

Local hero Someone really changing places



Photographs: Derek Brown

Who: Dusty Gedge, co-founder of www.livingroofs.org, partner of the London Biodiversity Partnership and chairman of the Lewisham Biodiversity Partnership

Where: The London Borough of Lewisham

What: The only independent organisation in the UK that promotes green roofs and offers advice, guidance and support for their installation

From his home base in the London Borough of Lewisham, Dusty Gedge tirelessly promotes the planting of green roofs – the practice of cultivating plant life on roof surfaces with significant benefits for the environment. He's nationally known as the 'green roofs man' and is a long-term supporter of conservation.

Dusty first got involved in 1997 with the London Biodiversity Partnership's conservation programme to develop urban brown fields and promote the black redstart bird as an icon of London. He took part in the project and, from there on, his interest in green roofs grew.

'My inspiration also came from Switzerland and Germany, where they've been putting up green roofs for over 25 years,' says Dusty. 'I'm a great believer that they can play a big part in meeting local, regional and national biodiversity targets.'

In his role as a partner of the London Biodiversity Partnership and as a speaker for livingroofs.org – the organisation he helped to found in 2004 – Dusty goes

all over Britain telling people about the benefits of green roofs. 'I'm keen to get green roof groups and forums set up all over the country,' he says. 'Brighton has one, Sheffield has one – places where local people and environment officers can meet and join the debate.'

In London itself, Dusty works with many businesses to develop

their own rooftop greenery. His biggest achievement, he says, has been to get Barclays Bank to install a green roof 160m above London on its headquarters building in Canary Wharf. And as chair of the Lewisham Biodiversity Partnership, Dusty has been responsible for pushing the issue, making the borough one of the top five in London for green roofs.

The Barclays Bank headquarters in Canary Wharf boasts a healthy green roof



'On a domestic scale, green roofs reduce your ecological footprint, encourage wildlife and reduce the amount and speed of rainfall entering the drain system,' explains Dusty. 'And the benefits are increased on larger buildings. Green roofs conduct heat up and out, meaning expensive air conditioning is unnecessary.'

Dusty works with organisations like the Greater London Authority to write reports on green roofs, but credits the Environment Agency with reaching the politicians. 'The real reason so many green roofs will be going up in London over the next five to ten years is because the Environment Agency has been pushing it higher up the Government's agenda,' he says.

Green roofs have been around for a long time, but the rise in interest is quite recent. Dusty says: 'Some of the best green roofs in London were built in the late 1980s. Everyone's talking about climate change now, but people have been trying to do this for 20 years.'

Green roofs are especially

effective in big cities where there is an 'urban heat island' effect. Vegetating the roofs of a large city like Bristol minimises this effect while also reducing air pollution. It lowers energy use and diminishes the risk of flash floods because rainwater is stored by the vegetation.

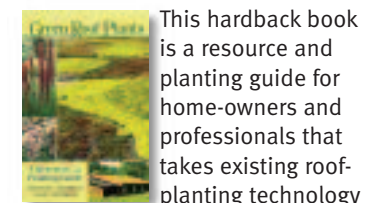
We need only follow the example of Switzerland, where Dusty's favourite green roofs can be found. 'At the Moos Filtration Plant just outside Zurich, there are 18 species of orchids and 178 flowering plants growing on what was once a reservoir,' he enthuses. 'It's so fantastic, the Swiss Government has designated it a National Park.'

When the World Green Roof Congress comes to London in 2008, the city will receive an expected 400 delegates from a range of backgrounds. If events like this, which is put on by livingroofs.org, the Environment Agency and GLA, can convince big business to take up the idea, perhaps Britain's green roofs will be headed for National Park status too.

www.livingroofs.org

Green Roof Plants

Snodgrass & Snodgrass
Timber Press
£20



This hardback book is a resource and planting guide for home-owners and professionals that takes existing roof-planting technology to the next level. It showcases the potential of plants like dwarf alliums and campanulas, going beyond the usual selections.

Green roofs demand species that can withstand stressful conditions in exposed locations. This concise, accurate, easy-to-use handbook will make the difference between a green plot and a brown one.

