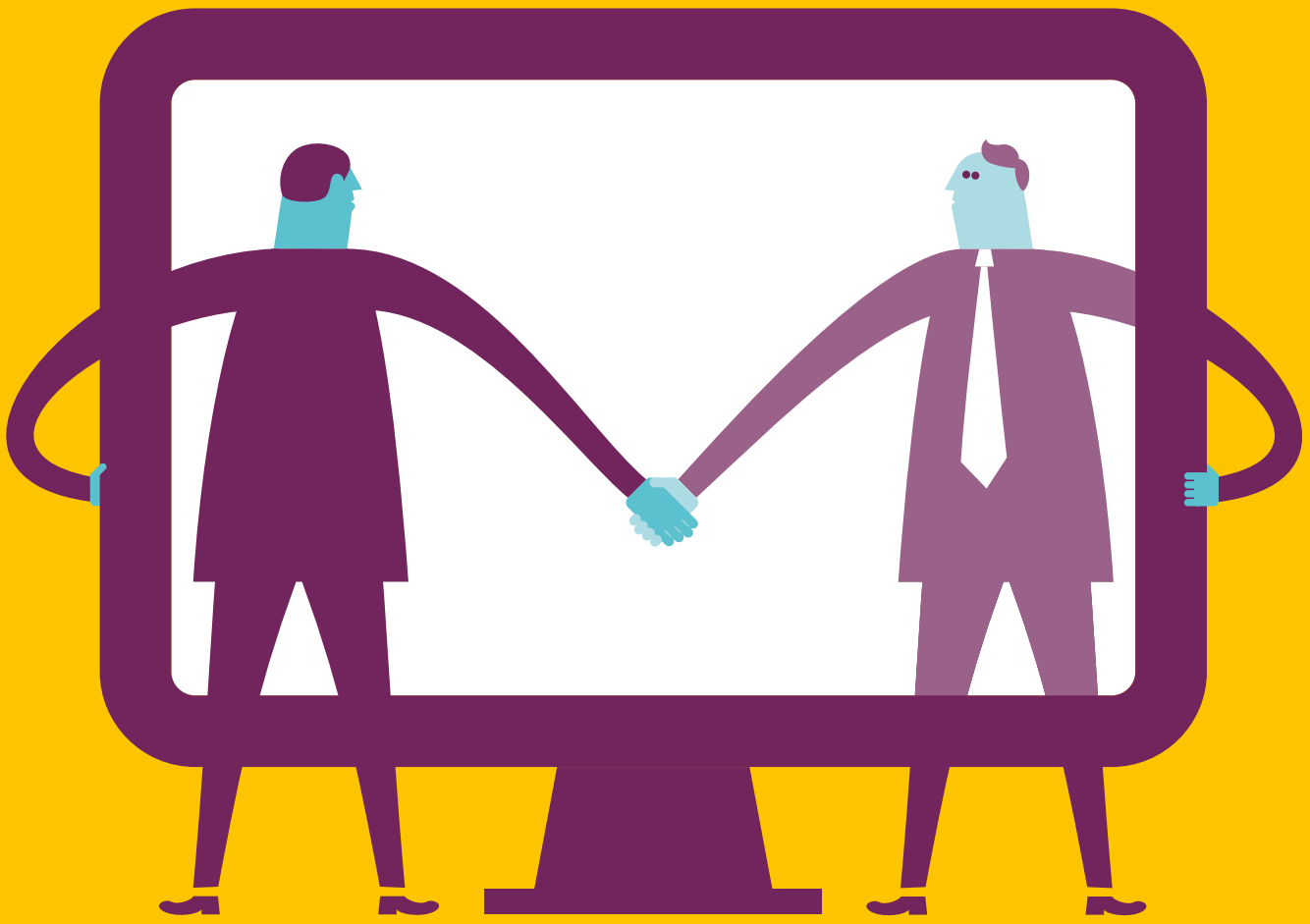
With over 9,000 IEMA Associates CRS felt the time was right to develop this new programme of support and guidance. Delegates at the launch came from many major industries to hear more from Jonathan Nobbs – IEMA's head of partnership development – who gave a very interesting talk about IEMA's dedication to creating a sustainable future through the development of environmental skills and knowledge, and why Full membership of IEMA is important to everyone working in an environmental role.

Nobbs was followed by CSR's head of environmental training, Richard Ball, who gave a fantastic presentation and insight into the scheme's programme which is offered

in two parts and is fully mentored; it is delivered by distance learning so delegates will work at their own pace and own time.

For more information contact Ros Stacey at rs@crsrisk.com or tel: 01283 509175.

CRS will be holding a seminar, "Pathway to MIEMA" for Associates of IEMA on 18 October 2012.



A helping hand

The Technology Strategy Board is helping UK companies to solve their sustainability challenges. **Sarah-Jayne Russell** reports

Innovation is not easy. It's a risk to do something new, and for every idea that is a success there are many that do not work. However, in a world where access to resources is becoming more limited, and where decarbonisation and climate change adaptation is increasingly urgent, businesses and economies cannot hope to evolve and grow without innovation.

This was one of the motivations behind the creation of the Technology Strategy Board in 2007. Sponsored by the business department, the organisation invests hundreds of millions of pounds each year in supporting companies to bring new technologies, products and services to market, and to encourage businesses, academics and government bodies to collaborate in tackling challenges such as resource security.

Investing for success

In the five years since its launch, the board has helped to generate £2.5 billion of investments in innovation projects, with its analysis showing that every £1 it has invested in collaborative research and development (R&D) programmes has returned £7 in gross value added, a figure set to grow in future. It works with more than 4,000 companies and 150 research organisations, and also helps UK firms access EU and international development funds.

In the current tax year, the board is expected to spend £390 million supporting innovation, half of which will go to small and medium-sized enterprises (SMEs). It has also committed to launching 60 R&D projects, which will see £250 million invested over the coming years to address priority areas including: advanced materials; bioscience; the built environment; energy; food supply; and high-value manufacturing.

As well as funding research centres, knowledge sharing networks (see panel, p.25) and events, the body provides much needed financial support to business ventures through its various competition programmes. These fund market research, R&D, feasibility studies and demonstration projects. SMEs are able to apply for grants of between £25,000 and £250,000 to investigate

the viability of new products and develop prototypes under its "Smart" programme. The £40 million initiative is open to all UK SMEs and awards funds on a two-month rolling basis.

Most of the body's funding, however, is dedicated to larger issue-focused competitions in line with its priority areas, such as improving the sustainability of agricultural practices or reducing the environmental impacts of buildings. These programmes can be:

- challenge led – where the board examines a particular problem such as water security; or
- technology led – where firms are asked to investigate how an emerging technology might be applied, such as plastic electronics.

Some programmes allow firms to apply individually for support but others require collaborative groups.

