TRANSFORM

Environment
Economy
Society

FOR ENVIRONMENT AND SUSTAINABILITY PROFESSIONALS

November 2019
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Highway to health

Efforts to reduce road transport emissions are shifting up a gear

PLUS

Knives (and forks) out Guy Smith on the media messaging around meat
Earth shattering A new approach to reporting land and soil quality
Steps to success The benefits of food carbon footprint labelling

IEMA Transforming the world to sustainability

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MARTIN BAXTER, IEMA CHIEF POLICY ADVISOR

Investing in the future

The transition to a net-zero carbon emissions economy by 2050 will require all organisations, in every sector, to do things differently. When overlaid with other environmental challenges, such as poor air quality in urban areas, it's easy to see why the transport sector is firmly in the headlights.

Of course, environment and climate change considerations are not the sole forces catalysing change in the sector – where and how we live and work, and the role of technology, will also have a huge impact on the future of transport and mobility.

When faced with such systemic change, the high levels of uncertainty faced by those planning major transport infrastructure isn't surprising – whether they're planning new railway lines or airport capacity, or enhancing the strategic road network. Significant levels of investment are needed – and financing becomes more expensive as uncertainty increases. Climate change risks, including policy, regulatory and physical risks, can severely impact asset values and rates of return on investment. With significant impairments from climate change already impacting some company valuations, it's no surprise that the finance sector is taking action to better understand how these risks are being managed.

The transition to net zero will also require major re-skilling of the workforce so that it can play its part in a clean-growth future. For example, there are no exhausts, catalytic converters, fuel tanks or gearboxes in electric vehicles, so investment will be needed to support the redeployment of workers and support for communities – a 'just' transition.

We're working with the finance sector on the development of national and international standards to integrate sustainability into financing and financial services. Many thanks to those IEMA members who submitted comments on the new sustainable finance framework standard, which we expect BSI to publish before the end of the year. It's an important first step towards ensuring that the deployment of capital is done through a green-tinted sustainability lens.

"It's no surprise that the finance sector is taking action to better understand how risks are being managed"

IEMA Transforming the world to sustainability

IEMA is the professional body for everyone working in environment and sustainability. We provide resources and tools, research and knowledge sharing along with high quality formal training and qualifications to meet the real-world needs of our members. We believe that together we're positively changing attitudes to sustainability as a progressive force for good. Together we're transforming the world to sustainability.

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ROUNDUP

ENVIRONMENT & SUSTAINABILITY NEWS AND VIEWS

CLIMATE CHANGE

Scientists endorse Extinction Rebellion protests

More than 1,000 scientists from at least 20 countries – and counting – have signed a declaration of support for the non-violent climate protests taking place across the world.

It states that government failure over the climate crisis justifies peaceful protest, "even if this goes beyond the bounds of the law". Biologists, physicists and climate experts are among the signatories, along with scientists who have contributed to the UN-backed International Panel on Climate Change.

"As scientists, we have an obligation that extends beyond merely describing and understanding the natural world to taking an active part in helping to protect it," the declaration states.

"We support those who are rising up peacefully against governments around the world that are failing to act proportionately to the scale of the crisis."

The declaration was drafted shortly before civil disobedience campaign Extinction Rebellion (XR) brought parts of London to a standstill last month, with similar scenes witnessed internationally.

Thousands of arrests took place across more than 20 cities, including New York, Toronto, Sydney, Amsterdam and Brussels, after activists blockaded key sites and chained themselves to vehicles.

XR also gained support from teenage activist Greta Thunberg, who has helped mobilise millions of young people to take part in student climate strikes this year.

However, the protests have also drawn criticism, with some warning that the radical and disruptive nature of XR's movement could turn public sentiment away from tackling climate change.

There have also been accusations that XR has a race and class problem, with the majority of protesters in London from white, middle-class backgrounds. Some fear that a perceived 'movement for the rich' could spark a backlash.

The scientific community has tried for more than four decades to draw attention to the climate crisis using conventional methods, with no government action thus far able to sufficiently curtail emissions, according to the declaration. It calls on individuals holding a master's degree or more in a science-related field to show support for non-violent climate protests by signing the document.

"We believe it is our moral duty to act now, and we urge other scientists to join us," says the declaration.

You can sign the declaration of support here: bit.ly/2MJy9Te

PHOTOGRAPHY: ALAMY

BUSINESSWATCH

Adidas launches 'take-back and resale' service

Adidas customers will be able to return and trade old trainers and clothes for e-gift cards and club points instead of sending them to landfill using a new circular economy platform.

The retailer's Infinite Play service, available through a mobile app, makes it quick and easy for customers by offering free collections, with old items later resold or recycled.

Adidas said that increasing the active life of all clothing by nine months would reduce the annual carbon, water and waste footprints of UK clothing by 20%-30% each.

bit.ly/2BfUwu3

Carlsberg unveils first 'paper beer bottle' designs

Carlsberg has unveiled two designs for the world's first paper beer bottle, made from sustainably sourced wood fibres that are fully recyclable and 100% bio-based. Both have an inner barrier to allow the bottles to contain beer. One uses a thin recycled PET polymer film barrier, while the other uses a 100% bio-based PEF polymer film barrier.

This is part of Carlsberg's ultimate ambition to create a 100% bio-based bottle without polymers as it looks to lead the way in advancing paper bottle technology.

bit.ly/2oMdvtD

The Guardian announces 2030 net zero emissions plan

The Guardian Media Group – owner of *The Guardian* and *The Observer* newspapers – has unveiled a goal to achieve net zero carbon emissions by 2030. It will also become the first major international news organisation to achieve B Corporation certification through balancing purpose and profit. B Corp UK executive director Chris Turner said: "Certification is a testament to the standard of their current practises and their ongoing commitment to creating a positive impact across the whole of their business."

bit.ly/2BkKxn6

IMAGES: ISTOCK/SHUTTERSTOCK

ECONOMY

US green economy shows strong growth

The US green economy grew by 20% between 2013 and 2016, employing an additional 1.5 million people and generating more than $1.3trn in revenue per year. The findings from University College London also show that the US now accounts for 16.5% of the world's green economy, employing a total of 9.5 million people. And despite president Donald Trump proposing thousands of new jobs for the fossil fuel sector over the next 30 years, the US coal industry lost around 37,000 jobs from 2013-2016.

"The green economy is of huge importance to the US in terms of economic growth and employment," said study co-author professor Mark Maslin. "Further investment in the fossil fuel industry is incompatible with economic trends, and could end up damaging the US economy as other countries invest in their green economy."

Broadly defined as an economy that is low carbon, resource efficient and socially inclusive, the global green economy is estimated to have enjoyed revenue of $7.87trn in 2015-16. The strongest areas of growth in the US that year were in the renewables sector, particularly consultancy and wind energy, which saw increases of 9.36% and 8.56% in economic value respectively. However, the researchers said other countries would soon compete, with China set to generate 13m clean energy jobs by 2020.

"Given the climate change emergency and the employment slump in fossil fuel industry, it only makes sense that future investment should focus on growth in the green sector," Maslin added.

BUSINESS

Brexit derails sustainability initiatives

Brexit-induced political uncertainty has derailed hundreds of innovative projects in the UK, including those aimed at boosting sustainability. A survey of more than 500 small and large businesses found that a third have delayed projects during the past year, while one in 10 have cut investment budgets.

The proportion of firms delaying sustainability projects has increased by 25% during the past two years, according to the findings, while fears that sustainable practices could hit profits have skyrocketed.

"No business is going to commit millions of pounds to projects, particularly involving new technologies, without a stable environment in which to invest," said Mike Hughes, UK & Ireland zone president at Schneider Electric, which carried out the research.

JOBS

Most EU environmental roles unaffected by Brexit

Brexit is unlikely to have a large impact on environmental professionals who practice within the European Economic Area (EEA) because most are not in regulated roles in the EU.

That is according to an update by IEMA, which said that there shouldn't be any specific restriction or barriers, even if blanket provisions are introduced for anyone providing services into the EU's single market. One notable exception to this would be for environmental health officers, which are regulated in various EU countries.

Guidance on the validity of UK professional qualifications in the EEA following a no-deal Brexit can be found at **bit.ly/2MOHGbp**

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IMPACT ASSESSMENT

Launch of IEMA Impact Assessment Strategy

The impacts of climate change, population growth, threats to nature, resource concerns and global development pressures on businesses, economic prosperity, communities, health and wellbeing represent a real challenge for sustainability professionals. IEMA and the Impact Assessment Network Steering Group, therefore, are excited to publish our new Impact Assessment Strategy. This will guide our work and engagement with members during the next five years. We will be working to ensure IEMA is the home of the impact assessment (IA) professional.

A lot of work has been going on behind the scenes and we have already begun implementing the strategy. Steering group member David Hoare from WSP has been working on a series of collaborative events with the Royal Town Planning Institute to network and improve practice on key issues for IA professionals and planners. Each event will be followed by a practice note sharing the key findings from the discussions. The next event is in Manchester on 7 November and new locations are planned for 2020.

We also have some webinars lined up for the end of the year, including our first panel discussion on cumulative effects in environmental impact assessment (EIA), with leading experts tackling this challenging issue. Finally, we have been rolling out the new IA Outlook Journal on issues including major infrastructure, biodiversity net gain, proportionate EIA and renewable energy.

Looking ahead to 2020, we will be increasing the frequency of our webinars and will draw on the expertise of IEMA's EIA Quality Mark scheme to bring you more exciting and informative content. We will also be looking at bringing you some 'back to basics' training on core EIA topics and challenges.

We expect to launch a number of key guidance documents and briefings during the coming months. These include topics such as digital EIA, climate change, materials and waste, cultural heritage, and major accidents and disasters.

Finally, IEMA is currently reviewing the EIA Quality Mark scheme, working with members to make improvements that will deliver more benefits to the EIA community and scheme members, as well as helping drive continuous improvement in the quality of EIA and environmental statements.

> "We will be working to ensure IEMA is the home of the IA professional"

PHOTOGRAPHY: GETTY

Vision

IEMA and its members will work to ensure that IA is widely recognised as supporting better decision-making, positively influencing development outcomes and providing lasting benefits to the environment, communities and the economy.

Objectives

1. **Promote professional standards and best practice and showcase the benefits of IA** to deliver positive outcomes for the environment and society
2. **Develop guidance and training and promote knowledge sharing and collaboration** to provide practitioners with the skills and knowledge to deliver effective and proportionate IA
3. Improve the effectiveness of IA through **innovation in practice and advocating for effective policy and regulations**
4. **Encourage and develop the careers of IA professionals** so that there is a vibrant supply of qualified practitioners to meet the needs of the future of IA.

Get involved

Each year we refresh the membership of the Impact Assessment Network Steering Group. If you are an experienced IA professional and want to help shape the profession and deliver the new IA Strategy, send your CV and a short paragraph on your skills, experience and what you can bring to the Steering Group to **IA@iema.net** by Friday 15 November.

If you just want to stay up to date with the latest IA activity with IEMA, you can join the Impact Assessment Network by emailing **IA@iema.net**

CLIMATE

IEMA declares a Climate and Environmental Emergency

In September, IEMA declared a Climate and Environmental Emergency. What does this mean, and how can we all get involved?

