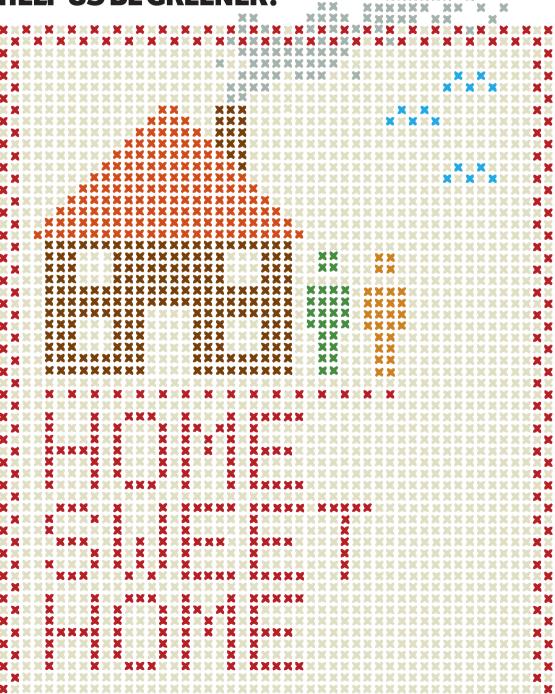
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HOW CAN GOVERNMENT HELP US BE GREENER?





"the task for environmental campaigns is not to dictate values to people" page 5

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"regulation can spark invention; it doesn't have to be creatively limiting" page 7

"in government adaptation plans, water efficiency was conspicuous by its absence" page 12

"they do it for exactly the reasons you'd expect: to save money and to save the planet" page 16

"without support to build community expertise, localism can only be passive" page 18



#### THE QUARTERLY MAGAZINE OF GREEN ALLIANCE

- 2 **COMMENT**
- 3 BRINGING IT HOME
- 5 WHY CAN'T WE SELL CLIMATE CHANGE LIKE WE SELL SOAP?
- 7 BETTER BY DESIGN
- 8 THE MYTH OF THE GREEN CONSUMER
- 10 RECYCLING VALUES
- 12 LESS IS MORE
- 14 **GETTING HEATED**
- 16 LEADING BY EXAMPLE
- **18 A GENUINE POWER SHIFT?**
- 18 AN EYE ON THE DETAIL
- 19 GREEN ALLIANCE NEWS

Edited by Nicky Granger, Rebekah Phillips, Sylvia Rowley and Karen Crane Designed by Howdy

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The views of contributors are not necessarily those of Green Alliance.

#### COMMENT

Insights into the factors that shape our actions draw on a large body of behavioural research. Until recently, this knowledge largely sat within the academic community and has rarely been translated into policy. In part, this is because of the complexity of behaviour and its sensitivity to context, reducing the effectiveness of blunt policy instruments.

All this has started to change as the present government is recognising the benefits of embedding behavioural insights into the policy process, making a clear commitment to find "intelligent ways to encourage, support and enable people to make better choices for themselves" (coalition commitment, May 2010). The new Behavioural Insights Team, informally known as the 'nudge unit' has been created in the strategy unit of the Cabinet Office, and the Treasury has recently launched a Behavioural Science Government Network. From an environmental perspective, this growing awareness amongst policy-makers of the drivers of behaviour change is extremely welcome given the scale of the environmental challenge and the speed with which we need to tackle it. Major changes in behaviour are required to reverse upward trends in resource use and the imperative to do so is high.

However, some interesting governance questions are raised in developing the right framework. What is the role of the state in changing the way each of us consumes resources such as water and energy? Does it have a mandate to intervene on the basis of the need to protect a scarce and declining public good, both for current and future generations? And is nudging people enough to deliver the scale of the changes required?

The following collection of articles paints a reasonably optimistic picture. Whilst they illuminate some of the factors driving our growing demand for energy and water within the home and the need for a strong public engagement strategy, they also share a common message: that what we know about human behaviour and environmental limits gives us powerful clues as to where the solutions lie, and that, with the right framework and instruments, significant changes can be made.



Tamsin Cooper, deputy director



The government says it wants to turn words into action.

To do so it needs to start at home, driving behaviour change in the right way, says **Rebekah Phillips** 

avid Cameron's pledge to make the coalition the "greenest government ever" has implications for policy designed to drive sustainable living. As Lord Henley explained at a recent Green Alliance event:

"The government's pledge to be the greenest ever is not a choice, it's an imperative. There is no point in rebuilding the economy unless it's a green economy: one that actively prevents waste and accurately reflects the value of our natural resources."

Consideration for future generations has also become one of the guiding principles of the coalition's philosophy. Nick Clegg, in his 'horizon shift' speech of September 2010, described how the coalition must, and will, take the necessary steps for a fairer and more prosperous future to avoid future generations bearing the economic and environmental costs of today's lifestyles. This would be a government "where fine words on the environment are finally translated into real action", he promised.

#### **Challenging targets**

These ambitions are challenging and are supported by equally challenging targets. The legally binding Climate Change Act requires the government to set us on the trajectory to reduce carbon emissions in our economy by 80 per cent

by 2050. DECC's recent 2050 *Pathways analysis report* has shown that this can only be achieved with "ambitious per capita demand reduction". This means that we need to reduce radically the energy we use in our homes. As Chris Huhne, the secretary of state for energy and climate change, said last year: "We must take action on energy saving. For too long, the debate around energy has focused on supply."

However, current trends in energy use are worrying for the policy-maker. Home energy use has been increasing steadily since the 1970s due to increased heating and the number and size of electrical appliances we use. This is despite the fact that our homes are slowly becoming better insulated and appliances are taking less and less energy to run. It means that we cannot achieve this demand reduction through technology and efficiency savings alone. A significant proportion of emissions reductions from households will need to come from tackling the trends in increasing appliance and energy use. The government is currently reviewing how it can achieve its target of a zero waste economy, and is due to publish results in the summer. This will include pushing recycling up from its current average of just over 40 per cent. It also encompasses meeting strict targets from the EU on reducing biodegradable waste to landfill. This must be 50 per cent of the waste that went to

landfill in 1995 by 2013 and reduced by a further 50 per cent by 2020.

Although water use is not increasing particularly fast (only increasing by one per cent between 2001 and 2008), the number of households in the UK is growing (the Climate Change Committee assume a 30 per cent increase



a significant proportion of emissions reductions from households will need to come from tackling the trends in increasing appliance and energy use



in households by 2050) and the projections of the UK climate impacts programme published in 2009 shows we are facing greater unpredictability in rainfall, and longer, drier summers in coming decades. This means that government needs to find a way for a finite amount of water to be spread further. In addition, water use is the second biggest user of energy in the home after



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space heating, so increased efficiency will be vital to reach climate change targets.