"We try and find the right way to get the right response from a particular target audience," says Richard Miller, the board's head of sustainability. "Sometimes that's about collaboration, sometimes it's about helping SMEs to participate, sometimes it's about demonstrator projects and sometimes it's about proving a technology.

"We try and understand where everybody is in a particular area, what the barriers are and then the right approach to overcome those barriers."

ALUMINIUM ALLIES

One of the 11 projects to benefit from funding under the Technology Strategy Board's £4.5 million supply chain innovation programme is research led by Jaguar Land Rover into boosting the use of recycled aluminium in car components. The collaborative project sees academics from Brunel University and metals experts from Norton Aluminium, Innoval Technology and JVM Castings working together to create a new aluminium alloy.

Aluminium is extensively used in the Jaguar XK

The two-year project exemplifies how the programme was designed to focus on tackling the real-world challenges, according to Richard Miller, the board's head of sustainability. "We wanted to make sure we could encourage resource efficiency without ending up with a lot of bright ideas that don't necessarily connect with real industry problems, which is a common problem," he explains.

In Jaguar's case the difficulty was how to use more recycled aluminium in its cars. Being a lighter material, aluminium helps to reduce the weight of cars, improving their fuel efficiency and reducing carbon emissions, and using recycled aluminium ensures greater resource efficiency. However, as it stands, Jaguar has to use virgin aluminium in its cars because that's the only way it can ensure the materials have the properties needed for structural components. Using £500,000 of funding, the car maker is working with its consortium of experts to develop a new alloy that will meet the company's performance requirements with up to 75% recycled aluminium. The group is also working on how to make sure the alloy will be easier to recycle at the end of the component's life.

Saving resources

In the board's delivery plan for 2012/13, the efficient use of materials is identified as a key area for investment, particularly through ecodesign and creating closed-loop systems. And, while the board has pledged £6 million of funding this year to tackling these challenges, an emphasis on resource efficiency is apparent in many of its other competitions.

"Around two-thirds of our projects have an explicit sustainability objective and we are trying to include it in all of our programmes, not as a separate concern but as an integrated part of the competition," says Miller. "We try and find the opportunities to remind people that sustainability needs to be taken into account. That's the only way to make it a mainstream concern."

One example of a competition that is more explicitly focused on sustainability encourages SMEs to develop technologies that will save or recycle one million litres of water a day. In June, the board announced that it had awarded £650,000 to 10 firms to carry out feasibility studies on their ideas, including £74,000 to Xeros, a company developing virtually waterless washing machines for the leather industry; and £76,000 to carbon reduction consultancy Sustain, which is designing a database containing water footprints of manufactured materials.

When it comes to resource efficiency, several projects have been funded under the board's low-carbon vehicle innovation platform, including one examining how to create a motor for hybrid trucks that contains no rare earth materials. At the same time, a manufacturing project has focused on recovering precious metals from circuit boards. Currently, firms have to smash open electronic products and use expensive machines to recover materials. This project tested using adhesives that are soluble in hot water on circuit boards

(lexisurl.com/iema13303). "This means you can make a printed circuit board come apart without a lot of thermal or mechanical energy, so the components can be recovered and reused much more easily," explains Miller.

Arguably the board's most high-profile initiative for tackling resource efficiency is its supply chain innovation competition. It encourages firms to work with suppliers and researchers to reduce their dependence on key raw materials, such as rare earths, and lower the environmental impacts of using others, like steel and aluminium. In February, the board revealed the 12 collaborative R&D projects that had been awarded a share of the £4.5 million fund. The competition was developed to address the resource security issues raised by companies such as Jaguar Land Rover, Unilever and Tata Steel, ensuring that the solutions developed had real-world applications.

The successful projects all focus on substituting materials, improving recycling rates, limiting the amount of materials used in production and reducing energy used throughout a product's life cycle. For example, Jaguar Land Rover is working with experts to create a new aluminium alloy that can replace steel in car components (see panel p.24).

Designing for the circular economy

The next step in the board's efforts to aid sustainable innovation is a programme looking at creating a circular economy, due to launch on 17 September. "The challenge is that 80% of the environmental impacts of a product are locked in at the design stage," says Miller. "We've realised that it's really important we involve designers at an early stage."

The board has started by teaming up with the Royal Society of Arts and the Ellen MacArthur Foundation to engage with designers through a series of workshops. The aim is to get designers and companies thinking about how the design process can be done differently and making them aware of the environmental impacts of their choices. "It's very easy for a designer to decide to make a product out of a certain type of plastic, for example, and to not think about if it's re-manufacturable or easy to recover for recycling," Miller says.

The workshops will be followed by feasibility studies, where designers and businesses will be asked to look at what is really achievable in terms of changing a product or service. Finally, next year, the board will run a competition enabling some of the projects suggested in the feasibility studies to be completed.

The direction of the organisation's future competitions echoes that of the businesses it works with, confirms Miller. "If you look at the projects under broader topic themes like advanced manufacturing, it's amazing how many are focused on reducing energy consumption and substituting problematic materials use," he says. "Firms want to have a lighter environmental footprint because that's where they think the market is. As more customers want to run their businesses as zero to landfill, companies are looking to improve the recycling of their packaging. There are lots of economic pressures making organisations say they need to deliver sustainability."

And with the board around, UK firms trying ground-breaking ways to improve their sustainability or that of their customers will always have a helping hand to do it.

GET CONNECTED

The best way to get involved with the Technology Strategy Board, is through its online community: _connect. The _connect website (lexisurl.com/iema13305) is free to join and provides news of the board's forthcoming events and competitions, as well as an online hub where more than 50,000 individuals and 1,600 businesses share ideas.

The site hosts the board's 15 knowledge transfer networks (KTNs), special interest groups and community networks. "The KTNs are a really important way of finding out what we are about and what's available to you, as well as finding potential collaborators and customers," reveals head of sustainability, Richard Miller.

The KTNs run workshops and events to provide briefings on competitions and to help build consortia of companies to work collaboratively on projects. "Often the KTNs are the way we bring people together, help them understand the challenges being set and look for areas of overlap and interaction between them," says Miller.

The KTNs also provide their members with feedback on competition applications and provide letters of support, as well as preparing reports and case studies sharing best practice. The environmental sustainability KTN is one of the largest, with more than 5,600 members, and subgroups focusing on areas such as resource efficiency. For more information on the environmental sustainability KTN, visit lexisurl.com/iema13306 or ring +44(0)1865 610 505 or email esktn@esktn.org.

Something old,

The National Trust in Wales has halved its energy use and carbon dioxide emissions in just two years. ***the environmentalist*** reports

The National Trust scooped the top prize for UK-based organisations at the prestigious Ashden Awards earlier this year, recognising the conservation charity's achievements in green energy across its Welsh estate. The award judges were impressed by the charity's dynamic, common-sense approach to improving energy efficiency and producing renewable energy in its continued drive to make the National Trust in Wales energy self-sufficient by 2020. The reductions in energy use are now saving the charity £280,000 a year, and have cut its annual CO_2 emissions by 1,700 tonnes.