The past 18 months have seen an escalation in climate action and concern, including landmark science reports, news and documentaries, international school strikes and Extinction Rebellion's direct action. To what degree does this help the case for transformative change?

Declared emergencies are growing and proving formative. The first was the City of Darebin in Melbourne, which declared in December 2016 and then progressed its Climate Emergency Plan. Parliament has declared a climate emergency, as have more than half of UK councils, and the Local Government Association recently declared and agreed to establish a climate emergency network special interest group. IEMA members have been influential in securing declarations, such as at Eastleigh Borough Council and Newcastle upon Tyne Hospitals NHS Foundation Trust.

Declarations often include a carbon neutrality or zero carbon target, as well as commitments to develop a plan or strategy. Language is developing, and *The Guardian* announced it would begin using 'climate crisis' along with 'global heating'.

Targets are also being set in the private sector. Pledges can be registered within schemes such as UNFCCC's Climate Neutral Now. Corporate declarations are being encouraged under initiatives like Business Declares or via B Corp

IEMA's declaration is rooted in international science and the knowledge that we can make a contribution to the rapid transition required. We have made our own commitments to carbon neutrality in 2020 and progressively towards zero-carbon operations, embedding climate change in key services and across our value chain. Our member-led Climate Change and Energy network is developing events, webinars and a climate action toolbox. On the policy front, we will respond to government consultations and are influencing international standards via ISO. All IEMA members can register to join the Climate Change and Energy network – go to **www.iema.net/engage/networks**

Read more about our declaration at **bit.ly/35Dtevt**

IEMA ACTIVITY

Disruptive technologies and modern slavery

In September, IEMA engaged with 40 members in their capacity as professionals working in supply chain transparency to inform our response to the Home Office consultation on transparency in supply chains. IEMA stressed that the need for guidance on how to prepare modern slavery statements under the Modern Slavery Act, and how to interpret them, is the most important feature that should be included in a central government registry. Find out more at **bit.ly/2nVnexg**

The fourth industrial revolution is causing a shift in the way we live and work – the majority of which is yet to be understood and resolved. To resolve this, the IEMA Fellows Working Group on Disruptive Technologies and the Digital Economy has been putting together a thought piece on disruptive technologies and sustainability. The piece seeks to demystify the landscape of disruptive technologies and their impact on the global transition to sustainability, and sends out a call for action by environment and sustainability professionals and the wider IEMA membership. For more information please register at **bit.ly/2IPJznm** for the webinar launch on 10 December.

Responsibility for environmental, social and economic impact is often fragmented across organisations and governments. This means sustainability frequently remains outside the core business model for many organisations. Yet in the face of slower national engagement, cross-sector alliances between cities, regions and businesses present opportunities to ramp up leadership and promote more integrated sustainability values.

The IEMA Fellows network will convene for its end-of-year event on 12 December for a discussion on sustainability leadership. While an opportunity to review Fellows' engagement throughout the year, outcomes from the session will be used to inform a focused roundtable discussion on sustainability leadership in Manchester in early 2020. All output from these discussions will be compiled in an insight briefing for IEMA members.

This legislative update has been provided by **Cedrec Information Systems**, available at **cedrec.com**

cedrec legislation made simple

NEW REGULATIONS

THE LATEST
■ LEGISLATION ■ GUIDANCE ■ CONSULTATION

3 OCTOBER 2019

Energy

The Ecodesign for Energy-Related Products and Energy Information (Amendment) Regulations 2019 reflect changes in EU law that relate to requirements for servers and data storage and the annulment of energy labelling requirements for vacuum cleaners.
cedr.ec/6dl

PENDING

Waste

The Draft Environmental Protection Act 1990 Amendment (Scotland) Regulations 2019 look to extend existing powers to require holders of waste management licenses to accept, keep or dispose of waste to waste operators holding other types of environmental permit.
cedr.ec/6dk

15 OCTOBER 2019

Water

The Nutrient Action Programme (Amendment) Regulations (Northern Ireland) 2019 allow a derogation for the application of livestock manure up to a limit of 250kg nitrogen per hectare per year, under certain conditions, on farms in Northern Ireland with at least 80% grassland.
cedr.ec/6dm

11 OCTOBER 2019

Brexit

The Regulatory Reform (Specification of EU Instruments) (Scotland) Order 2019 specifies EU instruments containing obligations relating to protecting and improving the environment, so corresponding regulations can be produced in the event of leaving the EU.
cedr.ec/6do

3 SEPTEMBER 2019

Climate change

The Scottish government has published a new programme that demonstrates its commitment to tackling climate change. It includes several important policies that aim to reduce carbon emissions in Scotland, and eventually lead to net-zero carbon emissions in the country by 2045 – five years before the rest of the UK.
cedr.ec/6dj

2 SEPTEMBER 2019

Waste

The Scottish Environment Protection Agency is seeking views on the proposal to expand the range of data from waste operator returns available to the public. It is targeted at waste management operators that provide data returns, users of the data and interested members of the public.
cedr.ec/6dg

3 SEPTEMBER 2019

Energy

The Department for Business, Energy and Industrial Strategy seeks views on the Draft Ecodesign for Energy-Related Products (External Power Supplies) Regulations 2020. The Draft proposes to introduce UK requirements for external power supplies that are in line with those supported at EU level in January 2019.
cedr.ec/6dh

16 SEPTEMBER 2019

Energy

The Department for Business, Energy and Industrial Strategy has called a consultation on proposals to help develop a policy framework for smart meters post-2020. This will help shape the policy framework for energy suppliers continuing to install smart meters after 31 December 2020.
cedr.ec/6di

Biffa Waste Services Ltd was found to have illegally sent household waste to China, India and Indonesia

INCOURT

WASTE

Biffa forced to pay over £500,000 for exporting banned waste

Following an investigation by the Environment Agency, Biffa Waste Services Ltd has been ordered to pay £599,912 for breaching waste exports regulations.

In June 2019 Biffa was found guilty of sending contaminated household waste, described as waste paper, to China between May and June 2015. Exports of unsorted household recycling waste from the UK to China are banned.

During the investigation, officers prevented seven 25-tonne containers at Felixstowe Port from onward transport to China. Despite being marked as waste paper, the contents included soiled nappies, food packaging, items of clothing, bags of faeces, wood, tin cans, plastic bottles and electric cables.

In September 2019 Wood Green Crown Court heard details about four further charges against Biffa illegally exporting 42 containers of waste collected from households to India and Indonesia between November 2018 and February 2019.

The court fined Biffa £350,000 and ordered it to pay costs of £240,000, plus a further £9,912 under the Proceeds of Crime Act 2002.

The Environment Agency has introduced a number of additional measures to tackle illegal exports, including working closely with HMRC to review inconsistencies between customs information and packaging data, and creating an investigations team to target serious offenders.

"Illegal waste export blights the lives and environment of those overseas," said the Environment Agency's head of waste, Malcolm Lythgo. "We treat illegal waste exports as a priority and will not hesitate to take enforcement action against those found to break the rules".

Between 2018 and 2019 the Environment Agency prevented the illegal export of 12,690 tonnes of unsuitable waste. It is working with the government to tighten controls, including increasing monitoring of waste shipments and charging higher fees to improve compliance.

CASE LAW

Appeal against planning inspector dismissed

Gladman Developments Ltd appealed against a decision upholding the refusal for planning permission for developments in air quality management areas. The planning inspector had concluded that the proposals were likely to have an adverse affect on air quality.

The High Court upheld that decision, referring to case law which required the government to achieve compliance with the Air Quality Directive 2008 by the soonest date possible. At appeal the main questions included: the inspector's understanding of relevant case law and the National Planning Policy Framework (NPPF), whether he had failed to deal properly with proposed mitigation, and whether he failed to explain how the developer's mitigation departed from the air quality action plans.

The judge confirmed that the inspector had properly engaged with previous case law, and had referred to the emphasis on the urgency of meeting limit values for air pollutants, which made it clear he understood the need to achieve compliance by the earliest possible date. However, he was not required to assume that local air quality would improve by any particular amount within any particular time frame. He had drawn reasonable and lawful conclusion on the future air quality baseline. He also had not failed to apply the NPPF whereby the planning system assumed other schemes of regulatory control would operate effectively.

Secondly, the inspector had been entitled to conclude that the developer's financial contribution to mitigation was unlikely to be effective and had explained that the contributions had not shown to translate into actual measures likely to reduce the use of private petrol and diesel vehicles. The inspector did not have to accept that because an appropriate method had been used in calculating the level of financial contributions, the mitigation measures would be effective. Finally, when the decision letter was read as a whole, the inspector's reasons were sufficient and lawful.

The appeal was dismissed.

OTHER NEWS

UK needs billions to meet 2050 climate targets

A report commissioned by the government states that the UK will need investment worth billions of pounds every year to remove enough greenhouse gases from the air to meet its 2050 climate targets.

The report, by analysts at Vivid Economics, estimated that the UK would need as much as £20bn a year to remove up to 130m tonnes of carbon dioxide from the air. This will be necessary to make up for industries such as aviation and agriculture.

The report says: "Even if emissions are reduced aggressively across the economy, the UK is expected to continue to emit a significant amount of greenhouse gases annually. The rate of rollout will need to be rapid, particularly in the 2030s and 2040s, and will require significant policy support".

Ministers have been urged to support investment in greenhouse gas removal. This could mean offering subsidies and grants for carbon capture technologies or demanding that companies supplying fossil fuels and agriculture products offset a percentage of their carbon emissions by investing in greenhouse gas removal.

The report estimates that, on average, the UK may need between £1bn-£2bn a year in 2030 to remove greenhouse gas emissions from the air, rising to £6bn-£20bn by 2050. Projects range in expense from technology that can absorb carbon dioxide from the air at a cost of £160-£470 a tonne, to restoring natural habitats at a cost of £8-£78 a tonne.

PHOTOGRAPHY: ISTOCK

Out to pasture?

Guy Smith talks to David Burrows about media messaging, agricultural emissions, and the NFU's vision for getting the UK's farming sector to net zero

Guy Smith produces sugar beet, barley, wheat, peas and beans in northeast Essex; he also grazes "a few sheep". However, he doesn't do much of the actual farming himself these days because he's also deputy president of the National Farmers' Union.

"I'm that horrendous thing, a weekend farmer," he admits during our chat at the NFU's new London base in Smith Square, Westminster. Indeed, the union's combination of working farmers and professional staff is one of its quirks – and strengths. It has been pretty successful over the years, but the next few months could test Smith and his colleagues more than any other.

For one thing, there is Brexit. A report published in August, written by the NFU's former chief economist Dr Séan Rickard and backed by the People's Vote campaign, claimed that the UK crashing out of the EU could cause more than half of UK farms to go out of business. Flooding their home market with cheap goods from overseas was not the vision farmers were sold. The political Pollyannas will argue that consumers will back British farmers and pay a premium for food produced here to higher standards of welfare, safety and sustainability – but what if they don't? After all, it's happened before with pork.

In the 1990s, the Conservative government proposed restrictions to the way pigs could be kept, and within a decade sow stalls were outlawed (the metal cages are designed so the sow cannot turn around for the whole of her 16-week pregnancy). Polling suggested that this was what consumers wanted; the line from government and retailers was that farmers would get a premium for the higher standards – so farmers invested. However, the support never materialised: with no restrictions on imports, retailers continued to import pig meat from countries still using sow stalls. "Consumers let us down," says Smith. "They didn't back up what they were telling politicians." Smith isn't advocating a return to these systems and a decline in welfare. Rather, he is highlighting the difference between consumer aspiration and consumer behaviour – a gap that those doing trade deals should be mindful of. Producers, like their animals, need protection.

