



AUTUMN '14



THE CONSUMER REVOLUTION ISSUE

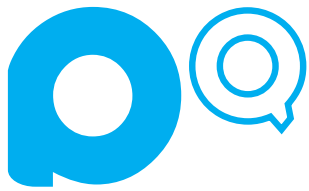
AN INDEPENDENT SUPPLEMENT DISTRIBUTED BY
THE GUARDIAN ON BEHALF OF MYGREENPOD
WHO TAKE SOLE RESPONSIBILITY FOR ITS CONTENTS



TIME TO #REVOLT

My Green **POD**

WWW.MYGREENPOD.COM



CONTENTS

AUTUMN '14

EDITORIAL:

Editor-in-chief: Katie Hill
Design: Bold Image
Consulting Publisher: Jarvis Smith

PUBLISHING:

MyGreenPod/Printed by the Guardian

Distributed by the Guardian on behalf of MyGreenPod who takes sole responsibility for its content. PQ does not accept unsolicited contributions. Editorial opinions expressed in this magazine are not necessarily those of MyGreenPod nor the Guardian and the companies do not accept responsibility for advertising content. Prices are correct at time of going to press and are subject to change. The Publishers cannot accept any responsibility for errors or omissions. The contents of this magazine are fully protected by copyright and may not be reproduced without written permission. If you have any queries relating to the magazine call 0203 002 0990.

Front Cover: Monsanto Poison Apple, Mau Mau

FOOD/HEALTH



BRITISH FARMING

26

18

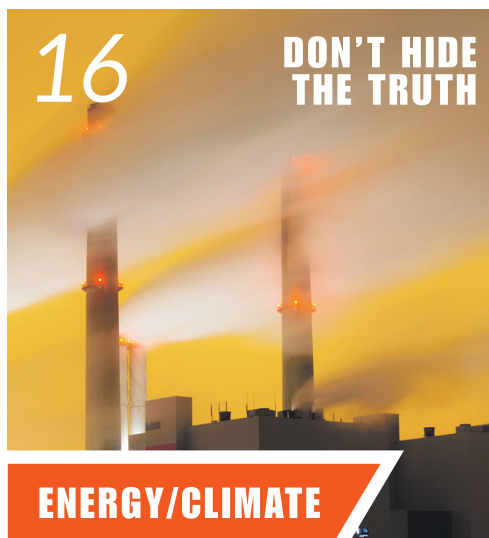
VIVIENNE WESTWOOD

ACTIVE • RESISTANCE
• TO • PROPAGANDA

ARTS/FASHION

16

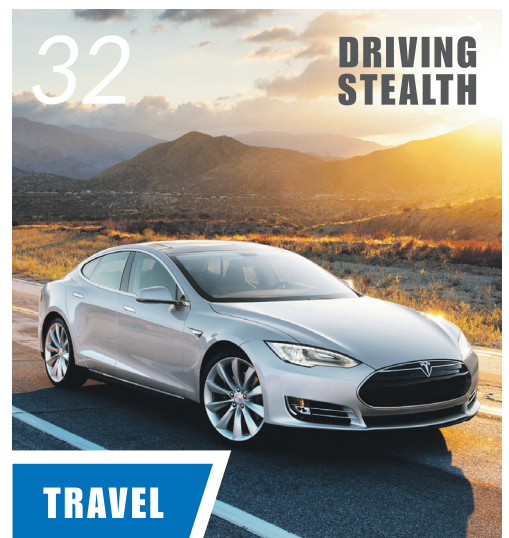
DON'T HIDE THE TRUTH



ENERGY/CLIMATE

32

DRIVING STEALTH



TRAVEL

02

NEWS/EVENTS >>

How reuse could drive the shift to a circular economy

04

BUSINESS >>

How global players could change the planet

06

BUSINESS >>

Super-brands commit to sustainability

08

BUSINESS >>

A risk or an opportunity in the consumer industry?

10

BUSINESS >>

Why Interface is cutting its own umbilical cord

12

BUSINESS >>

Proper labelling helps us decide where to put our money

14

ENERGY/CLIMATE >>

The Big 60 Million - power to the people

16

ENERGY/CLIMATE >>

'Don't Hide the Truth', by head teacher Marcus Culverwell

18

ARTS/FASHION >> The end of capitalism and how it runs the world, by Vivienne Westwood

20

HOME/GARDEN >>

Save Money Cut Carbon - yes, both at the same time

22

HOME/GARDEN >>

Biophilia - Oliver Heath on the new approach to eco-design

24

HOME/GARDEN >>

The 'restoration heroes' behind The Pumping House

26

FOOD/HEALTH >>

British farming and staying independent

28

FOOD/HEALTH >> Could an organic cleanse help you live longer?

29

FOOD/HEALTH >> Hydrogen-enriched water: the new miracle cure?

31

FOOD/HEALTH >> Dr Mariano Spiezia MD on staying attuned to seasonal cycles

32

TRANSPORT >>

Driving stealth - Jarvis Smith's electric spins

33

PEA AWARDS >> The green carpet event of the year is just around the corner

34

TRAVEL >> Girasoli di Bargiano - Jarvis Smith visits the sunflowers in Italy

35

TRAVEL >> Brighton Up - events that should put Brighton on your map

36

COMPETITIONS >>

Enter for your chance to win

G DP, income, savings, carbon emissions, investments, votes — the list of things we measure seems endless. Measurements allow us to understand the present, compare events from the past and set targets for the future: each provides feedback on how we're doing and where improvements could be made.

But Cat Fletcher, reuse activist, waste campaigner and director of Freecycle UK — which has over 1.8 million members in over 400 UK reuse groups — is frustrated that we have no decent or uniform way to measure the many things we reuse. 'Reuse occurs across all sectors', Cat tells *PQ*, 'but much of it occurs at street level in the third sector; practitioners aren't in alliance so the collective impact is unmeasured. It's a missed opportunity which I'd like to address so that the reuse movement can mobilise and help change the world for the better.'

As a solution, Cat has formed Reuse International — an organisation set to launch next year to accelerate the reuse movement and help spur the green economy. Cat's vision is to create a powerful think tank of academics, experts, investors and supporters — and, perhaps more importantly, a measurement tool to highlight the benefits of reuse and map out best practice.

For Cat, measuring reuse on local, regional, national and global levels would allow us to work out the financial, employment, business, environmental and personal benefits it generates. As a result, the sector would attract investment, support, policy change, tax breaks, publicity, endorsement and behaviour change.

The cost of waste

And change is certainly needed. According to the government's *Prevention is better than cure: The role of waste prevention in moving to a more resource efficient economy* report, the waste we produce costs UK businesses £885 million to manage, and the estimated cost of waste management to local authorities in 2011-12 was £3.2 billion.

While decades of investment have been ploughed into recycling and disposal, the result is that we now have an established waste infrastructure that requires a feedstock of, well, waste — with no incentive to reduce it. 'We need to change that', says Cat, 'and fast. There are too many people on the planet consuming way too much stuff, and we don't have enough natural resources to continue on our current path of consumption. A considerable leap in the right direction would be to know how much we reuse now, and set ambitious targets based on the evidence. We could reuse more. We could normalise it. Reuse could be rewarded and championed.'



One person's waste...

The need to address and reassess our general attitude to waste is gaining traction; last year, Dan Rogerson MP, Parliamentary Under Secretary of State for Water, Forestry, Rural Affairs and Resource Management, stated, 'We need to develop further the concept of a circular economy, where one person's waste becomes another's valuable resource. Making the changes needed may require innovation and

creative thinking but it is vitally important because of the benefits they can bring... Government's role must be to get out of people's hair; to set the conditions and guidelines that allow the market, businesses, local authorities and people to make the changes that will propel us towards a more circular and sustainable economy. It hinges on everyone playing their part, building partnerships to seize the opportunities that exist.'

If recognised, these opportunities would help to eliminate the idea of waste altogether, instead of putting extra stress on the resources and money required to recycle. Since 2001, recycling levels have increased from 11% to 43% — but the sheer scale of consumption means as a whole, we're becoming increasingly wasteful.

The estimated value of unused electrical gadgets in UK homes is £320, and 23% of the electronic equipment taken to Household Recycling Centres still works. The average UK home contains £4,000 worth of clothes, 30% of which haven't been worn for at least a year.

Enough's enough

'15% of the world's population — Europe, North America, Australia and Scandinavia — consumes 60% of the world's resources', explains Cat. 'In the UK we consume

about 600,000 tonnes of new goods each year, every year. As first world nations we have an economic system that relies on the never-ending production of stuff to sell — to be consumed. The concept of 'enough' has been written out of our perceptions!'

The 'emerging economies' in Brazil, Russia, India, China and South Africa (BRICS) are going to be the new big consumers in the 21st century, and Cat predicts they will consequently become the new 'big wasters'. The effects of 60% of the world consuming like we, the 15%, do now is a frightening prospect. Designers, manufacturers, retailers and consumers all need to work together to reconsider why, what and how we consume.

Raising the bar

'With the advent of new technologies and the industrialisation of just about everything, we have created a global structure that requires



**HOW REUSE COULD
DRIVE THE SHIFT
TO A CIRCULAR
ECONOMY**

**USE IT OR
SHARE IT**



our mass consumption of tangible goods that are constantly updated — whether or not we need that stuff and never mind whether it's fit for purpose', says Cat. 'It's unrealistic to expect all product makers to be transparent with the information about their products if the dissemination of that information costs them money, threatens their core business or reveals wasteful practices.'

We need to encourage responsible manufacturers, retailers and services to raise the bar and lead the way by providing better products, marketing them widely and explaining to customers why they're a better long-term investment. We need visionaries to lead the way so that sustainable consumption is an appealing model to producers, manufacturers, buyers and sellers, and is as convenient and rewarding as the system we are used to now. In some cases it already is: most people reuse already but don't necessarily give it that name; hand-me-downs between families and friends, buying antiques and going to the local car boot market are all examples of reuse in action.

For Cat, what's missing is an easy, mainstream, uniform collection system to stop reusable goods from being destroyed through the statutory waste management infrastructure of recycling, landfill and incineration. 'We need to normalise the consumption of second-hand goods — especially on the high street', Cat says. 'It's all still very hit and miss at the moment. There are some great enterprises underway like reuse shops at tips, IKEA's work with the Furniture Reuse Network to re-home old sofas and M&S and Oxfam's Shwopping partnership for clothes. Repair Cafés are popping up all over the UK and the number of social, people-powered enterprises — like ifixit and Freegle — is growing.

These schemes are all helping to extend the life of goods, but we need to scale up the easy, convenient options for people to pass on unwanted products and consume second-hand products. There are plenty of economic drivers that make this a viable disruption to existing business models — on top of the environmental imperatives to address resource scarcity, waste, carbon-intensive production, global transporting impacts and over-packaging.

Packaging has increased in volume because we now need to ship just about everything around the world, solve complex security problems and increase the advertising space on each item, to maximise

savings and reduce risks to corporate profits. 'Convenience and lifestyle aspirations increase the consumption of unnecessary products; we all feel time-poor and we're 'sold' the idea that having 'stuff' will make our lives nicer, better and easier', Cat says. 'In fact, once a certain standard of living and a certain amount of stuff is consumed, one's wellbeing does NOT increase.'

Making lives better

Having access to open space, health, education and connection to other people through community engagement maintains and increases our happiness, but advertisers have spent the last 60 years telling us otherwise: that owning more new and different things will make our lives better. 'We are all caught up in a system that absolutely requires we buy tangible goods endlessly', says Cat. 'It's a system that rewards profiteering above all else, and glorifies wealth and possessions. Popular culture celebrates over-consumption and encourages instant gratification, without ever revealing the real environmental costs. All our livelihoods are reliant on this consumption-based model, so it's understandable that it's so hard to break the habit!'

It's easy to see why waste is the second-largest employer globally: we have a linear economic model that creates an end product called 'waste'. To change the mould of how we might all earn a living, have a nice life and not create so much waste we — governments, business and citizens — all need to adopt some circular thinking so that 'waste' simply isn't created in the first place. 'Currently we just manage waste — badly. That's partly because we create so much of it', Says Cat. In a circular economy, 'waste' is understood as a resource with untapped potential, waiting to be transformed over and over again

in an economic ecosystem that reuses what it's already got.

'Do we only care about immediate financial gains and convenience, or do we really care about long-term personal wellbeing, environmental sustainability and economic stability?', asks Cat. 'I think it's the latter, but we all need to realise that what we buy sends back a message to government and business about what our core values are. I live in absolute hope that we can embed reuse into mainstream behaviour and institutional frameworks because it ticks all the boxes: it is good for People, Planet and Profit.'



To find out more about Reuse International, visit www.reuse.international. To find a local Freegle group and start exchanging second-hand goods, visit ilovefreegle.org.

A two-day 'Love Cycle' event will take place on 14-15 February 2015, 10.00-17.00 at Circus Street Market, Brighton. It will host art, music, talks, films, fashion, markets, food, demonstrations, information and workshops to celebrate and inspire resourcefulness. It will also showcase upcycling, reuse, zero waste, recycling, repair, innovation, sustainable materials and eco-design.

Together, the world's most powerful consumer brands have a lot of clout. The Consumer Goods Forum's 400 members employ an estimated 100 million people and generate combined sales of €2.5 trillion.

The way these companies — including GlaxoSmithKline, Nestlé, Nike, PepsiCo, Unilever and Procter & Gamble — choose to do business has a massive effect on economies, lifestyles, habitats and the future of our planet; the impacts and ripples of everyday decisions are felt across the globe and for generations to come.

We've heard a lot of negativity about these mega-brands, but what's going on behind the scenes, and how can the power they wield be used as a force for good? *PQ* speaks to Peter Freedman, MD of The Consumer Goods Forum, to find out.

Sustainable global business

Peter has met some very interesting people working on 'some very tough issues' over a career spanning retail, consumer goods and the public sector. He was drawn to The Consumer Goods Forum by its 'unique' board of directors; he believes that by working together they have 'a pretty good shot' at helping retailers and manufacturers collaborate in pursuit of better value for shoppers, and a more sustainable way of doing global business.

The Consumer Goods Forum has, in one way or another, been around since the early 1950s. The Forum we know today was founded in December 2009, following a merge between CIES, the Global Commerce Initiative (GCI) and the Global CEO Forum. It has evolved in several ways: membership is no longer restricted to retailers and is now open to retailers, manufacturers and service providers from all regions of the world, to ensure proper representation of the sector. Online retailers are also included in some of The Forum's working groups.

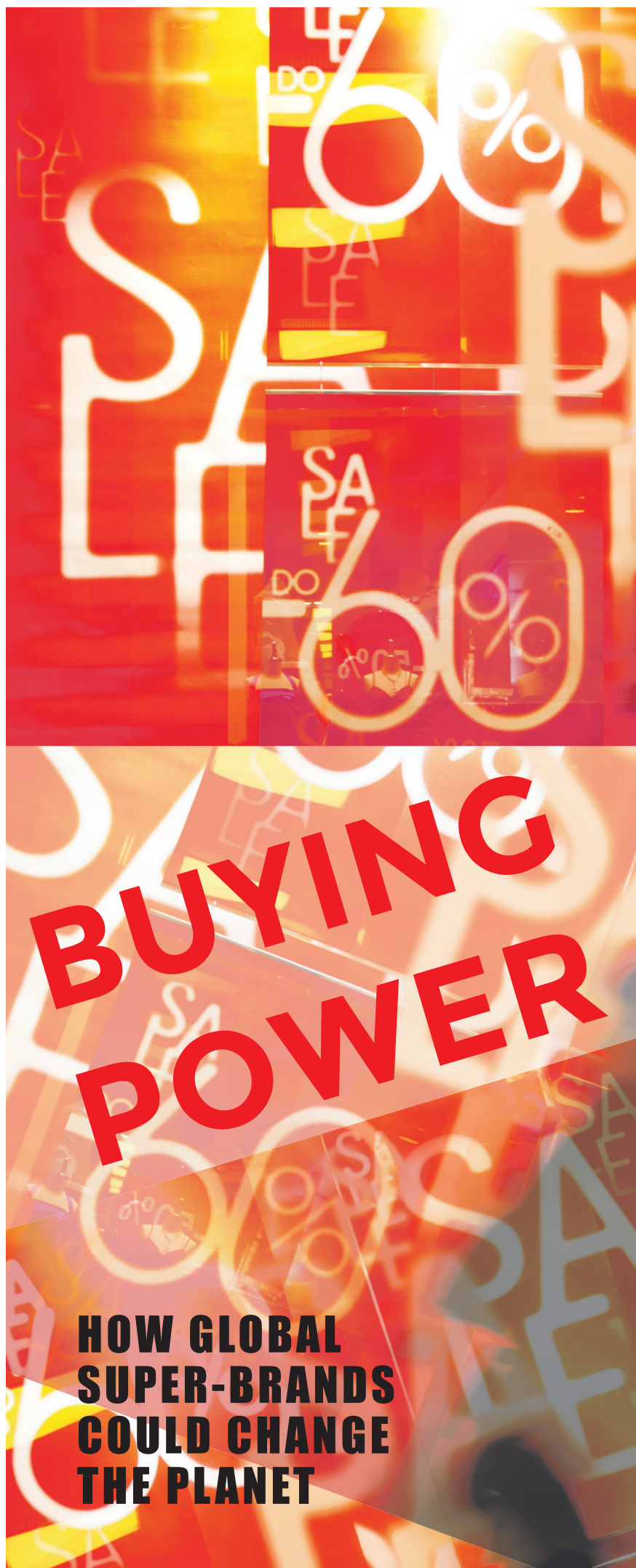
On top of that, The Forum has become more focused on what it's trying to achieve – to Peter, that's better social and environmental sustainability and compliance, product and food safety, helping to empower the world's population to live healthier lifestyles, wellness and driving efficiency in the industry's supply chains.

Collective vs corporate action

But uniting 400 of the world's super-brands in a common goal to drive sustainable business can't be an easy task — particularly when many are in direct competition for market share. 'You're right', Peter acknowledges, 'many of our members do compete — in the sense that, for example, they might compete for market share in shampoo. But there are many arenas — sometimes called 'pre-competitive' arenas — where collective action as an industry makes more sense than individual corporate action.'