Over the past two years, more than one hundred trust properties in Wales have been insulated and numerous solar, hydro and ground-source heat pump power systems have been installed, generating more than 700MWh a year. According to Keith Jones, the trust's environment adviser in Wales, it is a combination of efficiency measures and cultural change across its paid workforce and a band of 5,000-plus volunteers that will ensure the National Trust in Wales achieves energy self-sufficiency by the end of the decade.

Aiming high

A clear driver for the National Trust's overall energy-efficiency strategy is to reduce its energy bill, which currently runs at £6.5 million a year. The trust's headline target is to cut its use of fossil fuels through efficiency measures across England, Wales and Northern Ireland by 20% by 2020 and to generate 50% of its remaining energy needs from its own estate. Achieving both will cut carbon emissions from heating and electricity use by 59%.

In Wales, under its "Fit for the future" strategy, the charity has taken this goal to another level and has already reduced energy use by 41%. The range of energy efficiency and renewable energy initiatives launched by the trust in Wales requires a £3.5 million internal investment over the next 18 months, an amount that has to be paid back with interest in the next seven years.

Financial savings do not represent the only impetus for the trust's work in this area. As it is a charity that exists to conserve cultural and natural heritage, Jones points out that it makes sense for the trust to want to lower its own environmental impact and "show what can be done".

The Welsh region of the National Trust has become a centre of excellence on environmental issues: it was the first to pilot an environment management system and is now leading the way on energy efficiency. At the same time, regions elsewhere are at the forefront of developing other corporate initiatives – in this way, the trust's different regions can learn from each other.

Winning the 2012 Ashden Award, which was announced in May, puts paid to the myth that historic buildings cannot be retrofitted and made more energy

something new

efficient. But the National Trust's success so far does not mean that its ambitious energy-efficiency goals will be easily attained: the charity has more than 29,000 buildings across England and Wales, with many listed or designated. Jones says that the trust has encountered a knowledge and experience deficit in the mainstream contractor world when it comes to introducing energy-efficient adaptations to old, sensitive buildings. "The official data say that historic buildings are 'hard to treat' but really they are just hard to understand," he explains. "Most housing stock is already built and it is always a challenge asking a building to do something it is not designed to do. It is not a case of everything everywhere but something somewhere."

The National Trust in Wales, however, has been successful in installing energy-efficient and green technologies in historic properties. These include fitting air-to-heat pumps at Dan y Gyrn and a biomass boiler at Chirk Castle (pictured), as well as reducing energy wastage at holiday cottages in North Wales (see panels).

Renewable energy initiatives

As well as improving energy efficiency across its holiday cottages and historic buildings, the National Trust is committed to generating all of its own energy as part of its sustainability mission.

It now has eight medium-sized hydro-power systems operating in Wales, including one at Hafod y Llan, a trust campsite in the Nant Gwynant valley. "After much discussion, consultation and adjustment we now have our abstraction licence in place," says Jones. "This means we now have an agreement with the Environment Agency and the other statutory bodies involved on the volume of water we can take out of the river and how much to leave in the river to maintain

HEAT PUMPS AT DAN Y GYRN

Nestling in the Tarell Valley, at the foothills of the Brecon Beacons, is Dan y Gyrn, the National Trust's countryside base, and its volunteer house Beili Gwennol. Keith Jones, environment adviser for the trust in Wales, describes the buildings as having been touched with the "sustainable energy wand".

In addition to the 25kW biomass system installed at Beili Gwennol, a series of air-to-air heat pumps have been introduced. "We have become fans of air-to-air heat pumps – namely for their simplicity and cost, which is around £500–£1,000 each – and the fact that they take just four hours to fit," says Jones.

The challenge with upgrading the heating in Dan y Gyrn was that there was no distribution system for hot water; any replacement for the very inefficient storage heaters that distributed heat throughout the building (often when there was nobody in it) would also need to include an expensive hot water system. "In this situation we opted for a £3,500 spend on seven heat pumps rather than £25,000 for a biomass system," explains Jones. "Budget, time and disruption were major factors. Air-based heat pumps have had a bit of a bad press, but that's been more based on design and management than the technology."

Jones says that when the temperature is well below freezing, the heat they emit may well be on a par with a convector heater, and for 95% of the time he expects good heating performance from them.

"It is essential that users are trained in how to operate the air-to-air heat pumps," adds Jones. "Our staff are well aware of the need to manage the heat pumps and refrain from using the 'sub-tropical' setting on the controllers!"

BIOMASS BOILER FIT FOR A CASTLE

The National Trust has more than 25 biomass energy systems in place across Wales. One of its larger examples is a 450kW biomass boiler system in Chirk Castle, a grade I listed building near Wrexham that was built in 1310.

Heating and hot water were previously provided by an electric and oil-fired boiler system that had been in operation for more than 30 years. At £39,000 a year, Chirk Castle had one of the highest demands for oil fuel in the National Trust estate, with the large oil tanks posing a particular environmental risk for the property.

The aim was to replace the old electric and oil heating system with a low-carbon equivalent. To meet the funding requirements, the new system needed to be entirely renewables-based. In 2009, two biomass boilers, one 150kW and the other 300kW, were installed, with just over one-third of their cost being met by NATHEN – "National Trust heat from nature", a trust programme funded by the Big Lottery Fund as part of its bio-energy capital grants scheme.

Low labour and maintenance needs were deemed important when scoping the project. This requirement, combined with the lack of available wood and storage facilities on the property, resulted in the decision to install a wood-pellet boiler rather than a woodchip system.

A modular boiler system was selected to ensure the system could cope with the seasonal variations in demand. The boilers are supplemented by solar thermal technology that comprises two double sets of solar thermal panels with a third set due to be fitted when the castle roof is replaced. These panels complement the biomass boilers by providing hot water to the public toilets.

Keith Jones, the trust's environment adviser in Wales, says that the new system now provides 90% of the heating and hot water supply to the castle. The cost of the wood pellets is estimated to be half the price of the fuel for the old system, saving the trust around £25,000 a year.

ENERGY FOR HOLIDAY COTTAGES

The National Trust has several traditionally built holiday cottages in North Wales, with solid wall construction. Although they have high levels of sheep wool insulation in their loft spaces, the draught and air leakage, particularly from ill-fitting doors, were having a negative impact on the energy performance of the cottages. The trust has been piloting low-carbon heating solutions, such as heat pumps and biomass, as well as an initiative on better heating controls to cut energy use.

Heating for the cottages used to be provided by a mixture of storage heaters, oil panel heaters and fan heaters. When the cottages were occupied, the storage heaters could be switched to their maximum output by guests and left on for days or even weeks. The trust fitted electrical panel heaters operated via a controller that works in much the same way as a boiler controller. The period of time that the heaters are on is timed. A manual boost control was also fitted to the existing fan heaters which times out after a predetermined period, preventing the guests from leaving them running. The hot water heating systems at these properties were also fitted with additional controls.