Green Roofs and Living Walls

Nigel Dunnett and Noël Kingsbury
Timber Press
£25



As a 'nuts and bolts' starter to planting roofs and walls, this book marries with Green Roof Plants nicely. There's just one chapter to the kinds of plant species suitable for the drought, light and wind encountered on a green roof. The rest provides an authoritative introduction to the practical techniques for constructing green roofs. It also incorporates the art of wall planting and answers many technical questions that gardeners and architects will ask.

Do you know a local hero? Someone who you think is doing great things to improve their environment or community? If you do, get in touch with us at Your Environment using the contact details on page 3.

DustScan Ltd

Dust Monitoring and Consultancy Services

DustScan Ltd provides independent specialist dust monitoring and consulting services throughout the UK.

We are pleased to announce the introduction of our new DS 500 dust gauge. This easy-to-use system incorporates two separate monitoring technologies:

- The DustScan directional nuisance dust gauge, providing AAC% and EAC% data
- A battery-powered filter reference PM₁₀ or PM_{2.5} sampler

The equipment is suitable for either baseline or compliance monitoring. Dust sources and their significance can be assessed and dust samples can be collected.

A range of geochemical analyses of the directional and gravimetric samples is available.

Price: from £650.00 per gauge. Further enquiries: please contact our team on 01608 810110 (Tel) or 01608 810227 (Fax)

email: info@dustscan.co.uk
web: www.dustscan.co.uk



Nationwide

- Oil & chemical spill response
- Pollution control auditing, training and equipment
- Oil tank compliance advice and maintenance
- Hazardous waste disposal
- Industrial water jetting
- Tankering

Oil and Environmental Services

0800 592827

24hr UK Spill
EMERGENCY RESPONSE ASSOCIATION



www.adlerandallan.co.uk

Hyder Consulting

BTP Hyder
10 Medawar Road
The Surrey Research Park
Guildford GU2 7AR
Tel: 01483 535 000
richard.beltridge@btp-hyder.com

South East Office
Tel: 01622 676 177

East Midlands Office
Tel: 01442 866 776

West Midlands Office
Tel: 01905 794 784

Hyder Consulting Ltd
29 Bressenden Place
London SW1E 5DZ
Tel: 02073 186 000

www.btp.com
www.hyderconsulting.com

Are you at risk from flooding?

Flood Risk & Mitigation Specialists

BLOW BY BLOW

GREAT DUSTBIN REVOLT

Over a third of UK councils have changed to alternate bin collections to boost recycling rates and avoid EU fines by reducing the amount of household waste we landfill. The *Daily Mail* wasn't happy. It began 'The Great Dustbin Revolt', a campaign to save weekly rubbish collections. But to what effect?



1 Waste, rats and bad smells

On 22 April, The Daily Mail launched its 'Great Dustbin Revolt' campaign. According to the paper, alternate weekly collections – where councils collect household rubbish one week and food waste the next – create bad odours, rat infestations, more flies and are a public health hazard.

2

'Dustbin of Europe'

Outgoing Chairman of the Local Government Association Sandy Bruce Lockhart countered the Mail's claims, saying: 'Britain is the dustbin of Europe with more rubbish being thrown into landfill than any other country. The choice is simple and stark: either people throw away more rubbish in their black bins and damage the environment, or recycle more and help save the planet.'



3

The knock-out blow?

The Daily Mail 'wins' – publishing a victorious article in June about 30,000 homes that will have weekly bin collection restored. The paper claimed the changes resulted from its campaign and that councillors in areas that have brought in alternate bin collections suffered heavily in the polls. Following support from MPs in July that the scheme doesn't work in some built up areas, The Mail claims victory once again.



4

A defiant stand

'Alternate weekly collections are not the answer everywhere,' says Chartered Institute of Waste Management Chief Executive Steve Lee, 'but there are millions of people in the UK who have been happily participating in this type of scheme for years. In many areas where it has been introduced properly, the result has been higher recycling rates and good levels of resident satisfaction.'

AND THE WINNER?

The Great Dustbin Revolt landed a sharp uppercut on the chin of alternate weekly bin collections, but the scorecards show the environment wins – almost 100 authorities now recycle or compost over a third of their waste.



RSPB

Wildlife's winners and losers

British species at risk have doubled in 13 years, although climate change could help some thrive

The RSPB says there are now 1,149 types of plant, mammal, bird and insect at risk in Britain – almost twice as many as 13 years ago.