One example is deforestation; The Forum has a board resolution on achieving zero net deforestation by 2020, which it aims to achieve through the responsible sourcing of key commodities such as soy, beef, palm oil and paper, so that tropical rainforests aren't depleted.

'It's a big task', Peter admits, 'but we continue to work with our members, providing guidance and supporting those who seek early adoption.' Another example is food safety — an issue that Peter says everyone, shoppers and the food industry alike, 'cares about deeply'. 'As an individual retailer or food manufacturer there's a limit to what you can do about food safety', he says. 'It involves working with hundreds of thousands of upstream suppliers, service providers, governments and others — on a global basis. In both our food safety and zero net deforestation goals, our members understand that there are limitations to what they can achieve individually, and that collective action can make a big difference. There are many other arenas where such collective action makes sense.'



Impact on smaller brands

But what about the smaller ethical brands that could never hope to compete with the global players that dominate the market? How can genuine consumer choice ever be possible when smaller outfits with lower budgets are being squeezed off the supermarket shelves? 'First of all', replies Peter, 'don't forget our members are both retailers — who own supermarkets among other formats — and manufacturers, who make both branded and private-label products. You've got a very dynamic — and, in this case, a very competitive — industry structure.'

'They are all motivated to serve their shoppers and consumers better; if there is a shopper need that isn't being met then I think the system will usually find a way to meet that need. And I'm not sure I really buy the argument that supermarkets or manufacturers are dominant. If they are big it's usually because they're doing a good job of offering consumer choice. If the consumer wants even more choice, then market share doesn't count for much.'

Peter agrees that, if shoppers want smaller ethical brands, then 'absolutely they should be allowed to thrive — and they will do so'. But he thinks more debate is needed around brands whose sole — or primary — USP relates to the way products are sourced. 'Some of our members express frustration that consumers are not always willing to pay a premium for sustainable sourcing. That doesn't stop them offering choice in these areas, but it might explain why these markets haven't taken off as fast as some people hoped.'

Hard discounters and e-commerce are relatively new retail formats that are disrupting the UK's industry structure, so high street names will need to get to the bottom of what consumers really want if they're going to stay in the game. 'Our board approved a resolution to offer consumers and shoppers a range of products and services that support the goals of healthier diets and lifestyles', Peter says, 'so there is work being done on providing the right choices to consumers.'

Increasing our trust

More work is now also being done in the area of traceability, which will allow consumers to see exactly where a product has come from and whether it contains sustainably sourced ingredients. 'This allows them to make the choice on whether or not to buy the product if they cannot see that it was ethically sourced', Peter explains.

This is where decent, consistent and transparent labelling on all consumer goods comes in. 'Consistent labelling sounds so simple and yet it doesn't seem to be', Peter admits. 'But I know that our members care deeply about increasing consumers' trust in the industry. Transparency on what a product contains, how it was made and where it came from are all things I think we will see more progress on.' And progress is already underway: The Forum's board recently made a public commitment to ensure consistent product labelling and consumer information, so that consumers will be able to 'make informed choices by 2018.'

'Really, if you care about consumer trust in the industry, and if you agree that the issues I've described can only be tackled collaboratively between manufacturers and retailers across the world, then there is really no other organisation you can join', explains Peter. Members also get to build their personal networks across manufacturers, retailers and regions. 'From an operational standpoint that builds on consumer trust, we know our members get tangible value out of their engagement with The Consumer Goods Forum.'

For suppliers in emerging markets, Peter believes the major benefit of The Consumer Goods Forum lies in being able to benchmark operations against the best on the global market. 'And, of course, building their capacity so they can access new markets and grow their business, all while ensuring they adopt sustainable practices.'

For more information on The Consumer Goods Forum and its Sustainability Pillar, visit theconsumergoodsforum.com.

CEO-level issues

According to Peter, The Forum's members are constantly 'on the alert' for issues that might require collective action; they can be stimulated by external stakeholders or internal discussions with corporate members in industry-level meetings. Sometimes The Consumer Goods Forum will surface an issue based on forward-looking research, but ultimately its board decides on the priorities. 'The board consists of the CEOs of 50 of our members', explains Peter, 'so obviously they are going to focus on CEO-level issues. They usually then apply three simple tests: is this an issue that needs collective action, does it need global, rather than national or regional, leadership and would it benefit from manufacturers and retailers working together? These three criteria determine whether an issue is one to which The Forum can bring unique value.'

Once a priority has been decided, The Forum will try to set a simple goal, which may then be formalised into a board resolution and ultimately even a formal commitment. Then working groups of members are set up to make something happen. All quite straightforward, then? 'No', Peter assures me, 'it isn't!'

Still, one recent example of where the board has really come together is in its public call to action on climate change. In June, it issued a statement that called on heads of state across the world to engage and act with determination, leadership and ambition to secure an ambitious and legally binding global climate deal. At the same time, The Forum also reaffirmed its own commitments to two sustainability resolutions: achieving zero net deforestation by 2020 and phasing out HFC (hydrofluorocarbon) refrigerants from 2015.

'I have been struck by how many CEOs really do care about the issues we focus on', Peter says, 'and it goes way beyond a "tick the box" interest in what they used to call CSR. That doesn't wash any more. Our members are passionate about the issues we cover and they know they can contribute; they can shape the future of an industry that will have an impact on the lives of billions of people. The Consumer Goods Forum is the platform where their vision for this industry comes to life.'



SUPER -BRANDS COMMIT TO SUSTAINABILITY

**BY SHARING EXPERIENCES
AND NEW APPROACHES,
SOME OF THE WORLD'S
BIGGEST NAMES IN
CONSUMER PRODUCTS
ARE CHANGING THE WAY
THEY DO BUSINESS**

Walmart

In 2010, Walmart committed to sourcing palm oil for the company's private-label items in a sustainable way. Last year, the company converted 27% of its palm oil usage, and is on track to reach 100% by the end of 2015. Walmart has put its success in this area down to collaboration and education.

Walmart told *PQ* that there was an incorrect assumption, among both buyers and suppliers, that the process of converting to sustainable palm oil was too complicated and the cost too high. The fact that there was also no road map to follow was another reason to pursue business as usual.

Walmart buyers saw the challenge but didn't view it as an 'impediment'; instead, it turned to the supplier community to test potential solutions. In 2013, when Walmart was issuing a request for pricing for the private-label cookie and cracker category, buyers included the use of sustainable palm oil in the request for pricing. There was an understanding that challenges would be explored together in order to determine the feasibility of producing cost-neutral baked goods with sustainable palm. If buyers and suppliers could find a way to make this work, it would have a significant impact: 28% of Walmart's total use of palm oil in private-label products comes from this category.

Through this collaborative investigation period, buyers and suppliers learned that the perceived barriers didn't really exist. Together, they

developed a phased approach to step in to green palm certificates and then to mass-balance sustainable palm over several years. When spreading the cost per unit for the volume purchased by Walmart, the conversion cost is negligible. This approach enabled Walmart to continue to deliver on its brand promise to save people money so they can live better.

Walmart also realised that it could help demystify the process for suppliers across multiple food categories by sharing these insights. In April, with the support of Conservation International, Walmart hosted a conversion workshop for any supplier that uses palm oil, and distributed a 'how-to' manual.

'We all assumed that our suppliers knew what to do, but most did not — and neither did we, until we did the research', said Kim Brandner, senior director of private brand sourcing for Walmart. 'There was a common misnomer that it was extremely difficult and expensive to convert — but, through the cookie and cracker experience, we all realised that it isn't that difficult or expensive to do.'

Unilever

One of the three big goals of Unilever's Sustainable Living Plan (USLP) is to halve the environmental footprint of the manufacture and use of its products — from design to disposal — by 2020.

Unilever is the world's biggest producer of ice cream and one of the world's largest buyers of palm oil; it purchases around 1.5 million tonnes — around 3% of the world's total production — annually, for use in products ranging from ice cream to shampoo.

Back in the mid-1990s, Unilever started to develop Good Agricultural Practice Guidelines for palm oil through its Sustainable Agriculture Programme, and has been working towards the sustainable cultivation of palm oil ever since. In 2004 it became a founding member of the Roundtable on Sustainable Palm Oil (RSPO) which, through its 1,000 members, represents over 40% of all palm oil produced in the world.

Unilever achieved its target of sourcing 100% of its palm oil from certified, sustainable sources by 2015 three years ahead of schedule, primarily through the purchase of GreenPalm certificates. In 2012, it pledged to purchase all palm oil sustainably from certified, traceable sources by 2020. While this is a complex task considering the sheer volume of palm oil Unilever buys, the company is on track to meet its goal. It has invested \$130 million in a new processing plant in Sei Mangke, Indonesia, which will source palm oil from known and certified sources for use around the world.



In 1996, Unilever implemented a policy to stop buying new CFC-containing equipment and has committed to a non-HFC purchasing policy for all ice cream freezer cabinets by 2005. The first 700 HFC-free cabinets were introduced in Denmark in 2004 and by the end of 2013, 1.5 million had been rolled out (exceeding the target of 850,000 by 2015).

Unilever is a founding member of Refrigerants, Naturally!, a multi-stakeholder group established in 2004 to promote a rapid shift away from the use of HFCs in equipment like ice cream freezers and vending machines. In 2014, Refrigerants, Naturally! members successfully lobbied the European Commission in having damaging HFCs banned from many commonly used types of freezer, with effect from 2022.

At the UN Climate Change Conference in Cancun, Unilever worked with Tesco as co-chair of the team charged with delivering The Consumer Goods Forum's deforestation and refrigeration pledges. Participating companies agreed to begin phasing out HFC refrigerants from 2015 and to replace them with non-HFC refrigerants.

Nestlé

Nestlé has long sought to lead on climate change, and the goal has shaped its business practices all along the supply chain.

'Respect is at the heart of Nestlé', says CEO Paul Bulcke, co-chair of The Consumer Goods Forum. 'Respect for the society in which the company operates, respect for the environment and respect for future generations.'

In practical terms, Nestlé is continuously making efforts to improve the environmental performance of its operations. Today, it emits half the greenhouse gases per kilo of product it emitted 10 years ago; by 2015, it aims to further reduce direct emissions of greenhouse gases by 35% compared with 2005 levels.

Nestlé also looks to the beginning of its supply chain on environmental issues, helping farmers adapt their practices to the environmental challenges arising from climate change. The NESCAFÉ Plan, the Nestlé Cocoa Plan and Nespresso Ecolaboration have been devised to make the farming of key commodities for Nestlé, like coffee and cocoa, more sustainable – from an economic, social and environmental perspective.

The company also encourages its 400 biggest suppliers to report their greenhouse gas emissions targets through CDP, a not-for-profit organisation which enables companies to measure, disclose and share vital environmental information.

Nestlé's ambition is to ensure that its products have not led to deforestation. Of the palm oil it uses, 100% is RSPO-certified and Nestlé

has also backed the New York Declaration on Forests, which aims to halt and reverse the loss of forests. The company also supports the CDP initiative, which aims to remove commodity-driven deforestation from all supply chains by 2020.

At the other end of the supply chain, when it comes to keeping products like ice cream and yoghurts cool and safe to eat, Nestlé is also at the forefront. It uses the very latest technologies, such as safe natural refrigerant alternatives for industrial refrigeration installations. The company supports the development and use of safe and efficient natural refrigerant solutions for commercial applications, as well as the phasing out of appliances that use HFCs.

Nestlé has ploughed over £160 million into finding carbon-neutral natural alternatives in 93% of its industrial refrigeration systems. Now all new ice cream chest freezers in Europe use natural refrigerants.

The company is determined to combat food wastage, itself a major source of greenhouse gas emissions, and is co-steering, on behalf of The Consumer Goods Forum, the development of the World Resources Institute Food Loss and Waste Protocol.

These actions contribute to ensuring that Nestlé products are not only 'tastier and healthier', but also better for the environment along the entire chain.

Marks & Spencer

Marks & Spencer has been working on its sustainability programme, Plan A, for nearly eight years, and has made substantial progress on the 100 social and environmental commitments it outlines. Still, there are some issues which are so big that only collective action will deliver meaningful change.

For example, M&S knows palm oil and soya sourcing can contribute to deforestation but also that alone, its buying scale isn't sufficient to challenge and change these industries. By lining up with members of The Consumer Goods Forum, it has been able to send a strong signal to producers that sustainable change is an imperative.

Plan A is M&S's 100-commitment eco and ethical programme that tackles both today's and tomorrow's sustainable retail challenges. Launched in 2007, the plan has helped M&S send no waste to landfill, become carbon-neutral and reuse, recycle or resell over 10 million unwanted garments with Oxfam.

The aim of the plan is to make M&S the world's most sustainable major retailer, by embedding sustainability into everything it does – from store operations right through to raw material sourcing across the world. However, M&S understands that it can't and won't achieve its goals alone, and Plan A has enabled the company to collaborate with NGOs, other businesses and governments across the world to help drive forward the sustainable business agenda.

Collaboration, communication and the sharing of best practice are hallmarks of The Consumer Goods Forum's work, and the approach helps members, including M&S, find new ways to approach tricky barriers.

One example is the Refrigeration Resolution, which is leading the call to phase out HFCs. Potent greenhouse gases engineers from the world's largest food companies are able to share learning and experience as they find cost-effective ways of developing, installing and maintaining new low-carbon approaches to refrigeration.

M&S won't go as far as to say that Plan A alone is inspiring other sustainability leaders, such as Unilever, Nestlé, Mars and Coca-Cola, but the company does like to think that Plan A is 'another very important corporate commitment' to building a more sustainable approach to business. This is particularly true in the retail sector, which is characterised by product inventories of tens of thousands of products from a huge array of factories, farms and raw material sources, all of which need to be addressed.



In June, the board of The Consumer Goods Forum called on heads of state across the world to engage and act with determination, leadership and ambition to secure an ambitious and legally binding global climate deal, one year ahead of the UN Climate Summit in Paris.

The Forum also urged governments to make the UN REDD+ (Reducing Emissions from Deforestation and forest Degradation) climate change mitigation plan a priority, supporting it with local and national policies that can protect forests and support livelihoods.

At the time, Marc Bolland, co-sponsor of The Forum's Sustainability Pillar and CEO of Marks & Spencer Group plc, added, 'The latest report from the UN's Intergovernmental Panel on Climate Change leaves little doubt as to the future disruption that climate change will bring to bear. It is clear that there is still a great deal that needs to be done to protect livelihoods, individual businesses and our industry as a whole from the impacts of climate change.' He said that resolutions made by The Forum will help 'address key areas within our industry that are contributing to climate change on a global scale.'

The consumer goods industry has a unique role in enabling and empowering consumers to make sustainable changes in their purchasing and in their lives, if it innovates, communicates and partners up properly.

Risks and opportunities

The Consumer Goods Forum has four 'pillars', or services, that address 'some of the most important opportunities and risks' that face companies in the global consumer industry. One of those pillars is sustainability; it's connected to — and, according to the managing director, just as important as — the others: product safety, health and wellness and end-to-end value chain.

Members of The Forum are encouraged to act together to protect against climate change, reduce waste and promote and comply with good environmental practices. They can adopt The Forum's proposals and suggestions voluntarily, and many are quick to adopt them. It's not all entirely selfless; sustainable business practices often also offer economic opportunities, and still apply — in some cases even more significantly — in tougher financial climates.

The bundling of transport streams to save carbon and reduce empty trucks is just one example of how sustainable practices make good business sense; transport costs and packaging are reduced, and both have a positive impact on the bottom line.

Addressing deforestation

Two of The Forum's sustainability resolutions were announced at the Cancun Climate Change Conference in November 2010. The first was a pledge to mobilise resources within The Forum's respective businesses in a bid to achieve zero net deforestation by 2020. The commitment will be achieved through the individual members' company initiatives, and by working in partnership with governments and NGOs. The Forum's collaborative approach has helped it to develop specific, time-bound and cost-effective action plans, each based on the different challenges in sourcing commodities like palm oil, soya, beef, paper and board in a sustainable way.

Deforestation accounts for approximately 15% of all greenhouse gas emissions, a larger net impact than the entire transport sector globally. The biggest drivers for deforestation are the cultivation of soya, oil palm, logging for the production of paper and board and the rearing of cattle.

All of these commodities are major ingredients in the supply chains of most consumer goods companies. The Consumer Goods Forum's members drive the demand for these commodities and have an opportunity to ensure that the sourcing of these ingredients does not contribute to deforestation.

Greenhouse gas emissions

The second pledge to come out of Cancun was that members would start phasing out hydrofluorocarbon (HFC) refrigerants in new refrigeration installations from 2015, in recognition of the major — and increasing — contribution of HFCs and derivative chemical refrigerants to total greenhouse gas emissions. Where legally allowed and available, HFCs will be replaced with natural refrigerant alternatives.

Refrigeration is a significant and growing source of greenhouse gas emissions; HFC, the dominant technology, is 1,400 times more potent than carbon dioxide as a greenhouse gas. HFCs represent 1.5% of total warming potential today and, unless action is taken, are expected to increase to 6-9% of total greenhouse gases by 2050. HCFCs and HFCs are fluorinated gases (F-gases) that are widely used in the consumer goods sector, in anything from drinks coolers and vending machines to ice cream freezers and the freezers used in supermarkets.

However, there are barriers to wide-scale adoption of more climate-friendly refrigeration, mainly availability, cost, safety, maintenance, servicing and, in some markets, legislative restrictions. The Consumer Goods Forum is working to overcome those barriers through collaboration; it's using its collective influence to encourage its supply base to develop natural refrigerants technologies that meet business demand under commercially viable conditions.

Taking action

Since The Forum's resolutions were announced, its role has been to encourage and inspire members to take action and find ways to realise the commitments within their respective supply chains. The Forum has been raising awareness of the link between commodities — such as soy, beef, palm oil and paper — and deforestation, and developing ways to help members achieve the targets.

But ultimately, as The Forum's advice is voluntary and members' activities aren't policed or judged, there's no guarantee that The Forum's commitments on sustainability will be received and implemented with equal enthusiasm by all members. In fact, there's no guarantee members will adopt any of its proposed measures at all. The Forum is currently trying to develop some way of understanding the impact and implementation of strategies devised to deliver on the pledges, but as yet there's no way of knowing or measuring direct impact.