Energy usage over the course of a year has been closely monitored and has confirmed that one of the trust's cottages near Betws-y-Coed has saved £1,123 in energy costs over the 12 months.

ecological and aesthetic aspects. This licence then triggers the planning permission to be registered and processed," he explains.

The hydro system at Hafod y Llan uses around 450 litres of water per second and the trust is aiming to complete the work on the 650kW system in 2013.

The trust is also generating power through solar photovoltaics, including several systems set up in the grounds of historic buildings, rather than on their roofs. "We didn't bother with the roofs because of the scale we needed, and the mitigation costs on a listed building could result in us having fewer panels in place because of the extra cost," says Jones. "And I'm not a fan of bolting green 'bling' on."

Changing the culture …

The National Trust views employee engagement as a crucial precursor to achieving its energy-efficiency goals. Cottage managers, for example, were involved throughout the heating controls project (panel, left). As well as the trust benefiting from the managers' knowledge of the buildings, their understanding of the installation now means that they are able to support the smooth running of the equipment. "Hearts and minds, and not technology, are key," Jones comments. "We do not want just a couple of environmental experts in Wales – we want everyone to be specialists."

Effective training and communication sits at the centre of the charity's strategy for involving staff and volunteers, and there is also a lively environmental blog (lexisurl.com/iema13367) that is followed by a lot of employees. But, Jones confirms, developing commitment to the charity's energy-efficiency mission is ultimately a relationship issue and based on "never-ending, day-to-day interaction" with trust staff. "The number one indicator of employee engagement is how much the environment team are asked about the issues – and we get asked a lot," he says.

… to shape the future

As if its current energy-efficiency achievements and goals aren't enough, the National Trust has a longer-term vision to generate 400% more energy from its buildings and land than it uses in Wales.

Another part of its game plan is to set up a consultancy to help others save energy and look at appropriate renewable technologies for older buildings. The charity seems to be well on its way to energy self-sufficiency and beyond.

SYSTEMS BY NUMBERS

Niall Enright explains why maturity matrices have become such a hot topic

Maturity matrices have become the focus of increased attention as ISO 14001 receives a makeover. When the technical committee responsible for revising the standard met in Berlin in February, it produced a number of proposals for change. Some were to do with modifying the structure of 14001 to align with other ISO standards, while others were about engaging with the core strategy of organisations and reaching into functions such as marketing or design, which hitherto have been on the periphery of environment management.

The very first, and longest recommendation the committee made, however, addresses another fundamental aspect of 14001: how the standard itself can become a more effective change agent, rather than simply a "score-keeper". The recommendation states: "When considering new requirements in a revised version of ISO 14001, it should be remembered that 14001 is a tool to improve environmental management; new requirements should not be set in such a way that they only reflect 'best-in-class' levels that will dissuade or exclude entry-level organisations from adopting this standard. The use of maturity matrices should be considered to show how requirements can be applied in an increasingly comprehensive manner."

On a journey

At the core of the recommendation is the recognition that attaining good environment performance, or sustainability, is best considered as a "journey" not a "destination". It speaks to the inherent contradiction in any standard – that the very "awarding" of a certificate carries with it the implication that the destination has been reached. It is because of this perception that business managers often see 14001 as something you receive, something to display for marketing purposes or to meet a "tick box" requirement in order to qualify for certain contracts.

In opting to make 14001 a tool to improve environment management, rather than primarily to rate it, the committee has suggested that engagement needs to start with poorer-performing organisations at an "entry level". After all, we don't just want to preach to the choir. However, there is another risk here: that the standard will become

EXAMPLE: ENERGY MANAGEMENT MATRIX

	Policy	Organisation	Training	Performance measurement	Communication	Investment
4	Top managers are actively committed to the energy policy action plan and review it regularly	Fully integrated into management structure with clear accountability for energy consumption	Appropriate and comprehensive staff training tailored to identified needs, with evaluation	Comprehensive performance measurement against targets, with reports to management	Extensive communication of energy issues within and outside the organisation	Resources routinely committed to energy efficiency in support of business objectives
3	Formal policy exists but there is no active commitment from top management	Clear line management accountability for consumption and responsibility for improvements	Energy training targeted at major users following training needs analysis	Weekly performance measurement for each process, unit or building	Regular staff briefings, performance reporting and energy promotion	Some appraisal criteria used as for other cost-reduction projects
2	Unadopted policy	Some delegation of responsibility but line management and authority unclear	Ad-hoc internal training for selected people as required	Monthly monitoring by fuel type	Some use of firm's communication mechanisms to promote energy efficiency	Low- or medium-cost measures considered if short payback period
1	Unwritten set of guidelines	Informal, mainly focused on energy supply	Technical staff occasionally attend specialist courses	Invoice checking only	Communication used to promote energy efficiency	Only low- or no-cost measures taken
0	No explicit energy policy	No delegation or responsibility for managing energy	No energy-related staff training provided	No measurement of energy costs or consumption	No communication or promotion of energy issues	No investment in improving energy efficiency

Source: Carbon Trust

disconnected from absolute environment performance, that polluters could more readily achieve it and so devalue the standard.

Continuous improvement

The only way to overcome any perception of lower standards is to put continuous improvement more firmly at the heart of 14001, and this is where maturity matrices come into play.

At the heart of a maturity matrix is a self-evaluation of the degree of sophistication, or "maturity", of a particular aspect of a management system. This enables weaknesses and areas for improvement to be identified. Maturity matrices are already part of BS 8900, the guidance standard for managing sustainable development, but it would be wrong to think of them as a recent development. I have been using variants of the energy management matrix shown above effectively for more than 25 years (see panel).

The example matrix enables users to rate an organisation from 0–4 in one of six different themes, such as policy or investment. The rating is based on selecting the description that most closely matches the organisation's current approach. Although it appears simple, it has some very powerful characteristics. First, it enables a structured conversation to be had. I will often use such a matrix in a discussion with an organisation's leadership team to get them to rate themselves. Instead of having a free-flowing conversation about energy efficiency, for example, which can often get bogged down in specific technology or equipment, the matrix enables me to explore broader topics, such as investment or staff engagement, which are equally important.

In the process of the discussion the second benefit of the matrix emerges: its educational potential. Anyone completing a similar matrix would quickly understand that organisation, measurement and communication are important aspects of a successful energy management process, and would get a sense of what distinguishes the best from mediocre performance.

Year-on-year

Another interesting way that maturity matrices can be used is to compare the self-assessment of different groups in an organisation. If, for example, the management team score themselves highly on investment, but the engineering team's assessment results in a low score, then there could be a problem in the availability of funds or perhaps in the quality of the business cases developed by the engineers.