Bad press

Brexit isn't the only storm farmers are currently weathering. Agriculture's environmental impact is high-profile

REARING CHANGE

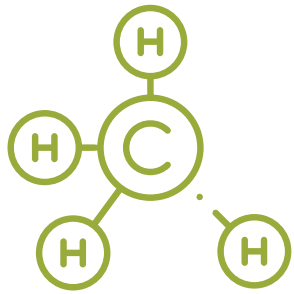
Agricultural emissions – and how they could be tackled

45.6m

UK farming emissions currently amount to 45.6m tonnes of CO_2e a year

30%

The food we eat could account for 30% of the UK's carbon footprint



56%

Methane accounted for 56% of agricultural emissions in 2017

2040

The NFU has a vision for reaching net zero greenhouse gas emissions from agriculture by 2040

22m

Producing bioenergy from crops and organic matter and capturing the carbon could save 22m tonnes of CO_2e

news and the anti-meat agenda has been "another knife in the ribs" for farmers (beef prices have also slid to crisis point). "The vegan lobby are hijacking the climate debate," says Smith.

A flick through the current week's farming press reveals a number of stories on the issue. 'Farmers fight back against anti-meat agenda' is the lead in *Farmers Weekly*, for example, while *Farmers Guardian* covers an apparent willingness in the Labour Party to put a carbon footprint label on foods and perhaps even introduce a meat tax. *Scottish Farmer*, meanwhile, homes in on the increasingly public spat between the BBC and the farming sector – the latter feels it is being blamed for the world's woes.

In August, for example, the Intergovernmental Panel on Climate Change (IPCC) published a report entitled *Climate Change and Land*. As usual, it was a fiercely detailed and scientific assessment, but most news outlets – including the BBC – boiled it down to: "Eat less meat and save the planet, say UN experts". It wasn't quite that simple, though. The specific text reads: "Balanced diets, featuring plant-based foods, such as those based on coarse grains, legumes, fruits and vegetables, nuts and seeds, and animal-sourced food produced in resilient, sustainable and low-GHG emission systems, present major opportunities for adaptation and mitigation while generating significant co-benefits in terms of human health."

> "A bit of beef hasn't got a standard bit of embedded carbon – it would very much depend on how that bit of beef is produced"

For UK farmers, the line "animal-sourced food produced in resilient, sustainable and low-GHG emission systems" was key. This is what NFU members are doing, according to Smith. "A bit of beef hasn't got a standard bit of embedded carbon – it would very much depend on how that bit of beef is produced. We'd ask consumers to be a bit more discerning." That's difficult when the scientists aren't all in agreement: the extensive grass-fed systems favoured by many UK farmers are not always lower-impact than more intensive systems. As Smith admits, the science on all this "isn't particularly settled".

The emissions question

He is quick to add that he isn't denying climate change – "that isn't where we want to be" – but the media's message that reducing livestock is the best way to combat it is not, in his view, wholly correct. "We think there is some twisted analysis going on, trying to suggest to consumers that the easiest way to stop climate change is to stop eating meat. We would argue that, in fact, transport and energy are really where it's at."

Emissions from UK farms currently amount to 45.6m tonnes of carbon dioxide equivalent (CO_2e) a year – about 10% of the total. Energy and transport are 24% and 27%, respectively. However, there are two points worth making.

First, the make-up of farm emissions is different from other sectors: carbon takes a backseat, with methane accounting for 56% of emissions from agriculture in 2017 (47% of total agriculture emissions were from the digestive process of livestock) and nitrous oxide another 31%. Reducing these gases is "more difficult", according to the NFU, because "they result from complex and imperfectly understood natural soil and animal microbial processes" (those belching animals).

A debate about the weighting these gases receive in emission figures is also bubbling up. While some scientists highlight that these are extreme greenhouse gases and deserve a large weighting in calculations, another school of thought argues that their

effects are easier to reverse because they don't remain in the atmosphere for as long as carbon dioxide. "To a certain extent, the debate going forward is going to be about weighting GHGs or identifying GHGs, and how you carbon account and measure the carbon embedded in food," Smith says.

Which brings us to the second point: the footprint of food actually consumed in the UK is likely to be far higher, given that we import 48% of our food (and rising). A 2010 study by WWF-UK and the Food Climate Resource Network, for example, found that the food we eat could account for 30% of the country's carbon footprint. How do you reduce this, though? "We need to find ways of reducing carbon in the way we produce food, sequester more carbon on farms and contribute more to the bioeconomy," says Smith.

Reaching net zero

These are the three strands of the NFU's new vision for reaching net zero greenhouse gas emissions from agriculture by 2040. Published in September, the 12-page plan suggests that the sector could reduce or remove those 45.6m tonnes of CO_2e in just two decades.

More efficient production will deliver 11.5m tonnes of savings, while farmland storage of carbon can slash another nine million tonnes. The biggest chunk – 26m tonnes – would come from boosting renewable energy and the bioeconomy: producing bioenergy from crops and organic matter and capturing the carbon

> "We need to find ways of reducing carbon in the way we produce food, and contribute more to the bioeconomy"

could save 22m tonnes alone. Do all that, and reward farmers accordingly, and there would be no need to cut back on the bacon sandwiches. The right policies and financial packages would need to be in place, though – and the public would have to buy into low impact food, too.

NGOs have been quick to pan the plan, given that it avoids the large cow in the room: meat and dairy consumption. Smith, however, claims politicians like it: "They like the idea of an industry stepping up with ideas about how climate change can be resolved or addressed."

None of this will be achieved overnight, but farmers need to up their game: there has been no progress on reducing farm emissions since 2008. A target set in 2013 to plant 5,000 hectares of trees every year has also proved difficult: England managed just 1,420 hectares in the year to March 2019, according to the Woodland Trust, although Scotland's 11,200 hectares did bump UK levels up to their highest in a decade. Smith has issues with both these targets.

"We are happy with trees on farmland as long as it doesn't significantly curtail production," he says. Otherwise "you'll just offshore the carbon and they will continue ripping down the Amazon rainforest". Turning the dial down on UK production would be folly, he insists, especially given the potential food security risks. How exposed to the vagaries of world food markets do we want to be, given political chaos and a changing climate?

Smith's claim to fame is that he farms the driest spot in the British Isles and most of his farm is below sea level: "You could say I am on the frontline of climate change." He is also ready to defend his members. "Politicians, voters and opinion-formers needed to be reminded that you shouldn't take food production for granted. Political advocacy is what drew me to this role."

DAVID BURROWS is a freelance journalist.

A new economic paradigm

Dr Kim Schumacher outlines the vital influence of environmental impact assessment frameworks on the sustainable finance sector

Finance is key when it comes to reaching climate targets and accelerating the low-carbon energy transition. Expanding renewable energy capacity, and sustainably managing natural resources, will require huge capital expenditure. It also means that environmental, social and governance (ESG) factors will have to be integrated into financial, political and regulatory decision-making. The importance of finance has been put forward by a plethora of publications and statements which aim to foster investment that takes account of ESG factors. In its 2018 *Guide on Sustainable Finance*, IEMA highlighted how sustainable finance can help manage climate-related risks and drive the transition to a net-zero emissions society. However, the 2019 UN Climate Action Summit highlighted a flaw in climate and sustainable finance activities: insufficient impact measurement.

Heralded as a primary solution to the climate crisis and flanked by regional and global investor commitments from businesses, governments and financial actors, green finance has become a sizeable element of the financial sector. They are seen as a way to mobilise global private and blended capital flows to achieve the Paris Climate Agreement and UN Sustainable Development Goals (SDGs), and are considered more climate-resilient. They have, however, been met with scepticism from some stakeholders, including researchers and regulators, who question whether they are as climate-aligned or ESG-compatible as advertised. And despite the rapid growth of this sector and the wider consensus around its role, the volume of climate-aligned investments falls short of limiting global warming to 2°C, or reaching the SDGs.

Standardisation issues

The quality of ESG data is preventing large institutional investors from expanding activities in this area. Measuring the impact of ESG investments is a challenge: many models and methodologies do not permit solid asset allocation or risk management. Several studies have illustrated the hampering effect of inconsistent data, and shown that differing methodologies are the cause of variations when assessing climate risk exposure for identical equity or bond portfolios.

Data gaps and the inconsistencies of proprietary assessment methodologies make it difficult to evaluate green financial products. Several indicators, including biodiversity and ecosystem services, pose particular challenges. The knowledge deficiencies and data gaps regarding the impacts of investments on natural capital, and vice versa, are among the largest across the ESG data landscape. These undermine the credibility of ESG scores for numerous asset holdings, leading to greenwashing concerns. Due to incomplete corporate disclosure and lack of granular multi-annual ESG datasets, ESG ratings for companies still differ between rating agencies.

The market for ESG data is projected to grow to almost $800m by 2020. This underscores the reliance of sustainable financial market actors on external data services. However, at the moment, all main data sources primarily rely on self-assessed company reporting or annual

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questionnaires sent by organisations such as the Carbon Disclosure Project or the UN Principles of Responsible Investment. In the absence of standardisation, these data sources vary in terms of consistency and granularity. The latter defines what constitutes a green project, what indicators and metrics to use, and how to benchmark best practice. Proper environmental management frameworks can alleviate greenwashing controversies by offering a tested template for reliable measurement, reporting and verification of project and policy-related ESG impacts.

COSTING THE EARTH

Is sustainable finance poised to make a significant difference?

$800m

The market for ESG data is projected to grow to almost $800m by 2020

2°C

Climate-aligned investments fall short of limiting warming to 2°C

50%

Cumulative issuance since 2007 stands at $521bn, with 2017 and 2018 accounting for more than 50% of all issuances

EIA: a core tool

To strengthen emission pathways and ESG strategies, solid measurement, reporting and verification mechanisms need to be established. These assure proper accounting of climate and ESG-related impacts and enable proper disclosure with best practice frameworks such as the recommendations published by the Task Force on Climate-Related Financial Disclosure. Standardisation is being addressed on multiple fronts, such as by the Sustainability Accounting Standards Boards and the International Standardisation Organisation (ISO), which has established committees to develop standards dealing with the disclosure of climate-related investment activities (*ISO 14097*) and terminologies surrounding sustainable finance *TC 322*). IEMA is involved in ISO standard development, having joined the *TC 322* as an organisational member.

> "The low level of standardisation is currently being addressed"

The European Commission is leading the most advanced effort, having published legislative proposals dealing with different aspects such as establishment of a common taxonomy, a "unified classification system on what can be considered an environmentally sustainable economic activity". Other proposals are on disclosure, benchmarks and the creation of a green bond standard.

In sustainable finance, Environmental Impact Assessment (EIA) is instrumental for the structuring of green bonds, given the project-based nature of this type of debt financing. The green bond market has multiplied in size, with cumulative issuance since 2007 standing at $521bn; 2017 and 2018 account for more than 50% of all issuances. Its most prominent role in the green bond segment notwithstanding, EIA will have a much larger impact on ESG data quality and standardisation of impact measurement methodologies.