Its recent *Report on the Species and Habitat Review* reveals that climate change and human activity have posed an increasing threat to wildlife. Species at risk include skylark, dormouse, red squirrel, grass snake, Atlantic salmon, pine marten, water vole, moonshiner beetle, lesser spotted woodpecker and grey partridge.

The report involved research by more than 500 experts and a number of volunteers.

A spokeswoman from the Department for Environment, Food and Rural Affairs said ministers were looking carefully at the list. 'When finalised we hope it will provide a springboard for protecting threatened species for at least the next decade,' she said.

A separate report from the Government's wildlife advisor Natural England found that some species could actually thrive in years to come as the

climate becomes more suitable for them across a wider area.

The *Monarch Report* found that 15 species might benefit, including turtle dove, greater horseshoe bat, red hemp-nettle, and small-flowered catchfly. But the report warned that many others faced a serious threat to their survival, including the song thrush, capercaillie and black grouse (pictured).

www.rspb.org.uk

On the move

Some wildlife is already hot-tailing it to cooler climes around Britain. Examples include:

- Butterflies. The small skipper, the comma and the holly blue have all crossed the border into Scotland in the past few years.

- Barnacles, limpets and seaweeds. They're moving north and east around the coastline.

- The long-billed murrelet. Spotted for the first time in Britain last autumn, the bird attracted 1,500 people to a Devon coastal spot.

Summer floods a climate change wake-up call

Human 'fingerprint' in weather system shows link to wetter weather, says new study

The rainfall from May to July broke all records, making it the wettest three months since England and Wales precipitation records began in 1766. According to the Met Office, many areas saw over 200 per cent more than their average May–July rainfall.

Now, research from the Met Office and Environment Canada has shown, for the first time, a link between human activity and changes in global rainfall patterns. Scientists have found a 'human fingerprint' in the rainfall changes detected in a belt of the northern hemisphere stretching from the Mediterranean to the UK and Norway.

Although the study, published in the journal *Nature*, does not prove that any single episode of extreme weather can be directly linked to climate change, it shows a steady increase in levels of rainfall across the UK – by an average of 6.2mm every decade. The scientists conclude that at least half, and possibly up to 85 per cent, is caused by the impact of greenhouse gas emissions.

The widespread, extreme floods that happened first in June, then in July, caused billions of pounds of damage to property and businesses, and serious disruption to people's lives. At the height of the crisis in June, South Yorkshire Fire and Rescue was taking a 999

call every 10 seconds. In Hull, one of the worst affected areas, the number of damaged homes topped 17,000, approaching a fifth of the city's stock.

The ground remained sodden with surface water, so when 120.8mm of rain fell in Pershore, Worcestershire, on 20 July and heavy downpours continued across England, the waters ran straight into rivers, causing watercourses to rise very quickly. At Walham power station near Gloucester, disaster was narrowly averted as Environment Agency staff and the military worked to protect it from the rising River Severn, which would have caused 500,000 homes to black out had it overtopped defences.

Much of the flooding was because drains were unable to cope with the huge quantity of water that fell so suddenly, running straight off driveways and hard-standing into the drainage system. Five times as many homes and businesses were flooded by overflowing drains and sewers as were affected by river flooding.

According to climate change scientists, this is exactly the kind of flooding that the country needs to expect and prepare for because of global warming.

The Stern report on the economics of

climate change warned that flooding costs could rise from the present £1 billion a year to nearly £21 billion a year later this century.

In April, as the UN's Intergovernmental Panel on Climate Change published its report on the potentially devastating impact of global warming, the Environment Agency warned that the UK has no choice but to prepare for higher temperatures, rising sea levels, 'boom or bust' rainfall patterns and extensive flooding.

With the recovery operation for this year's floods well under way, the Environment Agency has welcomed a Government inquiry into the nature and causes of the extreme weather. But it said that, despite Environment Secretary Hilary Benn's announcement of an increase in funding for flood risk management from £600 to £800 million by 2010/2011, much more would be needed.

Chief Executive Barbara Young said: 'In the last seven years, we have created defences that protect 100,000 homes in floodplains, as well as increased those receiving flood warnings and greatly improved flood mapping and forecasting. If there's one major problem, it's that there is much more that we could do if we had adequate funding.'