Similarly, comparisons can be made year-on-year to see if an organisation is improving its score, and this is clearly what is in mind in the 14001 approach: that the maturity matrices should be periodically revisited so an organisation can demonstrate its systems and processes are developing over time.

I recently worked on a project where a maturity matrix was the central tool driving change in a global business. This company faced a number of common challenges in constructing a global energy-efficiency programme. The operating units were very diverse and their approach to energy efficiency varied hugely. The corporate team did not want to be seen as imposing an external view on the sites – which rarely works – and, as is often the case, there was frequently a perception at sites that energy efficiency was just about technology.

The solution was an advanced form of a maturity matrix, which provided the basis for a full-day workshop to help department heads and specialists to define a priority plan for their own site.

The maturity matrix was a spreadsheet with, on different tabs, the following six themes:

- leadership and context;
- measurement;

- opportunity assessment;
- project implementation;
- continuous improvement; and
- key performance indicators and communication.

In each theme there were then between six and 11 topics or questions. Under opportunity assessment, for example, the first topic examined what type of baseline assessment was already in place.

There were a number of innovations that were applied effectively in this tool. First, the site teams were asked not just to rank their actual performance but to state what their target would be. To assist in setting the target, the tool displayed the score needed to achieve certain standards – both the corporation's own requirements and, in this case, ISO 50001. The input was designed for a "live" interaction, with opportunities to capture comments and actions, and to set tasks and priorities. There were also features to run multiple assessments and aggregate these, as well as to instantly create PowerPoint presentations that summarised the key conclusions.

Skills and knowledge

Part of the reason for the success of this approach was that the corporate team running the workshops was excellent at managing the discussion and knew about each site's processes and culture. With 46 topics it was important to allow space for debate, but then ensure a consensus was developed around the actual and target rankings. Here language is very important.

Typically, the wording of the possible responses to each topic should be "neutral", and carry no connotation of poor or inferior performance. In designing the matrix, careful consideration was given to the scoring method itself. Should it be numerical, such as the 0–4 in the example matrix, or 1–5 star? Or rated in words? In the event, a numeric scale of 1–5 and the words rudimentary, transitional, progressing, mature and excellent were adopted.

A key feature of the success of the approach was that the project was not perceived to be about outside assessment or imposition of targets – rather it was about each site's own perception of its strengths and weaknesses, and its own priorities.

The process was seen to bring value because it was something around which the various functions at site level could unite to create a plan they personally had developed and owned. Here, the selection of participants was also important, to ensure that their conclusions carried weight and that all departments that could influence energy use were involved – not just engineering, but operations, finance and maintenance.

Key issues

So what are the key issues for the ISO 14001 approach to maturity matrices? You do not need fancy spreadsheets: a simple paper-based model will suffice. And, while there could be merit in organisations seeking to achieve 14001 designing their own matrices, it would be a good thing if the ISO standards development team set out clear examples of the maturity matrices that should be used.

The themes covered in such matrices can be entirely generic in nature, such as leadership, measurement, continuous improvement, and products and services, for example. This offers an opportunity to reinforce some of the other recommendations on the scope of the ISO standard, using the topics in each theme. So that under leadership, for example, an organisation could explore how environment management can be incorporated into its corporate strategy, while under products and services it could explore how the environment management system interfaces with design or marketing or introduce the concept of life-cycle assessment.

The process around how matrices are employed is equally important. Is there benefit in an "actual" and a "target" assessment to encourage forward thinking? Should an evidence base be required to support organisations' self-assessment, against which an external audit can be performed? If entry-level organisations can achieve 14001, how will continuing progress, as measured by the maturity matrices, form the basis for maintenance of the certification?

Whatever your thoughts on the applicability of maturity matrices to ISO 14001, it is clear to me that the process around self-assessment provides the basis for some very powerful engagement. Maturity matrices should definitely be in the toolkit of every environment practitioner as they speak to the idea of a journey, which is central to everything we do.

Niall Enright is a sustainability consultant. He can be contacted at niall.enright@sustainsuccess.co.uk.

Tackling transport

Sarah-Jayne Russell investigates the business benefits of getting to grips with sustainable travel plans

Work-related travel can generate more than half of an organisation's carbon emissions and, for many companies, travel costs come second only to salary bills as their largest controllable expense. Reducing the number of journeys made by staff is, therefore, good for the environment and the bottom line, and yet, according to Heather McInroy, programme director of Business in the Community's ways2work campaign, business travel remains the least understood and the most neglected area of corporate responsibility.

"In general, there is a real lack of action, but for those organisations that are addressing this issue there are substantial reductions in costs, lost man hours and emissions, as well as improvements in productivity, employee wellbeing and profits," she says.

The first obstacle for most organisations when tackling business travel is a lack of information. Few businesses, according to McInroy, really understand the financial impact of commuting (the maintenance of a single car-parking space can be as much as £1,000 a year) or have an overview of travel across the whole organisation. GlaxoSmithKline, for example, overhauled its travel policy, discouraging international travel after it transpired that 500 of its employees were stranded overseas by the volcanic ash cloud in 2010.

For those examining work-related travel, the finance department will hold data on travel expenses, which will reveal where the most significant business costs lie. Meanwhile, carbon footprinting will provide detailed information on environmental impacts, and the Department for Transport has published guidance specifically to help firms measure and report emissions from work-related travel (lexisurl.com/iema13281). "For some organisations travel will be a tiny proportion of their emissions; for others it could be as much as 75% of its carbon footprint," advises McInroy.

The right initiatives

There is no one-size-fits-all solution to sustainable travel; the appropriate action depends on the type of organisation, its size, budget and objectives. For large firms with global operations, reducing international travel is a key concern, for which telecommunications technology is a useful tool. Ernst & Young, for example, is saving £585,000 a year on travel costs and avoided flying 6.8 million air miles during 2009/10 after investing in video and teleconferencing facilities.

For smaller firms the priority may be travel within the UK, where getting staff to use public transport might be more appropriate. For those with limited parking, tackling the commute will be important. E.ON has saved £100,000 in parking costs at one of its offices and cut commuters' carbon emissions by 151 tonnes by providing passes for local buses and promoting car sharing.

Once organisations have a clear understanding of work-related travel patterns, the task is to prioritise initiatives. WWF in its position statement on business travel (lexisurl.com/iema13280) advises firms to first look at reducing the need to travel; second, consider how to reduce the distances to be travelled; third, cut emissions from travel through low-carbon technologies; and, finally, offset emissions generated by travel.

"Sustainable travel needs a staged approach over time," advises Sam Pickles, environment manager for the Greater Manchester Fire and Rescue Service (GMFRS), which is working to reduce the fuel consumption of its

vehicles by 25% by April 2014. "The key is to set targets and get buy-in from central leadership. Then you need to find the right technological fixes and behaviour change initiatives to deliver those targets."