Reversing lifestyle trends on a large scale will be no easy task. In many cases the high-carbon, resource intensive option is often pre-programmed as the cheap, easy and socially acceptable option, while sustainable living is often still harder, more expensive and outside of the norm. And the coalition is also aware that it has a long way to go in making it easier for people. Lord Henley again: "Because, despite the good work that's already being done, doing 'the right thing' for the environment is still a minefield of confusing, often contradictory information and advice."

#### **Evidence of confusion**

In 2010 we carried out ethnographic research with six households from around the country. A video researcher followed them for three days to see how they live and why they make certain choices that impact on the environment. They were a varied bunch, ranging from a student houseshare to a retired pensioner. Some were from urban locations, some rural, some owned their homes and some rented, yet these households all showed similar confusions with regards to what they should be doing to live more sustainably, and they all highlighted the difficulties that everyone faces.

They also show what academics know well: that our behaviour is shaped not only by rational, conscious deliberation, but also by personal emotions and psychological quirks; by social and cultural norms; by the immediate context of our actions and by the wider infrastructure into which our lives fit. And they show that when a policy is designed with human – and business – behaviour in mind it can have a very powerful effect. For example, none of our households had sought out information on energy efficiency, or had read

information that was automatically provided. Where home-owners had installed insulation it was as a result of door step campaigns, incentives and the influence of neighbours. But not all our households owned their own homes and therefore had the capacity to improve them.

"We got a government grant to have our cavity walls filled...at the time we were told it would make a price difference to out heating bills, and I think it has actually." Sway family

Although recycling was easily the most common environmental behaviour, not all of our households recycled. And, of those that did,there



the high-carbon, resource intensive option is often pre-programmed as the cheap, easy and socially acceptable option



was confusion over what could and couldn't be placed in the recycling bin, particularly when the type of recyclables collected was changed.

"People are confused about what they can recycle. Everyone is...we are, aren't we?" O'Brian family

None of the households knew much about water efficiency. The only family that did was due to the mother's upbringing in Australia where water efficiency has a lot of coverage.

"You don't hear them pushing about it...using water doesn't sound as harmful as using the electricity and that." Nesbitt family

#### What is needed

The evidence from our research shows that, to achieve its ambitions, government will need to introduce a far more comprehensive policy suite than it has inherited, using the multiplicity of tools at its disposal; building on the growing academic knowledge and evidence base about what drives individual and collective action.

The coalition has pledged to help individuals to reduce their impact in certain areas and work is underway on initiatives such as the Green Deal, but as yet it is unclear what the broader framework will look like to reinforce individual policy efforts such as this.

In addition, without taking a strategic approach, there is a danger that success in changing one behaviour may be undone by triggering unintended consequences in other aspects of life. In the example of home energy efficiency this might involve 'take-back', ie householders turning up the heating after installing insulation or the 'rebound effect', spending money saved on energy bills on new electronic gadgets or a flight to Spain.

Our new report *Bringing it home* will tell the stories of these families in more detail and recommend a more comprehensive approach to driving behaviour change, by learning from the past and building on the government's interest in behavioural economics.

Bringing it home will be published by Green Alliance in March 2011.

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Social marketing has serious limitations in its capacity to engage the public in climate change, says behaviour change psychologist

#### **Adam Corner**

ore than half a century ago, social psychologist GD Wiebe noted the effectiveness of radio advertisements for commercial products, and asked, "Why can't you sell brotherhood like you sell soap?"

The marketing industry realised long ago that to promote a product successfully, you need to sell the idea behind it. Not only commercial advertisers took their cue from Wiebe's proposition; social marketers have also applied this concept to achieve pro-social changes in attitudes and behaviour. Social marketing has now become the dominant force among organisations seeking to influence how people act. But can we rely on it?

#### Information alone won't change behaviour

Social marketers recognised that simply providing people with information was

insufficient to bring about changes in their behaviour, so they developed a new framework. First, the intended audience of a behaviour-change campaign must be understood and segmented, so each segment can be approached according to their attitudes or behaviour. In an anti-smoking campaign, this might involve identifying people who want to stop smoking, and those who don't want to stop. Each is likely to respond differently to anti-smoking messages.

Any potential barriers to behaviour change must be identified and the context for the behaviour must be understood. A smoking cessation campaign is unlikely to influence people who regularly spend time where smoking is the norm, for example. Social marketing has the ability to pilot behaviour-change programmes with a small number of people first, and gives good opportunities for evaluating feedback and success.

It certainly sounds sensible, and social marketing has been successful for campaigns aimed at changing exercise habits, reducing alcohol consumption, stopping smoking and eliminating drug use, as well as promoting pro-environmental behaviour. A social marketing initiative by the Australian government named Travelsmart achieved an impressive 14 per cent reduction in car use over an 18 month period.

#### Social marketing gets results. So what's the problem?

Partly, it depends on what you mean by 'getting results'. Social marketing has been shown to achieve well-defined behavioural change on a piecemeal basis. But does it offer the right set of tools for catalysing the individual, social and political shifts necessary to make the transition to a low carbon society?



#### Short-term success at the cost of long-term gain

One concern is that social marketing has no capacity for strategic oversight. What if the most effective way of promoting pro-environmental behaviour 'A' is to pursue a strategy that is detrimental to the achievement of long-term pro-environmental strategy 'Z'? The principles of social marketing have no capacity to resolve this conflict, they are limited to maximising the success of the immediate behavioural programme.

This can lead to paradox, illustrated by the report *Consumer power* by Reg Platt and Simon Retallack (IPPR, 2009). This focused on 'Now People', members of the public who are high consuming and seek psychological rewards in status, fashion and success. The report recommended communicating with Now People in the way that resonated most strongly with them,



environmental education, fostering ecological citizenship and involving people in social networks, rather segmenting them as individuals, has far greater promise



by appealing to their wallets. But this is problematic as low carbon behaviours are by no means always low-cost. And, more importantly, Now People's high consumption lifestyles are unsustainable. There are limits to the extent that a message can be tailored before its purpose is entirely subverted.

#### The dangers of segmentation

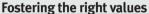
There are also limits to the usefulness of segmenting an audience. It's true that people differ in their attitudes towards climate change, and that one-size-fits-all is unlikely to work as a communication strategy. But segmentation emphasises the differences between people, which causes problems for two reasons.

First, it does nothing to increase social capital and may even damage it. Social capital is the productive benefits of social relations, and is important for sustainable development and the effectiveness of environmental policies. Communities with higher levels of social capital are more likely to respond positively to proenvironmental policies and display proenvironmental behaviour, because they are already engaged in solving problems collectively

and tend to trust each other more. Individualised messages might work well for individuals, but are they as powerful in the context of social interaction?