On the ground

'We didn't think we'd get such a lot of water. We just thought we might get a soggy carpet, but the floods came up the lane so quickly. The last flood here was in 1947 and it didn't come anywhere near the house then.'

'I think the whole of Tewkesbury really didn't expect anything like this, it's been extreme. We've had lots of information about water and what we can and can't do – it's been an efficient process. I don't think the Environment Agency, or indeed anyone, could have foreseen this amount of water.'

Kate and Pete Parkinson, residents of St Mary's Lane in Tewkesbury, Gloucester

IN IT FOR THE LONG HAUL

Who: Rob Hopkins
Where: Totnes, Devon
What: Founder of the Transition Initiatives movement, which aims to prepare us for life when oil supplies run out

‘Our lifestyles are awash with oil: cars, plastics, medicines, building materials, paint, varnish, glue, resin,’ says Rob Hopkins, taking us on an imaginary walk around his home. ‘The reasons our socks are stretchy is because they have Lycra in them; our PVC windows, Nylon in our bedding – the range of things is incredible. Oil underpins our society.’

From his base in Totnes, Devon, Rob co-ordinates the extraordinary network of ‘transition’ towns and initiatives that have flourished in the UK since the movement’s inception in September 2006. The two drivers at its core are climate change and the concept of peak oil.

Sticky situation

‘Peak oil is the idea that what matters isn’t when the last drop of oil runs out, but when we reach the peak of oil production – when we’ve used up the oil that’s easy to get at,’ Rob explains. His concerns were first raised by the work of Richard Heinberg – a research fellow of the Post-Carbon Institute. Rob read Heinberg’s seminal book *Power Down* in 2004, just before starting to teach the world’s first full-time permaculture course in Kinsale, Ireland.

‘I found out about peak oil on the first day of term,’ says Rob. ‘So we designed a project for the students looking at how

the town of Kinsale could respond to the oil challenge, and came up with the Energy Descent Action Plan.’ This first transition initiative asked some pretty big questions. ‘People argue that we need a 90 per cent reduction in carbon emissions by 2020, but what would this look like?’ says Rob. ‘And what happens when you add peak oil into the mix?’

What grew from this initial experiment was the Transition Initiatives movement. Having lived in Ireland for 10 years, Rob upped sticks to Totnes in



I’ve always been able to read a very depressing book about climate change and peak oil, then go plant some carrots

September 2006 where he intended to trial the ideas developed in Kinsale. But he hadn’t bargained for such a huge and positive response – there are now 17 official Transition Towns and many more initiatives running throughout the country.

‘Totnes is special because it was the first Transition Town in the UK. It also has a history of being involved in alternative projects, so people are open to new ideas,’ says Rob. ‘It’s been valuable as a lab for testing new schemes that other towns copy.’

Rob initially set up a number of working groups involved in building, food, energy, transport, health and medicine, liaison with local government – every aspect of people’s lives – to drive projects forward. But his role quickly changed from initiator to facilitator, bringing together people who are passionate and knowledgeable about their own particular subject and supporting them to achieve their goals.

‘We try and keep the whole process very unthreatening, playful and interesting,’ Rob

says. ‘The scheme acts as a catalyst, encouraging people to imagine their community without all the oil it relies on. This tends to stimulate people to question their basic assumptions about energy resources and come up with practical solutions.’

The end of the world...

So what’s the bottom line? ‘To spell it out, we’re currently collectively £1.2 trillion in debt, borrowed against the fact that the economy will keep growing,’ says Rob. ‘When the economy

can’t do that things will quickly unravel. Most people find it hard to deal with, but I’ve always been able to read a very depressing book about peak oil and climate change then decide I need to go out and plant some carrots.’

Rob helps communities learn how to anticipate and cope with the terminal decline in oil production that will start at around the turn of the decade. There could be potential benefits like ‘a renaissance in food farming in Britain’ and ‘an incredible rethinking of the way we do things’ according to Rob. And if Totnes is anything to go by, communities will become increasingly independent of the state.

The term Rob uses is resilience: ‘It’s about shock-proofing our communities at a time when the likelihood of shocks is increasing.’ In Totnes, local people have run schemes to plant nut trees as an alternative source of food. They’ve set up conferences for landowners and estate holders and education days in local schools. But Rob’s favourite project by far has been the launch of the Totnes Pound.