However, early adopters are given additional support and, perhaps more importantly, The Forum has a major role in knowledge sharing and collaboration across its membership. This is perhaps its most powerful function. Mike Barry, director of sustainable business at Marks & Spencer, said, 'M&S can't change the world of palm oil on its own. We use a fraction of the world's supply. By teaming up with other big players in the industry through The Forum, we have additional leverage and can share best practice. Very simply, together we are stronger and can move faster to help create a more sustainable approach to production and



consumption.’

A member-only online platform helps to boost collaboration between members by driving communication and knowledge sharing. This ‘Knowledge Navigator’ is a private space that allows teams to share documents and information on work they’re doing prior to any wider release. Individuals can connect with each other, view and download presentations and other useful material and share latest news and updates. Similarly, the content produced by The Forum is open source and available to all its members.

Sharing ideas

A lot of The Forum’s work relates to pre-competitive business practices, with the goal of harmonising the good ones and developing new improved ones. For this reason, successful strategies made by one company in the area of sustainability could be directly transferred and applied to a company in a completely different corner of the consumer market. The Forum organises summits to help with the exchange of knowledge and encourage discussions on how to overcome any barriers that members may be facing.

When The Forum announced its commitments around zero net deforestation and HFCs back in 2010, it knew that it could only ever achieve its goals by working collectively in partnership with governments, development banks and NGOs. Together with the US government, it founded the Tropical Forest Alliance in Rio, 2012, following a series of dialogues and partnerships with key stakeholders.

The alliance is a public-private partnership in which partners take voluntary actions to reduce the tropical deforestation caused when commodities such as palm oil, soy, beef, paper and pulp are sourced. The Forum’s partners now include governments in the UK, Norway, the Netherlands, Indonesia and Liberia, as well as a large group of civil society partners. A workshop in Jakarta was held in June 2013, with the aim of identifying challenges and realistic solutions to removing deforestation and rights violations from the palm oil and pulp and paper value chains, while also increasing production.

The Forum is also working to create funding and other practical schemes that will incentivise and assist forested countries to conserve their natural assets and enable them to achieve the goal of zero net deforestation, while at the same time meeting their goals for economic development.

Tackling climate change and today’s other big sustainability issues requires a multi-stakeholder approach, and The Forum acknowledges that it is ‘just one piece of the pie’ that can help the industry to discover and implement better practices — and also be more transparent about the actions being taken.

Buying power

This focus on transparency and sustainability isn’t entirely driven by consumer demand or the products that are selling in the highest number. While consumers are increasingly requesting products that are more sustainable and safe, when it comes to the crunch they’re not always buying those products or choosing them over cheaper alternatives.

So where does all this leave the smaller, independent brands that are jumping out of the mainstream and going it alone? Many key innovations in sustainability have been launched by these smaller companies, and they often pave the way for an industry approach by the bigger players.

The Forum believes that significant change, or the power to transform a market, can only be achieved by a broader group of stakeholders, and that the opportunity lies within every company, irrespective of its size, geography or sector. The goal must be to help catalyse that action, and The Forum hopes to be able to help with implementing the new approaches that will make sustainable practice in the consumer industry a reality.

SUSTAINABILITY: A RISK OR AN OPPORTUNITY IN THE CONSUMER INDUSTRY?

BUSINESS



Since the launch of Mission Zero in 1996, Interface, the world's leading designer and manufacturer of modular flooring, has been pioneering sustainability across all its operations — without sacrificing the company's business goals.

As well as being good for the environment, Interface has found that radical sustainability pays — to the tune of around €7.5 million per year. According to Rob Boogaard, acting president and CEO of Interface EMEA, this 'big plus to the bottom line' is the result of investments that have been made possible through savings in energy and materials, the company's war on waste and everything else Interface has done to date to make its operations more sustainable.

One example is the Dutch manufacturing plant, which currently runs on 100% renewable energy. The company wouldn't have been able to make this transition without first reducing its energy requirement by roughly 50%; the energy savings were responsible for generating the funds to invest in sustainable engineering solutions.

'Outrageous' expectations

Circular thinking started at Interface around 20 years ago, when founder Ray Anderson decided to uproot fundamental principles of the business. His 'outrageous' expectation was that the company should 'cut the umbilical cord with oil' — the main product traditionally used in nylon yarn.

For obvious reasons, this was easier said than done. Ray's committed focus on sustainability meant the company needed to start sourcing an alternative to the virgin oil it had been using to manufacture carpets. Recycling was the obvious answer, but Interface found it was 'practically impossible' to get 100% of its products back.

On top of that, Interface was a growing business that would require more and more materials as time went on; it was vital to look for other sources of recycled materials that could be reused in the nylon for the yarn Interface used for its carpets. Now, 43% of the raw materials used by Interface in Europe are recycled or bio-based — though the goal is to get to 100%.

From fishing nets to carpets

In its search for new sources of nylon, Interface started working with its supplier to collect fishing nets out of the commercial fishing sector, primarily in Norway, to recycle into new yarn. Then, a few years ago, an Interface employee visited fishing islands in the Philippines that were covered with old fishing nets — many of which were drifting off the coastline and catching fish that, uncollected, were going to waste. The local population was polluting its own livelihood.

The employee proposed the idea of paying local communities for every kilogram of fishing nets they recovered and collected. The scheme, in partnership with ZSL and Aquafil, took off — and deprived, remote communities were connected to Interface's for-profit value chain. Within a year the programme was self-funding, and currently operates in 24 islands in the Philippines, with each community actively participating in the supply chain.

Interface has recently committed to expand this 'Net-Works™' model

across the region of Cameroon in January 2015. While Net-Works demonstrates an innovative model for closing the manufacturing loop, its ambitions for up-scaling show that this could provide a template for the future of sustainable manufacturing in the modular flooring industry and beyond.

Disrupting supply chains

The Net-Works programme disrupts supply chains on an international scale and is giving back to the 660 million individuals around the globe who are dependent on the ocean. From a business point of view, the scheme also essentially allows Interface to become the supplier to its supplier. Through the project, 'waste' products have been recognised as future raw materials that can be used by businesses around the world.

The village communities working to source fishing nets have seen over 4,460 people engage with the programme so far, with women given equal opportunity to participate and receive an additional source of income from net collection. As a result, they have become integral decision-making members of the community banking systems.

Skip forward three years to 2014 and more than 41,000kg of discarded fishing nets have been collected, allowing 4,500 villagers in communities to earn a supplemental income that's equal to

84,000 meals. Estimates suggest that over the next three years, Net-Works will support and reinforce a further 500 hectares of community-based Marine Protected Areas (MPAs) in various regions, assisting the restoration of biodiversity in the aquatic ecosystems.

Internal scrutiny

Interface was the first company of its kind to identify the problems associated with nylon yarn in the manufacture of carpet. The company carried out research on its own manufacturing process and discovered that, throughout the full life cycle of its products, the manufacturing of the yarn causes the greatest harm to the environment.

Virgin oil contributed to around 50% of the total environmental impact of Interface's carpets, so the company now focuses on three logical ways to reduce the impact of virgin oil in its products. A typical carpet tile can contain around 700g of yarn per square metre, so one of the most obvious ways to create a more sustainable product is simply to reduce the amount of yarn used.



WHY INTERFACE IS CUTTING ITS OWN UMBILICAL CORD

BUSINESS

MISSION ZERO



As well as delivering environmental benefits, on a practical level a carpet that contains less yarn is often easier to clean, offering a great alternative to hard flooring by combining a tough surface with improved acoustics. As well as reducing the amount of yarn used, Interface recognised that it was also important to use alternatives to virgin nylon, such as bio-based or other low-impact yarns and yarn containing more recycled content.

Plant-based carpets

In 2012, Interface launched Fotosfera, the first ever carpet tile made from plant-based nylon. The product consists of yarn exclusive to Interface, which is made from castor bean plants and produced in rural communities. The oil's derived from plants that are fast-growing, resilient and exceptionally low-maintenance. 70% of the world's castor bean plants are grown in India; even in hot, arid conditions they may only require water once in up to 25 days.

By using castor bean plants in Fotosfera, Interface made a breakthrough in an industry that's traditionally relied on petroleum-based materials. At the same time as reducing its reliance on virgin petro-chemical raw materials, with the ultimate goal of eradicating them from its products by 2020, Interface has helped to deliver significant socio-economic benefits by supporting the farmers who grow the crops. Castor bean plants act as an excellent soil stabiliser in areas prone to erosion and can grow on marginal land where other crops struggle, providing farmers with a much-needed income. In some circumstances, this can lead to a revenue of up to 10 times the cost of planting the crop.

As well as having 63% bio-based content, Fotosfera uses Interface's glue-less installation method, TacTiles™, to further reduce the product's impact on the environment by virtually eliminating Volatile Organic Compounds (VOCs). This approach removes liquid adhesives from the installation process and can help to contribute to a healthier environment, with a lower impact on indoor air quality.

What's more, using a glue-free installation method means that there will be no damage to the sub-floor if carpet tiles are taken up, which allows more design flexibility and can make repairs and recycling easier when it's time to replace the carpet.

Mission Zero

The focus on sustainability and the 'war on waste' are part of Interface's Mission Zero pledge, which made Interface one of the first companies to make a public commitment to sustainability. The goal is for Interface to become the first fully sustainable — and ultimately restorative — company and to achieve zero negative impact by 2020.

Since Mission Zero began, Interface has successfully achieved zero waste to landfill status at its European manufacturing facility in Scherpenzeel, the Netherlands, and continues to introduce new solutions to environmental issues. The company has achieved a 50% reduction in energy use per unit of production and an 87% reduction in water consumption. Water use is expected to drop to around 95% following Interface's recent installation of a recirculation system that uses closed-loop piping.

In January 2014, the Dutch plant confirmed the site was operating on 100% renewable gas and electricity, with green gas created by the



anaerobic digestion of fish waste. As a result, Interface was able to announce earlier this year that it had achieved a 90% carbon reduction.

Sustainability and design

The way Interface sees it, sustainability and design go hand in hand — a sustainable solution needs to be practical and aesthetically pleasing and with that in mind, there should never be a need to compromise. In

recent years the company has won key design awards including the Red Dot award and the Athanenum Good Design Award in 2012.

There's a genuine belief at Interface that the only way to achieve long-term sustainability is to listen to people and their opinions, no matter who they are. Interface is a business and as such it's driven by demand, so it needs to create practical solutions to real issues. There's little sense in creating highly sustainable products if customers aren't prepared to buy them.

Every customer's needs are different — some may want a bold, colourful design, whereas others may want a more muted, conservative

scheme, but all will undoubtedly want a product that is durable and that withstands the test of time in a busy environment.

The glue-less installation method of TacTiles is a perfect example; in addition to the environmental benefits of eradicating the use of adhesives, there are design benefits to bonding carpet tiles to each other rather than to the floor. Those in listed properties don't need to worry about causing damage to the floor underneath the carpet, and the tiles allow you to explore your creative side by mixing styles and colours, or cutting tiles into different shapes for a unique pattern.

The result is a durable installation without the daunting permanence of experimentations with bold patterns or vibrant colours. Businesses hosting events can also print bespoke designs, such as QR codes, onto the tiles.

Driving transparency

Interface has devised strict methods for measuring sustainability — not just in order to monitor its progress with Mission Zero, but also to help customers understand what is involved in truly sustainable business. As a result, it's allowing consumers and businesses to make more informed decisions about the products they select.

The company understands that, in order to be sustainable, you need to take into account the full life cycle of a product. Using Life Cycle Assessments (LCAs) enables any business to develop an in-depth understanding of a product's environmental impact during its entire life cycle, from the sourcing of raw materials and manufacture right through to installation, maintenance and disposal.

This commitment to business transparency meant Interface was the first carpet tile manufacturer to receive a third-party verified Environmental Product Declaration (EPD), to allow true product comparisons. Interface is actively encouraging this level of transparency across the industry in general, and believes that the shift towards these standards represents true innovation. For customers, the practical result is that you can make informed decisions about the products you buy and the impact they have.

For more information on Interface, its Mission Zero pledge and the Net-Works scheme, visit interfaceflor.co.uk.

Many surveys and research studies from around the world suggest that, where all else is equal, consumers would choose a product that has a low carbon footprint over one that doesn't. 'The numbers are particularly high in developing countries and with younger demographics', says Dr John Kazer, certification manager at Carbon Trust. 'A committed minority does consider environmental impact first, but most people focus mainly on price and quality.'

The good news is that the quality of products tends to go up, and the cost of production down, when companies invest in sustainability – and this is being seen at the checkouts. 'Recent Nielsen research has shown an average 2% growth for companies with sustainability claims on packaging', says John, 'which rises to 5% when companies make this part of wider product marketing.'

Still, supply chains and carbon emission measurements are complex issues at the best of times; they're even harder to get your head round when you're trying to whip round the shops. 'Consumers still don't instinctively understand what 50 grams or 10 kilograms or 1 tonne of greenhouse gases means in terms of causing climate change', explains John. 'What's easier to understand is when one number is bigger than another, as shoppers can look at scale and make comparisons. They also understand that companies that have taken the trouble to measure, manage, certify and transparently communicate this information are taking a responsible approach to reducing the environmental impact of their products.'

The trend towards data democracy shows there is an appetite for more information to be made available at the point of sale; consumers are asking questions and they expect companies to have the answers. If key information about the environmental impact of products is made available, people would be better able to make informed decisions about how to spend their money and which companies they want to support.

Cracking the code

But even with the best intentions, it's not easy to select the most ethical option on the supermarket shelf. Hundreds of eco-labels are appearing on products around the world – but they each mean something different, are assessed to different standards and require different levels of rigour or verification.

As consumers grow increasingly aware of environmental issues, even more labels – in even more sectors – are sprouting up to cater for the demand. Products that manufacturers claim are 'natural' or 'green' may actually be no better than other options further down the aisle, and even an in-store comparison of harder data like food miles won't provide a full, accurate picture of a product's all-round eco-credentials.

'One of the big myths that people still believe is that food miles are a reasonable indicator of a product's environmental impact', says John. 'Very often transportation only plays a comparatively small part in the carbon footprint of a product, which is why it is so important to measure the full life cycle.'



BUYING POWER

PROPER LABELLING CAN HELP US DECIDE WHERE WE PUT OUR MONEY

BUSINESS



Some eco-labels are regulated by third parties and others have been created by the companies themselves. Fortunately for consumers, the best schemes provide good information on the internet. 'Good things to look out for on a label are that it is independently verified by accredited certification bodies', explains John, 'and that it follows international standards, provides real numbers or data and requires a regular re-certification process.'

Doing it right

On top of giving customers the products they want, businesses can really benefit from making serious efforts to manage and reduce their environmental impact. In most organisations, according to John, 'what gets measured gets managed'. The process of measuring a product's carbon footprint and achieving certification reveals new opportunities for cost saving, identifies hotspots of inefficiency and highlights where a business should focus its carbon reduction efforts.

For John, there's nothing that a company could find in its supply chain that would be more of a concern than choosing not to look in the first place.

'Businesses are often very surprised when they look into their supply chains and see how inefficient, wasteful or expensive certain parts can be', he said. 'Only after looking at what's happening through a product's entire life cycle can issues be identified and changes made.'

One of the best examples the Carbon Trust ever uncovered was through its work with Walkers crisps. 'The company discovered that farmers were using humidifiers to hydrate potatoes and make them weigh more', explains John, 'because payment was calculated according to weight.' This meant that the suppliers were using extra energy for humidifiers, and that Walkers was using extra energy to remove the moisture when frying the crisps. Both contributed to costs and carbon footprint, so Walkers and its farmers could make very substantial cost and carbon savings simply by altering the way transactions for potatoes were made.

Tools for action

Back in 2007 there was a growing awareness of the need for organisations and consumers to take action on climate change, but many of the practical tools needed to fully understand and reduce carbon emissions were not available.

'When it comes to really understanding the greenhouse gas impacts of products you need to look at the full life cycle of emissions, from cradle to grave', says John, 'but this was not being done consistently in a way that allowed consumers to make comparisons.'

Because there was no standardised way of measuring the life cycle carbon footprint of products, the Carbon Trust developed the world's first methodology to do this, known as PAS 2050. 'Our certification scheme was created to make sure that companies have done their calculations correctly', explains John, 'and it provides a carbon footprint label to enable consumers to act on the information.'



The Carbon Trust's label is a broadly applied and recognised environmental certification scheme, hailed by many as the 'gold standard'. It is assessed to an international standard that can be used to certify any type of product or service around the world, rather than just fish or wood, for example. When a product displays the carbon reduction label, customers can be confident that its manufacturer has taken robust steps to understand a product's carbon footprint, and to reduce it year-on-year. 'Other similar labels do exist in some countries that certify to the same international standard on carbon footprinting; Taiwan is one example, and we're currently discussing a mutual recognition scheme', John told *PQ*. The Carbon Trust is also currently working to create new eco-labelling schemes for Mexico, Hong Kong, Malaysia and Brazil.

Measuring carbon

Labelling with footprint information is currently entirely voluntary and is regulated by international standards and certification bodies. A product's carbon footprint can be measured in a few different ways, but typically two different methods are used.

The first, 'cradle-to-grave', looks at all the emissions associated with eating a certain food product, from producing the raw materials on farms to processing, packaging and transportation, right through to when it is cooked and any waste that ends up in the bin afterwards. The second method, 'cradle-to-gate', just looks at all the product's emissions up until it leaves a company's boundary of control, so it doesn't include the emissions associated with selling, using or disposing of the product.

There are many issues that need to be considered if a company wants to create truly sustainable products — biodiversity loss, deforestation, water use, air pollution and the treatment of workers are just some of the points to address. 'Many of these are local issues, or specific to certain types of product', says John. 'But a product's carbon footprint is a

consistently applicable issue for everything that we buy. Climate change is one of the most serious and urgent issues facing the world today, which can exacerbate many other environmental and social issues. This means that a carbon footprint is a good place to start, both for businesses and consumers who want to make a difference.'

21st century issues

In many cases the environmental impact of certain foods is coming down thanks to more sustainable farming and a focus on reducing food waste. The challenge is that the global population and demand for food are both growing, which means the total environmental impact from food is, too — despite more responsible production and greater efficiency. 'Businesses and governments are starting to respond to the challenge', says John, 'but this will be one of the biggest issues we need to solve as a civilization in the twenty-first century.'