The first initiatives the GMFRS introduced were low-cost process checks, which ensure, for example, that drivers know when calls are not emergencies and so can travel at normal road speeds. The next step was looking at how to better design its fire engines, including developing a lightweight polymer to replace the steel bodywork panels on the vehicles. The panels have reduced the weight of the engines by 750kg and cut fuel consumption by 6%–7%. The GMFRS has also installed engine management systems to ensure vehicles use less fuel, and trained staff in fuel-efficient driving techniques.

Get networking

While each organisation's approach to sustainable travel will be unique, there are common elements and a wealth of support available through business networks for firms starting out. The ways2work website (ways2work.bitc.org.uk), for example, has case studies detailing the approaches of firms such as BT, Capgemini and EDF, as well as template policy documents, a 12-step plan to developing a sustainable travel programme (see panel) and useful information to develop business cases.

"Don't reinvent the wheel. The odds are someone has already done all the leg work for the change you're contemplating," advises McInroy. "It's also really useful to talk to other people, to find out the challenges they came up against and what they did to overcome them."

WAYS2WORK'S 12 STEPS

1. Identify challenges

Before collecting detailed data, outline your organisation's headline travel-related challenges.

2. Know the business environment

Successful plans need to work within your organisation's physical environment, management structure, business activities and future strategies.

3. Create the project team

It is vital to have representation from all internal stakeholders, from business leaders to employees, with a central programme manager.

4. Evaluate current resources

Identify existing tools or initiatives that might fit with your programme. Survey your employees to identify their demographic profile, work roles, travel needs and location.

5. Create the core framework

This framework will detail how your programme will be funded, delivered and measured. It is developed by realigning your existing travel provision; identifying any gaps; and then establishing how staff will access the programme.

6. Needs analysis and KPIs

Undertake a needs analysis of employee travel patterns and their associated environmental impacts, to enable future comparisons against key performance indicators (KPIs).

7. Clarify initial objectives

Evaluate and prioritise your initial objectives for the programme against the results of the needs analysis.

8. Develop a 12-month programme

The programme should include: targeted sustainable travel initiatives; management activities; needs analysis; and data collection and interpretation.

9. Find the right partners

Partners will fall into two categories: core providers (usually insurers or administrators of health-related employee benefits) and ancillary providers (specialists who deliver targeted initiatives).

10. Communicating the programme

Every initiative should be supported by a relevant communication campaign to staff.

11. Launching the programme

Consider the expectations being raised and how to ensure the programme meets them. Don't forget to demonstrate that feedback is being taken on board.

12. Evaluation and ongoing management

Once the programme has been launched, steps 5 to 12 will continue to be relevant. It is important to share with stakeholders the programme results.

Professionals on the way up

Development At a time when organisations of all kinds require their employees to justify their salary and prove their credentials, recognition from employers, colleagues and clients has perhaps never been more important to environment professionals.

Little wonder then, that when IEMA members were recently asked why they stay with the Institute, the overwhelming majority (88%) said that their main motivation was to gain and retain a sense of professional recognition.

Whether that recognition comes from the demonstration of specialist qualifications, evidence of time spent developing knowledge or an understanding of an individual's years of vocational experience, being recognised for their knowledge and skills is clearly very important to members.

Personal commitment

The level of personal commitment to improving knowledge and skills is demonstrated by the fact that, during 2011, more than 91% of IEMA members undertook some kind of professional development. This was one of the headline findings from the most recent IEMA practitioners' survey (lexisurl.com/iema13469), which also revealed that the three most popular ways of keeping knowledge and skills up to date was by attending events or conferences, reading key materials and attending a continuing professional development workshop. The Institute also found that more than seven in 10 of those who said that they spent time on such activities did so because they wanted to develop their knowledge and skills, either to progress in their current role or gain a new position.

According to another IEMA poll, more than one-quarter of members (28%) are currently planning to upgrade their membership, 10% of whom want to upgrade as soon as possible and a further 37% who are aiming to step up within the next six months.

Something for everyone

Any level of IEMA membership contributes to being recognised as a

Dominic Freestone, AIEMA – waste regulatory specialist, Environment Agency

What was your main motivation for achieving Associate? For me it is a stepping stone to Full and Chartered Environmentalist (CEnv), which are my ultimate goals. However, I needed to get through Associate first as my environmental knowledge was, given that I am a waste specialist, quite narrow. I was advised to look at the Associate criteria. I was able to use this as a guide to where I needed to fill in the gaps in my knowledge.

How did you prepare and study for the Associate entry exam? As I was mainly addressing the gaps in my knowledge, I'd say my preparation was very targeted. For example, my knowledge of sustainable development was quite weak as that had never been a part of my job. My main source of study was the IEMA handbook, which I borrowed.

What was your overall impression of the new Associate entry exam? It worked really well. Working through the system was a piece of cake as it's obviously been very well thought through. However, the questions were challenging. IEMA recommends you allow 15 minutes per question but I set my kitchen timer for 13 minutes to allow some time at the end to revisit my answers, as there really isn't any time to waste.

Has achieving AIEMA status helped you to become more professionally recognised? It's certainly nice to be recognised as officially being at a certain level as I deal with a lot of consultants who are also Associates. Plus, I'd say that I have more confidence now that I have improved my knowledge and this will help for when I go for Full and CEnv in the next 12 months.

Eric Steltzer, AIEMA – energy policy analyst for the State of New Hampshire, USA

Why was Associate – via the entry exam – right for you? I am in the process of moving to the UK from the US and I wanted to gain a professional qualification that would demonstrate the skills I have. A lot of the jobseeking I've done has featured jobs looking for IEMA certification, so I knew it would be a good way to go.

How did you prepare for your upgrade? It was a little of refreshing my current knowledge and plugging the gaps in what I didn't know, but what was really helpful for me was being able to look at the sample exam that was on the IEMA website. I did spend a number of hours studying at the library in preparation for the exam. I also looked at the Associate standard and I was able to get the IEMA handbook through a local library here, which helped direct my study.

What worked well about the exam from your experience? I went online to have a look at the exam and I could see that I'd be able to go back and forth between the questions. I like to start with the questions I know really well first and come back to the others later in the exam period, so knowing that the exam had that capability was great. What I also really liked is that you could do it whenever you had the time and capability, and being able to get the results so quickly. That helped my preparations for moving to the UK. And being an international member didn't seem to cause any issue at all.

Do you feel as though you have more professional recognition now that you are an AIEMA? I feel like I do, yes. I think a lot of places are looking for Associate or Full membership.

Caroline Thomson, MIEMA – works at Biochemica UK

What was your motivation for undertaking the IEMA Diploma? Ultimately, I wanted to achieve Full membership. I also want to be as qualified and well informed in my field as possible, so that I would have greater confidence to drive change and to help steer my company towards sustainability.

Having achieved the Diploma, do you feel more confident? Certainly, it gave me a huge sense of accomplishment. I know now that when I talk to people about environmental or sustainability issues they listen. I just feel more in control and more able to help the business move in the right direction.