Under the slogan *The Totnes Pound is like real money only better*, the ‘economics and livelihoods’ group printed and promoted 300 bank notes for use in 30 shops in the town. The parallel currency – £10 of which is worth £9.50 sterling – will strengthen the local economy against big chainstores, and give businesses a boost.

The mushrooming growth of the Transition Initiatives movement shows no signs of slowing. Rob has recently appointed his first two full-time staff members, he’s writing a book called *Small Is Inevitable* (to be published by Green Books) and he’s being approached by more individuals, councils and councillors each week. ‘We want a team of trainers to support new initiatives,’ says Rob.

‘There’s something about this process that is like creating new stories about what the future could be like,’ he continues. ‘It’s really a very simple idea: the future with less oil could be better than the present if we design it with creativity, adaptability and imagination.’ www.transitiontowns.org/Totnes



Totnes Pounds were given away at an open evening for 200 people and can be exchanged in the town’s businesses – on one side of the note is a facsimile of the 1810 Totnes bank note

LCM ENVIRONMENTAL 24 hour phone line: 01884 841 387

REMEDIATION • OFTEC TANK SERVICES • GROUND CONTROL



TANK CARE • ENVIRONMENTAL • INCIDENT MANAGEMENT

A nationwide company, with 20 years experience offering a safe pair of hands for all your environmental needs.

Langlands Business Park, Uffculme, Devon, EX15 3DA
www.lcmenvironmental.com

Self Cleaning effluent quality monitors

TO ASSIST YOU WITH IPC COMPLIANCE



Dissolved oxygen, Suspended Solids, Total chlorine, pH, ORP/Redox

All with ATI’s air blast cleaning system



Analytical Technology, Bank Chambers
 33 Stamford Street, Mossley, OL5 0LL
 +44 145 783 2800
 sales@atuk.com

- Reduce compliance failures
- Improve treatment
- Never need cleaning
- Typical maintenance intervals of 12 months
- 1000’s installed

www.analyticaltechnology.com

THE REAL STORY:

I'M NOT A PLASTIC BAG

Designer Anya Hindmarch's fabric shopping bag caused a sensation, using high fashion to promote the message that plastic bags are bad. It was never supposed to be the world's most sustainable sack, but met with serious criticism. So is it really bad?

How it started

Action group We Are What We Do decide to raise awareness of the 17.5 billion plastic bags picked up from shops each year by producing a fabric shopping bag. For maximum impact, they combine with top designer Anya Hindmarch and produce a limited quantity of bags. Shoppers queue at Sainsbury's in the wee small hours to buy one. They sell out within hours, only to appear on eBay later for hundreds of pounds.

VERDICT

This bag is cool. And that meant it got an important issue noticed. But there are better alternatives to the plastic bag. In fact don't bother buying a new bag at all – dig an old one out from the cupboard.

Dyes

After shipping, the bag is dyed brown, blue, green and charcoal grey. We couldn't find out whether the dyes used are natural or synthetic. Natural dyes are made from plant and vegetable compounds mixed with mineral salts. However, they're not widely used because they can't match the bright shades of synthetics.

FIND OUT MORE:

www.wearewhatwedo.org



Raw materials

The bag is made in unbleached cotton. However, the amount of pesticides used on cotton makes it one of the least environmentally friendly materials, and the fabric used in the bag is neither organic nor fairtrade. Non-organic cotton takes up only three per cent of the world's farmland, but uses 25 per cent of all chemical pesticides.



Manufacture

China, where the bag is made, is the world's biggest emitter of CO₂ after it overtook the US in June 2007. Chinese factories typically use electricity that has been generated from burning coal.

Transport

The bag is shipped 8,000 miles from China to the UK for sale in April – at a price of £5 – and again in summer, when a further 20,000 are produced – at £7.50. (Shipping accounts for five per cent of the world's CO₂ emissions.) In a bid to reduce the bag's carbon footprint, the company carbon-offsets by purchasing carbon credits.

ANORAK'S CORNER

ECO-TORCHES

In the war against batteries, winding, shaking and sitting in the sun can all help. But when you need light, and you need it now, do eco-torches do the business? Gill Chilton investigates



Shaking things up: eco-torches do away with batteries, which is no bad thing. We buy one billion in the UK each year. Many contain toxic or corrosive substances such as lead, mercury and cadmium. Most go into landfill. But new EU legislation will require us to recycle around 50 per cent.