As a start, it's fair to expect companies to provide information and evidence about the impacts of their products, as otherwise consumers wouldn't be able to make informed choices about what they buy and whether it's worth their money.

'Think about the issues that matter to you and your family', advises John. 'Look for relevant information and/or labels and use them to help you make decisions about your lifestyle. Think about the overall consumption inherent in your lifestyle, how can you change what you do and how you do it? And don't generate waste — reuse or recycle whenever possible. Even a highly ethical or sustainable product will still have an impact!'

For more information about the Carbon Trust and its Footprint Label, visit carbontrust.com.



Community-benefit renewable energy is at an all-time high in the UK. The projects are increasingly attractive to local communities with an interest in clean energy and ethical investments — and could be on the verge of redefining our future energy mix.

Ed Davey has said ‘We’re at a turning point in developing true community energy in the UK’, and that for too long community energy has been a policy footnote, ‘with all the focus on big generators and individual households – all but ignoring the potential of communities to play a key role.’

Over 5,000 UK groups have worked to transform the way their communities use energy; can we really wrest power from the Big 6 and transfer it into the hands of the ‘Big 60 Million’? *PQ* talks to Toddington Harper, CEO of BELECTRIC UK and Big60Million, about why it’s time to give power to the people.

The big idea

Toddington comes from a family of renewable energy entrepreneurs; he grew up in the Middle East with a television powered by solar energy and wind turbines. With a smile, he recalls that it ‘went fuzzy in strong winds’. His father, Brian Harper, was one of the first pioneers in the solar energy industry, when solar panels were 99% more expensive than they are today. ‘He was building eco-homes in the desert of the United Arab Emirates in the late 1970s’, Toddington explains, ‘when one day somebody turned up with a solar panel and

university and the creation of FuelCellMarkets.com to implement its conclusions. The focus was expanded through LowCarbonEconomy.com, before Toddington completed the circle and returned to solar energy. He created his most recent initiative, Big60Million, to help produce homegrown solar energy, and to share the benefits of this solar energy with as many of the UK’s 60 million residents as possible. Toddington says it’s an initiative ‘born out

40,000 UK homes every year. The solar farms have a performance ratio much higher than the industry norm. ‘We typically work with thin-film technology, which has the lowest energy and carbon payback of any type of solar panel’, Toddington explains. ‘It allows us to produce energy more efficiently and reliably throughout the year. We manufacture a lot of the components ourselves; by using only the best materials and components, we’re able to create incredibly efficient solar power plants of the highest quality.’

For Toddington, Big60Million offers solar energy in an affordable and attractive financial model. It allows communities to share the benefits of the renewable energy generated at sites such as Willersey Solar Farm, which was the first Big60Million project.

Community investment

Big60Million’s concept is to develop, build and maintain best-in-class solar projects that offer wide-ranging benefits to communities — not least the opportunity to buy Solar Bonds, which offer attractive interest rates, and own a stake in each solar farm. Willersey Solar Farm is a 3.8MWp project that now produces enough energy for over 1,100 typical houses — or for those with electric vehicles to drive over 18 million kilometers per year.

September 30 2014 was an important day in the Big60Million calendar: it was the day the first Big60Million bond offering closed for Willersey Solar Farm. As Toddington predicted, people voted with their wallets: they invested

THE BIG 60

MILLION

POWER TO THE PEOPLE

said, ‘we need electricity to communicate with you. This provides it.’ My father shimmied up the pole, took his first look at a solar panel, and solar power has been a massive part of our lives ever since.’

Having grown up only knowing renewable energy, Toddington was pretty sure that this was how the world was powered. The illusion was shattered when he found out about fossil fuels during a school geography lesson. As it turned out, he discovered, no one else’s TV was powered by a wind turbine.

Ever since, Toddington’s mission has been to turn his childhood beliefs about how the world worked into a reality. His work has included a thesis on fuel cell technologies at

of frustration and the realisation that people will welcome more solar energy if it directly benefits them as well as the planet.’ His vision is for all 60 million residents of every town and village in the UK to have the opportunity to harness the wide-ranging financial, environmental and social benefits of a local solar farm.

The Big60Million was inspired by Toddington’s work as the CEO of BELECTRIC UK Ltd, a global technology market leader in the development, engineering, financing, construction, operation and maintenance of large-scale solar rooftop and solar farm projects, which currently generate enough energy in the UK for the equivalent needs of

in the solar mini-bonds — which cost just £60 each — and embraced the opportunity to boost their income while supporting the growth of homegrown community renewable energy.

When the first £4 million bond offering for Willersey Solar Farm in Gloucestershire closed, it was close to a million pounds over-subscribed. ‘The Solar Bonds issued for Willersey Solar Farm were certified by the Climate Bond Initiative as the UK’s — indeed Europe’s — first Climate Bonds’, Toddington explains, ‘and the solar farm will produce energy to power over 1,100 homes over the course of a year — every year for the project’s lifetime.’ On top of that, the Big60Million investment model proved that solid investment

performance can be compatible with socially responsible principles.

The idea that local communities are offered first refusal on investment in the solar projects is a marked departure from the traditional route, where profits would be snapped up by a small number of investors in the City of London. Those who invested in Willersey Solar Farm are set to receive 7% annual interest on their investment (before tax), which is paid twice a year: once before Christmas and once before the summer holidays. This is paid for five years; after that investors have the option to take their money out (in full) or reinvest in the project for a further period. It's the first of many Big6oMillion mini-bond offerings that Toddington hopes to roll out. While the opportunity to take part will be open to all UK residents, companies and SIPP pension schemes, a key principle is that bonds will always be offered to those closest to each solar project first.

'I'm not a financial adviser and I don't claim to be', says Toddington 'but with the support of Rockfire Capital, which is authorised and regulated by the Financial Conduct Authority, we were able to put together an offering which, according to Financial Website of the Year Thisismoney.co.uk, 'looks good when interest rates are at record lows and is much more than investors will get with a cash ISA'.

Toddington is so confident in being able to deliver the investment returns that he offered the assets of Willersey Solar Farm as security to bond-holders. This, he believes, 'is the right way to do business'.

Shortfalls and blackouts

Toddington stresses that community energy projects aren't 'better' than putting solar panels on individual properties, and that it's not an 'either/or' situation. 'I am delighted that there are more than 600,000 domestic solar energy systems already installed, and that our renewable energy capacity is growing', he says. 'However, the UK faces huge electricity shortfalls. We are facing blackouts, and that's a huge concern.' Toddington cites the depletion of North Sea oil and gas reserves, underinvestment in our energy infrastructure, nuclear power stations being decommissioned faster than they're going to be constructed and the fact that we've been a net importer of energy since 2003 as key issues for the UK energy market. 'To help reverse or mitigate that problem we need as much renewable energy as possible. If you're fortunate enough to have a roof that faces the right direction and you own your house, then of course we'd recommend you put solar panels on in.'

But not everyone's in that position — and not everyone with a suitable roof has several thousand pounds of disposable income to invest in that kind of installation. At £60, the price of a Solar Bond is similar to that of

premium bonds, making it a very accessible option. This is critical to Toddington's quest to find a mass-market solution with which to approach as many of the UK's 60 million people as possible.

While Toddington acknowledges that we all need access to clean renewable energy, planning permission for projects will only be granted if people in the area decide the project is suitable for the community. 'Suitability comes in many forms', says Toddington. 'It's crucial for us to make sure the site is sensitively located, and not on high-grade agricultural land'.

Biodiversity boost

Big6oMillion projects aren't all about the money; in future they will come in all shapes and sizes, from roofs and car parks to solar farms. In the case of the latter, less than 5% of the land underneath a solar farm has anything attached to it, meaning that over 95% of its footprint can be used for grazing, agriculture or other or biodiversity measures. 'According to the recent World Wildlife Fund study, over



BUSINESS

50% of the world's animals have been wiped out in only the last 40 years, largely due to destruction of habitat and intensive farming', says Toddington. 'If we can use solar farms to provide a sanctuary to protect wildlife then that's fantastic.'

With that in mind, BELECTRIC has planted over 20 acres of wild flowers in Willersey. 'Because we are only experts on solar energy, we're working closely with environmental partners such as the RSPB, British Beekeepers Association and FlowerScapes to deliver the biodiversity measures. We now have beehives permanently stationed on as many sites as possible, which in the summer months house over a million bees', Toddington says. 'We've put in birdboxes, batboxes, hedgehog boxes, hibernacula — you name it. And at the end

of the flowering season, we bring the sheep in to enjoy a nutrient-rich wild flower forage and trim everything down in the process. It's a fantastic opportunity for us, the food chain and for nature.' Local groups and kids from nearby schools have used the site for educational programmes; they've painted the various on-site animal sanctuaries and have even helped to plant a seed bank for future generations. 'We're really delighted about that', Toddington beams, 'and of course we're also excited that the bond has sold out — in fact, it was oversubscribed, which demonstrates that there's clearly an appetite for clean, ethically sound investments that provide benefits to as many people as possible.'

Tilting playing fields

When asked about the biggest challenge Big6oMillion faces at the moment, Toddington doesn't hesitate in his response: 'It's the government's involvement with the solar energy market'. He explains the industry is just as interested in getting off subsidies as the government is, and argues that the subsidies were only ever designed as a temporary driver until they were no longer needed. Having delivered incredible cost reductions of 80% in the last three years, the industry now only needs a further few years of stability to get off subsidies permanently. 'It's the rapid changes in government legislation and the uncertainty that creates that causes the problem', Toddington explains. 'With solar, it feels like we're not on a level playing field — and in fact that it's constantly being tilted against us.'

On the one hand, solar power is extremely popular with the general public. 'According to DECC, 82% of us support solar power', says Toddington, 'making it by far the most popular form of renewable energy. Yet the government keeps changing things and the messages are so mixed. Regulations are constantly tilting in favour of other technologies and away from solar energy. This is a real challenge. The best thing the government could do would be to leave the legislation in place and 'let us be' for a bit, to let us continue the path we're on, without changing everything so rapidly in support of technologies, like fracking, that are just such a bad idea'.

There are approximately 60 million people in the UK; if 60 million people could benefit from solar energy, then Toddington believes they'd support it. 'It's pretty clear from our first Big6oMillion project that we have a fantastic formula that benefits a lot of people', he says, 'but we need it to benefit as many of the 60 million people here as we can.'

For more information on Big6oMillion projects and details of how to get involved, visit Big6oMillion.co.uk.

There is no single or homogenous audience to warn about crossing ecological boundaries or failing to deal with the large-scale problems that human beings have created. All of us, whether as individuals making consumption choices, governments setting legislation or corporations making production choices, have cumulative common impacts and therefore we are all involved. However, trying to convey important information to every human being who is in a position to do something that will bring about change is a tall order.

A logical approach is to include the most significant and pressing issues within the taught curriculum and within the cultures of our schools. Then, within two decades, all of the people taking significant places of leadership, governance and management in our societies will be well informed to make the right choices. It is our children, those in our colleges today, who will mould economic and social systems for the rest of the century.

A deep understanding of why climate change, desertification, fresh water depletion, soil degradation and other ecosystem service damage really matter to us all is essential if these problems are to be recognised for what they are, and if they are to be taken seriously and dealt with appropriately.

I believe education in these areas needs to be across the full age range, and for regular consolidation it needs to be integrated into all subject areas in order to give it the profile it deserves. In this way the rising generations will then all know what needs to be achieved to tackle the considerable challenges ahead. As they take their places in our societies and stride forward into the 21st century, these future leaders and innovators will not then be travelling blindfolded.

Adults today, and particularly educators, have to be the ones to tell the children currently in our schools of the problems that we have created, or they will simply follow in the foolish footsteps of their forebears — that is you and me. I may offend you with this statement, but the truth is we have run up an ecological debt which our children will have to pay.

A statement by Dr James Martin which first made me really think — in fact it made me sit up in indignation — was this: ‘The public at large is spectacularly ignorant about many serious scientific issues.’

But when I investigated further I realised that he was right, and I was indeed ignorant. The ecological problems which are growing at a dangerous rate are little understood.

I can say this with confidence, because when I speak to groups of students and teachers, there is a void in their understanding of both the issues themselves and the consequences of leaving them unaddressed. There is a deep lack of understanding regarding the relationship between the environment on which we depend, its provision of our every need and our extravagant consumer culture.

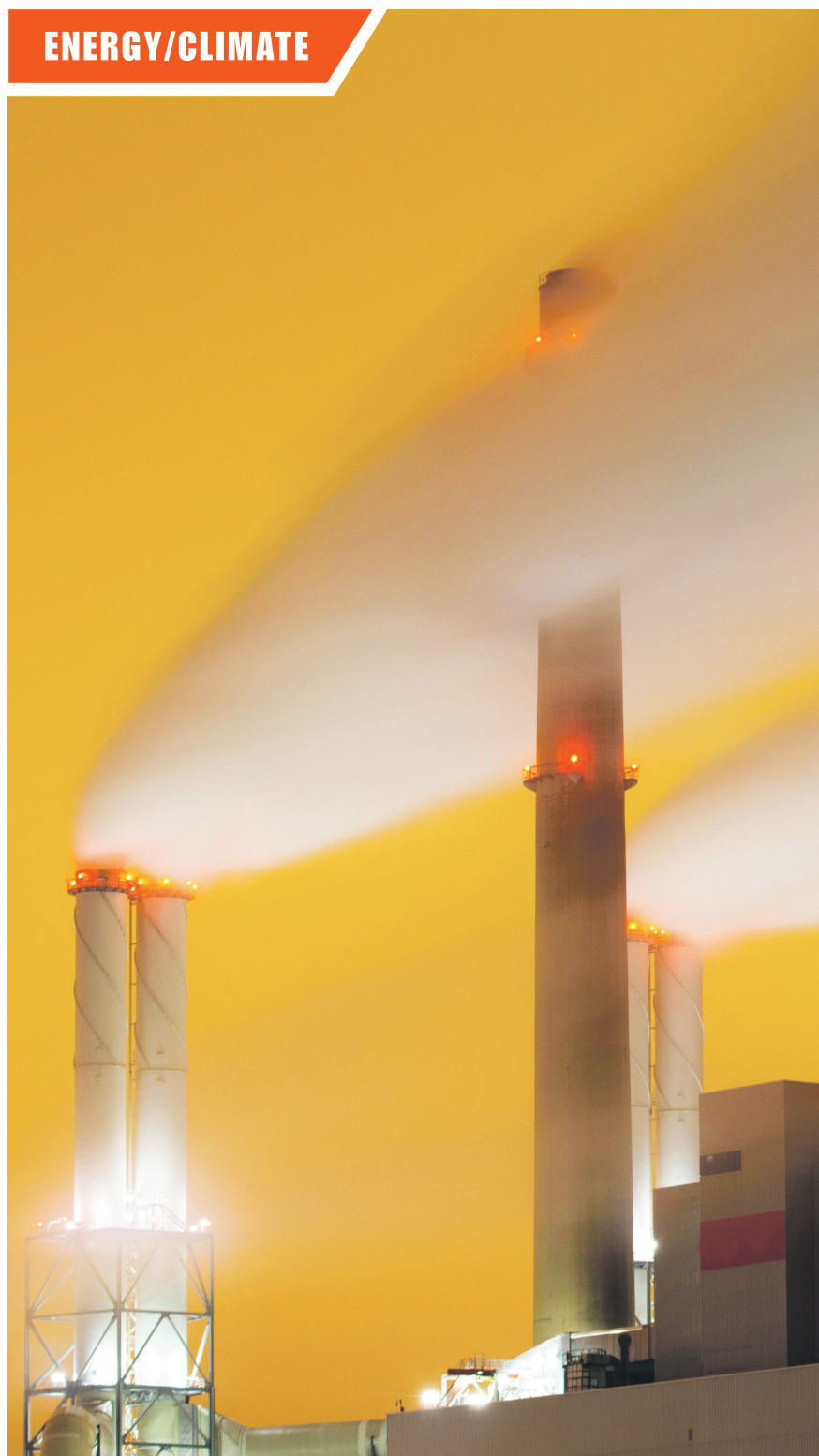
Can we ignore what is said to be an inevitable slide into serious economic, social and environmental problems, unless we act decisively to stop it? As one observer put it, ‘it would be the most significant shift in society that mankind will ever have seen.’ If so, can we allow this possibility without doing everything we can to avoid it? And how can we achieve this goal without teaching our children, the future pioneers of progress, everything we can about solving the problems?

H. G. Wells once said, ‘Civilisation is in a race between education and catastrophe. Let us learn the truth and spread it as far and wide as our circumstances allow. For the truth is the greatest weapon we have.’

As I have started to express, the truth is, unless thousands of the world’s top scientists are dreadfully mistaken, we are running at ever-accelerating speeds into very serious problems, and unless we take the urgent and significant action that is needed to prevent it from happening, our children and future generations will pay a huge price. The issues about which these experts are warning us are frighteningly absent from general public consciousness and, in the main, they are certainly absent from our school curriculums. Yet it is our children who



ENERGY/CLIMATE



FROM OUR ‘CHILDREN’S FUTURE AND THE STORMS AHEAD’, BY MARCUS CULVERWELL

need to know — perhaps more than anyone.

This is not scaremongering. It is not the rhetoric of alarmist environmentalists. It is

simply the opinion of many of the top academic minds of our day, and it is based upon clear scientific and mathematical data.

Despite having had a scientific background myself, and despite being the head teacher at a school with an excellent reputation, when I started looking more seriously into what I was slowly becoming aware of, I found it hard to believe how little I, or any of my contemporaries, really knew about the significance of climate change, water and food scarcity, ecosystem degradation and resource depletion.

Many of these contemporaries are head teachers who have significant positions in the world of education, but we all lacked an appreciation of the potential problems we, and pupils in our schools, were likely to be



DON'T HIDE THE

facing in the not too distant future.

It struck me that if those who shape our current education system are missing one of the most important ingredients from the educational mix, then we are simply not preparing children for the future that they are almost certainly going to inherit. Like training coal miners when the pits have already closed, or VCR technicians when the technology was long since obsolete, we are not preparing our students for the realities they will face.

In our schools we not only seem to be falling behind the needs of industry and business in a rapidly evolving world, but we are also missing this crucial ingredient, this vital ingredient for a healthy and stable future, and one that is gaining much traction in both higher education and in business.