Second, splitting people into distinct segments may entrench attitudes that need to be changed in the future. The department for environment, food and rural affairs might identify someone who claims to only engage in environmental behaviour to save money as a 'waste watcher', one of its seven audience segments. Message tailoring dictates that financial incentives should be used to encourage this person to adopt environmentally friendly behaviours. But this will only strengthen their tendency to save energy for financial reasons, and there are compelling arguments against promoting this type of attitude in the longer term.

A strategy for engaging people in preventing climate change needs to be about more than just social marketing. Environmental education, fostering ecological citizenship and involving people in social networks, rather than segmenting them as individuals, has far greater promise for the ambitious societal transformations needed to tackle climate change.



Psychological research shows that particular types of values (eg concern for others and respect for the environment) are associated with environmental behaviours, while others are not (eg materialism, personal power and ambition). Most people have a range of values. The task for environmental campaigns is not to dictate values to people, but to encourage the values that will lead to serious engagement with climate change and sustainability. If they don't, they may undermine the very value-base they seek to appeal to in the future.

#### Social marketing offers tools, not strategy

Social marketing gives a set of tools for making a process more efficient, it doesn't tell you what that process should be. Given the scale of the climate change challenge and the broader issues of environmental sustainability, we should not limit our efforts in engaging the public on climate change to social marketing. It doesn't match the scale of the challenge and, without the oversight of a more comprehensive strategy for engaging the public, there is a risk that social marketing for climate change will be counterproductive.

We can't sell climate change like we sell soap for the simple reason that 'selling' climate change is not the aim of public engagement.







Dr Adam Corner is a member of the Understanding Risk Research Group at Cardiff University's School of Psychology. This is an edited extract from a longer article by Adam Corner and Alex Randall (head of media at the Centre for Alternative Technology, Machynlleth). For the full article, contact corneraj@cardiff.ac.uk

# BETTER BY DESIGN

Technology and good engineering are the keys to improving products' environmental credentials, argues **James Dyson** 

'm an engineer, not an environmentalist.
Good engineering is about doing more with less. For me, efficient engineering is environmentally responsible engineering.
At Dyson, I don't charge our engineers to come up with green machines, but the best performing machines. We're constantly designing out materials, energy, cost, waste, consumables and inefficiency, and designing in performance and quality. The result is a machine that outperforms others and has a limited environmental impact.

#### Less materials, better performance

Materials are important when it comes to doing more with less. Plastics, for example, are impressively sophisticated; a plastic can be thinner but have the same performance as its bulkier cousin. This approach helps us to reduce the volume of materials in products, but doesn't compromise on durability or performance. Apple appears to be doing the same with the new MacBook Air. It's ultra compact, which will reduce its material footprint, but also make it easier to use because it's lighter.

I did away with the bag in 1992. They not only clog vacuums and cause them to lose suction, but they clog up our environment. Nowadays, vacuum cleaner bags are made from plastic and aren't accepted in recycling streams. They end up in landfill, where they don't biodegrade.

Energy efficiency is important too. Supposedly, the higher the motor wattage, the higher the performance of domestic appliances. The reality is very different. Technology makes the difference, not motor wattage. High wattage motors can waste energy and harm the environment needlessly. And they are heavy and use more materials, like copper.

The average energy consumption of a vacuum cleaner today is 1800W. We're already producing high-performing vacuum cleaners with lower wattage motors. Our smallest upright machine has a small 650W motor, yet, with its Root CycloneTM technology and compact design, it equals the pick-up performance of a full size Dyson vacuum cleaner.

#### A call for regulation

Rapid change is required. Legislation is one solution to inertia. Regulation can spark invention; it doesn't have to be creatively limiting, quite the opposite. The Energy Using Products Directive sets the framework. It needs to be ambitious.

Our recommendation to the European Commission is a mandated restriction on the size of motors used to implement the Energy Using Products Directive for vacuum cleaners. This would limit the negative environmental impact of vacuums and promote consumers' interests, ensuring that energy use is reduced and communicated clearly.

#### **Changing behaviour**

The biggest environmental impact of domestic appliances is not caused by manufacture or landfill, but energy in use. In vacuum cleaners, this accounts for 90 per cent of a machine's environmental impact. Individuals' impact on the world can start to be managed through responsibly designed energy-using products. There is little excuse for material and energy inefficiency.

We are facing a period of environmental austerity. The solution is technological advancement through efficient design. But few manufacturers of energy-using products have responded.

It's not enough for a product to be green alone. To change consumer attitudes and behaviour, it has to do the job as well as, or better, than its peers. Take hybrid cars, honed to energy efficient perfection. New technology is allowing the hybrid to become a serious alternative to gasoline and diesel; it's predicted to account for seven per cent of the US car market by 2015, compared to 2.2 per cent in 2007.

Change is possible, but only good technology will make the difference. Only truly breakthrough technology can disrupt a market and change attitudes. We've changed the way people dry their hands. Airblade is significantly different from what preceded it, for a start, it uses one fifth of the electricity. If the product is similar, then the consumer will use it similarly.

Energy efficiency and consumer behaviour are not inextricably linked. To focus solely on this evades the issue. Technology is the solution.

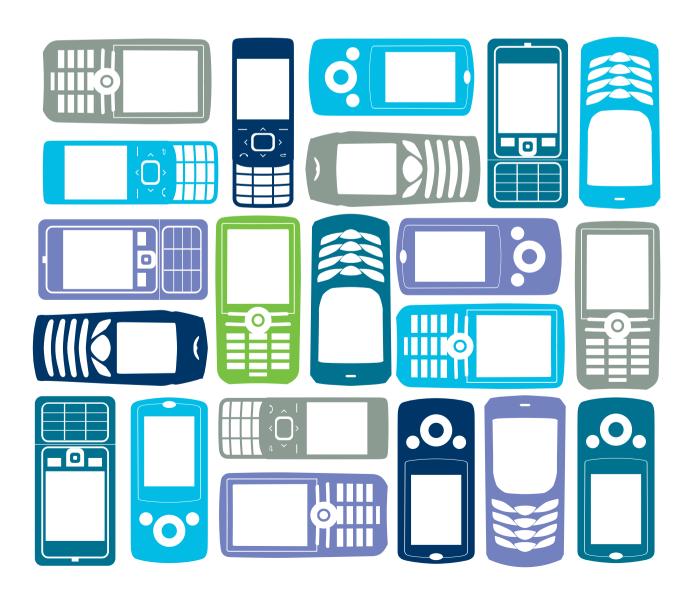


James Dyson is chief engineer at Dyson Ltd



# THE MYTH OF THE GREEN CONSUMER

Julie Hill has revealed the secrets behind the stuff we buy in her new book. Here she argues that we need more information... and less choice.



o you consider yourself a 'green consumer'? If so, you might resent the inference that you are a myth. But if you don't consider yourself to be a green consumer, you have just helped to illustrate the problem.