The EU makes direct reference to EIA in the taxonomy technical report, a practical guidance document published in June 2019, to outline further details on how the taxonomy would be implemented. The report provides sample sectoral assessment procedures for sustainable finance practitioners in which they need to ensure an "EIA has been completed in accordance with the EU Directives on Environmental Impact Assessment (2014/52/EU) and Strategic Environmental Assessment (2001/42/EC)" to properly evaluate the potential risks on ecosystems."

It evidences that existing EIA frameworks are an established tool to measure impacts *ex-ante*, with modern frameworks even containing ex-post monitoring obligations during an asset's operation and decommissioning phases. Numerous EIA or strategic environmental assessment frameworks already require the systematic production and collection of asset-level or policy-level ESG data. This can be used to fill data gaps, complement existing databases and catalyse standardisation trends. This will not only render ESG scores and ratings more reliable, but also accelerate the transition towards better disclosure and render ESG impacts, as well as climate-related risk exposure, more comparable at asset and company level. EIA could thus play an important role in determining the future growth patterns of sustainable finance.

DR KIM SCHUMACHER CEnv MIEMA is an honorary research associate at the School of Geography and the Environment, University of Oxford.

The Greenwash Diaries

The UK government's fixation on single-use plastic will win votes and keep businesses happy. Why? Because none of the new policies will break the single-use status quo.

I'll focus here on just one line of the recently published 232-page Environment Bill: "The regulations may specify only items which (a) are single-use items, (b) are made wholly or partly of plastic, and (c) are supplied in connection with goods or services."

Once again, the focus is on single-use plastic rather than single-use full stop. Once again the message is: plastic bad, non-plastic good. This, of course, is a vote-winning strategy if the consumer surveys are anything to go by. And you might think that this makes life uncomfortable for brands that have pandered to (and pushed?) our grazing, on-the-go culture here in the UK, building their models and margins on single-use packaging.

However, you'd be wrong. These businesses don't have to rethink their models and operate deposit and return schemes for reusable packaging – they just have to switch away from plastic. This is what the public wants, and what the politicians are telling them. In the UK, extended producer responsibility (EPR), the plastics tax and a deposit return scheme (DRS) will make single-use packaging more expensive, but not enough to force a revolution based on refillables and reusables. The new charges will help, but not as much as you might think.

Adding a 25p charge to compostable cups in parliament resulted in a 75% fall in the number of hot drinks sold in disposables. Total sales remained the same – people sat in with a ceramic cup or brought their own reusable one. That's evidence of a charge's benefits, right under the government's nose. Roll that charge out nationwide and the behaviour shift won't be anywhere near as high: maybe 20% or 30% of drinks will be sold in reusables. That's far better than now (1% to 2%), but it leaves 70% of disposable cups in play. Currently, only 4% are recycled.

It isn't just cups. Sales of food-to-go are booming (and will increase by 26.4% during the next five years, according to food and consumer research charity IGD). There are now 25% more takeaway outlets than three years ago; we have 8,149 coffee shops; and 76% of us buy lunch out every day. All the while, on-the-go recycling infrastructure is crumbling or being ripped away. Anyone who thinks cash from EPR and a DRS will reverse that trend are mistaken.

"ONCE AGAIN, THE FOCUS IS ON SINGLE-USE PLASTIC RATHER THAN SINGLE-USE PACKAGING. AND FOODSERVICE BRANDS KNOW THAT"

The Single-Use Plastics Directive – which the UK will likely implement – isn't really any better. It "promotes circular approaches that give priority to sustainable and non-toxic reusable products and reuse systems rather than to single-use products, aiming first and foremost to reduce the quantity of waste generated". Sounds ideal.

However, the definition of single-use plastics is open to debate. All we know is that they "should exclude plastic products that are conceived, designed and placed on the market to accomplish within their life span multiple trips or rotations by being refilled or reused for the same purpose for which they are conceived". So does that mean closed loop recycling – for example a plastic bottle recycled back into a plastic bottle – is fine? Once again, the focus is on single-use plastic rather than single-use packaging. And the big foodservice brands know that.

Take McDonald's, which just trialled a 'nearly plastic-free' store in Berlin. "We really went all in," reads the blog. "Edible waffle cups replaced condiment sachets and containers. Paper straws replaced plastic straws. Wooden cutlery replaced plastic cutlery. Sandwiches were wrapped in packaging made from grass, not paper. And Chicken McNuggets were served in paper bags, rather than cardboard boxes."

So, all McDonald's has done is switch from one type of single-use packaging to another and branded the whole operation 'sustainable'. Makers of single-use non-plastic packaging are rubbing their hands. This is greenwash by regulation, and McDonald's et al. are lovin' it. But is this really the future we want? I thought this was about a reduction in the consumption of vast quantities of single-use packaging – and not business-as-almost-usual.

DAVID BURROWS is a freelance writer and researcher. His reports include The Future of Foodservice Packaging (*Footprint*) and Grocery Packaging in a Sustainable Future (*The Grocer*).

CHARITY

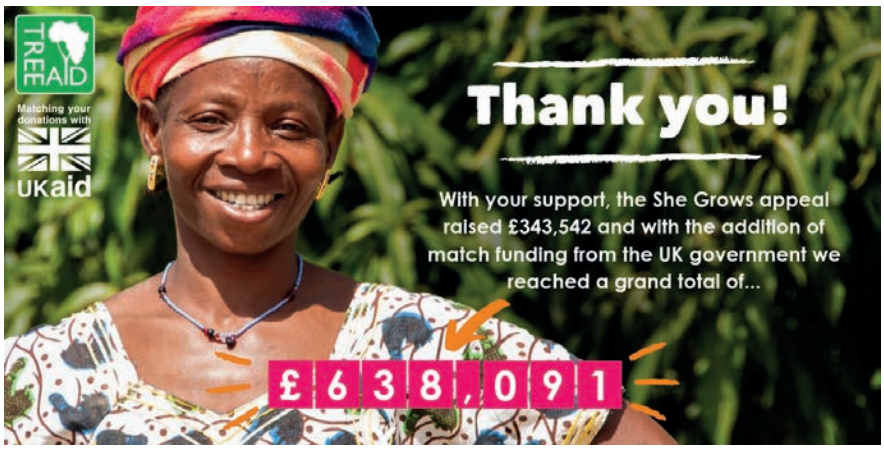
Transform helps Tree Aid smash funding target

Transform magazine has helped humanitarian and environmental charity Tree Aid raise £638,091 to fund new work tackling deforestation and poverty in Mali.

The UK government matched donations to Tree Aid's 'She Grows' appeal after it beat a £250,000 funding target, with several donations made via the *Transform* website.

The appeal ran between 1 April and 30 June this year, raising money for a three-year project that aims to provide 1,000 women living in poverty with the tools and training needed to save and replant their local forest.

It will also help them set up small businesses so they can earn a sustainable living from the trees by processing and selling shea butter and honey.

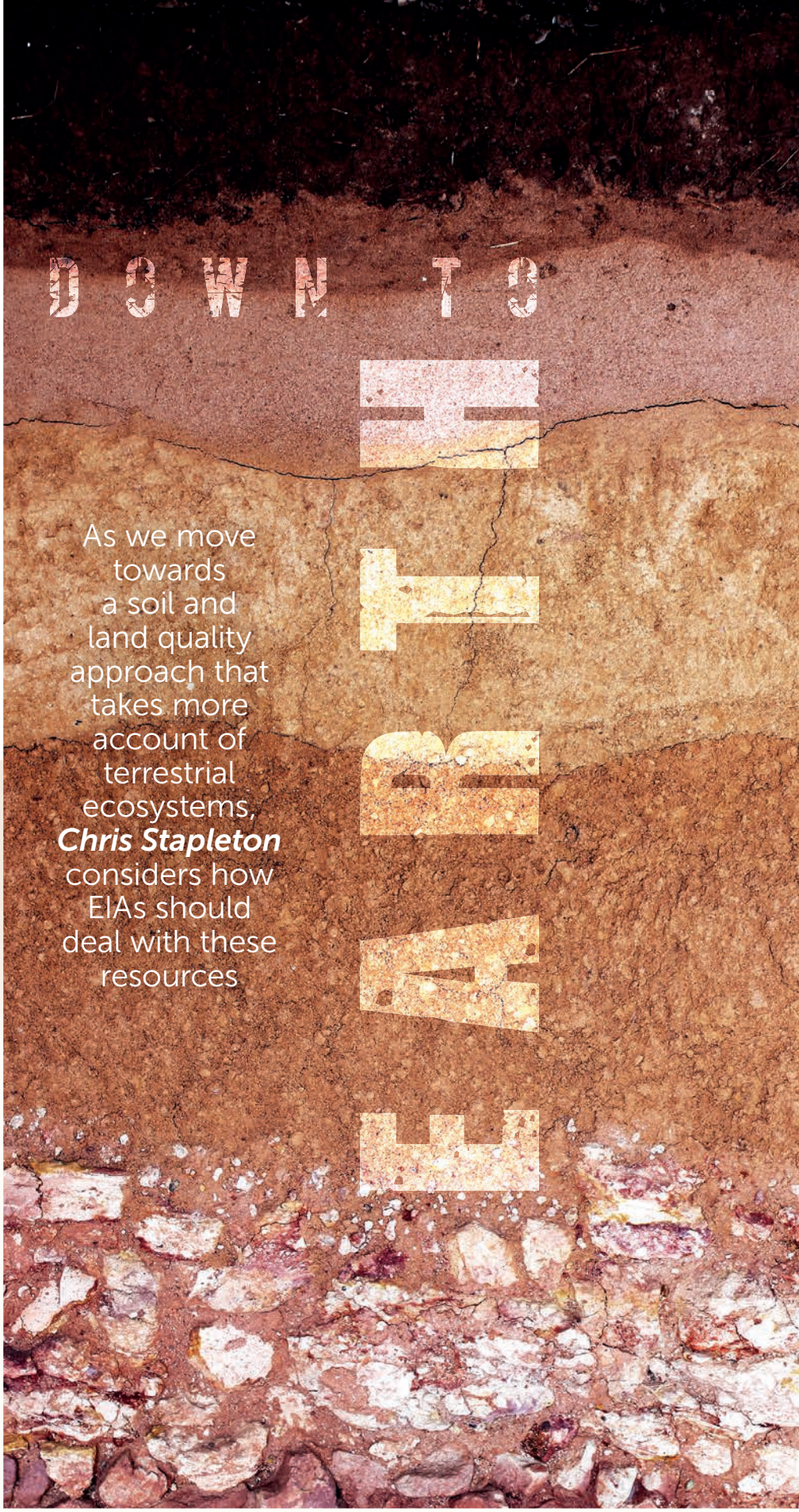


This comes as the effects of climate change and deforestation become increasingly prevalent on the drylands of Africa, where women are expected to feed their families from some of the direst land in the world.

"We are so grateful to everyone who supported our appeal and we are looking forward to helping 1,000 women transform their lives and environment at this very critical time," said Tree Aid CEO John Moffett. "People in the drylands of Africa are among the most vulnerable in the world to the effects of climate change. Women especially depend on the land, but a vicious cycle of deforestation, climate change and land degradation is making their lives more difficult.

"Thankfully, trees offer hope and a practical solution to the climate crisis."