You've also recently achieved Full membership of IEMA. Do you feel that the Diploma helped you to get there? I had wanted to become a Full member for a few years, but I didn't want to make the attempt too early in my career and risk failing. By achieving the Diploma I knew that I had covered all that a Full member was required to understand. The interview was very nerve-wracking but I knew I had the knowledge and the experience to back up my answers and I even took my Diploma with me to remind myself that I could do it!

Do you have more professional recognition now you are a Full member? Well, just by reading *the environmentalist* I see that more people each month are gaining their membership and doing the Diploma, which is encouraging. Some of the consultants and specialists I have worked with are Full members and it's a good feeling to know that I can count myself among them.

David Forbes, MIEMA – environment and sustainability development manager, oil and gas industry

Why did you choose to do the IEMA Diploma course? Just to achieve a better general understanding and learn more about environmental programmes. It was a personal decision as I was in a role where I was working for an oil and gas company and I found myself seeking opportunities to improve the company and improve myself.

How did you find the course and what do you feel you achieved? I enjoyed the course and thought the tutor – Robin Bloodworth – was excellent. The workload was definitely busy but interesting, with a lot to take in. I'd describe it as stimulating. The Diploma gave me a broader perspective and removed the "tunnel vision" aspect that you can sometimes have. It made me think more strategically and in a much more balanced way. It gives you exposure to issues that you don't think are relevant to what you do, but when you take a look you start to understand other angles. The Diploma has particularly helped me with issues like climate change adaptation as before I didn't really know what it meant.

Do you have more professional recognition now that you are a Full member? I'm not an academic person, so for me achieving Full was great. But the thing I've enjoyed most about the whole process is the exposure to wider environmental programmes and gaining the ability to consider many different angles around environment and sustainability. And if an external person comes into our organisation and thinks "what gives that guy the right to be in that position", now I can say "well I'm a Full member of IEMA", which I think holds some credibility, and my organisation can say that they have someone trained and qualified looking after things.

dedicated environment practitioner, although it is the professional levels of membership – Associate, Full, Chartered Environmentalist and Fellow – that carry the most gravitas.

Internationally recognised, those holding Associate (AIEMA) and higher status can confidently demonstrate that their knowledge and experience of environmental issues has been independently approved by IEMA. The demand for AIEMA in particular explains why, since the revision of the Associate standard and launch of the online Associate entry exam in May of this year, more than 1,000 people have downloaded the application form.

Those Associate members seeking Full membership can achieve the necessary knowledge and understanding by completing the IEMA Diploma in Sustainable Business Practice, which was launched in March 2011 and is aimed at members who are working in a business environment. Assignments, for example, are often based on work-related practices.

Voice of experience

The "upgrade your membership" pages of the Institute's website (lexisurl.com/iema13365) receive in excess of 1,000 hits each month, so it is clear that IEMA members are as ambitious as they are dedicated to their profession.

Many of those who are aiming for Associate or Full membership are possibly wondering what happens during an upgrade process: How does the Associate entry exam work? What does it take to achieve Full membership?

To answer some of those queries, four IEMA members who have recently upgraded – two to AIEMA (Dominic Freestone, a waste regulatory specialist at the Environment Agency, and Eric Steltzer, an energy policy analyst for the State of New Hampshire in the US) and two to Full membership (David Forbes, who works as an environment and sustainability development manager in the oil and gas industry, and Caroline Thomson, who works for water treatment chemicals specialist Biochemica UK) – offer an insight into the process of achieving their level of membership and how upgrading has enhanced their professional recognition.

For information on upgrading your membership, visit lexisurl.com/iema13365 or call us on +44 (0)1522 540069 to discuss your options.

Environmental governance for finance directors

Reporting Following the government's announcement that FTSE-listed companies will soon be required to report their greenhouse-gas (GHG) emissions, IEMA's chief executive Jan Chmiel (pictured) wrote an article for the *Financial Director* (lexisurl.com/iema13156), outlining the trends in sustainability reporting and informing company directors about their current and future responsibilities in relation to environmental governance. Below is an abridged version of the article.

Addressing the green agenda

The development of environment taxes, levies, regulation and now mandatory reporting has the potential to create confusion and build the perception that addressing the green agenda is a burden. On the contrary, the evidence is that embracing sustainability can lead to short-term improvements to profits and longer-term competitive advantage.

To maximise the opportunity it is important to understand the trends driving

the reporting and regulatory challenges. By doing so it is possible to deal with both short-term needs and future proof the organisation. The following trends have been growing for some time:

- **The changing environment –** every business needs to know how it will be affected by climate change across its whole value chain.
- **Rising cost –** in the UK there are a number of environmental taxes and the government plans to increase the proportion of revenue coming from such taxation. Companies should know how their operations are affected.
- **Reputation –** the link between environment and reputation has strengthened. Society is driving a need for environmental disclosure.
- **Investors –** investors have been slow to recognise the need for firms to manage their environmental sustainability, but they are now asking for better and more consistent reporting.
- **Company governance –** a government cannot micro-manage the way an economy addresses all aspects of the environmental challenge. As a result there will be a greater burden placed on corporate management to take responsibility.

Looking at these trends it is clear that what was voluntary will become mandatory, and what could be managed outside the core will now need to be integrated into the fabric of corporate decision making.

Changes to iema.net

Over the coming months IEMA members will notice various changes to the look of the Institute's website.

IEMA is currently upgrading its internal systems to cope with an increase in applications for membership and to develop the services that it offers current members. At the same time, IEMA is also updating its website to align with the office-based improvements.

The layout and content of the website will remain much the same, so everything that you currently access will be where you would usually find it. The only change that members will see is the look of the website's pages.

Members are advised to visit the new website – which is still located at iema.net – as soon as possible and log in to explore the new site.

The only thing you will have to do is reset your iema.net password so that the new site and IEMA's new database recognise you. Members will only have to do this once and their new password will also be applicable to the environmentalistonline.com site.

IEMA's new-look website

If you have any difficulty using the new website, please contact IEMA to let us know so that we can rectify any teething problems. To do this, simply call the Institute on +44 (0)1522 540069 or email webmaster@iema.net.

IEMA EVENTS

Date	Region	Topic
Regional events		
28 September	South West	Green drinks (Bristol)
28 September	North East	Demystifying the green deal
12 October	East of England	Water security for the East of England: understanding the issues and potential solutions
17 October	North East	Renewable energy: opportunities and barriers to renewable energy technology at the business scale
31 October	South West	Green drinks (Bristol)
Membership workshops		
26 September	Midlands	Full and CEnv membership workshop (Maidstone)
8 October	East of England	Full and CEnv membership workshop (King's Lynn)
8 October	Wales	Full and CEnv membership workshop (Cardiff)
10 October	Yorkshire & Humberside	Full and CEnv membership workshop (Leeds)
18 October	South East	Full and CEnv membership workshop (Southampton)
7 November	West Scotland	Full and CEnv membership workshop (Glasgow)
14 November	South East	Full and CEnv membership workshop (London)

Short cuts

IEMA survey says ...