There really are some green consumers, those people prepared to seek out and buy, sometimes at premium price, the limited range of green choices wheeled out by retailers, like fairtrade goods, recycled paper, peat-free compost and organic cotton. It's just that not enough of us, when consuming, have chosen these products to make them the norm. Sometimes that's about price, sometimes it's about awareness and information. Sometimes, let's face it, it's about just not caring, or not caring today because there is too much else to think about. But what is the fundamental problem? That there is a choice.

My argument in *The secret life of stuff* is that by catering for the small proportion of consumers prepared to purchase in a consistently green way, companies have ensured that every other product has been let off the hook. The idea of the green consumer has pushed retailers towards more sustainable behaviours in some limited areas. The growing uptake of FSC timber and paper, for instance, or the moves to scrutinise the origins of GM food or palm oil. But these are



#### not enough of us have chosen to consume green products to make them the norm



specific, often news agenda-driven initiatives, important as they are. They say nothing about the credentials of the rest of the goods on offer. Take the average mobile phone. How many are green? Or perfume? Or a t-shirt?

#### What do we want green to mean?

Even here there is no consistent approach. The energy efficiency of appliances is one area where most consumers know to look out for the A-G rated labels. Why? Because the law requires the labelling, so it is comprehensive, consistent and trusted. We are getting used to the extension of that idea with the compulsory labelling of the energy efficiency of buildings and cars. But there is nothing that states that the energy used to produce the product has to be calculated, so the early forays of some companies into carbon footprinting puts them either ahead of the game or out on a limb, depending on whether you think

the practice will spread or not. There is nothing requiring information on the water used to produce a product, even though a small number of enlightened companies know that this is their most critical and potentially insecure ingredient, and each of us accounts for over 4,500 litres of water a day in the food and drink we consume. Or the amount of materials, especially the waste that was generated before the product even got to us. And, despite the welcome development of symbols on packaging to indicate whether the materials used are ones commonly recycled by councils, there is nothing that promotes or requires similar statements for the materials in the products themselves.

Materials are the next big environmental and political issue. The tiger economies of China, India and south-east Asia have been producing stuff for us to buy in the developed world, enabling the UK's own 'total material requirement' (the resources used to produce consumer goods) to stabilise. That means we have been offshoring the effects of taking those materials, as well as the waste generated along the way. It may not show up in our environmental accounts, but it certainly adds to the global ecological debt.

Increasingly, the tiger economies are producing goods for their own citizens, whose incomes are rising. That is good for them, and they have a long way to go before they come anywhere near putting the same strain on planetary resources as we do. But it also means they may have less vital materials to export to us in future. Already concerns are being voiced inside the European Commission about 'rare earth' metals, timber and fibre. These are based more on the viability of European companies than the effects of securing new sources of materials on the environment, but they are at least the start of a debate about what materials we need, why, and where.

#### Less choice, less waste

We have been kept in the dark for far too long. Companies are allowed to bring goods to the market (whether made in this country or outside) without any statement of their ecological origins, good, bad or indifferent. As consumers, we shouldn't have to search out this information, it should be provided as standard. We also shouldn't have to make all the complex judgements that arise from that information. We should rely on companies or public authorities to 'choice edit' on our behalf.

Of course, there would need to be agreement on what information to collect but, after that, setting the design criteria for the future need not be that hard. We can see the outlines in initiatives already in train. Timber, metals, textile fibres and water are all commodities that should be certified as sustainably sourced. All products should be designed for durability and repair, and then for recovery and recycling. We need to find

ways to keep materials in our economy much longer. Less than half of the materials entering the UK economy are recovered and the rest is written off as waste, with all the energy, water and human effort involved in bringing the stuff to that point written off as well.

All energy used should, ultimately, be renewable, and all biodegradable materials kept in the nutrient cycle to reduce reliance on non-renewable fertilisers such as phosphates.



#### we don't need more choice, we need some choice taken away from us



Only by setting these parameters as design criteria, expected of all products on an international basis, can we begin to address the huge aggregate environmental impact of the products we buy. We don't need more choice, we need some choice taken away from us, specifically the option to buy bad products.

Has this made you feel powerless? Are consumers to be simply passive recipients of painfully slow bureaucratic processes to set standards for products? We have to be realistic. Whether it is through government action or unprecedented cooperation between companies, establishing new design criteria for products is not going to happen overnight, and it is not going to happen without public support. We should all be demanding better, taking up the green choices we already have dotted around, while asking for the whole landscape to be transformed.

As Giles Bolton wrote in *Aid and other dirty business*: 'Our failure to realise our clout in a consumer-fixated world, is, in truth, the most baffling aspect of modern life and at the root of our powerlessness'. It's time to take control.



The secret life of stuff is published by Random House. You can order a copy from www.rbooks.co.uk.

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Tim Burns examines how to encourage recycling in our communities

ousehold recycling rates in England have risen to 40 per cent, but we could recycle over 80 per cent of our waste. And in the worst performing areas of the UK, particularly our large cities and in flats, recycling rates are still as low as 20 per cent.

To improve this, we need a balance between good infrastructure and service provision and a societal shift that sees people give greater value to the products we use and the waste we create.

Local authorities have done a great job of increasing service provision and improving communications efforts over the past ten years. Now, attention is increasingly shifting towards how we can incentivise people to recycle.

#### Bank bonuses for recycling

One high profile example, met with praise by the current coalition government, is the RecycleBank scheme. Through it, householders earn points for recycling, which are then redeemable with a variety of retailers, much like a loyalty card. RecycleBank has clear attractions for politicians and local authorities chasing ambitious recycling targets. According to RecycleBank similar



if you start rewarding the public to do something good for the environment, won't they demand rewards for other things they currently do for free?



schemes in the US have increased recycling rates and kept the public happy at the same time. After all, who wouldn't rather be rewarded to recycle?

But there may also be downsides to this approach. If you start rewarding the public to do something good for the environment, won't they demand rewards for other things they currently do for free, such as leaving their car at home or eating a more sustainable diet?

While short-term effects may be positive for recycling, there is a strong possibility of people reverting to their old habits in the absence of incentives and repeated reminders, or if the scheme were to close. Furthermore, the RecycleBank scheme may actually encourage

#### Focus on food waste

Tim's article focuses on recycling, but reducing food waste is also important. 65 per cent of the food and drink we waste in the UK comes from our homes, leading to the emission of 26 million tonnes of greenhouse gases (CO2 equivalent) per year, at a cost of £12 billion (source: WRAP).

Although wasting less in the first place is always the best option, one way to minimise the impact of the food we throw away is to collect it separately and use it to make renewable energy through anaerobic digestion.

There is scope for much more of this: a newspaper survey suggests that while all Welsh councils now offer some food waste collection,

greater consumption by encouraging people to buy more. Is this really a message we want to send out?