You can find out more about the She Grows project here: **bit.ly/2Biy4kb**



DOWN TO THE EARTH

As we move towards a soil and land quality approach that takes more account of terrestrial ecosystems, ***Chris Stapleton*** considers how EIAs should deal with these resources

Land and soils are often considered the same thing, but there are important differences. Land is a more complex concept, and because these terms are practically indivisible it is more helpful to consider the relationship between them than to seek separate definitions. 'Land and soils' (*facing page*) sets out an integrated definition.

Within Environmental Impact Assessments (EIAs), 'land quality' has two meanings. Firstly, and outside of urban settings and brownfield sites, land is likely to be agricultural with natural undisturbed soils. Within our planning system, the focus of land and soil protection has been on the productive value of agricultural land, with reference to the five-grade Agricultural Land Classification (ALC) system. In England and Wales this has involved the protection of our 'best and most versatile land' – grades 1 and 2 and subgrade 3a.

Secondly, land quality is concerned with the degree to which land and soils have been degraded by disturbance and contamination arising from human activities, and with remedial measures.

I am concerned with the first type of land quality, which is beginning to encompass the provision of a wider range of terrestrial ecosystem services than biomass production from agricultural land. The concept of sustainable development has raised the need to protect land and soils for for a wider range of environmental objectives, and this should be reflected in EIAs.

Development impacts

Land and soils are perhaps the most direct environmental receptors of development impacts. Land take, and the displacement of soils by development, are the primary impacts – particularly in the change from agriculture to urban uses.

While it is not possible to mitigate the loss of agricultural land to a development, it is possible to mitigate the displacement of soils. Land with natural soils may be lost to hard development (built structures

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and manufactured impermeable surfaces), but for sustainable development the soils displaced must be conserved for beneficial use.

Where a significant impact on land or soils is anticipated, ALC and soil surveys should be carried out as part of the EIA baseline studies. The field survey should also include an assessment of the volumes and types of topsoil and subsoil available within the study area, to facilitate their separate stripping and their use in land restoration.

Mitigation objectives

It is necessary to ensure that the smallest possible area is lost and avoid highly valued or sensitive land and soil resources. Site boundaries and the corridors of land affected by linear developments can be adjusted during project design to achieve this. Layouts can be configured to locate hard development on less valued land and soils, and to maintain the physical viability of residual agricultural land.

The restoration of land to its original quality is the main mitigation objective, and this can be achieved through the conservation and sustainable reuse of temporarily displaced soil resources that are put back where they came from.

Finding a suitable location (preferably within the red line of a development site for effective development control) and beneficial reuse for permanently displaced soils, in a way that retains their natural functions, is more of a challenge. Good project design and well-managed construction operations must ensure that topsoils and subsoils are handled separately from the bulk movement of other excavated materials, in order to conform to good practice guidelines for soil handling.

Soil stripping, storage and subsequent reinstatement operations for land restoration can damage soil structure. This is due to the use of inappropriate methods and machinery, and the moving of soil when it is too wet and plastic. Good practice is to use excavators to strip and reinstate topsoils and subsoils successively in parallel strips, the width of the strip being determined by the reach of the excavators. This maximises the volumes of topsoil and subsoil separately stripped and minimises the mixing of topsoils and subsoils. It reduces damage to soil structures, retains drainage in reinstated soils and allows for varying stripping depths in a controlled manner as the parallel strips cross the boundaries of different soil types.

> "Within our planning system, the focus of land and soil protection has been on its productive value"

Using bulldozers to strip soils may be quicker and cheaper, but it causes more damage to the soil. It is difficult to control on a construction site, and often results in loss of soil function.

Changes to Environmental Statements

EIAs and Environmental Statements (ES) focus on agricultural land and soils, and these inputs are covered in an ES section or chapter setting out the areas of ALC grades of land taken by the proposed development, together with soil handling proposals for the conservation and reinstatement of displaced soils.

Perhaps the shift in focus from agricultural land to the protection of a wider range of soil functions should now be reflected in a more generic ES section or chapter simply entitled 'Land and Soils'. This could help us to more fully understand the significance of land take in ecosystem services terms as changes of land use from one category to another. This section or chapter could set out the areas of agricultural land (in hectares) transferred to different types of hard and soft development within a scheme, together with an account of what has been done with the soils displaced.

Land take is superimposed on patterns of land ownership or tenure, and the loss of land from a farm holding might also be accompanied by a consequential restructuring of ownership and tenure. These impacts on agriculture can be addressed in existing ES sections and chapters on social and economic impacts.

These changes within the EIA process would help to facilitate a more sustainable approach in determining the effects of development on land and soils.

CHRIS STAPLETON is a member of the Royal Town Planning Institute and IEMA.

Land and soils

People think of land in terms of what they can do with it. Economists consider land to be one of the basic factors of production, along with labour and capital. From the human perspective, land is an area or location where we can live and carry out activities for subsistence or wealth-creating employment, leisure activities and other lifestyle choices. Its value is partly determined by its physical properties. Land also has social and economic dimensions, influenced by the different potential uses of land (including urban development) and also by its location in relation to settlements. Historically, land ownership has been 'route one' to wealth and power.

Where soil occurs, it is the topmost layer of the land and it is a component of terrestrial ecosystems, providing a medium for the transmission of carbon, water, nutrients and the growth of plants. People rely on ecosystem services provided by land and soil for biomass production, including food, fibres, and timber, and these services are central to social, economic and environmental sustainability.

Taken from Methods of Environmental and Social Impact Assessment, Oxford Brookes, 2018

Buying into low carbon

Dr Luca Panzone and ***Brett Cherry*** discuss how to lower consumers' food shopping carbon footprint by encouraging environmentally friendly buying

Global policy agendas increasingly support the reduction of greenhouse gas (GHG) emissions to ensure that climate change is kept under control. The private sector recognises this, with many businesses reporting their environmental performance annually in their CSR or sustainability reports. However, achieving net zero emissions will require the support of food shoppers, too: in western economies, food accounts for around 30% of total household GHG emissions, a sizeable share. Could carbon footprint labelling make a difference to consumers' food choices?

Carbon labelling food products

There is currently no information on the environmental impact of food choices in the market. Indeed, consumers are confronted with a complex food labelling system, and adding complexity can hinder, rather than help, changes in behaviour. Carbon labelling

IMAGES: ISTOCK/SHUTTERSTOCK

reports the amount of GHGs a product has emitted by merging complex supply chain information into a single number.

This is still a relatively new concept for consumers, and is not yet present on packaging. It is an obvious option when it comes to informing consumers: it has been discussed and studied for years, and many products have been 'footprinted'. Some external sources, such as smartphone apps (eg Giki) already provide this information. These might not be enough, though, as they only help consumers who already have strong environmental values – not the larger group of climate-inactive consumers.

Driving low-carbon behaviour

Helping the environment presents a dilemma for consumers: the decision often requires giving up something personal (the product they like the most) for little individual benefit. For instance, imagine a meat lover agreeing to give up meat; they will receive some noticeable benefit if everyone gives up a little meat, but minimal return if they act alone. This problem reduces the motivation to act, leaving a need for more structured interventions.

There are three main drivers of behaviour. Firstly, consumers change behaviour if there is a change in the costs and benefits of a decision. For instance, a carbon tax changes behaviour by increasing the costs of high-carbon goods relative to low-carbon goods.

Secondly, changes in the way products are sold alter how consumers shop. Choice architecture changes behaviour by making socially 'desirable' choices simpler. For example, making low-carbon options more accessible or visible on a shelf has the potential to drastically reduce the carbon footprint of a diet.

Thirdly, behaviour change requires a change in consumer mindset. Providing information on the environmental impacts of food choices helps to raise awareness.

This third point is particularly relevant because environmentally conscious consumers may fail to act because they are unaware of the carbon footprint of their food shopping decisions, or may not think food is part of the problem. Indeed, these three drivers are connected: as an example, policy interventions that target price tell consumers that products with a higher tax should be consumed with moderation to avoid environmental problems.

These interventions require consumers to know the carbon footprint of products so that they can switch to low-carbon alternatives. It is important to understand not only if a policy works, but also whether the effect is sustained over time. Retailers want to build a relationship with consumers, and so does the government, which designs policies to create long-term compliance. A multi-week experiment can provide suggestions on how to design a policy that values environmental protection over time.

Carbon taxation

All products emit GHGs, and a carbon tax should tax all products in proportion to the amount of GHGs they emit. In recent research using an online shopping environment, a carbon tax for all products in-store (an average price increase of 8.5%) successfully encouraged shoppers to lower their carbon footprint by around 20%. The effect remains stable for two consecutive weeks of taxation.

The tax was designed to ensure that consumers do not spend less and are motivated to switch to low-carbon options. A carbon tax, therefore, does not have to be bad for business: it can lower the carbon footprint of food shopping by making consumers buy more wisely. At the same time, it can motivate suppliers to find ingenious ways to reduce the carbon footprint of their products and reduce the price increase.

As a result, a carbon tax on food products can assist countries in meeting decarbonisation targets and motivate shoppers to lower their carbon footprint. The tax is more effective if there is a carbon label that helps interested

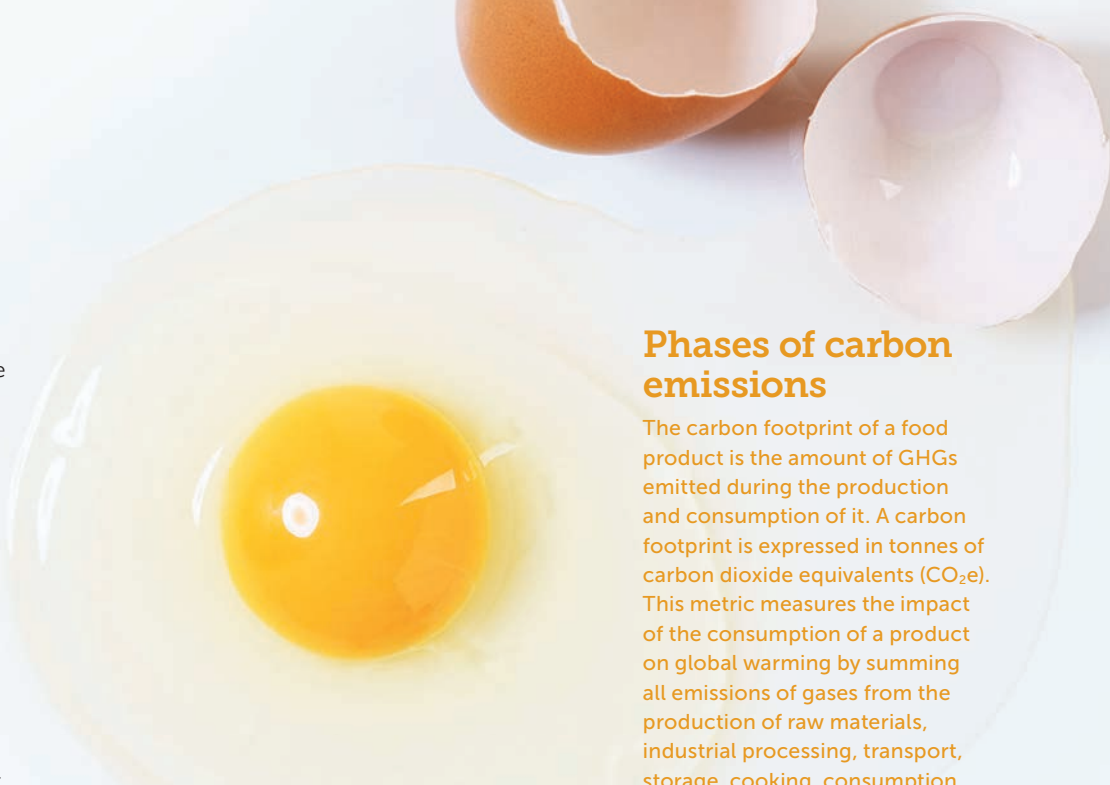
Testing interventions for sustainable food shopping

We designed an online experimental supermarket, which allows testing for new policies (such as a carbon tax), to design persuasive messages that encourage shoppers to make low-carbon food choices, as well as to observe the impact of marketing activities on consumer choice overall. Supermarkets can use this platform to test their own activities and interventions in a controlled environment prior to a live roll-out.