Our mission began at night: my seven-year-old son and I put four battery-free nightlights to the test on the nightly goings-on in our garden.

The **Rimax Magic Light** (£9.99 at www.rmxdirect.co.uk) uses the principle that a magnet moving repeatedly through a coil generates electricity. That means fast shaking in a horizontal fashion. Doing this for 40 seconds is ridiculously frustrating and a lot of work for just three minutes of power.

More promising, and especially with small children, is the **Squeezy Dynamo Torch** (£9.75 at www.ecogadgets.com).

After some 30 squeezes, you're powered up for 10 minutes – enough to scour the garden until we got bored. No matter, another few compressions and we were back on. And on: our efforts sent the dynamo spinning time after time. This torch is great fun and perfect for young kids as it's so easy to power up.

Overtaking the mass market at the moment are wind-ups. High street chain Robert Dyas sells the **LED Dynamo Torch** (£4.99). One minute's winding equals 30 minutes light, so for an emergency kit, it's

great. It's also cheap enough to buy one for the car boot, one for the fuse box and one for camping.

My vote for regular use goes to the solar-powered option. Pop the **5 LED Solar Torch** (£7.50 at www.ecogadgets.com) on a windowsill by day to generate 2–3 hours of power. There's a compass on the end, so not only do you get light, but you won't get lost in the dark.

Gill Chilton is a journalist, consumer expert and Your Life's Contributing Editor



Get off to a good start.. Choose an IEMA Approved Course

Give your career the IEMA stamp of approval.

For a wide range of environmental courses delivered by approved IEMA training course providers please visit www.iema.net, email info@iema.net or call 01522 540069



iema

INSTITUTE OF ENVIRONMENTAL MANAGEMENT & ASSESSMENT

A profession for environmental practitioners
Professional Development • Best Practice • Networking

St. Nicholas House, 70 Newport, Lincoln, LNI 3DP, UK Tel: +44 (0) 1522 540069 Fax: +44 (0) 1522 540090
Email: info@iema.net Web: www.iema.net

GREEN CHALLENGE

GETTING TO WORK

Have you considered a greener commute? We set three Environment Agency colleagues the task of changing the way they travel to work for a week to find out how it affected them

CAR TO BIKE

Name: Peter Bond
Occupation: Operations
Technical Supporter
Distance from work: 8.5 miles

Pete's Verdict: My usual journey to work is along a busy A-road, but by bike I can use a Sustrans route. Travelling by bike didn't really change my routine, but I needed a change of clothes and a shower when I got in.

During the the challenge a number of unexpected site visits came up. I had to cycle home to pick up my 4x4 then drive over to the site. I also nearly got knocked off my bike by a roe deer crossing the track!

Travelling to work by bike every day isn't easy for me as I'm often out on site visits. Even though I got wet 7 out of the 10 journeys, I'll definitely cycle to work at least two days a week.



BEFORE
Total carbon footprint: 25kg
Hassle rating: 1
Conscience rating: 5
Weekly cost: £12

AFTER
Carbon footprint: 0
Hassle rating: 6
Conscience rating: 3
Cost: £0

BIKE TO CAR

Name: Michael Guthrie
Occupation: Head of Customer/Community Relations
Distance from work: 4 miles

Michael's Verdict: For me, travelling to work by car meant sitting in traffic jams, road rage, feeling lethargic and being less alert in the office.

The evening journey was really frustrating as the traffic

queue started 100ft from the office. Looking around me, it seemed pointless to use a car with just one person sitting in it.

In terms of routine, I found myself leaving earlier in the morning and later in the evening to beat the traffic, but that's not why I won't drive. I feel much fitter when I'm cycling to work – driving adds cost and makes me feel guilty when I could so easily cycle or get the bus.



BEFORE
Total carbon footprint: 17kg
Hassle rating: 2
Conscience rating: 6
Cost: £1 per day

AFTER
New carbon footprint: 1kg
Hassle rating: 2 in the sun, 8 in the rain
Conscience rating: 4
Cost: up to £7.60 per day

Conscience rating:
1 = I'm saving the planet
10 = I'm harming the planet

CAR TO BUS

Name: Vicky Quill-Bishop
Occupation: Business Editor
Distance from work: 6 miles

Vicky's Verdict: I quite enjoyed taking a bus to work – it's more restful than using the car. I discovered that buses go everywhere, and I got to see baby chicks by the pond I walked past.