#### **Healthy competition**

An alternative recycling scheme that shows real promise is currently being trialled in the London Borough of Ealing. It was launched in late 2010 and involves the 23 electoral wards of Ealing competing against each other to win funding to improve their local community. The wards with the highest and most improved proportion of household recycling will each be awarded funding to spend on environmental improvements in their communities, such as revamping a playground or installing new benches, possibly even made from recycled materials.

Instead of rewarding households, this scheme works by benefiting whole communities for their recycling efforts.

As Lorien Cummins of Ealing Council says, "By breaking down the cash incentives on a ward by ward basis, we are encouraging neighbours to work together to do something positive for their area, and the most deserving areas will win additional funding to do something good in their community." Hopefully Ealing may be able to use recycling as a starting point for empowering more sustainable communities.

#### Taking a long view

If we really want to recycle more and reduce waste in the longer term, we urgently need to embrace alternative ways of thinking. This means going beyond just focusing on changing behaviours and starting to explore values. After all, it is our underlying values that help form our attitudes, life goals, identity and ultimately our behaviour.

only 41 per cent of English councils do the same (source: *Independent on Sunday*). A study by Brook Lyndhurst shows that the service works best when food waste is collected weekly and refuse is collected fortnightly.

One of the barriers to participation is fear of mess and smells. But significantly, those who have never tried it are more concerned about the 'yuck' factor than those who actually use it.

The main reasons people give for taking part are: disliking waste, wanting to do something for the environment and simply doing it because the service is there.

The recent *Common cause* report from WWF suggests that for lasting change we need to think about moving away from self-interest values like financial wealth, image and popularity, and instead reassert common interest values like our health, our relationships and our participation in the community.

As well as being more likely to tackle issues such as consumption, this has many other benefits; research shows that communities with dominant common interest values are stronger, more cohesive, fairer, and have higher levels of personal well-being than communities without.

In Waste Watch's view, rather than spending the limited funding available on short-term, quick-win behaviour change campaigns, we'd be wiser to take a longer-term, more holistic view. We will need to face up to the challenge of reducing consumption, climate change and inequality.

If we do this, we will be much better placed to achieve lasting social change driven by shared values, rather than by short-term self interest.



Tim Burns is head of community engagement for Waste Watch. www.wastewatch.org.uk

On 9 March 2011, Waste Watch is holding a seminar to examine common value-led approaches towards waste and recycling in the community. For more details, please contact Julia Robb on 020 7549 0347 or julia.robb@wastewatch.org.uk



# **LESS IS MORE**

Nicci Russell examines why, even today, the potential benefits of water efficiency are often overlooked





ot only is human life dependent on water, but so is every sector of our economy, from offices to factories, transport, schools, hospitals, government services and more. Most forms of energy generation, another staple for our economy, use water too.

The only two UK droughts in 2010 were in Scotland and the north west of England, the very areas that, five years ago, we were advised would never need water efficiency measures. Drought and water scarcity are not the same, one is time-specific while the other is more long-term. Yet both are symptomatic of climate change.

It's vital for our society and economy that we waste less water and make it go further. When I was young, baths were a weekly affair, but most children now, including mine, have a bath most nights. And, although many of us have switched to showering, some people have up to three a day, and very little is known about the average shower length. Water companies predict a further increase in personal washing and outdoor watering and there are also a growing number of single-person households, which use more water per person.

We need the government to commit to every home having a water meter by 2020. The current process of increasing metering slowly in some areas and more quickly in others means that vulnerable groups are often subsidising those who are not yet metered. A planned approach, supported by the government, would mean these inequities could be addressed. And it's certainly true that a water meter helps reduce water wastage.

It's all about changing behaviours. Even the most water efficient house can still be wasting water if the people living there are leaving taps running or spending ages in the shower.

Although water wasn't part of the previous government's energy efficiency programme, it has been announced in the National Infrastructure Plan that water efficiency will be included in the Green Deal

It makes sense to include water and offer people a whole house Green Deal. A basic water efficiency retrofit of taps, toilets and showers would only cost up to £70 per house, including fitting, in contrast to energy efficiency measures, which can cost thousands. The water element would pay back within three years if homes were metered for energy only and within one year if they were also metered for water. In this way, the Green Deal could also be used as an incentive for water metering, as well as making 80 per cent of existing homes more water efficient by 2050. If the government ignores this opportunity to include water efficiency in its flagship energy efficiency programme, future governments, faced with ever increasing water resource issues, will certainly wish it hadn't.

#### **Focus on water efficiency**

For every three litres of water we use, one is wasted. Whilst, as Nicci writes, an individual's habitual use of water is an essential component of this, water is also an area where technology has not been brought into use in any degree.

Only a third of homes in England have water meters, the highest percentage in Great Britain. This means that most people have no idea at all how much water they use, and how their use compares to the norm.

Meanwhile there has been little wide-scale focus to encourage the uptake of more efficient appliances or the retrofit of efficiency measures.

We know there is significant variability in how people use water and that it meets different needs for different people, such as relaxation and cleanliness. Research by the department for environment, food and rural affairs has shown that spontaneous awareness of the need to avoid wasting water is low. However, once people are aware, they tend to be supportive of water efficiency for green reasons. The main driver for adopting water efficiency measures is not, primarily, financial for most people (unlike with energy). In Waterwise's programmes, residents



the tendency to downgrade water efficiency in favour of energy efficiency is counterintuitive.



have signed up for water efficiency home visits because they want to help the environment, cut waste, feel as if they are doing something good, or cut their bills. And during the 2006 drought, water use went down by ten per cent, even in areas where there was no hosepipe ban.

The Tap into Savings programme, led by Waterwise, with partners including Global Action Plan, water companies and social housing providers, is a retrofitting and behaviour change programme covering 7,500 homes in three areas of England. It is showing good uptake rates, and substantial water savings and associated behaviour changes are expected.

Water efficiency isn't all about preventing waste and making water go further. Improving water efficiency is vital in both tackling and adapting to climate change. Five per cent of UK greenhouse gas emissions come from heating water in homes. And one per cent of emissions come from the UK water industry treating and pumping water and waste. Water efficiency

56 per cent of the most inefficient toilets for example are in owner-occupied properties, yet there is nothing to encourage their replacement.

There is no mandatory industry-wide labelling scheme to tell people which the most efficient products are: Waterwise has found over 70 different forms of self-certified labels.

In addition, standards for new build housing do not include any requirements for the water efficiency of the products within them.

Part of getting smarter about water use will be about making sure the smartest technology is used.

has a lot to contribute towards achieving low carbon goals.

Despite this, it is not mainstreamed in the government's climate change adaptation planning, nor in the advice it gives to business. In government departmental adaptation plans, published in 2010, water efficiency was conspicuous by its absence. Across the economy, adaptation strategies tend to focus on flood risk management rather than water efficiency. Yet all organisations will be affected by the need to be more water and energy efficient.