The aim is to help shoppers make better choices, removing potential mistakes, misconceptions and distractions and persuading them to make sustainable decisions. The online shopping platform does this by helping us to understand how people make food choices based on information provided, and their personal goals and interests.

Crucially, consumers do receive what they purchase, and while they have the option to make smarter choices, the uninterested consumer is never forced to make choices they would prefer not to.

"Helping the environment presents a dilemma for consumers: the decision often requires giving up something personal (the product they like the most) for little individual benefit"



consumers who are searching for low-carbon options – which, in the presence of a tax, implies helping consumers to spend less money on tax and more money on food.

Past decisions matter

The mindset of the consumer also plays a role when it comes to choosing low-carbon products. Whether the person feels they are doing enough for the environment or not can influence the carbon footprint of someone's food shopping basket. To this extent, encouraging consumers to think about their past successful environmental behaviours can drive further carbon footprint reductions. This can induce consumers to feel that they care for the environment (why would they have done it – and succeeded – otherwise?), encouraging further pro-environmental behaviour. We asked consumers to report their pro-environmental behaviours from the past week before shopping, and then informed them about the carbon they saved.

This reflection resulted in consumers buying food baskets that were around 20% lower in carbon footprint. The resulting basket had a knock-on effect of reducing fat consumption, because a number of high-carbon products (such as meat and dairy) have more fat than low-carbon options (fruit and vegetables). Having access to carbon labels allowed consumers to find low-carbon alternatives for their basket. However, the effect of this nudge does not persist over time unless it is used jointly with other nudges or policies.

What next?

Consumers play a key role in targeting reductions in GHG emissions. Their choices drive changes in the way food is produced, leading to long-lasting carbon reductions. Markets need to motivate customers to consider the environmental implications of their choices, increasing their interest for environmental protection. Carbon labelling is perhaps the first of many steps, but it can provide information on a product's GHG emissions and allows consumers to rank products by 'environmental quality'.

> "A carbon label draws the consumer's attention to GHG emissions and the natural environment, raising awareness of the need for sustainable choices"

The role of carbon labelling is even more important in the presence of interventions that target carbon reductions, because it enables consumers to actively look for low-carbon options. Moreover, a carbon label draws the consumer's attention to GHG emissions and the natural environment, raising awareness of the need for sustainable choices. Perhaps it is time to introduce carbon labelling across the whole marketplace. Like nutritional labelling, it would be a bold move, but it could drive long-term changes to protect the environment for future generations.

DR LUCA PANZONE is a lecturer in consumer behaviour at Newcastle University.
BRETT CHERRY is science communications and marketing manager at Newcastle University.

Phases of carbon emissions

The carbon footprint of a food product is the amount of GHGs emitted during the production and consumption of it. A carbon footprint is expressed in tonnes of carbon dioxide equivalents (CO_2e). This metric measures the impact of the consumption of a product on global warming by summing all emissions of gases from the production of raw materials, industrial processing, transport, storage, cooking, consumption and waste.

For instance, eating an egg emits CO_2e to: make and deliver feed for the hens; heat the shed to maintain the health of the hens; transport the eggs by van; store eggs in chilled rooms; produce the packaging in which eggs are sold; and use energy for cooking it.

This simple example tells us that the way carbon footprint is calculated depends critically on the supply chain of the food product under consideration. In general, the carbon footprint of food consists of six elements:

- GHG of inputs – for example fertilisers for agricultural production, or packaging for industry
- GHG from the production of the raw materials
- GHG from transport and logistics, for raw materials to reach their destination
- GHG from manufacturing or processing, that is the production of the product itself
- GHG from distribution, related to the operations of the retailer selling the product, including store energy consumption, food storage or in-store refrigeration
- GHG from consumption and waste, eg cooking, home refrigeration, and composting.

Sensing a change

When it comes to air quality monitoring, does the new wave of low-cost sensors spell a method change? ***Rick Gould*** reports

A decade ago, continuous monitoring for ambient pollutants such as nitrogen dioxide and particulate matter could only be carried out using certified, complex, large, demanding and costly monitoring systems. Many local authorities could only afford a few of these at most, leaving gaps in monitoring data across large areas.

Such systems are still essential, as they provide reference measurements based on validated European (EN) standards. They are also required to comply with the EU Air Quality Directive's monitoring requirements. However, during the past 10 years, there has been an explosion in the availability of relatively inexpensive, compact systems that appear to do the same job – at the fraction of the cost and in a package that is both easy to deploy and operate. These monitoring devices are known as low-cost sensor systems.

A low-cost revolution?

"A revolution is taking place in air quality monitoring with the introduction of very large spatially dense networks of low-cost sensor systems, which can detect key pollutants with a high time-resolution," explains Dr Nick Martin of the National Physical Laboratory (NPL). For example, in the summer, more than 100 low-cost sensors resembling tiny cooker extraction hoods started popping up across London as part of the Breathe London project. This provides continuous data on London's air quality, supplementing traditional reference systems. It has parallels worldwide due to the growth in low-cost sensors and the interest that air quality managers and researchers are taking in them.

Low-cost sensors employ similar techniques to those used in reference systems, but in simplified and compact packages. Their prodigious growth is often matched by the manufacturers' claims for them, with some producers asserting that they are as good as traditional reference monitors. Does the evidence support this?

"So far, they have performed less well than claimed," says Martin, who works internationally in NPL's team for characterising and testing the performance of environmental sensors and other types of monitoring system. Indeed, research worldwide shows that the performance of low-cost sensors is variable; some perform almost as well as reference systems under certain conditions, while other types have been found to be inaccurate, imprecise, inconsistent and unreliable.

> "Research shows that performance is variable"

Barriers to success

The Breathe London sensors have performed comparatively well in reported, peer-reviewed research papers when compared with reference systems. But how good do they need to be?

The EU Air Quality Directive specifies two grades of monitoring system: quantitative reference systems and semi-quantitative indicative systems. Low-cost sensors could fill the latter role and Martin is part of the European standards group that is developing technical specifications for such sensors.

"Low-cost systems are presently poorly characterised, with no standardised means of verifying that the data meets the requirements for regulatory reporting or other applications," he says. "This is a barrier to a market expansion that would benefit EU industry, and it inhibits the adoption of newer technologies. End users and regulators have no way of judging whether their purchases will fulfil their claimed performance, making it difficult to assess the effectiveness of new environmental policy implementation," he adds. "Standardisation is the only way of overcoming these problems."

Until then, the Government's Air Quality Expert Group has provided advice on using low-cost sensor systems at **bit.ly/2C2hSFS**.

RICK GOULD, MIEMA CEnv is a technical advisor at the Environment Agency. He is writing in a personal capacity.

IMAGES: SHUTTERSTOCK

Highway to health

How to tackle road transport's contribution to the air quality crisis? The Highways Term Maintenance Association's Sustainability Advisory Group discusses

Since the start of 2019, the UK's air quality has well and truly been in the spotlight. In January, the government published its Clean Air Strategy, which has been described as "ambitious" and includes new air quality targets and new powers for local government.

At the launch of the strategy, then Environment Secretary Michael Gove said: "While air quality has improved significantly in recent years, air pollution continues to shorten lives, harm our children and reduce quality of life. We must take strong, urgent action."

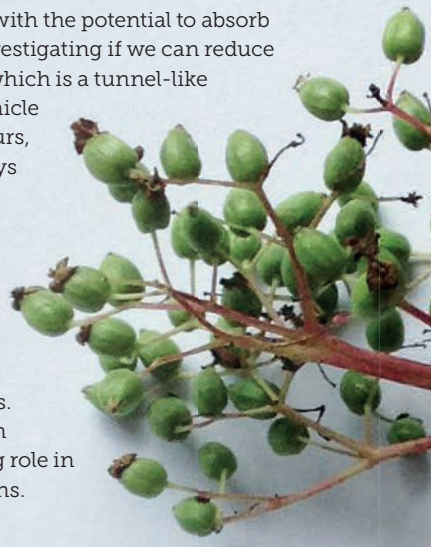
Evidence for why "strong, urgent action" is needed is rife. Figures from Defra show that while nitrogen oxide emissions fell by 3.4% from 2016 to 2017, $PM_{2.5}$ emissions only fell by 0.1% during the same period.

$PM_{2.5}$ emissions are particularly concerning, as these particles are small enough to penetrate and lodge deep within the lungs. This can cause breathing problems and has been linked to asthma, heart disease, stroke, and lung cancer.

Engineering out emissions

Road transport generates air pollution in two main ways: through exhaust emissions and through the particulates that come from wear to tyres and brakes. The government's main plan to reduce exhaust emissions is to clean up the vehicles themselves, replacing today's predominantly diesel and petrol vehicles with ultra-low emission vehicles. It has previously announced that the sale of all new conventional petrol and diesel cars and vans must end by 2040.

Highways England has its own strategy for improving air quality, which includes a series of pilot studies looking at everything from alternative fuels to optimisation of vehicle flow. One of the pilots is the trial of a barrier that incorporates a polymer material with the potential to absorb nitrogen dioxide. "We are also investigating if we can reduce the costs to construct a canopy, which is a tunnel-like structure designed to prevent vehicle emissions reaching our neighbours, to make this a viable solution," says the strategy.



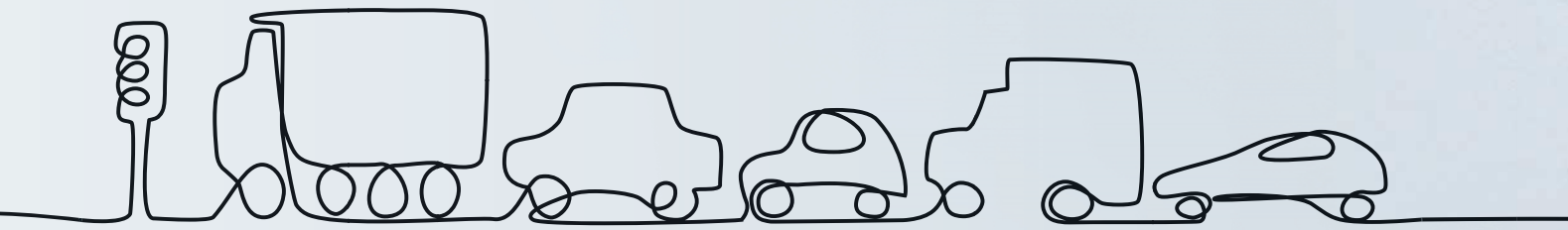
However, Matthew Tompsett, environment and sustainability lead at Kier Highways, says the emphasis on hard engineering solutions is ignoring the vital role green infrastructure could play in cleaning the air near roads. "It is widely recognised that green infrastructure can play quite a big role in removing particulates," he explains.