The IEMA "preference" survey, which focused on what members want and need from their membership, closed on 4 September with a total of 1,960 responses via the online poll, which covered every level of membership, from Student to Fellow. The survey was designed to achieve a consensus on what elements of membership individuals find most valuable, what other services they would ideally like to see introduced, how often they like to be updated, and what devices – PC, tablet, smartphone – they use. The results will ensure the Institute can deliver appropriate, useful and valuable services that help all members to be the best that they can. IEMA was also interested in establishing where its members are positioned on the Institute's environmental skills map (lexisurl.com/iema11446) and their ambitions about moving up or across the map as they gain knowledge and experience and their skills base develops. Headline results from the survey reveal that members are, in the main, very satisfied with the current range and provision of information, events, publications and other services that come with all levels of IEMA membership. The Institute would like to thank all of the members who took the time to contribute to this survey. Analysis of the results is still ongoing, but a breakdown of the outcomes will be made available to members over the next few months.

IEMA on the move

Before the end of 2012, members will be advised of IEMA's transition to new premises from its current St Nicholas House address. During the move, which will be to a nearby address in Lincoln, service will continue as normal, with minimal disruption. Our telephone and email details will remain unchanged and anything sent to St Nicholas House after the move will be automatically redirected. Further details on the move will be available on iema.net and in *the environmentalist* in the coming weeks.

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iema
Institute of Environmental Management & Assessment

Sharon Lashley

Project consultant, Jayvee Renewables

CAREER FILE

Qualifications

AIEMA, NVQ level IV in environment management, Chartered Institute of Environmental Health approved trainer

Career history

Feb 2012 to now
Project consultant, Jayvee Renewables

2010–2012
Project manager, Community Energy Solutions

2004–2010
Regional programme coordinator, Groundwork North East

2001–2004
Environment officer, Sotralentz

Why did you become an environment professional?

I've always had an interest in the environment, particularly climate change and water use, and I'm involved in a lot of voluntary activities around these issues. It was this passion for the environment that drove me to pursue a career as an environment professional.

What was your first environment job?

Managing an ISO 14001 certified environment management system (EMS) for a plastic packaging company

How did you get your first environment role?

I was working in a customer services role and was offered the opportunity to become involved in the management of the firm's EMS.

How did you progress your environment career?

While working for the packaging business, I undertook an environment management NVQ as well as qualifications in carbon footprinting and auditing. I then moved into the regeneration sector, where I managed environment education programmes and services that helped firms to improve their environmental performance. I then qualified as a trainer and completed a course on the economics of climate change and renewables. These qualifications enabled me to move into the renewable energy sector as a consultant and adviser.

What does your current role involve?

I provide support to firms across a variety of projects, from 14001 implementation and waste minimisation to identifying opportunities for investing in renewable energy. It also involves the project management of installing and running renewables, such as solar photovoltaic systems, and delivering environment awareness training.

How has your role changed over the past few years?

My role has been enhanced greatly through my training in renewable energy. This new area of expertise has enabled me to offer a more comprehensive service to my clients and to identify financial benefits, via the feed-in tariff for example, as well as resource management savings.

What's the best part of your work?

Having the opportunity to carry out energy audits, implement 14001 and recommend renewable technologies for clients. I really enjoy completing projects; seeing the renewables installed and knowing the clients are benefiting both financially and environmentally.

What's the hardest part of your job?

I don't really consider any element of my job as being difficult as there is a solution for everything – it's just a case of being a good problem solver and having a methodical approach to any challenge!

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

I've just completed a course on domestic energy awareness and I'm finalising my portfolio to become qualified to complete energy performance certificate assessments for domestic properties.

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

My ability to engage with my customers – it's really important to be able to work across all sectors and target audiences.

Where do you see the environment profession going?

I'd like to see the profession continue to grow in importance, cementing the brilliant work we all deliver. I'm also extremely keen for us to focus on addressing better water management.

Where would like to be in five years' time?

Still working in this sector, delivering a valuable service to businesses and installing more renewables. I hope that we, as a planet, will be less reliant on fossil fuels and that I, as an individual, will be continuing to live as an ecowarrior!

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

Train in the fundamentals of environment management and register with IEMA as a sign of your commitment to professional standards. Embrace the profession, as it is a truly rewarding one that can provide so much diversity and interest. It's also worth considering training in renewable technologies as they will form a valuable part of our future.

How do you use IEMA's environmental skills map?

The map is a really valuable tool to understand my current knowledge and skills, and to identify any gaps and how these can be addressed. Having worked in the environment sector for more than a decade I am now working on becoming a Full IEMA member and IEMA's skills map is helping me to achieve that.

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Associate/Technical Director EIA **£Negotiable** London Ref: 68565	**Graduate Planner – London** **£Competitive** London/Bristol Ref: 2012-24
Environmental Compliance Manager **£30,000** Leicestershire Ref: 70239	**Senior Ecological Consultant** **£25,000 – £35,000 + Benefits** Central London Ref: ISW-0012

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RPS is seeking innovative individuals to join our Radiological Services Team based in Chepstow.

RPS has an enviable track record in specialist and multi-disciplinary project delivery for blue chip clients across the UK and abroad. As a result of recent significant project awards and our growth strategy, our Radiological Services Team is looking to appoint Senior and Principal Consultants with a sound track record of working on nuclear or radioactive waste management projects. Our team specialises in the characterisation of radioactively contaminated land and buildings, waste management, environmental sampling and monitoring programmes and we also provide radiation protection advice to our nuclear and non nuclear clients.

The role will be primarily working on UK projects but there may be overseas opportunities for appropriately experienced candidates.

Key responsibilities are likely to include:

- Providing advice on radioactive waste characterisation and management
- Undertaking BAT/BPEO/BPM and optioneering studies associated with radioactive waste management
- Undertaking and/or project managing radioactive waste characterisation programmes
- Undertaking and/or project managing radioactivity surveys
- Supporting our Radiation Protection Advisers
- Supporting environmental auditing and assessments of nuclear and industrial sites
- Preparing Environmental Permits associated with radioactive waste
- Preparing proposals
- Technical report writing.

The role involves both office based work and also a variety of site based activities therefore candidates will need to be physically fit and also willing to travel across the UK.

Prospective candidates will be degree qualified, ideally with a post graduate qualification. We seek staff with excellent team working and communication skills, keen to progress technically and commercially. The position will appeal to individuals seeking to become an accredited Radiation Protection Advisor, Radioactive Waste Advisor or Chartered Status through a professional institution.

All selected candidates will also be required to undergo a security clearance and offers of employment will be subject to appropriate clearance being granted.

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IEMA Associate Membership Certificate Course*

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for more information

*IEMA courses are delivered in association with CAMBIO

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