Every water efficiency policy change has to be fought so hard for, and then protected. The first ever introduction of water efficiency into building regulations in April 2010, for example, was hard won, but is now under threat through a general review of building regulations.

The tendency to downgrade water efficiency in favour of energy efficiency is counter-intuitive. Waterwise's white paper, published in June 2010, set out the case for the political, economic, social and environmental opportunities created by water efficiency. It includes two pages of recommendations for water policy, but four pages of recommendations for how water efficiency can help to achieve wider government priorities such as carbon reduction and the Big Society.

Waterwise would like to see a world where water and energy regulation work together to tackle efficiency and climate change. After all, water and energy customers tend to be the same people.



**Nicci Russell** is policy director of Waterwise, www.waterwise.org.uk



# **GETTING HEATED**

Energy is an essential part of our lifestyles, yet its associated emissions have a high environmental cost. Here, **Rebecca Willis** challenges assumptions about our energy needs, **Professor**Michelle Shipworth looks at why energy efficiency isn't the only answer and Colin Butfield examines what the Green Deal will do about it.



#### What is the problem?

The US energy secretary has told Americans they each have a hundred slaves working for them; every US citizen uses the energy of a hundred men working flat out. We're not quite so profligate in the UK – around fifty slaves each perhaps – but it's inescapable that energy use has increased dramatically over the past two centuries, and keeps on rising.

Until relatively recently, this wasn't deemed a problem. There was plenty of fossil fuel to power the industrial revolution and post-war consumer boom. Unfortunately, the damage it was doing in causing climate change wasn't understood.

Increasing oil prices and the need to curb carbon are making us rethink our energy needs. The department of energy and climate change's (DECC) 2050 Pathways Analysis showed various ways the UK could meet its carbon targets. All but one involves "ambitious per capita energy demand reduction". The one that doesn't shows that it's almost impossible to meet targets without demand reduction.

Even if all low carbon technologies are successful, we won't be able to use as much energy per capita as we do now. The DECC scenario work made clear we need to reverse over two centuries of steady growth in energy use.

#### A challenge to energy thinking

A Green Alliance think piece, to be published later this year, will look at the new shape of energy politics and policy. It will expose fundamental energy policy assumptions that are rarely challenged: the assumption that we need abundant energy for economic prosperity and social progress; that energy must be freely available and affordable to all; that high fuel prices must be avoided; and that energy saving is primarily a question of efficiency.

The think piece will ask whether society can achieve desired outcomes with much less energy, and whether cheap, low carbon energy is any longer a realistic or legitimate policy goal. It will examine the changes needed in energy markets and other policy areas:

transport, land use, food and agriculture, if we are to achieve absolute demand reduction.

They're challenging questions for government, but we need to ask them. Our society has been built on ready access to cheap energy. We can't assume that the army of virtual slaves will keep growing. We need to develop a view of a prosperous society built on less precarious energy foundations.



**Rebecca Willis** is a Green Alliance associate. www.rebeccawillis.co.uk

#### What's really going on?

Demand for higher home temperatures is widely blamed for UK residential energy use not declining, despite increased efficiency of dwellings and heating technologies. These assumptions underpin UK energy policy. However, the truth is that occupants don't seem to be demanding any higher temperatures now than 20 years ago. A repeated, cross-sectional social survey found no change in reported thermostat settings in owner-occupied, centrally heated English houses between 1984 and 2007.

#### So why is energy use not declining?

There are many possible reasons, including: home energy efficiency has probably not improved as much as previously assumed; increased penetration of central heating; dwelling areas being heated may have increased; heating may now be switched on for longer; and windows may be opened more frequently during winter, increasing energy use to maintain the same temperature. We have studies underway testing the last three possible explanations.

The assumption that a demand for increased temperatures has prevented home energy use from declining has delayed recognition that homes have not become as energy efficient as assumed. This in turn has delayed the enforcement of energy efficiency building regulations. This assumption may also have delayed recognition that increasing home energy efficiency alone doesn't save as much energy as initially thought. Additional policies and programmes are required.

#### Further delay in developing the right heating controls

This inaccurate thinking has been exacerbated by UK government regulations (eg the SAP home energy rating system), policies (eg from the department of environment, food and rural affairs) and programmes (eg from the Energy Saving Trust) assuming that adding central heating controls will reduce energy use.

Our findings suggest households using the central heating system controls currently available have no



lower temperatures or heating durations than households that don't.

However, recent research in the US suggests that certain types of central heating system controls do reduce energy consumption. In the UK, a multi-university, multidisciplinary research project, Carbon, Comfort and Control, is now underway and is applying a user-centred approach to developing new forms of heating controls that appeal to householders, are intuitive to use, and make it easy for people to reduce their heating energy use. Perhaps that will give us some more answers.



Michelle Shipworth is a researcher in energy and social sciences at UCL Energy Institute. www.ucl.ac.uk/energy

#### What's the deal and how green is it?

for 26 million nomes in the UK account for 26 per cent of the country's total carbon output. We've got to make them more energy efficient to reach climate change targets.

The government Green Deal is a measure to remove the upfront cost of home energy efficiency improvements and is currently making its journey through parliament. It's an essential first step. But for it to make a difference, people need to take it up and do so in very large numbers. And there lies the problem. Most householders like the idea, but admit they won't get the improvements done without some sort of nudge. We believe it needs high impact promotion and a clearly defined brand, financial incentives, such as a council tax reduction, and a Green Deal installers' kite mark for enough people to be aware of the deal, be motivated to take

it up and feel reassured they'll get a good quality job.

And what about people who rent? The sensible approach would be to make it a legal requirement for landlords to make energy efficiency improvements, rather than relying on tenants to take the initiative. Whilst the government seems to recognise this, unfortunately it is not currently intending to put firm requirements in place.

#### **Clarity and cohesion needed**

One of the Green Deal's big missing links is a clear government statement about the scale of carbon savings it aims to make in the mid-term. Lots of ambitious statements have been made about the green revolution it will bring by 2050, but if we want to stimulate businesses to invest in promoting the Green Deal now, we need to know what it will achieve by 2020. How many

homes? What kind of carbon savings?

It also needs to be considered how the Green Deal and its associated policies will sit alongside other energy efficiency projects such as the new energy company obligation (ECO), smart meter role out, feed-in tariffs and the renewable heat incentive. There are great potential synergies, but they need to be well managed to work in tandem without causing conflicting results



Colin Butfield is WWF's head of campaigns. www.wwf.org.uk



# LEADING BY EXAMPLE

Old homes are a huge drain on our energy resources, but how do we make them more efficient? We spoke to **John Doggart** of the Sustainable Energy Academy about the charity's Old Home SuperHome network

#### What is Old Home SuperHome and how did it get started?

The project started just over three years ago. Our work with the Environmental Change Institute in Oxford showed that, if all new homes were carbon-neutral from tomorrow, it would save just one per cent of the country's carbon output by 2050. But if existing homes were retrofitted to become 60 per cent more energy efficient it would reduce UK carbon emissions by around 15 per cent.