This is an important factor. What universities and businesses are starting to see as important matters take a long time to filter down into schools. Therefore, the process of preparing our children properly to take up effective positions in such organisations is inadequate.



Dealing with sustainable development and all that it entails is not only of paramount importance for the future stability and prosperity of the planet, but also presents some of the most exciting opportunities for young people for employment in areas that will have profound impacts and offer real value. Jobs with global significance.

Yet, in the main, we are teaching as we have always done — business as usual (BAU) — seemingly oblivious to the many voices of top business experts, economists, investment analysts and systems analysts, as well as the raft of scientists and sociologists who are calling for us to accept the fact that it has to be business as ‘unusual’ now. We have to change the way we teach and subsequently the way we live and run our economic systems quite radically and decisively. We must swiftly move to systems whereby we no longer damage and degrade our environment, because the ramifications of all these interrelated systems all starting to fail are enormous. Educating our young people in order to prepare them to be instrumental in this cultural shift, and freeing them to use their creativity to bring about changes which we, their teachers and parents, may not even be able to imagine, must surely be of paramount importance.

Despite warnings from scientists and engineers, their warnings are not heeded and disasters result. From the eutrophication of the Black Sea to the flooding of New Orleans caused by Hurricane Katrina to the virtual depletion of fish stocks from our oceans, we only act after catastrophe has occurred and often when it is too late.

However, when it comes to protecting the Earth, our very life source, and protecting our global economy, our social stability and interconnected ecosystems from imminent disaster, it is a catastrophe we cannot allow. Not only will the repercussions in terms of human misery and tragedy be enormous, but if some of the world’s most eminent scientists are right, we will condemn future generations, starting with those currently in our schools, to a declining economy, a destabilised global community, declining security and a destabilised climate which will wreak ever-increasing havoc on mankind. These are not small issues.

Governments talk but fail to act with the strength or urgency needed. There appears to be much more emphasis on small short-term financial gains than in investment to protect our children’s future. It is sad, but probably true, that the current generation of students and pupils in our schools are the only ones who can effectively bring about the system-wide changes we need to see. This will only happen if they understand what the real needs are — and that will only be achieved through an education system which effectively conveys the needs to them. If this is to be effectively conveyed, then it needs to hold a prominent place in our school curriculums, our school cultures, and needs to be taught by teachers who themselves understand what is at stake.

Currently human beings are behaving with great complacency in the light of all the evidence, and we are failing to address these very serious problems. As I say, much of this is down to widespread ignorance, and I can say this with confidence because just two years ago I was just as oblivious to these colossal problems as are the majority of the population today. The other reason for the lack of action is that the enormity of addressing the problems is so great that it is easy to wonder where to begin. People also tend to believe that it is someone else’s responsibility, but we all need to take responsibility and we all need to get involved.

This is why my call is to those in a position to influence education from whatever direction. It is a rallying call to everyone who has the opportunity to guide curriculums and change school cultures. And it is a challenge to everyone who will ultimately inform the people who hold the keys to unlocking new possibilities for a sustainable future — the children and young adults in our schools today.

If H. G. Wells was right, we need to make sure education wins the race, not catastrophe!

Everyone is talking about the end of capitalism together with how we transfer to a postcarbon economy. The answer is simple: what's good for the planet is good for people.

I wish to quickly explain how capitalism runs the world. Give you a perspective. If you hold onto this perspective then you can work everything out for yourself, even down to the detail. Know what you should do. Everything is connected.

I've written everything down because I want to get it right. One step at a time.

Central Banks: We have to start with the central banks which control the world's economy. They do this by creating debt. (It's actually a global Ponzi scheme.)

The central banks are private banks. The US Federal Bank is one; they are organized by the Bank for International Settlement (BIS) in Zurich.

These central banks print money. Today they do this by pressing buttons. They create virtual money out of nothing.

This money is loaned to other banks, monopolies and governments. It has now become a debt.

The central banks prefer it if the loans are never paid because what they want is the interest – which accumulates out of all proportion to reality.

This means they always have fantastic amounts of money to lend and they don't have to print virtual money except in an emergency.

It also means that the central banks come to own everything – because they own the debt. How often have we heard of a poor country selling its assets and natural resources just to keep up with the interest payments on the debt it has been forced to borrow?

Monopolies: The monopolies work this system for the central banks. The monopolies do the actual job of wrecking the planet and exploiting its people (cheap labour). They suck up small businesses.

Capitalism: This economic system is called capitalism. Capitalism began 200 years ago and is now global. It is coming to an end. It is not possible to continue indefinitely using up the world's resources.

Capitalism is run on fossil fuels – which are more difficult to get and running out. You can't have capitalism without fossil fuels. It began with coal and ends with oil and gas.

Environment: The conventional supplies of fossil fuels which are easily accessible have all been discovered. They are finite. Science tells us that we must leave 80% in the ground. Otherwise, runaway climate change is inevitable.

We are in a trap: we can't suddenly stop using these fuels but we must phase them out, as soon as possible, in exchange for sustainable energy.

Sustainable energy: Sustainable energy is cheap and infinite. It will be a base for a different economy, a fair economy founded on true human values. We will develop the world we want.

Don't forget that capitalism is a war economy: it profits from war. Its aim is to own everything.

We would prefer cooperation and community. Capitalists prefer competition and death.

Governments: Governments serve the central banks and the monopolies. They form a triad. This triad is desperate to hold on to capitalism. They have resorted to extreme measures, e.g. fracking.

Now that capitalism is ending, the fact that it is a Ponzi scheme is more clearly exposed.

Governments help the central banks to conceal this by imposing austerity; pretending that we can control the debt.

The debt accumulates and it can never be paid back. A child unborn already owes an enormous IOU. Debt is simply a promise to pay in the future. Austerity is a proof of government contempt for people. They will suffer: we will continue.

Meanwhile the central banks are showing their hand by printing emergency money.

They bailed out the commercial banks to keep the system going. They might as well print more virtual money and tell governments to stop the austerity. It won't make any difference. If capitalism continues, it will crash. The dollars will be useless. All money will be useless.

Democracy: Governments do not care about people. They care only for their own power and that lies within the triad. In England this applies to all the main parties. There is nothing to choose between them. There's no point in voting for any of them. That's why I say there is no chance of immediate democracy in England. Old people vote from habit.

Young people: We have to build the minority parties. The Green Party has a sane and practical agenda.

We must fight the main political parties. Everything they say is rubbish. Everything they do is dangerous.

Demonstrate: Time is running out. Come out and be counted. Numbers = People Power.

We want a government that's on our side. We must oppose present governments to get the government we want.



THE END OF CAPITALISM & HOW IT RUNS THE WORLD

BY VIVIENNE WESTWOOD

URGENT!

These are difficult days

We must save the world – now.

Or lose

The change from capitalism to a green economy is easy

We know what to do

What's good for the planet

Is good for people

Vote Green.

Vivienne Westwood ♥



CLIMATEREVOLUTION.CO.UK
FACEBOOK.COM/JOINTHECLIMATEREVOLUTION
TWITTER @CLIMATE_REV

Want to save energy, slash your power bills and reduce your carbon footprint? Of course you do — it's a no-brainer. The technology and services exist to do all three things in one shot — so why aren't more people using them? And given the impact on the bottom line, why, for that matter, aren't more companies?

There are some barriers but they're nowhere near as bulky as they used to be. PQ talks to Mark Sait, CEO of savemoneycutcarbon.com, about the challenges facing consumers and organisations that have the will to do things right — and how they're overcome.

The next big thing

If anyone can spot a fast-growing trend, it's Mark. He's helped to establish and build companies in some of the biggest areas of consumer technology — from broadband and mobile to Web 2.0 — and has watched them snowball into highly profitable international brands. One example is iBAHN Europe, which Mark launched after clocking an opportunity to provide broadband access for travellers. The company grew — and quickly: it was soon turning over \$100 million and operating in over 50 countries. 'Just like iBAHN where we spotted broadband access as the next big thing for travellers', says Mark, 'we started to research what might be the next big challenge and how we could set about building a business to service this need.'

It turned out that the next big challenge was around water and energy consumption, and how to reduce both in buildings that are in constant use. 'We launched savemoneycutcarbon.com in 2010 with a focus on hotels; as they operate 24/7, they use huge levels of energy and water', explains Mark. 'We expanded our business to any building that operates around the clock, from hotels to hospitals and even some home environments.'

It may come as no surprise that Mark's latest venture is growing fast, too. Homes, warehouses, hotels and organisations — from sectors including healthcare, retail and education — are all benefiting from lower bills, reduced energy consumption and a smaller carbon footprint. 'The scope is unlimited', explains Mark. 'Any building which consumes energy or water should benefit from our services, with rapid return on investment and continued savings from efficiencies year after year.'

Taking control

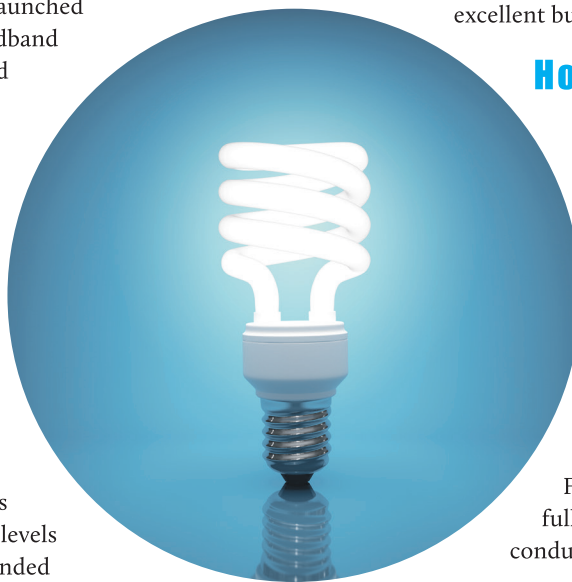
Homeowners can scour savemoneycutcarbon.com for energy-saving products that have already helped the company's bigger customers, from the NHS and MoD to Carlson Rezidor Hotel Group and Macdonald Hotels, save millions of pounds in water and energy bills. 'You can't search in the Google box for what you don't know exists', explains Mark. 'Many of our products and the savings they can generate are still relatively unknown in the market, so we're targeting very strong, rapid growth across the board.'

Mark remembers starting out with a focus on the hospitality industry. 'We quickly saw that every business, organisation and household would need to find ways to cut their costs and be more sustainable', he told PQ. 'That's proved to be the right vision as we work with a wide range of companies, organisations and consumers who all want to help protect the planet while taking back control of rocketing utility bills.'

Ever-rising energy bills are just one of the areas driving demand

for savemoneycutcarbon.com. 'The era of cheap carbon is definitely over', says Mark, 'and the cost of energy generation will continue to rise.' But on top of that, Mark has also identified a 'genuine and growing acceptance' that we need to be more environmentally aware; 'sustainability is now centre-stage for companies', explains Mark. 'Their customers increasingly want to see this at the heart of all corporate social responsibility strategies.'

On top of the growing consumer demand for sustainable business, Mark highlights that internal eco-advocates in CSR departments and new external pressures, such as mandatory emissions reporting, are also helping companies to shift towards more environmentally friendly practices. 'The need to control costs and the clear commercial benefits of going green are very strong forces for eco change', adds Mark. 'We know that lighting costs soak up around 40% of a commercial building's costs and that by reducing energy use by 25%, a company can see a bottom-line benefit equivalent to a 5% sales increase. Being green makes excellent business sense.'



How it works

Mark's company helps its customers with everything from efficiency measurements to the supply and installation of water- and energy-saving products. 'Ultimately for any of our customers, big or small, it's about making sure they see a reduction in their bills equal to or greater than we calculated', he says. 'A savings calculator is linked to all the products on the savemoneycutcarbon.com website, and calculates potential savings immediately. For businesses and larger organisations, a full energy and water survey is recommended, conducted by our Field Services team.'

The data collected by the team is plugged in to a financial modelling tool which flags where savings can be made and indicates return on investment. 'This is then overlaid with other key details that have an impact on real savings and paybacks', explains Mark, 'such as usage assumptions and local utility prices together with reductions in maintenance costs. Post-installation smart monitoring provides ongoing proof points of savings, and helps to fine-tune the sustainability programmes.'

The potential savings are huge. An LED lighting retrofit can generate energy savings of up to 85%, and offers a rapid return on investment with ongoing savings on energy and maintenance costs. One customer, Carlson Rezidor Hotel Group, saved over £250,000 in energy costs, as well as the associated reduction in carbon emissions, through a switch to LED installations. Intelligent controls for heating ventilation and air conditioning have reduced energy costs by up to 45% for another customer and one hotel group, The Hotel Collection, managed to save £100,000 inside eight months from a £65,000 investment in eco showers, eco taps and tap aerators. The additional benefits from reduced water heating bills, plus the associated reduction of the group's carbon footprint, were a large added bonus.

Savings at home

As well as the eye-watering savings to be made through large-scale efficiency measures, energy-efficient installations can slash homeowners' bills, too. According to Mark, switching traditional lighting for LED lamps could cut £650 off a typical three-bedroom home's annual electricity bills, and reduce its carbon footprint by 50-70%. Eco showers,

eco taps and tap aerators cut water consumption by over 50%, and every household — even those that aren't on a water meter — would gain through reduced water heating and pumping costs. The planet would also benefit from the reduction in carbon emissions that would come as a result.

'For consumers, the initial cost of LED lighting can cause hesitation', explains Mark, 'but when we explain that the LED lamps will usually pay for themselves within 18 months, then continue to deliver energy savings of up to 85% for a decade and more, the decision is made much more simple!'

For business, resistance to LED lighting can come from a bad experience of experimental installations of cheap, low-quality products. 'Not every LED is the same and quality products will always outperform "cheap as chips" varieties', says Mark. 'We don't go near the budget end, having seen the frankly awful light quality and average lifespan. One of

what they can within a confusing environment, but that we need crystal clear guidance and strong support from government to go further. 'The Green Deal has been extremely disappointing', he says. 'It's complex and very limited, with quite substantial investment and longer payback times. A new, comprehensive, more supportive deal is sorely needed right now.'

According to Mark, people need more than a 'gentle nudge' and a kind word of encouragement. 'We've seen a massive education programme this year encouraging people to switch suppliers to get a better deal', he says, 'but little real progress on ensuring that people have detailed information about energy efficiency in the home. The little things make a big difference.' Mark's solution would be to put solar panels on every building and install products that reduce the water and energy we use: that, he says, would be 'a true win-win'.



our chosen partners is Soraalighting; you get a beautiful natural light from the high-quality, cutting-edge products from this Nobel Prize-winning team. They're cost-effective and extremely energy-efficient bulbs.'

A confusing environment

According to Mark, every business and organisation — across every sector — is growing more aware of the need to save energy and manage water consumption. 'Historically, energy and water costs have been a very small portion of operating costs', says Mark, 'but this is changing rapidly as the cheap energy era comes to an end — a fact that the government's been publicising over the past two to three years.'

But it's also true that national energy efficiency policies have confused both businesses and consumers, leading to lower take-up of sustainability strategies. For Mark, the UK really needs a coherent, joined-up national energy efficiency plan that promotes — and financially supports — the whole range of energy- and water-saving solutions. 'Everything from LED lighting to eco showers and taps, tap aerators, intelligent pumps and smart lighting and heating controls should be promoted, as well as effective insulation and efficient heating', he says.

Mark acknowledges that 'a great many consumers' are already doing

Consumer power

While the government could be doing more, Mark has confidence in the power of collective action. 'I think we're already seeing the "whip of the market" as consumers vote for sustainability with their purses and wallets', he says. 'This is concentrating the minds of many brands, and in the future I'd like to see a collaborative relationship developing between company and customer.' With the rise of social media and other networks, the conditions for greater collaboration and communication between companies and their customers are already in place.

A recent five-continent report from Marketing to Mattering found that 72% of us believe business is failing to live up to our expectations. 'Studies clearly indicate the issues facing chief executives around the globe', says Mark. 'Two-thirds of them admitted that their companies were not doing enough to address sustainability challenges. There's an urgent need for business leaders to find better ways to develop sustainability strategies that reflect more accurately the hopes, expectations and needs of their customers.'

For more information on the products that could help cut your energy and water use — and give your bank balance a boost — visit savemoneycutcarbon.com. You'll also be able to calculate the kinds of saving possible in your home.

Urbal life and nine-to-five desk jobs are leaving us disconnected from the natural world we evolved in — but by transforming the space around us we can bring the connection back, deepen it and be better off as a result.

PQ speaks to Oliver Heath, eco-designer, writer and TV presenter, about a new approach to design that's bringing back our love for life.

'On some level', says Oliver, 'we all know the deeper benefits to our health and wellbeing from being in or close to nature; be it a walk in the woods, looking out over rolling hills, sitting next to a roaring log fire or even just the company of pets.' Biophilia — which quite literally means 'love of life' — recognises this primitive attraction to our natural environment, and was popularised by American biologist Edward O Wilson when he started to notice society's drift away from it.

'Biophilia refers to our innate attraction to nature and natural processes', Oliver explains, 'and concerns our residual genetic inheritance from the hundreds of thousands of years we've survived and thrived in the natural world — either as hunter gatherers or as an agrarian society.'

Urban sprawl

Our drift towards urban lifestyles, which really got going after the industrial revolution and has gathered pace ever since, means we're increasingly cut off from our natural habitat, with many of us spending minimal time outdoors. Our primitive and innate connection to nature has been severed by a lack of exposure to plants and trees, a reduction in the dynamic natural lighting conditions that impact on our circadian rhythms and the rarity of views out onto woods, water and open spaces.

Oliver uses our wider approach to environmental conservation as evidence that, by embracing urbanisation, we've unwittingly undervalued nature's impact on our health and wellbeing. 'We have decided, to our detriment, that our cities and nature are two quite separate spaces that shouldn't mix', he says. 'One is clean-lined and pristine, one is dirty and dangerous. But let's be honest — which is which?'

Humans are incredibly adaptable; we're being cooped up in shrinking spaces — with less and less experience of our natural home — and we're still managing to survive. But this way of living, in an 'always on' society that bombards us with information to which we're constantly required to respond, is far from ideal for our health or wellbeing. We lose touch with our emotional landscape and find it harder to focus, concentrate, socialise, listen and restore. 'What is clear is that, as this pattern continues, we're similarly seeing a rise in stress', says Oliver. 'Stress is a known cause of mental health and cardiovascular related illnesses, which the World Health Organisation has noted will be the two key contributors to illness by 2020.'