A green solution?

Tompsett says "the jury's out" on the ability of green infrastructure to deal with NOx emissions, but this will be less of an issue in the future as clean fuel technologies are introduced for new vehicles. Particulates will still be a problem, however, because they are also generated from brake disc and tyre wear.

Trees and plants have a variety of mechanisms for absorbing particulates. Some species have pores in their bark, while others have leaves with thousands of tiny hairs on the surface to trap the particulates. "They end up in the soil or going down gulleys as part of the sediment," explains Tompsett. "The important thing is that they are not suspended in the air for people to breathe. Green infrastructure is not the answer to all the problems, but it must be part of the longer-term solution."

IMAGES: ALAMY



AECOM associate director Caroline Toplis agrees that green infrastructure could play a significant role in improving air quality – particularly to counter the combined effects of climate change and highways maintenance activities. "With hotter and drier summers, there is likely to be a greater amount of dust and particulates in the air, and the atmosphere is expected to be more 'stagnant' at times; any highways construction and maintenance activities will worsen this effect," she explains. "Ensuring green infrastructure is always integrated alongside and in conjunction with highways infrastructure will help to tackle air pollution, and provide cooling and shading benefits to help reduce some of the other impacts of climate change."

"Green infrastructure will help to tackle air pollution, and provide cooling and shading benefits to help reduce some of the other impacts of climate change"

Beating the congestion

Toplis also believes highways maintenance firms have a responsibility to make sure their working practices are not contributing to the problem. "Air quality impacts can be made worse during roadworks due to idling and slow-moving vehicles, or can shift the problem elsewhere as people try to avoid the congestion caused by roadworks," she says.

This is something the highways maintenance sector is addressing, according to Skanska sustainability manager Ed Godsiffe. "Our key negative impact is how we manage traffic when we are doing the work," he explains.

VolkerHighways environmental advisor Miles Durrant agrees, saying that one way the highways maintenance sector can contribute to improved air quality is to cut down the

0.1%

$PM_{2.5}$ emissions only fell by 0.1% from 2016-2017

50%

The Clean Air Strategy pledges to halve the number of people living in locations where $PM_{2.5}$ is above the WHO guideline level by 2025

25%

Diesel generators are responsible for an estimated 25% of highways maintenance site emissions

amount of time cars are forced to slow down and sit with their engines idling at roadworks. He advocates using warm lay asphalt rather than traditional hot rolled products, so the road can be reopened more quickly once the work has been done.

Godsiffe says the highways maintenance community already has initiatives to help reduce air quality issues related to congestion and traffic management, including better work planning, collaboration with utilities providers, and innovations that improve traffic flows based on better understanding of real-time data. "We're using existing data better," he says. "Now that we can get far more up-to-date information on traffic, we can plan works accordingly."

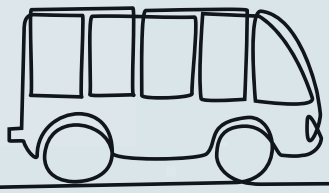
Toplis has identified some simple steps the industry is taking, such as moving from the use of diesel generators on site – responsible for an estimated 25% of site emissions – to hybrid generators; using appropriately sized generators and plant; using mobile lighting rigs powered by solar or hydrogen fuel cells; and planned logistics that lead to fewer vehicle movements and deliveries.

"Air quality impacts can be made worse during roadworks due to idling vehicles"

Electric vehicles and alternative fuels

VolkerHighways is also investing in alternative power options. Its parent company VolkerWessels has launched its Sustainable Advantage initiative to source plant and equipment with lower emissions, with the first item being LED lighting towers. Generators are next on the hit list, says Durrant: "There are hybrid options available, and you can get some that are powered by solar panels, but the concern is whether they are just a novelty, or if they can generate enough power to supply energy in the winter months. But they are definitely part of the future."

VolkerHighways has invested in electric vehicles, including company cars and vans.



"We did some trials looking at how much the vans are used throughout the day, and worked out that two of them could be replaced with electric," Durrant explains. "We have used them on our joint venture in London, but some of our contracts are too rural; the drivers have to go long distances with no option for charging."

He adds that it is difficult to know whether to commit to specific technologies or fuels: "The manufacturers themselves are concerned about which route to go down. They don't want to pile their investment into electric if that's not what everyone's adopting. Are we going to commit to invest in an electric fleet and find out that's not what is going to be used in two years' time?"

If, as the government plans, diesel and petrol vehicles disappear from our roads, the air pollution problem will be significantly reduced. But that is some way off, and the entire industry has a responsibility to do what it can to improve air quality – and save lives.

The highways sector has a major part to play in tackling the issues around air quality through the way we design, construct and manage the highways network. This offers both a challenge and an opportunity to those who work in this area. The Highways Term Maintenance Association (HTMA) can play a major role by helping the sector to understand the issues around air quality, and by offering and sharing best practice and solutions. By doing this, we feel that we can help tackle both the health and environmental issues posed by poor air quality on our highway networks.

Further information

Read Highways England's Air Quality Strategy at **bit.ly/2hqnBMh**

The HTMA's Sustainability Advisory Group aims to highlight and tackle sustainability risks that influence the highways management and maintenance industry, and ensure pragmatic delivery of sustainability.

Samantha Carlsson BSc (Hons) MSc

IEMA Sustainability Impact Awards 2019
Inspiration | Innovation | Transformation
WINNER

The senior sustainability consultant at engineering firm Hoare Lea, and winner of IEMA's Future Sustainability Leader Award, talks about her career to date and the importance of perseverance

CAREER HIGHLIGHTS

- Started as a graduate sustainability consultant at Hoare Lea in 2014
- Progressed to senior sustainability consultant in 2018
- Shortlisted for CIBSE Graduate of the Year and EDIE Rising Star awards
- Qualified as a BREEAM assessor and a BREEAM and WELL-accredited professional
- Achieved BREEAM 'Outstanding' on 1 New Street Square, Deloitte's new UK headquarters – a first in the workplace sector for Hoare Lea. Among its many accolades, the project became the highest scoring BREEAM 2014 refurbishment project in the world, and the largest WELL Certified Gold Commercial Interiors project globally.

What first inspired you?
I have always been interested in the physical world and the impact we have on it – the fact that we can influence it for both the positive and negative hit me early on. I grew up in South Africa and Bahrain, and in the latter water was as cheap as oil, with both treated as an unlimited resource, which highlighted contrasting environmental issues.

How can working in the built environment have an impact?
We create the world that people are going to live, shop or work in, and the scope of influence is huge. One issue in sustainability discussion is that you can't see carbon so people find it hard to relate to, but it is possible to see the materials that go into a building, which makes it more tangible. We can then discuss how to reduce those materials and the energy used, making decisions which will enhance the sustainability of that project.

What are the most important attributes for a leader?
It is about inspiring and encouraging others to take a leap of faith with you. But that is only possible by having the knowledge behind you, and by being approachable. It is about bringing people on that journey with you and working together to encourage collaboration.

How does your IEMA award rank in your achievements to date?
I was just doing my job, a job I believe is making a difference, so it is wonderful to receive this for the five years of projects I have worked on, and it recognises the teams I have been lucky enough to work with too. We put in a lot of care and attention to make each project a success so this is a rewarding acknowledgement.

What did you think of the awards?
It was a great day. It could have been awkward because of the climate strikes, but Tim Balcon summed it up well when he explained the need to recognise people and projects making an impact, even though we are in an emergency. All the projects were inspiring, and although it can be easy to get quite down about the state of the environment, there are many people doing many good things.

And where do you see yourself in 10 years' time or beyond?
I want to continue on this journey, influencing each project so it is more sustainable than the last, and improving the social value in projects. I would also like to influence policy and those pioneering sustainable behaviour. Sometimes a little push from government or legislation really helps.

Do you have any role models?
Ashley Bateson, a partner in my firm, because he is a very good advocate for delivering sustainability – really knowledgeable, and open to having conversations about the different ways to achieve an outcome. More recently, people like Greta Thunberg, a 16-year-old who, alone, started striking one day and has created a tsunami of protests around the world. I am inspired by people raising awareness, but also by people on the ground who are trying to find solutions.

> "I am inspired by people on the ground who are trying to find solutions"

What advice do you have for people starting out in the sustainability profession?
There can be challenges when trying to embed sustainable solutions, and people shouldn't underestimate the passion that goes into those discussions. It is fortunate for people starting out now that there is a lot more awareness about climate change and much more pressure from the public.

There will always be people who say one person can't make a difference, but I am an optimist and we can inspire one another. You just have to crack on and never give up because it is important to be part of the solution.

A higher standard

Shaun McCarthy OBE, IEMA's Professional Standards Committee chair, talks about the group's latest recruitment drive and the importance of rigorous standards

What is the purpose of the Professional Standards Committee (PSC)?

There are many networks of sustainability experts around the world, but IEMA is a properly constituted organisation, and what differentiates it from other bodies are its professional standards. The PSC's job is to act as the guardian for those standards. We make sure that the right standards are upheld throughout IEMA's offerings, from the professional qualifications all the way up to the approval of Fellows. We also oversee training, scrutinising the general awareness training and upskilling of people and making sure there is a consistent level of delivery. The committee underpins all the work that IEMA members do every day. A lot of what we do is low profile but very important to the organisation and its members.

Could you give us some examples of the PSC's work?

The PSC was instrumental in creating IEMA's Skills Map, which defined the new membership levels that were introduced around two years ago. The Skills Map is important as it ensures that being an IEMA member actually means something. We have also been

working with the executive on the process of approving membership applications. The team has increased the turnaround speed by 50% following a root-and-branch review of the processes, introducing more technology and recorded interviews. We are a business, so if someone applies for their membership status to be upgraded, it's important that they get a fast and professional response. In the past, that hasn't always been the case, but that has changed – driven by the committee.

We also helped create and approve IEMA's Code of Professional Conduct and all the processes and procedures that sit behind that, which again need to be very rigorous. If we get a complaint about a member, we need to make sure we have rock solid procedures in place. We were really pleased to see the 'Click the Code' campaign generate so much interest. Having a serious document like that differentiates us as an organisation.

How challenging is it to ensure standards are consistent across countries?

IEMA is expanding internationally, but we are also broadening our scope from traditional environmental management to wider sustainability issues. It is challenging because terminology, standards and legislation are different around the world. If someone in the developing world is applying legislation that we might think is substandard in the West, then there needs to be a judgment call around whether this person is fit to be an IEMA member. Do they understand issues that are maybe beyond the legislation in their country, and get the big picture? Do they understand the connectivity between things like climate change and biodiversity, for example, and the impact that biodiversity has on social infrastructure and wellbeing? We are looking for people with specialist skills, but also with a broad perspective.

What work do you have planned for the future?

We are working with the executive on the assessment of members, and looking to broaden our pool of assessors to reflect the eclectic members that we have from a geographic and subject point of view. We want to have additional contact with assessors, and get them to communicate with each other more. We need to make sure that someone joining IEMA has a really good experience and give them a good introduction to the organisation.