When we looked into it we realised that nobody knew what the actual end product – a retrofitted house – looked like. And when retrofitting was talked about, it was talked about as an unpleasant necessity rather than an aspiration. So we set out to show people that these are terrific houses. They perform better from an energy point of view than a new house, and they use less fuel and are more comfortable too.

SuperHomes are old homes that have undergone energy-efficiency retrofits, and achieved a minimum of 60 per cent carbon emission savings. They are open to the public at least once a year, so that other people can experience them too.

#### How many SuperHomes do you have now?

We have 80 across the country and 80 per cent of the population are within 40 minutes of one. We've doubled the number each year and our target is 200.

#### How many visitors do you get?

Visitor numbers go up about 30-40 per cent each year. Last year it was over 16,000. The best thing is, most visitors are inspired to invest in energy conservation afterwards. On average they spend £2,000, and a quarter spend over £5,000. That's £30 million in the last year.

#### Why do you think most people do the retrofits?

Our survey proved that they do it for exactly the reasons you'd expect: to save money and to save the planet.

#### <u>Is visiting a low carbon home is important?</u>

Very. It gives visitors a 'touch and feel' experience. Before people have experienced a low carbon home, they usually think it's a good idea, but not necessarily for them. Once they've visited a SuperHome, they see how they can do it in their own home. Marketing people call it salience. The opportunity to touch and feel convinces people of a reality in a way that words or megaphone messages can't. Seeing is believing.

Also, the fact they're being shown around by people who've been through the process themselves is important. A householder who is taking visitors around is regarded as an incredibly trusted source. They're not the government, who might have another agenda, or a charity, but someone just like you.

#### Presumably it works best if people see houses that are similar to their own?

Absolutely, and we have at least one of every type of house, including about seven per cent social housing. That's not a political move; it's so people can see retrofits in a home like theirs. It makes the visit more relevant.

If you live in a Victorian solid wall house then visiting a 1970s house with cavity walls won't have much resonance.

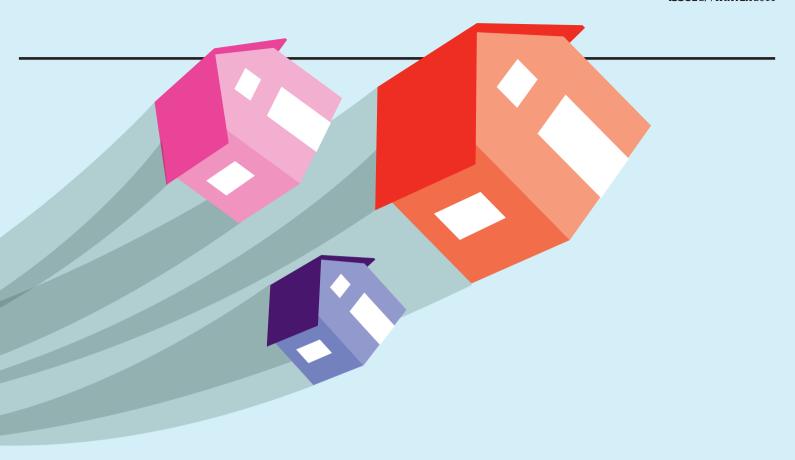
#### What about the people living in the homes?

Most of them are very ordinary people. They care about the environment, but they're not ardent environmentalists. This helps to show visitors they don't necessarily have to be 'greenies' to save money and make their homes more comfortable.

And comfort is a very important driver. From my own experience, living in a Victorian house that's now warm is like moving from a 2\* hotel to a 5\* hotel. The heating goes off at 10pm and on at 6am and the temperature only goes down by about a degree in between, and we've removed about a third of the radiators. We're on course for a 70 per cent carbon reduction, and the house looks the way it's always looked.

#### How did you achieve this?

We insulated the front façade so we wouldn't lose any Victorian details and put external insulation on the back and sides, which are plain.



We've also got a condensing boiler, low energy lighting, rainwater harvesting and Rationel windows. They perform about twice as well as conventional double-glazing. Our house is also so well draught-proofed, it performs three times better than a standard new-build house.

#### What do you think of the government's Green Deal?

It's good but it's too little. The cost of doing this kind of work is two or three times more than the government is offering. Typically, it costs between £20,000 and £30,000 for the kind of work we've had done.

# The government says it will bring the nation's houses out of the dark ages. But that will only work if people go for it, won't it?

Yes, people need to want to do it. The government seems to think that if a person loses no money, that will be the incentive. We think that's not enough. Most people won't want the hassle unless they're incentivised or inspired in some other way. Of course, the value of the house goes up, usually enough to cover the cost of the work. We're not sure by how much in this country, but in Australia there's evidence values go up by about six per cent. Add that to saving two thirds off your fuel bill and it's a much stronger motivation.

# Should the government make it easier for people to see low carbon homes first hand?

We think there should be one in every local authority area and it should be open during the week, which is something our SuperHome owners are unable to do. We've done what we can with our resources and with support from partners such as WWF and the Energy Saving Trust, but it needs government resources too. The government could invest a fraction of the money it's spending on the Green Deal to set up an example home open seven days a week in each area.

#### What's next for Old Home SuperHome?

We want to increase the number of houses and visitor numbers and to help develop products that we identify a need for. For example, we've been developing a method of internal insulation for solid walls. We can do a room in about an hour and a half, on average. It means landlords can have this done without tenants having to move out.

#### Why so fast?

Because we're smart. We do a 3D laser scan of the walls and send the information to an off-site board cutting operation. The boards are cut to size and then two installers put them on the walls. That's it, job done. OK, you have to decorate afterwards

and the radiators and skirting boards need to be taken off and put back on. They're not done within the 90 minutes, but the main part is. We've just trialled it with a local authority with tenants in place and it worked very well.

It should take two days per home, once we perfect it. Not having to decant people to live elsewhere for four or five weeks not only prevents upheaval for tenants, it saves a lot of money and administration. It's the sort of disruption the private rental sector will be prepared to consider.



John Doggart is chairman and founder of the Sustainable Energy Academy. The next countrywide opening of a SuperHome is from 2-3 April 2011. www.sustainable-energyacademy.org.uk



### A GENUINE POWER SHIFT?

#### Faye Scott outlines the thinking behind Green Alliance's

#### new work on localism

Localism offers a wealth of opportunity. People tend to see environmental action as something for the centre to deal with, whereas localism offers the possibility of a real increase in the agency people have in securing environmental progress. They will have greater say in how their area develops. Something which the government, with its unshakeable faith in communities, believes can only lead to better decisions.