Re-imagining design

In the design world, biophilia is being used to explore the concepts behind our deep attraction to nature and natural processes. 'Biophilic design principles can be used to create a physical landscape that connects to our emotional needs', explains Oliver. 'We can then create spaces that serve us better, with numerous benefits. It's as simple as that.'

A biophilic approach can be used to improve everyday products, transform the spaces we interact with and invigorate us as a result. It can provide secure, restorative places to regroup our mental and physical energies in preparation for new tasks ahead, with benefits including improved energy levels and concentration, a sense of calm and greater focus. These are the emotional and physical needs that apply to most of

the spaces we inhabit, from homes and schools to healthcare facilities and offices. 'As an emerging science and style', says Oliver, 'it's a subject that's becoming increasingly important to a number of organisations, including Amazon, Google and Apple. I'm currently working with Interface, a visionary carpet manufacturer and sustainability pioneer, to promote the many benefits that biophilic design can have in the built environment.'

The benefits

Studies in the US have uncovered measurable benefits in a number of different types of building where biophilic principles have been applied. Hospitals incorporating biophilic design principles have demonstrated improved rates of post-operative recovery — with less pain, 8.5% shorter stays and 22% less medication for their patients. There are benefits for everyone, from the patients and doctors to the visitors, and staff are

able to enjoy greater focus. 'I love the playful and natural qualities designed into the Crown Sky garden at the Chicago Children's Hospital', says Oliver, 'and the way St Mary's School in Oxfordshire, by Jessop and Cook Architects, allows natural light to flood in, with views out onto nature and plenty of natural materials inside.' Schools have demonstrated that children learn 20-25% faster when natural light is present.

Offices can use biophilic design principles to improve levels of productivity and creativity, while also reducing absenteeism and 'presenteeism', where employees are at work but not focused on the tasks in front of them. 'When you consider that staff costs represent 90% of many business expenses', says Oliver, 'then improving staff health and wellbeing can clearly create large improvements in profit for relatively small outlays.'

The biophilic home

For Oliver, there are four key biophilic principles that can be applied to the spaces we inhabit, from homes and offices to schools and healthcare spaces, that allow us to perform better.

The first is natural light, which helps govern our circadian rhythms. 'Maximising natural light is essential to our health and wellbeing', says Oliver, 'whether it's through windows, roof lights or glass doors.' The second is a view out onto nature, which Oliver explains 'can improve focus and create a greater sense of calm'. You don't need a national park on your doorstep; a garden, green roof space or terrace would do fine. Natural materials are also a must; studies have shown that natural materials, patterns, products and textures have a calming and restorative quality, with a surprising number of additional positive side-effects. 'Lastly', says Oliver, 'you need to have a safe space to retreat back to. We all need somewhere to sit and restore energy and focus after a period of activity. This could be a quiet space in an office or a favourite armchair next to a roaring log fire.'

On top of the immediate and tangible benefits to productivity and creativity, Oliver explains that biophilia is also about 'understanding that our wellbeing — both psychological and physiological — is intricately connected to that of the environment we have emerged from.'

Once we understand this, we can measure the many tangible benefits in a range of spaces, such as hospitals, schools and healthcare facilities, and start to put a financial value on them. 'Sadly', Oliver concedes, 'it seems that only by placing a monetary value on nature, and linking it to our health and wellbeing, can we really impress on our society the value of preserving the environment on a wider scale.'

For more information on Oliver Heath's eco-design, interiors and architecture, visit oliverheath.com.

BIOPHILIA

OLIVER HEATH ON THE NEW APPROACH TO ECO-DESIGN

HOME/GARDEN





OLIVER'S TOP 5

There are plenty of ways to bring 'biophilic' benefits to your home. Here are Oliver's top suggestions.

Encourage a connection with dynamic forms of natural light. Make sure your curtains don't block light. Incorporate roof lights or sun-tubes into spaces and fit glass into doors — especially those that connect to exterior spaces.

Make visual features that will lead the eye to exterior spaces and fill them with nature — be it plants, water features or elements that will attract birds and other wildlife.

Incorporate green leafy plants into interior spaces. Many, such as ferns, spider plants and moth orchids, will even remove toxins.

Use natural materials, products and textures, such as timber wall panels or even floor surfaces with natural qualities.

Create safe, warm, cosy spaces for relaxing and restoring your energy. Think spaces with big armchairs, blankets and fleeces, a wood-burning stove, side tables with soft low-level lighting and gentle, calming smells, like lavender.



When Alison and Matthew Grey decided to buy a Victorian pumping house in Newgate Street village, near Cheshunt, Hertfordshire, they agreed to allow Channel 4 to follow the project's progress for the TV series *Restoration Man*.

The programme, which aired at the beginning of January, followed the Greys throughout 2013 as they struggled to keep costs down; they wanted to create a modern family home without compromising any of the building's design integrity.

'Our biggest challenge was deciding how to replace the windows, which are a major feature of the building', explains Alison Grey. 'George Clark, the presenter, called us restoration heroes because we spent almost half our allocated budget on steel window frames which were much more sympathetic to the original design than the UPVC ones we inherited.'

A large chunk of the programme focused on the couple's angst over the cost of metal versus plastic or wooden window frames.

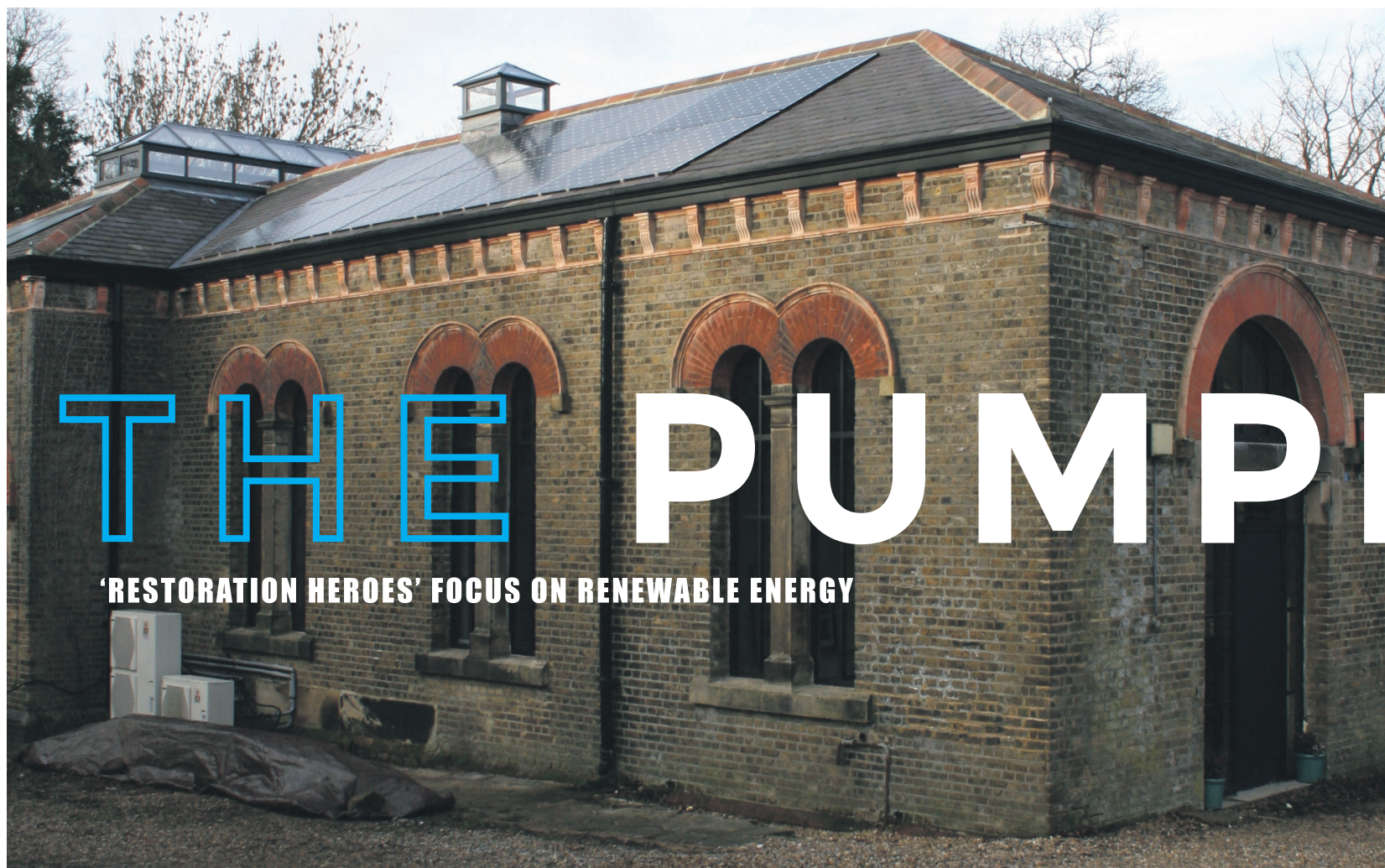
Thanks to its certification under the Microgeneration Certification Scheme (MCS), AOS Solar's customers are also eligible for any available government-funded grants, such as the Renewable Heat Incentive (RHI).

'When we spoke to our installer about heating and looked at the options on the market, there was a clear winner', said Alison. 'Ecodan was streets ahead of other heat pumps in terms of performance, flexibility and support from the manufacturer.'

The building

Built around 1888 on Darnicle Hill, the pumping house drew water from an aquifer via a 250ft bore hole that served Cheshunt and the surrounding area. It was decommissioned in 1970 and passed through various owners before the Greys bought it for £750,000 in 2012.

The late Victorian industrial building still has many of its original features. The stock brick walls have rubbed red brick window and door



Unfortunately, that meant that the show didn't cover Alison and Matthew's commitment to installing renewable technology in as much detail as they'd have liked.

Renewable heating

'We filmed quite a bit on why we had chosen to install an Ecodan heat pump for our heating, photovoltaic panels to help generate electricity and a Lossnay heat recovery ventilation unit, but most of this ended up on the cutting room floor', says Alison.

In fact, the couple spent almost as much time on their research into renewable heating as they spent researching the windows. 'We knew that heating a building of this size would be extremely costly without some form of sustainable energy', Alison explains.

The Greys sought the advice of Tony Owen of AOS Solar, installers of renewable technology across Hertfordshire, Essex and North London.

arches, terracotta dressings and decorative console brackets supporting the cast iron gutters.

During the initial stages of development the family lived in the old boiler room, which had been converted by the previous owner. Phase one saw the complete renovation and refurbishment of the building's pump room as the Greys stripped everything back to the bare brickwork.

'Our first step was to take everything back to basics and see what we could retain and incorporate to give the building the credit it deserved', says Alison, who project managed most of the renovation while on maternity leave following the birth of the couple's second child.

The original glazed brickwork and sandstone detailing around the windows were renovated by experts, and became a feature in the new clean and modern design of the family home. This is one of the simple things that, for *Restoration Man* presenter George Clark, showed Alison and Matthew were ticking all the right boxes to get a sympathetic but modern restoration.

The Greys designed the main body of their home on two levels with a split across the tall, arched windows to provide light on both floors. Upstairs, the roof beams were cleaned and renovated to provide a beautiful feature and downstairs, the couple rescued two huge sandstone blocks which had been used to anchor the steam pump engines. These were cut up to provide floor tiles for the new downstairs bathroom, which helped retain some of the history of the building.

Final costs

After spending almost £80,000 on a new roof and new sewage facilities to make the property habitable, the Greys added 14 photovoltaic panels, two solar thermal panels and a 5kW Ecodan unit for their hot water. The couple had originally planned to spend £60,000 for the basic build of phase one, but in reality they spent £30,000 on the fittings, £30,000 on the windows and around £80,000 on the basic build, meaning the Greys had to re-mortgage halfway through the project.

pump.

‘The first thing that comes to mind with the Ecodan air source heat pump’, Alison told *PQ*, ‘is that I never feel any guilt over heating such a large house! Due to the efficiency of the air source heat pumps and solar system coupled with the government Feed-in Tariff, we are now energy bill neutral. The alternative in such a large building — it’s two large double-height rooms of 12x6m each — would be an entirely unsustainable monthly energy bill.’

‘There’s more than enough capacity in the equipment to sustain us through sub-zero temperatures’, Alison added. ‘Coupled with the underfloor heating, managing a warm house is not something we need to think about. We just set the thermostats to 20 degrees and the system ensures the house is kept to temperature.’ In their previous home the Greys had used a gas combi boiler. ‘It was easy enough to use and not too expensive’, Alison says, ‘but it worked on a timer rather than a thermostat so it wasn’t all that efficient or effective — if it was cold



George Clark called them true restoration heroes because of their refusal to compromise on design and quality. He presented them with original prints of the inside of the pump house when they held a party to celebrate the completion of phase one with family, friends, suppliers and the Channel 4 crew.

The new home has a 14kW Ecodan for its underfloor heating and a 5kW unit for the hot water supply. Alison Grey is confident that the heat pump system will pay for itself within a couple of years. ‘The heat pump and underfloor heating system combined did cost more than a traditional carbon-based system would have cost to fit, but the running costs will be less than half of an oil or LPG system and we are also eligible under the Government’s Renewable Heat Incentive’, she explained.

RHI payments are guaranteed for the next seven years and could provide the Grey family with hundreds of pounds every three months. On top of that, they will help to reduce the payback period for the heat

outside it wasn’t quite warm enough inside and if warm outside it was too warm inside.’

The Domestic Renewable Heat Incentive — a world-first scheme to support our shift towards renewable energy — provides seven years of government payments for the heat generated by low-carbon systems. The tariffs range from 7.3p/kWh for air source heat pumps to 19.2p/kWh for solar thermal.

Mitsubishi Electric has developed a heat pump calculator, the Ecodan Selection Tool, which allows anyone with an interest in heat pumps to get an insight into how this technology could benefit any building, whether it’s a single domestic dwelling or a large commercial project. To see how much your property could benefit from a heat pump through the Renewable Heat Incentive, visit heating.mitsubishielectric.co.uk/ecodanselectiontool.



More and more people are changing their shopping habits and favouring small-scale suppliers over the soulless glow of the supermarket. Some have always supported their local independents, but there's also a steadily growing tide of consumers who are starting to feel there's something wrong with the way things are.

According to Deloitte's *Global Powers of Consumer Products 2014* report, net sales of the world's 250 largest consumer products companies were in excess of \$3.1 trillion in the 2012 financial year, meaning an average company size of \$12.5 billion. Only companies with sales of over \$3 billion in 2012 made it into the ranks of the top 250 'global powers' — and only seven of those had origins in the UK.

There's something very, very unsettling about that. It's not just about where our money's ending up (and where it's not) or what it's being used for (and what it's not) — it's also about the situation on the ground for the suppliers and producers.

The reality

Defra figures indicate that, compared with 1945, the average cereal farm now produces three times more per hectare. Better management techniques and improved plant varieties have had a significant part to play in this — but, according to an Andersons report, 'the use of synthetic pesticides has both enabled and protected these gains.'

Some of these pesticides, grouped with other Plant Protection Products (PPPs), are now being threatened under EU legislation; if banned, the total UK farming

income could plummet by £1.73bn — a 36% drop in overall profits — and mean 'iconic' British foods such as frozen peas, apples and fresh carrots 'would be severely curtailed'. The report suggests the impact on the food processing and manufacturing sector's associated workforce would be job losses of 35,000 to 40,000, while the agricultural supply industry, including wholesalers, could face job losses of 3,500-4,000.

The Food and Agriculture Organisation (FAO) of the UN predicts that there will be 9 billion people in the world by 2050, and that a 70% increase in food production will be required to keep such a huge population

alive. At the same time, University of Sheffield research suggests that the UK only has 100 seasons left in its soil due to intensive over-farming.

Rising demand and dropping food prices mean farmers and producers need to find new ways to get maximum yield from the resources available. A cow in a mechanised, American-style indoor dairy — the likes of which are now making their way to the UK — can produce over 11,000 litres of milk, compared with

**THERE'S A LOT OF
FUN TO BE HAD
WHEN YOU STAY
INDEPENDENT**



the 4,000 litres per year produced by the average British cow 40 years ago and the average 7,327 litres produced last year.

With global milk prices plummeting — and UK dairy farms closing as they find themselves selling milk for less than it costs to produce — this style of dairy may soon become the norm in the UK. The *Guardian* recently reported that the current cost of production for a dairy farmer supplying to Tesco is around 31.5p per litre; the best milk contracts pay dairy farmers 32p per litre, while the worst pay just 26p — representing £90,000 in lost revenue to the average UK dairy farmer. DairyCo figures for the 2012/13 milk year show a decrease in England's Dairy Farm Business Income (FBI) of 40.5% when compared with 2011/12.

In order to keep driving supermarket profits, something will have to give; either the quality of the products we end up consuming will have to decrease, or the price paid to the producers will have to drop. Those fighting to maintain high standards of animal welfare and preserve environmentally sustainable techniques could well go out of business unless we're prepared to pay more to fund these principles.

Shifting attitudes

But on the surface, it looks like we do. We're turning our backs on brands that seems to control the biggest chunks of the market and are instead opting to support independents with more style, flair and personality — and which produce healthier goods with a focus on more sustainably sourced ingredients.

The shift hasn't gone unnoticed; some of the most powerful brands on the high street have been given a facelift in a bid to show customers that they've changed course and that they, too, are becoming more eco-aware; the lurid red and yellow of McDonald's has been replaced with a more muted and self-conscious green or black, while Starbucks has dropped the company name from its logo altogether.

Still, we're not daft — and deep down the mega-brands know it. When you've spent fortunes on building up a brand identity that blazes from every major high street and calls to something deep in the consumer consciousness, it'll take more than a lick of paint to change it.

Instead, some major players are accepting that they'll never have the same credibility enjoyed by smaller players; rather than trying to compete, they wait in the wings while independents establish a reputation in the market and then simply buy them up. In some cases, the option to buy may have been agreed a long time beforehand, with the smaller company enjoying investment and support from a global competitor until it's grown into a loved name with a loyal fan base — and is worth buying.