> "A lot of what we do is low profile but very important to the organisation and its members"

Tell us about the make-up of the committee.

The PSC is a sub-group of the IEMA Board. It comprises both IEMA members and other experts who are non-members, but we follow the lead taken by the Board.

We are a diverse group, with, for example, an English environmental lawyer based in France and a South African renewable energy expert in environmental management based in Dubai. We also have an Australian expert based in Spain who is proficient in joined-up thinking around sustainable cities – so we have individuals with strong traditional skills, such as environmental assessment, and some with broader strategic approaches.

With such a diverse group, do you often have disagreements?

There are some disagreements, which is healthy because there is such a diverse range of opinions. Some people are very much about environmental standards, and some are more about strategic thinking, the bigger picture and innovation. We need all of those things – there is always a challenge around ensuring people comply with standards, which can be quite rigid, but we need to innovate at the same time. We have had some healthy discussions about some of these issues when arriving at solutions.

And you are recruiting?

It might be the best-kept secret at IEMA, but we have two vacancies on the committee to fill, and are welcoming applications from people from diverse backgrounds with a range of skills. They could have experience in other parts of the world, too, because of IEMA's international expansion and because part of our mission is to transform the world to sustainability. We will probably look to recruit after Christmas; this will be promoted on the IEMA website and social media. These are unpaid, non-executive roles. The group meets four times a year, using Skype or GoToMeeting. What we really want is a good, challenging group that can hold IEMA, the Board and executives to account when it comes to upholding the standards that define our organisation and give it its uniqueness.

What is your message to potential applicants?

Join us! It is a great place to be. I joined because I bought into the vision of IEMA as a place for sustainability professionals to call home. People joining the committee can help us ensure we offer the best experience for members and construct an organisation people can be proud of. They will be joining an eclectic group that is involved in interesting debate and makes a difference.

And for IEMA members?

The committee is there for members and makes sure people can continually feel proud to be a member. We want to reassure them that, when we bring their peers into this family, they really are peers and up to scratch. We are not going to water down our standards in pursuit of commercial gain or any other benefits.

It's important to give recognition to the people on the committee who give up their time for free and fit the work in around their day jobs – I am really grateful to them.

For further details on the Professional Standards Committee and its members, visit: **bit.ly/IEMA_PSC**

CONNECT

SOCIAL AND COMMUNITY NEWS FROM IEMA

PREVIEW

Salford to host IEMA Futures Sustainability Conference

The IEMA Futures network is set to visit the University of Salford for a series of talks and interactive workshops

With movements such as Extinction Rebellion and the school climate strikes taking place around the globe, it is clear that the future of our planet is no longer just an issue for sustainability professionals.

IEMA Futures is a network of young professionals who are passionate about inspiring the future voices of sustainability and champions of the environment. Being a part of the network brings a wealth of benefits, offering chances to network with peers and providing opportunities for learning and development.

Join us at the University of Salford where, through a series of talks from renowned professionals and interactive workshops designed to promote wider thinking, you will learn more about sustainability, what role you can play in furthering it, and how you can help to foster a sustainable future.

Confirmed speakers include:

- **Pauline Giroux,** senior corporate responsibility manager, Yorkshire Building Society
- **Andrew Clark,** lecturer in environmental management, University of Salford
- **Andrew McMullen,** environmental impact director, LEGO Group
- **Nicola Stopps**, CEO, Simply Sustainable
- **Grace Corn,** project manager, SOS-UK

More speakers to be announced shortly.

14 November 2019
09:30 – 16:30

Who is this event for?
Anyone who is passionate about the environment and the future of the planet. Current students, graduates and young professionals are all welcome.

To register, go to **bit.ly/2IViFKG**

QUOTE UNQUOTE

Totally thrilled to be quoted in @IEMA_Transform in relation to @uncclearn – a shout out to @merylbatchelder @OASES_NorthEast too. We will get there!!!
@VICTORIAPENDRY1

Thank you to everyone who attended the event that we did with @iemanet today and made it a success! There were lots of interesting debate and perspectives from a broad range of industry experts. #transport #sustainability #autonomousvehicles
@PETERBRETTLLP

Great session today with @KingstonUni students studying a BSc in #Environmental Science. As an IEMA approved university course, students are awarded IEMA membership to help and support them throughout their study and into their future careers.
@IEMANET

Happy to get my @iemanet student membership! #UniversityofLeeds Msc. #Sustainability and Consultancy!
@CAMILALIMBERG

What a lovely surprise! I'm thrilled to be invited to become a Fellow of IEMA. My mission is to make environmental management *THE* business norm. Fabulous to be recognised by my peers & the committee. Thank you so much!
@ESHCON

Really proud to see our IEMA members in Oman at the leading edge of making a real difference to reducing carbon emissions in the Middle East. Congratulations Dr Harshit Agrawal FIEMA CEnv on the article in this month's hashtag #IEMATRANSFORM publication.
HARRY SEALY

DATES FOR YOUR DIARY

iema.net/events

5 NOVEMBER

Hull: Climate Emergency – What Does It Mean To You?

Presenting a radical call for transformative change in the way we do 'business as usual', we look at the challenges and opportunities for change towards sustainability in the political and business world, bringing together speakers with differing perspectives to inspire debate and discussion.

For more information and to book: bit.ly/HULLcemer

6 NOVEMBER

Birmingham: Drinks Networking Social

This is a new network group bringing together environment and sustainability professionals in the local area. We'll be hosting this event at Rudy's Pizza. Both members and non-members are welcome.

Discounted For more information and to book: bit.ly/BirmNETW

7 NOVEMBER

South East: Networking Social

The group acts as a focal point for environmental policy, legislation and regulation, networking opportunities and professional development for members in the region. This event also features a limited number of 1:1 CV review sessions with Sunny Pawar, steering group chair.

For more information and to book: bit.ly/SE_IEMANetwork

7 NOVEMBER

Bangor: Biodiversity and Business

Our first IEMA North Wales event features some great speakers, presenting on topics of biodiversity in construction and sustainable energy from tidal power. Ideal for those within environmental management, studying an environmental degree, MBA students, environmental businesses and engineers interested in sustainable energy.

For more information and to book: bit.ly/BANGbio

IEMA members: get connected

If you would like to promote your events, please get in contact with **nicole.bains@redactive.co.uk**. We would particularly like to hear from our international members about their activities.

AWARDS REACTION

"We are not a massive company, so being recognised for our work is superb," said managing director @ErikaWilson79. "We are now celebrating our 1000th sale, it's just incredible – and obviously reducing carbon for everybody."
@WILSONPOWERUK

We are pleased to announce that our Operations Coordinator, Laura received a highly commended award in the @iemanet Future Sustainability Leader category last week!
@STMARKSSHOPPING

Coverage thanks to @NWEMlive & @newsandstar
@JAMESCROPPER


Cup recycling wins award

On Friday last week we attended the @iemanet #IEMAawards2019. Our @ImogenClareC had been shortlisted for the #Sustainability Leader award. It wasn't a win for us this time, but we had an amazing afternoon celebrating the great work happening to help beat #climatecrisis
@SCOTCHPARTNERS

"We are particularly proud to have won this award and be applauded by the experts in sustainability." @WHEBsustainable wins award for #sustainablefinance from @iemanet. Now safely on our mantle piece... @mattywin85 @penny_walker_sd @IEMA_Transform
@WHEBSUSTAINABLE

Congratulations! David Hoare, Associate Director, @wsp has demonstrated the highest level of passion or #sustainable development by way of his significant voluntary contributions through both his professional achievements and IEMA membership #IEMAwinner #IEMAawards19
@IEMANET

CAREER PROFILE

Debbie Cousins

FIEMA CEnv

Head of Environmental and Sustainability Department operations, associate director, European Bank for Reconstruction & Development (EBRD)

Why did you become an environment/ sustainability professional? My dad, David Attenborough and David Bellamy – their enthusiasm for nature, protecting the environment and science got me hooked as a child.

What was your first job in this field? Auditing, environmental management systems and environmental impact assessments for power stations, working with on-site station chemists. I also helped with the company's first environmental performance reports and learner-centred professional development submissions.

How did you get your first role? Partly being in the right place at the right time, as the environment was increasing in profile just as I left university. I worked with two visionary leaders who asked me to join a new environmental team. My boss threw me in at the deep end, sending me off to get my hands dirty working on-site.

What does your current role involve? In the space of a few hours I can be reviewing an environmental and social impact assessment (ESIA) and biodiversity management plan, discussing the compensation package for a vulnerable farmer losing his land, considering labour and gender issues in supply chains and responding to questions from bankers and board directors. My work also involves site visits to many different countries and liaison with a broad range of stakeholders.

How has your role progressed over the past few years? In addition to managing a great team of environmental and social professionals at the EBRD, my role has offered me the opportunity to lead due diligence on major international infrastructure projects and contribute to strategic initiatives on a broad range of issues such as road safety, the green economy and capacity building.

What's the best part of your work? Every day I am involved in projects that change people's lives. It's never boring – I get to travel, meet people from all walks of life and see the implementation of life-changing projects.

What's the hardest part of your job? Hearing of fatalities and seeing the struggles of some individuals.

What was the last development event you attended? Leadership in Impact Assessment (IA) symposium at Liverpool University in January 2019.

What did you bring back to your job? Advocacy from professionals is needed as IAs need direction around scope, multi-disciplinary impact/risk analysis and proportionality. IAs need to keep pace with changes, social media, digital and broadening of impact assessment.

What are the most important skill(s) for your job? Deep technical understanding of ESIAs, management systems and good practice for financial institutions, as well as empathy and negotiation skills.

Where do you see the profession going? Sustainable finance is here to stay and will have a huge role to play in our profession. Social, low carbon and climate resilience issues are already integrated into everything we do at the EBRD, with new emerging issues such as gender-based violence and anti-microbial resistance.

Where would you like to be in five years' time? Leading change on sustainable finance in infrastructure, so that the environment and sustainability is truly considered at the heart of every project. Sharing my experiences with the next generation of environment and sustainability professionals.

What advice would you give to someone entering the profession? Be flexible, gain on-site experience, find a good sponsor and learn to write executive summaries.

How do you use the IEMA Skills Map? When discussing competency needs, and sometimes in appraisals.

If you had to describe yourself in three words, what would they be? Humanitarian, committed and inclusive.

What motivates you? My family – my kids have enough to clear up from my generation as it is! Contributing to others' personal development is also important to me – chairing the IEMA Global ESA and supporting the Early Professional Group means a lot.

What would be your personal motto? Try and you might, don't and you certainly won't – it was in a fortune cookie I opened once and stuck with me.

Greatest risk you have ever taken? Going to live in Hong Kong 25 years ago. It felt like a risk at the time but it started my international career.

If you could go back in history, who would you like to meet? Emmeline Pankhurst, head of the British suffragette movement, who helped women win the vote.

PHOTOGRAPHY: JASMINE COUSINS, SHUTTERSTOCK, GETTY

IEMAJOBS

IKEA Foundation

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Leiden, The Netherlands
Competitive salary

canterbury city council

Climate Change Officer
Canterbury
Competitive salary

iemajobs.net
The PERFECT PLACE
to find the latest
environmental
vacancies

LUC

EIA Project Manager
Edinburgh
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Tritton Road, Lincoln, LN6 7AS.

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