But is there a real power shift taking place? We'd question how genuine the handing down of power can be without the provision of resources necessary to fulfilling the responsibilities it creates. Planning, in particular, is a system through which complex trade-offs are negotiated. Without support to build community expertise, localism can only be passive, handing over rights but not resources.

Communities rich in social and financial capital will no doubt make the most of these new freedoms. And in areas where environment is high

on the list of local priorities we may well see ambition and progress, unfettered by centralised limits to vision. But in areas where the environment won't make it onto the list of things that matter — and there will be many — can we blame local authorities for rolling back their efforts in the face of swingeing cuts and a sudden absence of related national frameworks?

Our vision is for a real partnership. One in which national government devolves new financial resources as well as new rights, and agrees differentiated responsibility for things of collective interest, such as climate goals. It is unrealistic to expect local authorities to be responsible for national carbon targets, or to ensure that efforts to deliver onshore renewables add up across the country. But they can demonstrate vital leadership in tackling the impacts of their own estate and driving down local emissions.

This is a pragmatic localism based on the principle of subsidiarity, rather than passive

localism that offers new rights but no new resources. It recognises that, paradoxically, the state will have to exert greater central control further down the line if we fail to share responsibility for collective environmental goals. Importantly, all areas would be free to tackle their emissions in the way they see fit, and agreement would be negotiated not imposed. Instead, it would serve the critical function of ensuring that the environment is at the heart of a genuine power shift.

Faye Scott is senior policy adviser leading our new programme of work on localism, which aims to ensure that the environment is at the heart of localism. If you have views to share, please get in touch. fscott@green-alliance.org.uk

## AN EYE ON THE DETAIL

Amy Persson describes how, with other leading groups, we are tracking the coalition's progress against its promises on climate change

The coalition government could be considered to have got off to a good start on the climate change agenda, with David Cameron's now often repeated 'greenest government ever' pledge. It may have caused some eye rolling amongst those who've heard it all before but it nonetheless signalled a commitment to an agenda the Conservative leadership had only recently embraced.

This positive rhetoric was quickly followed by the publication of the coalition's programme for government which contains a host of commitments that both parties agreed to implement during their five year term.

On climate change, the coalition programme contains some bold promises to deliver potentially transformative policies and institutions such as a Green Investment Bank; electricity market reform to secure investment in low carbon energy; and a

Green Deal to encourage much needed home energy efficiency improvements.

The devil, however, is in the detail. Across a range of areas the headline policy is good but the actual commitment is open-ended and vague. While the coalition programme commits to a Green Investment Bank for example, we're eight months in and still not clear whether the government will actually set up a proper bank.

To make sure government delivers its core promises in a comprehensive and ambitious way, Green Alliance is working with an influential group of organisations: Greenpeace, WWF, Christian Aid and RSPB. Together we are working out what in our view success looks like for each of the coalition's low carbon commitments and using our analysis as a basis for discussion with government over coming months.

Later this year we will produce a report that rates the government's progress in what will be the first of a series of performance reviews on the delivery of the coalition programme in relation to climate change.

The coalition programme is the first time in recent history that a government has spelt out what it will deliver during its first term. It is the glue that binds the coalition together. Our job is to make sure that a promising start on the low carbon agenda turns into the ambitious implementation of some interesting headline policies.

Amy Persson is senior policy adviser leading Green Alliance's Political Leadership theme. apersson@green-alliance.org.uk

#### **GREEN ALLIANCE NEWS**

#### NEW YEAR, NEW IDEAS, NEW PARTNERSHIPS

All our theme leaders are busy planning exciting new projects and we are currently looking for partners to work with us. Here are just some of the new directions we're taking:

**Third Sector:** how do we maximise the opportunities of localism whilst ensuring this new government agenda delivers for the environment?

Sustainable Economy: stimulating political debate around how energy levies are designed, to make them fairer and provide energy efficiency investments for vulnerable and fuel poor households.

Green Living: analysing what the government's Green Deal means for energy efficiency, and the part business can play in changing our behaviour.

Designing Out Waste: asking whether we need new economic incentives for resource use and developing new work around the concept of the circular economy.

To find out more about our new projects, or membership of Green Alliance, contact **Laura Williams** on o20 7630 4525 lwilliams@green-alliance.org.uk

## BUSINESS OPPORTUNITIES

Our business circle continues to thrive. This membership scheme offers progressive major businesses the chance to contribute actively to current debate, and to improve knowledge, performance and reputation in the competitive environmental arena.

Last autumn we provided members with the opportunity to explore the implications of the comprehensive spending review for the environment with Paul Johnson, director of the Institute for Fiscal Studies, and with senior figures from leading NGOs. Recently members were given exclusive insights into what role business and civil society will play in the Big Society at a dinner with Sir Stuart Etherington, CEO of the National Council for Voluntary Organisations, and Shaun Spiers, chief executive of the Campaign for the Protection of Rural England.

The present government has placed great store on 'nudging' people to make better choices for themselves. In March, we will be holding an event for members to explore what 'nudge' actually means, whether it is enough to encourage people to make pro-environmental choices, how business can promote pro-environmental behaviour amongst their employees and customers, and what policy framework is needed to help them do this.

Members benefit from interaction at our events with a network of senior level contacts across all sectors.

Business circle members are listed on our website at www.green-alliance.org.uk
For more information contact **Richard Booth** on

For more information contact **Richard Booth** or 020 7630 4515. rbooth@green-alliance.org.uk

# NEW INDIVIDUAL MEMBERS

welcome to:

**Rosie Amos** 

Tim Fiennes

**Richard Usher** 

Peter Vickery

Green Alliance is an influential, independent organisation working to bring environmental priorities into the political mainstream. We work collaboratively with the three main parties, government, the third sector, business and others to ensure that political leaders deliver ambitious solutions to global environmental issues.

#### staff

Matthew Spencer

director

Tamsin Cooper

deputy director

**Louise Humphrey** 

head of resources

**Richard Booth** 

events co-ordinator

Rachel Cary

senior policy adviser

**Karen Crane** 

senior communications manager

**Josephine Evetts** 

pa to director and office manager

Hannah Hislop

senior policy adviser

Hannah Kyrke-Smith

policy assistant

**Chris Littlecott** 

senior policy adviser

**Amy Persson** 

senior policy adviser

Rebekah Phillips

senior policy adviser

**Edward Robinson** 

media and communications manager

Sylvia Rowley

policy adviser

Faye Scott

senior policy adviser

Marta Silva

book-keeper

Laura Williams

fundraising manager

contact each staff member at: initialsurname@green-alliance.org.uk

#### associates

Ian Christie, Chris Church, Chris Hewett, Julie Hill, Jiggy Lloyd, Derek Smith, Stuart Singleton-White, Sheila Watson, Rebecca Willis

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