The major discomfort for me was waiting at the cold bus stop on a wet, windy day. Plus

there was no leeway for a lie-in or I'd miss the bus. Deciding how to dress each morning at 7am when the weather is so changeable was tricky, but the early start meant my buses were quick and on time.

Because there was a short walk to and from the bus stop to my house, I felt more awake when I got to work. I may still take the car on wet, cold days, but I'll certainly take the bus at least twice a week.

KEY

Hassle rating:
1 = easy peasy
10 = mega hard

To work out your carbon footprint, go to www.actonco2.direct.gov.uk

AMAZING IDEAS

BIO-PHONE

In one sense mobiles are good news for the environment – every time we talk and text we save the paper we'd use to post a letter. But the fact that in Europe we throw away about 100 million mobiles each year – the vast majority of which work perfectly well – means they're one of the least green bits of kit around.

But what if you made a mobile that didn't hang around in landfill for hundreds of years? That's the thinking behind a research project started by Dr Kerry Kirwan of WMG at Warwick University.

Kirwan and his team have developed a 'biophone' whose outer casing looks like plastic but is actually made of poly-vinyl alcohol. When composted, it disintegrates, releasing a seed.



Left to right: Kerry Kirwan, Peter Morris, Director of PVAXX, and Dan Jacobs, an engineering researcher, with their prize

The prototype device, which was developed with Motorola and research firm PVAXX, includes a dwarf sunflower that germinates when put into wet, nitrate-rich soil. The project is currently in the development phase, but the team hopes it'll soon become a commercial reality.

FIND OUT MORE
www.vopnet.org

KNOW YOUR WORLD 10 surprising facts about: tap water

- Just £1 a year covers the metered cost of what you drink in a year, compared with £1.50 for one day's worth of Evian.
- It's good for your health – scientists argue that the trace elements in tap water provide a mineral boost.
- If you live in the north of the UK, you're more likely to be drinking lake or river water.
- Washing machines use 14 per cent of all domestic water.
- Saving water can help your business. An Enhanced Capital Allowances scheme gives tax breaks when you buy water-efficient technology.
- Embedded or 'hidden water' pushes a person's daily water usage from 150 litres to more like 3,400 litres. A tomato has 13 litres of water behind it. Log on to www.waterfootprint.org for what you've washed down today.
- England has less water available per person than parts of the Middle East and Africa.
- You can waste around nine litres of water running a tap in summertime before it feels cold enough to drink.
- You can find organic carbon, tetrachloroethene, sulphate, potassium, copper, chlorine, calcium and ammonium in a tap nearby.
- Your bottled water may have come from a tap, not a mineral spring. Dasani and Aquafina are both reprocessed city water.

wpi Water Solutions
Meeting EA and SEPA specifications

Wastewater Treatment - SAF
Bioscope designs, small foot print

- Integral flow balancing tank for commercial applications with variable flows & loads
- Reliable operation and standby facility
- No internal moving parts
- Treats from 20:35:20 to 10:10:2 BOD:SS:NH₄
- Simple tankering
- Flexible supply lead times

60 to 3000 jpe

Wastewater Treatment - Domestic
with up to five years de-sludging requirements

- No internal moving parts
- No odour
- 1 year guarantee
- Certified to the new European Standard - EN12565-3
- Irish Agreement Certified
- Conforms to UK Building Regulations
- Low running costs

1 to 55 jpe

Rainwater Harvesting
for domestic and industrial use

- Low cost, simple installation
- 15 year guarantee
- Reduces water bills
- Helps compliance with Building Regs, Part H3
- Robust design
- Low carbon footprint

Bioscope Commercial Solutions and Stormwater Management also available

2700L to 13,000L

For sales, advice or a full list of products: www.wpi.co.uk
Tel: 08454 504819 Email: enquiries@wpi.co.uk

Hyder Consulting

BTP Hyder
10 Medlaw Road
The Surrey Research Park
Guildford GU2 7AR
Tel: 01483 535 000
richard.bettidge@btp-hyder.com

South East Office
Tel: 01622 676 177

East Midlands Office
Tel: 01442 956 776

West Midlands Office
Tel: 01905 794 784

Hyder Consulting Ltd
29 Bessenden Place
London SW1E 5DZ
Tel: 02073 166 000

www.btp.com
www.hyderconsulting.com

BTP

Are you at risk from flooding?