Tim Mead, CEO of Yeo Valley organic dairy, has seen this happen time and again. 'It's a modern phenomenon that the greatest danger to the top brands in a sector comes from others that have not yet been born', he told *PQ*. 'As a result, larger branded companies have allocated resources to spot and take stakes in potentially successful start-ups; their involvement hugely increases the brand's chance of success, when compared with the start-up trying to go it alone and grow while also remaining independent. Innocent was helped along by Coke and Green & Black's by Cadbury.' When Cadbury was bought by Kraft foods, Green & Black's became financially controlled by the second-largest food company in the world.

Behind the brands

This muddies the water for consumers who are trying to make conscious decisions about which brands to support; companies that appear British and independent could have been snapped up by international businesses, or may never have been independent in the first place. Rachel's Organic yoghurt has a great Welsh heritage and has become a British institution, but is owned by Lactalis, a group with a self-confessed 'commitment to large-scale milk processing in all its forms'. Seeds of Change started life selling ethically traded organic seeds, but was snapped up by Mars when it branched out into other areas.

The upshot is that every pound you spend on brands you want to support could well end up in the accounts of the companies you're trying to avoid. 'Most bigger players have access to market capital as opposed to debt', explains Tim. 'They also have a stable of brands, so a success rate of 50% is acceptable. They win some, they lose some.'

Yeo Valley is one British brand that has retained its independence and all the freedom that comes with it. The Mead family has been farming in Somerset since the 1400s, and Mary and Roger Mead moved to Yeo Valley over 50 years ago. They started out with just 30 cows, a few sheep and some arable crops — and the farm has now grown into to the UK's number one organic dairy brand.

We went to visit Tim Mead and his wife, Sarah, to find out how they'd been able to succeed where other brands had failed; 50 years after setting down roots in the valley, the independent, family-run farm has received three Queen's Awards for Sustainable Development and the Good Dairy Award from Compassion in World Farming. The Meads have also set up a field of solar panels to power the milk bottling plant and a crop of elephant grass, a sustainable biofuel for the boiler in the farm's head office.

Points of difference

The farm has only ever had British Friesian cows. Lots of farmers went all-American in the '70s and '80s with Holstein herds that promised more milk, but — as I suspect is the case with most things they do — the Meads took the common sense approach: British Friesians are more fertile, live a lot longer and are better suited to the farm's grass-based system.

Cows' needs change with age and with the seasons, but organic cows always need organic feed — the vast majority of which is produced from the farm's acres of arable land and grassland. Once weaned, the cows go outside to graze clover and grass in the fields, and are also fed a mix of silage ('pickled grass — it's delicious'), crimped wheat and other cereals. Pretty much all of the feed's grown at the farm and individual cows are given their own special mix, depending on what they need each day.

The Meads also helped to form the Organic Milk Suppliers Co-operative (OMSCo) in 1994, after The Milk Marketing Board — which bought all the milk in Britain — was broken up. It was suddenly down to the farmers to find new buyers for their milk; Mary and Tim talked to a handful of local organic farms about pooling their milk together so they could buy large volumes for their famous Yeo Valley Yeogurt — and so OMSCo was born.

The farm also grows organic food to feed its staff, uses 100% green electricity and manages 50 acres of land as habitat for wildlife. The list goes on. But there's something else that stands about this family; there's no sense of outrage when we talk about companies selling out without giving their customers a heads up, and no complaints about the injustice of competing in a market where the odds are heavily stacked against the success of independents.

Instead, Tim and Sarah seem more interested in having a laugh, spending decent time together as a family and making the working environment at Yeo Valley as much fun as possible. We headed to the local pub for a Sunday roast, went for live music and a dance at a great local festival ('Mini-V') and had time to enjoy the farm's on-site café and stunning landscaped gardens — which, in line with the Meads' tendency towards openness, was recently opened to the public.

Photographs of all the things that make the Meads smile — from the rather handsome gardener to cover art from their favourite albums — line the corridor leading into a bright meeting space with spectacular views across the valley. The atmosphere is open, honest and genuine — a quality that can perhaps only ever be created by a group of people doing everything they think is important, and doing it exactly how they want.

It's not impossible to do things differently, and it was quite obvious from our visit that there's a lot of fun to be had when you do.

Andrew Cooper spent the last 10 years sharing his love for juices, smoothies and raw food with friends and family — and watching their lifestyles and general health improve as a result. As the demand for his concoctions and cleanses grew, he decided to share his passion more widely and enlisted the creative flair of renowned chef Arthur Potts Dawson.

Arthur has travelled across the globe and worked alongside top talent in the world's best kitchens over his 27-year career as a professional chef. His own restaurants boast 'a revolutionary approach to environmental sustainability', with Acorn House described by top critic Giles Coren as 'the most important restaurant to open in London in the past 200 years'.

Arthur's signature style is eco-friendly and sustainably sourced food; the seasonal recipes he creates for Juiceman celebrate the wonderful British countryside and support organic farming. From seed to bottle, everything is hand-picked, hand-made and hand-bottled — then hand-stamped by Juiceman to guarantee the quality of the final product.

Unadulterated nutrition

Rather than being 'yet another brand', as Andrew puts it, Juiceman represents a choice to embrace a healthier lifestyle that's supplemented by 100% organic, natural and unprocessed nutrition. Andrew firmly believes that optimum nutrition extends life expectancy, and that we can enjoy long, healthy lives by consuming the best produce we possibly can.

'Organic and seasonal fresh fruit and vegetables are the best food for your body and mind', says Andrew, 'and the most natural and harmonious way to feed people. At one time, 'organic' was the only way we grew food.' The raw cold press, which Andrew believes is 'the best way to liberate the enzymes and nutrients' in all the organic produce, pulverises the ingredients and, by applying around seven tonnes of pressure to the pulp, squeezes out every drop of juice.

'The results are perfect extraction of the nutrients and, quite simply, the best-

FOOD/HEALTH



tasting juice on the planet!', says Andrew. 'Our cold pressed juices will provide you with over 1kg of organic fruit and vegetables in a bottle packed with easily digestible raw vitamins, minerals and enzymes, flooding your body with pure unadulterated nutrition.'

The juice cleanse

Juice fasting is one of the oldest ways to allow the human body to rid itself of toxins and heal itself. We take on average 18 hours to process each piece of food that we consume, so eating three meals a day with snacks would mean your body never stops working.

Over time toxins build up and coat your internal system, creating an acidic pH (rather than the alkaline pH the human body needs). If your colon and digestive system are coated in waste from meat and dairy products, your body will only be able to absorb a small percentage of the 'good stuff' you consume.

Ideally, it's good to get three seasonal five- or seven-day cleanses in per year: one after Christmas and the others before and after summer. Lots of people opt for a one-day cleanse each week as it's a good way to reset any bad lifestyle or dietary

habits that start to creep in. Everyone is different and has a different goal, so visit juiceman.co to design your own bespoke cleanse.

Picked, pulped, delivered

Juiceman's mission is to provide those leading a busy lifestyle with an easy way to maintain optimum health. It can deliver 100% organic, cold pressed, unpasteurised juices, nut milks, tonics, shots and cleanses every morning and bring daily goodness straight to your door — just like the local milkman.

The cold pressed and unpasteurised juices will stay fresh for three days if they're refrigerated as instructed. There's one delivery for every two-day cleanse or juice box and up to three deliveries for a six-day cleanse, so you have the freshest juices possible without overloading your fridge. Woolcool thermo liners and DryFreeze inserts are used during transit to ensure the juices remain at their optimum temperature right up until they're delivered.

THE JUICE MAN

COULD AN ORGANIC CLEANSE HELP YOU LIVE LONGER?

THE GOOD STUFF

Here are just three examples of the juices, shots and milks available from Juiceman — you can see the full menu on juiceman.co.

Turmeric milk

Cashew nut, date, hemp seed, Himalayan salt, vanilla, turmeric, cardamom, cinnamon, honey

For: Skin and hair boost, anti-inflammatory

04 shot

Aloe vera, grapefruit

Power roots juice

Carrot, apple, sweet potato, ginger, lemongrass, yellow beet, turmeric

For: Liver detox, skin health, heart health, anti-inflammatory

Acid water, alkaline water, ionised water — and now hydrogen water, the latest in a string of miracle waters designed to heal and nourish the human body. So what's the deal with this new twist on the most vital of human drinks, and can anything really beat plain old water when it comes to hydration?

Hydrogen water is a new health product that's hitting UK shores with a string of VIP endorsements behind it — from royal families and politicians to celebrities and those 'generally in the know'. The grouping of celebrities and politicians with 'those in the know' is the first thing to question. The second is whether enriching H₂O with H₂ can genuinely be said to have any positive biological benefits.

While it's a relatively new phenomenon in the UK and Europe, hydrogen-enriched water is pretty popular in Japan, where it's believed to slow down oxidation processes in the human body. Additional claimed benefits are rehydration, energisation and detoxification.

We all know the dangers of dehydration; it's a primary cause of hospitalisation for the elderly and has been linked to infections and a decline in cognitive and athletic performance. The body's cells must be kept hydrated in order to function, communicate, signal, metabolise and everything else. But why do we need extra hydrogen in our water?

According to Prof. Tyler Le Baron, Molecular Hydrogen Institute, hydrogen gas has been shown to have a therapeutic effect on over 70 human diseases. Dr Hidemitsu Hayashi developed his Water Regulating Theory in 1995, working on the basic premise that oxidation brings about sickness, and reduction restores us back to health again. Dr Hayashi explains that, because living organisms originated in water, all the necessary conditions for their birth and survival should also exist in water. He continues that oxidation by active oxygen can cause every disease — from deactivating enzymes in the cells to damaging DNA and destroying lipid membranes.

In contrast, active hydrogen should be the ideal antioxidant to bring about recovery. Dr Hayashi highlights that, while vitamin C — or ascorbic acid — is a known antioxidant, when oxidised it produces dehydroascorbic acid, which might damage DNA. In contrast, after the reduction of active oxygen, active hydrogen derived from hydrogen-rich water makes nothing but H₂O, eliminating the risk of side-effects.

An interesting paper was submitted by Happe in January 1997. In it, he said that the oldest life forms, *Desulfovibrio gigas*, had developed an enzyme to activate hydrogen 3.8 billion years ago. The hydrogenase enzymes split molecular hydrogen into atomic hydrogen — but it wasn't clear why it had been necessary for these microbes to develop such an enzyme. It may well have been to produce active hydrogen to combat the active oxygen that might threaten their existence.

Unfortunately, the water we drink and depend on is 'hydrogen-poor'; it can't reduce active oxygen and Dr Hayashi believes it causes various illnesses as a result. While *Desulfovibrio gigas* developed hydrogenase in order to obtain active hydrogen and fight against active oxygen, our ancient ancestors were compelled to develop their own procedures to fight against active oxygen.

Conrad Swailes discovered hydrogen water whilst investigating potential cancer cures, including viral and bicarbonate of soda treatments, after his mother and uncle were both lost to cancer and his father was diagnosed with lung cancer. 'I started drinking it myself and realised within weeks some tangible changes in my body', he told *PQ*. 'It was very difficult to get hold of the water and that's when I realised what a great opportunity there was to spread the news on what I had discovered and take it to the wider market.'

'This is not just another product, but something that can actually

help everyone be healthier and possibly prevent some major illnesses. I'm not saying this is some miracle cure for anything, but what I am saying is that from what I have seen so far, what others

are saying and what other scientific people are saying, too, it's quite possible this is one of the most important developments in the health and wellness markets for some time. In time we will have more proven medical backup from various studies that are already happening around the world.'

HYDROGEN-ENRICHED DRINKING WATER

THE NEW MIRACLE CURE?

HEALTH/BEAUTY

Electrolysis, reaction with alkali-earth metals and ionisation are all ways to enrich water with H₂. The idea and means to reform water by electrolysis were developed in Japan about half a century ago, and the reason why the devices were found nowhere else can be explained by differences in water hardness. Japan's water is soft, with a hardness of around 50ppm, whereas in London water hardness is over 130ppm.

Beyond electrolysis, you can inhale molecular hydrogen gas (H₂), inject it or drop it into your eyes in a saline solution, bathe in it or — perhaps most appealingly — drink hydrogen-enriched water.

In a bid to make hydrogen water available to everybody — and at a reasonable cost — Conrad launched Hydronaid. It's the first hydrogen water to enter the UK and European market, and is based out of a production facility and global distribution centre in the outskirts of London.

Although some people have felt immediate benefits of drinking hydrogen water, Conrad suggests that regularly consuming a litre a per day will give the best results.

For more information on hydrogen-enriched water and its benefits, visit hydronaid.com or molecularhydrogeninstitute.com.

**TURN TO PAGE 37 FOR A CHANCE TO WIN
A SIX-MONTH SUPPLY OF HYDRONAIID
HYDROGEN-ENRICHED WATER.**

INLIGHT®

Artisan Luxury Skincare

Be beauty-full



www.inlight-online.com

A BEAUTIFUL AUTUMN

DR MARIANO SPIEZIA MD ON STAYING ATTUNED TO SEASONAL CYCLES



Inlight Daily Face Oil (£32, 30ml)



Inlight Line Softener Intensive Formula (£77, 30ml)

Don't flake out

What to do: To prevent the house or workplace from becoming too dry, use a humidifier or place a bowl of water on the radiators. A few drops of pure, organic, balsamic essential oil (such as eucalyptus) can be added to the water to decongest the respiratory tract.

What to drink: An old-fashioned, comforting and therapeutic recipe is to add to half a litre of cold water a dried apricot, fig or date, the skin of an unwaxed organic lemon, an organic apple split into four parts (leave the seeds in), a clove bud, half a stick of cinnamon and a slice of ginger. Cover, bring to the boil and then steep for 15 minutes, then strain and drink, adding a drop of honey if required.

What to eat: Supplements that increase the cellular metabolism (essential fatty acids), antioxidants (vitamins C and E) and Omega-3 and 6 EFAs (essential fatty acids found in flax or hemp seed oil).

I have always loved autumn: it's a transitional time when Nature — including our bodies — prepares for winter rest after the hectic and intense activities of summer.

Generally speaking, transitions are very important in our evolution: they allow us to follow life's cycles and they break mental patterns so we can evolve towards new ones. In the *I Ching*, or 'Book of Changes', creation is the result of the encounter between energy and matter, consciousness and form, cosmos and Earth; the changes manifest this constant movement of life during its expression and evolution. To be 'alive' we must change constantly from one level to another — and by observing Nature closely we can better understand seasonal changes and how they reflect in our bodies and our skin.

A few years ago I had the joy of experiencing the extraordinary autumn scenery of the Lake District. I was struck by the natural variations of colour: from rust to orange, from light brown to burgundy, from intense yellow to ochre. An orchestra of shades that enchanted my heart.

The colours of the leaves change because of the lower external temperature and lack of light; chlorophyll is no longer produced and what is left in the leaf starts a natural process of degradation. The consequence is that other pigments, carotenoids and anthocyanins, will appear on the scene, giving the yellow and reddish colours.

Another interesting thing I noticed was that the autumnal colours are in the lower part of the iris' spectrum, representing a natural movement towards a reduction of the frequency and the 'resting zone' of the light, in line with those changes that bring the contraction and introspection

of the autumn season.

It is a time when Nature retracts the energy from outside, pushing roots back into the soil in preparation for the coming cold. From a psychological point of view we are more prone to 'be' than to 'do' during this time.

We're drawn to roots and hot food, and want to spend more time at home in a warm, closed environment. Our inner metabolism changes, increasing the production of cortisol, and we need more carbohydrates and fat to generate heat.

Internal fluids slow down and our circulation withdraws from the external layers, focusing instead on better supplying the inner organs. This is why the skin becomes paler, colder, less oxygenated and more prone to flaking, as less fat is contained in its hydrolipidic layer (epidermis).

Because of the impact of the elements, plus pollution, central heating and all other environmental and metabolic changes, the skin can become arid and dry. People are affected in both the home and the workplace; the dry air produced by central heating damages the respiratory tract and dries the skin, dehydrating it and speeding up the ageing process. Central heating also speeds up the loss of water through the skin, increasing natural evaporation (*perspiration insensibilis*). In a normal situation we lose 700ml of our internal water daily, but central heating will increase this amount.

Dr Mariano Spiezia is Scientific Director and formulator at Cemon Homeopathics. For more information on his formulations and how they work, visit inlight-online.com.

Like a lot of men — and women — I like cars. I don't own one at present and am happy with my City Car Club membership, but I may need to buy one next year. My check list is simple: it has to look good and it has to be electric.

Tesla Model S

So let's start with the Tesla S. It's fully electric, has a rapid one-hour charge time and gets from 0-60 in around 4 seconds. On the outside it's nearly as sexy as an Aston and the interior's beautiful, with a full touchscreen display that's bigger than an iPad and connects to the internet. But more importantly, this car's a great drive. On the downside, prices start at around £60k and the one I borrowed, the P85+, costs closer to £100k. Nevertheless, it's a beautiful car with a 300-mile range on a full charge. Genius.

With the government schemes, company tax benefits, congestion charge exemption and no gas tank, for me this car absolutely rocks!

For full spec and pricing, visit teslamotors.com.

Vauxhall Ampera

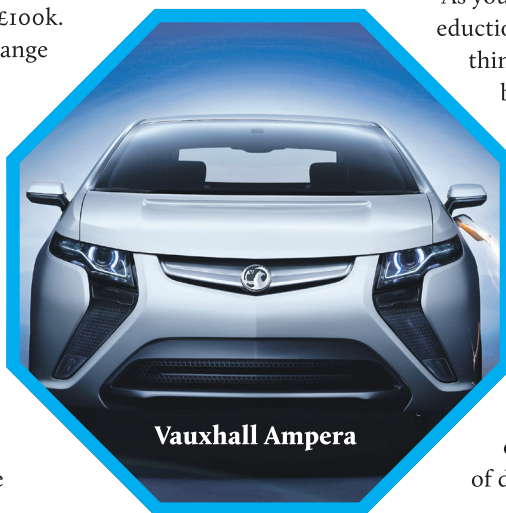
Now I think I may have got my quest back to front — or have I? Next was the Vauxhall Ampera, an extended range vehicle. This means that when the 60-mile battery range runs out, the petrol kicks in and you can go for another 240 miles without filling up. You can charge the Ampera overnight (for eight hours) at home.

The accelerator's nice and responsive and, while the touchscreen may not be as thrilling as the one in the Tesla Model S, the rest of the four-seater interior is great — provided the questionable graphics on the door panels are optional.

You get the same tax benefits and congestion charge



Nissan Leaf



Vauxhall Ampera

travel needs will be met.

'With 95% of my journeys being under 40 miles, the Ampera has reduced our reliance on petrol massively, saving money and time at the petrol station. Instead, we power up from photovoltaic panels on the roof of our home — to drive smoothly and silently through town and countryside.

'Acceleration and braking style feedback (in real time and at the end of each journey) helps me to improve safety and the efficiency of my journey, and keeps me away from the petrol station. If all that isn't enough, it's a sleek, sexily designed aerodynamic ride. Right now I couldn't ask for more.'

As you can probably tell, Oliver had a far better education than I did — but I think we're saying the same thing. However, we do now have the long-range Tesla batteries — and, personally, I *would* ask for more.

For full spec and pricing, visit www.vauxhall.co.uk.

Nissan Leaf

Last but definitely not least is the new Nissan Leaf. It's fully electric with an 80-mile range and, again, an overnight charge was easy for me at home. Alternatively there are loads of charging points around if you want to own a piece of what will inevitably be the future of driving.

I found the last Leaf design horrible, but this new sleek and sexy thing works for me. The interior is pleasing to the eye and touch — and for a fraction of the cost of my beloved Tesla, I would

have one of these any day of the week.

When a BMW driver cut me up, I chased him down and then proceeded to leave him standing at the next set of lights! I was 21 miles from home with 20 miles left from my charge; if I hadn't made it back I'd be too

DRIVING STEALTH

JARVIS SMITH'S ELECTRIC SPINS

TRANSPORT



Tesla Model S

exemption, and for around £35k this is a great car. My friend Oliver Heath has had one for ages, and here's what he had to say about it.

'I'm full of admiration for my extended range electric Vauxhall Ampera — a transitional car for transitional times. Until we have affordable long-range batteries and a charging network equivalent to that of our traditional fuel infrastructure, we need reassurances that our

humiliated to be able to recommend this car. Priced at around £20k, we'll be seeing more and more of these great vehicles on the road. Happy days!

For full spec and pricing, visit nissan.co.uk.

Go green and be proud you're doing more than all the gas-guzzlers out there.



THIS YEARS THEME

Unity

**THE PEA AWARDS
BANKSIDE VAULTS, LONDON
27.11.14 - 6.30-11PM
PLEASE JOIN US!**

**TICKETS COST £15
& ARE AVAILABLE TO PURCHASE
AT PEAAWARDS.COM**

**NO 1 INVICTA PLAZA
SOUTH BANK
LONDON, SE1 9UF**



You are cordially invited to the fourth edition of the PEA (People Environment & Achievement) Awards on Thursday 27 November 2014, 6.30-11pm

The PEA Awards celebrate everything from raising awareness, travelling responsibly and proving ethical best practice to creating technologies, designing products and developing specific campaigns.

This glamorous green carpet awards ceremony aims to honour those who have demonstrated an outstanding level of achievement in communicating the importance of sustainability, which today is greater than ever.

Among this year's judging panel is host, eco-designer and TV presenter, Oliver Heath and celebrity health guru and pioneer of all things natural and organic, Jo Wood. Judges also include industry experts and innovative thinkers from organisations such as Carbon Trust, Forum for the Future National Geographic.

**OUR HOST: OLIVER HEATH
- TV PRESENTER & ECO DESIGNER**

**6.30-7PM: WINTER JUICEMAN
JUICES UPON ARRIVAL**

**7-8PM: ORGANIC JUNIPER GIN
- LUSHCOMBE ORGANIC SOFT DRINKS - BELU
WATER & THE ARTHUR POTTS DAWSON RAW
FOOD EXPERIENCE**

**8-9PM: PEA AWARDS - CELEBRATING OUR PEA
HEROES & WINNERS**

**9PM-11PM: A UNIQUE & EXCITING INTERACTIVE
EXPERIENCE, THAT MAY BRING US TO UNITY**

IF YOU'RE A GREEN HERO OR KNOW SOMEONE WHO IS, PLEASE ENTER FOR NEXT YEAR'S PEA AWARDS AT PEAAWARDS.COM

WITH APPRECIATION TO OUR SPONSORS



Newform Energy™
Redefining Renewables



After such a beautiful summer, and having spent the winter months in India, we didn't want to go too far for a summer holiday; somewhere just a few hours away would be perfect. We wanted tranquility, outstanding beauty, sunshine and heart-warming character. Italy or France?

Of course there are loads of options in Europe, so I started searching online. Italy kept playing on my mind and seemed a good idea; I'd heard glorious things about Tuscany and the Amalfi Coast, but for some reason it was Umbria — right in the middle of Italy — that kept calling.

Sunflowers of Bargiano

I narrowed my search to a privately owned property called Girasoli di Bargiano — 'Sunflowers of Bargiano'. It was located near the famous town of Orvieto, Allerona, on the border between Lazio and Tuscany. It's near the nature reserve of Val Monte Meana and Peglia — an area populated by wild animals such as deer, wild boar, hares and pheasants — halfway between Rome and Florence.

Within a few kilometers there are tourist destinations such as Bolsena (with its beautiful lake) and Corby (with its stunning castle), as well as Città della Pieve, Assisi, Perugia, Gubbio, Todi, Viterbo, Pienza and Siena — not to mention the renowned spas of Chianciano and San Casciano dei Bagni.

We flew to Rome from London; my fiancée, Mum, six-year-old daughter and I jumped into a hired car and, in just over an hour, arrived on top of a hill in the dead of the night — with the Milky Way lighting up the sky above us.

The manager, Njambi, had stayed up to wait for us — a lovely (and completely unexpected) gesture at 1am. Thankfully she spoke English, as our Italian left a little to be desired. Could we have some wine, please? And out came a bottle of local Chianti.

The farmhouse

The property was stunning: a converted farmhouse made from gorgeous local stone, solid wooden beams and stacks of original features. We took the wine off to our room; by this time my daughter, Sophia, was asleep so we kicked back with a deep sense of peace and quiet.

The next day we woke to glorious sunshine beaming through the wooden shutters on the windows; we flung them open and my jaw nearly hit the ground. The view was breathtaking. Mamma Mia.

Breakfast was served on the patio and accompanied by an even more stunning view of the panoramic countryside, with sweeping hills and gothic buildings extending out into the distance. My spirit felt like it had expanded to maximum potential, like the biggest, deepest breath I'd ever taken, my energy field running wild with no boundary. Not many places make me feel like this so quickly, but this place was like magic.

The owner, Claudio, was a very fine gentleman — full of warmth and smiles. 'Good-a-morning', he said. 'You happy? You happy?' We all laughed and confirmed that yes, we were indeed happy — to which he replied, 'You happy? I'm happy!', and that was the theme for the rest of the holiday. As long as we were happy, then Claudio continued to smile all day long.

The grounds

After a satisfying breakfast of Italian breads, local jams, eggs and dark,

rich coffee, we went to explore the garden. We checked out the large swimming pool, which we had to ourselves for most of the week, and admired the 120 olive and various fruit trees. Sophia was in her element when she spotted the goats, sheep, pigs, geese, puppies and other animals.

An old tool shed on the grounds housed an ancient cistern to collect rainwater from the surface of the roof of the 700-metre farmhouse, which was surrounded by around 12 acres of land — four of which were arable with the rest left covered with forests.

The nearest houses were across the valleys on neighbouring hills, and we could see the occasional car bumping along the old Roman roads that cut across the green mounds.

We absolutely fell in love with this place, and Claudio said it was for sale. He had renovated the home for his family and, now they had all flown the nest, he felt it was simply too big and wanted to move on.

The fantasy

We'll buy it! Well, he said, if you have €1.2million, it's yours. I was amazed at the price considering what you'd get for a similar budget in some parts of the UK. Still, we're not exactly millionaires — but this place would be perfect for anyone who is and would like to move abroad to a beautiful and expansive rural environment.

It'd be perfect for retreats — I could imagine a yoga session on the patio for at least 20. There are enough rooms for 24 to sleep comfortably, plus a well-equipped kitchen and spacious dining area. As far as I could see, the farmhouse had everything we needed for the alternative lifestyle we so badly want.

Italy's 'most dramatic city'

We did a little bit of sight-seeing but, to be honest, we were not in rush to leave this haven. The gothic city of Orvieto is a must; it well and truly lives up to the title of 'the most dramatic city in Italy'.

We had a real treat when we visited; yes, the pasta was fantastic — but while we were high on top of the town looking out at all the beautiful lights way in the distance, the blood-red Moon popped over the horizon.

Because we were so high it felt like we could see through the illusion of distance and space; the Moon was absolutely huge and felt so close — I had never seen anything like it before and probably never will again. Absolutely amazing; an anomaly and visual experience I will appreciate for the rest of my life.

Lago di Bolsena

Our only other trip — apart from eating out on the best pasta and pizza euros could buy — was to Lake Bolsena. It was my birthday and Claudio had promised to take us out on his boat; a picnic and a swim in the lake were both necessary.

I can't wait to visit Claudio and Girasoli di Bargiano again — not only to experience the chilled white wine, fresh melon and Claudio's hand-cooked pasta, but to live with such a vast and expanded awareness of consciousness, with my eyes fully open. It was a rare treat indeed, and one I want to experience again and again.

To find out more about availability, rates and the property itself, visit girasolidibargiano.com.

GIRASOLI DI BARGIANO

JARVIS SMITH VISITS THE SUNFLOWERS IN ITALY

TRAVEL



Brighton Fashion Week

This October marked the fifth anniversary of Brighton Fashion Week, one of Europe's leading fashion events. Thousands visited to attend parties, network events, a fashion market and witness the emerging talent showcased on the innovative catwalk shows.

Carry Somers, founder and creator of Fashion Revolution, kicked things off with a great speech about her goal to raise awareness of the true cost of fashion — and that set the tone for the rest of the week.

The Sustain Debate was introduced by Izzie Roffe-Silvester, who shared *Material Fiction* stories to encourage the 200-strong audience to think about fashion from different perspectives. The panellists Carry Somers, head of Fashion Revolution, Purna Sen, Labour PPC for Brighton Pavilion, Tamsin Lejeune, CEO of the Ethical Fashion Forum, Caroline Lucas MP and Pants to Poverty founder Ben Ramsden engaged in a passionate debate about the many issues around ethics and sustainability in the fashion industry.

Liz Bishop, event director and founder of Brighton Fashion Week, said, 'Brighton is overflowing with moral thinking and fashion industry practices are not exempt from the discussion. We can all do our part in sharing existing resources and limiting new purchases, but the reality is that we are all still 'consumers.' We want to have an open discussion to educate ourselves about the hidden costs behind the things we buy.'

'What we want', Liz added, 'is to gain a greater understanding of how our purchases can help us shape more sustainable business practices and a more responsible economy as a whole.'

The debate was followed by the first of Brighton Fashion Week's catwalk events, Sustain. Back by popular demand, the catwalk show at the Old Ship hotel promoted sustainability by showcasing designers who combine innovative fashion design with ethical thinking.

Kumiko Tani, director of Re-cycle-style (pictured), stole the show, with a collection designed to change the image of recycling by showing just how stunning the results can be. The wider goal is ultimately to help reduce the volume of waste we create.

The show began by unveiling a dress created by Dumpster Design, in collaboration with Sustain's sponsor, Veolia. Other designers included Victoria George and Wan and Wong Fashion, with Catherine Hudson headlining the catwalk with a SS15 collection — a Brighton Fashion Week exclusive.

Later that evening, Brighton Fashion Week's Zeitgeist Emerging Talent Catwalk Show featured select international fashion designers. Taking the theme 'Spirit of the Times', this year's catwalk show focused on the relationship between the past and the future. Headlining the catwalk, Louise O'Mahony, Milica Vukadinovic and Georgia Dorey pushed boundaries and took creative risks to create original and creative pieces.



TEDxBrighton 2014

Imagine a gender documenter, a crime and thriller novelist and a radical activist and campaigner for issues around pornography, feminism, exploitation, human rights and raunch culture all in the same room. That should give you a flavour of TEDxBrighton 2014.

Fox Fisher, Peter James and Sam Roddick were just three of the speakers at this year's event, which focused on the prevalence of technology in the networked age.

The focus was on how our social networks can leave us feeling more isolated than ever and how, in our world surrounded by screens, we are driven to desire the physical. The talks explored how intimacy looks in the modern age, and explored ideas around flashmobs, subcultures and connectivity across distance. The Ideas Lab ran in the Dome foyer throughout the day and provided a soap box for the very best ground-breaking inventions, designs and new technologies from the South East and beyond.

Brighton calendar

20th November – 7th December:
Cinecity Film Festival

The city's annual film festival returns with an eclectic mix of local, national and international screenings. This year's opening night film is the critically acclaimed *Birdman*.

21st – 23rd November: *MADE 2014*

The design and craft fair brings hundreds of independent

designers to the city for one big weekend.

29 November – 14th December (weekends only): *Artists Open Houses*

Hundreds of artists open their homes to the general public, giving visitors a chance to speak to the artists directly — and possibly try some mulled wine and homemade treats along the way.

5th December – 17th January: *Sleeping Beauty*

Set in a converted church, Emporium is a popular cultural arts venue. This festive season it will be hosting a special production of the classic fairytale.

16th December – 4th January: *One Man, Two Guvnors*

The National Theatre's award-winning comedy comes to Brighton's beautiful Theatre Royal for the Christmas season.

21st December: *Burning the Clocks*

This unique community event celebrates the lengthening of days with a lantern parade through the city, followed by a bonfire on the beach

6th – 11th January: *Holiday on Ice*

In a special tribute to the show's 70th anniversary, Holiday on Ice, starring Ray Quinn, will take you through skating traditions past and present.

10th & 31st January: *Chocolate Walking Tour*

Forget the January blues and enjoy a chocolate-themed walking tour with tasters and a hot chocolate.

BRIGHTON UP



**HERE ARE JUST SOME
OF THE EVENTS
THAT SHOULD PUT
BRIGHTON
ON YOUR MAP**

TRAVEL





WIN: 1 OF 20 SUMA ORGANIC HAMPERS

Whether you're living la dolce vita with a big group of friends or hunkering down for quiet evening in, the New Organic Hamper contains a carefully selected mix of vegan, organic Suma products, to add a ray of Italian sunshine. You can cap your meal off with a velvety espresso made from one of the organic, fairly traded coffees.

Deadline for entries: 15/01/2015



WIN: 15 PAIRS OF PEA AWARDS TICKETS

It's nearly time for the green carpet event of the year — and we've got 15 pairs of tickets to give away! The PEA (People and Environment Achievement) Awards will take place on Thursday 27 November at a secret location on London's South Bank. You'll get to mingle with green heroes, chat to inspiring people, watch the awards ceremony and enjoy an organic gin or two.

Deadline for entries: 24/11/2015



WIN: 1 OF 25 WELEDA HAND CREAM GIFT SETS

This limited edition gift set contains a luxurious trio of full-sized Weleda hand creams: Pomegranate, Sea Buckthorn and Citrus. Each is NATRUE-certified: genuinely all-natural, free from artificial additives of any kind and suitable for vegetarians. These replenishing balms are made with nourishing plant oils and protective waxes, and naturally scented with pure essential oils.

Deadline for entries: 15/01/2015

We're not quite ready for Christmas yet, but that's no good reason not to start indulging.

We've got our hands on some great prizes, from a pre-Christmas stay in one of the UK's greenest cities to organic hampers packed with Italian sunshine and cook books that celebrate the best of British food.

For those sticking to stricter routines before the festive season gets in full swing, we've also got a two-day organic juice cleanse up for grabs and a six-month supply of hydrogen-enriched water — perfect for a pre-Christmas detox.

Everyone loves a freebie — and we've hand-picked this selection of green pearls to get you on top form and feeling your best.

No catch. No pressure. Just enjoy.

You can view more details of our prizes — plus all our competitions — by visiting mygreenpod.com/competitions. Share them with friends, spread the word and update us with your experiences if you're one of our winners. **Good luck!**

THE LATEST COMPETITION GIVEAWAYS FROM MYGREENPOD.COM

ENTER
TO
WIN



WIN: A STAY IN BRIGHTON

VisitBrighton is offering a night for two in one of the greenest cities in the country, plus theatre tickets to 'One Man, Two Guvnors' on Friday 19 December. You can shop at the hundreds of independent traders before dropping at the Jury's Inn, which has won 17 independent awards for sustainable and accessible tourism. Ts & Cs at mygreenpod.com.

Deadline for entries: 12/12/2015



WIN: 1 OF 10 YEO VALLEY COOK BOOKS

From soups to patês, casseroles to pies, *The Yeo Valley Great British Farmhouse Cook Book* celebrates all that is fabulous about British food — with inspiration for every season. As well as providing recipes and ideas for getting the best out of traditional British ingredients, there are tips for preserving your seasonal goodies so you can enjoy them throughout the year. Yum!

Deadline for entries: 15/01/2015



WIN: A SIX-MONTH SUPPLY OF HYDRONAIID

Hydronaid is offering a six-month supply of hydrogen-enriched water — 21 500ml pouches to the case, two cases per month. Hydrogen-enriched water is understood to slow down oxidation processes in the body and leave you hydrated, energised and detoxified. See p31 for more information on the science and research into the benefits.

Deadline for entries: 15/01/2015



WIN: A JUICEMAN CLEANSE

Juiceman is offering one lucky winner a two-day essential cleanse (worth £130), packed with 100% organic and cold pressed nutrition. You can tailor your cleanse to spicy or sweet and the juices, crafted by eco-chef Arthur Potts Dawson, will be delivered straight to your door. Find out more about Juiceman on p30.

Deadline for entries: 15/01/2015



COMPETITIONS

**My Green
pod**
.com



WIN: 1 OF 100 INLIGHT START-UP PACKS

Inlight organic skincare is hand-crafted in the UK, with a touch of Italian glamour and style from skincare expert Dr Mariano Spiezia. The result? Authentic, artisan luxury to bring some extra radiance. This starter pack is just what you need — before and after the party season — to keep your skin glowing.

Deadline for entries: 15/01/2015

MYGREENPOD.COM



TIME FOR #UNITY

My Green **POD**

WWW.MYGREENPOD.COM