Flood Risk & Mitigation Specialists

Nationwide

- Oil & chemical spill response
- Pollution control auditing, training and equipment
- Oil tank compliance advice and maintenance
- Hazardous waste disposal
- Industrial water jetting
- Tankering

Oil and Environmental Services

0800 592827

24hr UK Spill
EMERGENCY RESPONSE ASSOCIATION

A+A
Adler and Allan

www.adlerandallan.co.uk

IF THERE'S ONE...



... BOOK TO GET

Sea Change: Britain's Coastal Catastrophe
Richard Girling
£16.99, Eden Project Books 2007

There's a sense of when, not if, about this book. We've failed to listen and respect our environment, stripped the sea of fish and filled it with waste. And yet Girling's potentially gloomy book has a few surprises. He shows an insatiable thirst for raw facts – like one in five cigarettes smoked in the UK is smuggled and beach-goers leave behind 150 times more litter

than fly-tippers. He takes a fresh angle on many issues and his witty, wry writing style makes this an entertaining read.

In a country where no-one lives more than 72 miles from the sea, we all have coastal links. Childhood holidays, eco-aspirations, flooding, political experiences... this book ties everything together. Along with the author's solutions, which may just turn the tide, you come away caring that bit more about our sea.

Gill Chilton

ALSO TRY...

The Organic Directory 2007-8
Edited by Clive Litchfield
£8.95, Green Books with the Soil Association 2007

This is the definitive sourcebook for anyone seeking an organic lifestyle. Find farmers' markets, organic baby food, textiles, B&Bs and much more.

Eco-Centres & Courses
Terena Plowright
£12.95, Green Books 2007

Learn about composting toilets, bee keeping and solar power at one of 150 eco-courses and fun days.

Q&A

ECO CONUNDRUMS

PLASTIC RECYCLING



With Paul Davidson,
Plastics Technology
Manager at WRAP
(Waste & Resources
Action Programme)

things like yoghurt pots and plastic fast-food trays?

A: Nothing! All plastics melt, so they can be recycled, but it's down to economics. It's only worthwhile for councils to collect plastics that can be easily prepared. Bottles tend to be cleaner: milk, cola, fabric conditioner and shampoo are all easily rinsed. Yoghurt, cling films and solid foods cause more problems. Tetra Pak, who manufacture juice cartons, have their own send-back scheme (see www.tetrapakrecycling.co.uk).

Q: So could I recycle old plastic toys and garden pots?

A: For the moment, the best guide is to read what your council wants – there are lists at recycle points and on home collection bags and boxes. Going with the 'can be recycled' symbol on a product only tells you what is possible, not what your council is doing right now.

FIND OUT MORE
www.wrap.org.uk
www.environment-agency.gov.uk/subjects/waste/

Q: I have to drive eight miles to my nearest plastics recycling point. Am I doing more harm than good by doing so?

A: Well firstly, it depends on whether you'd be using that route anyway. Lots of recycle points are in supermarket car parks, so it's easy to get into the habit of dropping off when you food shop.

At WRAP, we never encourage a journey just for recycling. Every half a mile that you drive produces the same amount of CO₂ emissions as are saved by recycling one plastic milk bottle (around 63g of carbon). So you need to take 16 empty milk containers to your recycling point to offset what your car produces by driving the eight miles there.

Q: You mention milk containers. What's wrong with recycling



ALAMY

PROTECTING THE ENVIRONMENT

Sediment Pollution Management



Trap Stormwater Run-Off Silts
Protect Waterways and Drains
Reduce Water Pollution
 Terrastop™ Premium silt filter fence traps harmful suspended solids in construction site stormwater runoff before they pollute the surrounding environment and clog drains.



Trap Disturbed Silts
Protect Aquatic Habitats
Minimise Pollution
 Sedimat™ mats provide an effective and practical method to trap sediments disturbed during in-stream construction and maintenance activities without causing water back-up.

Erosion Control and Revegetation



Protect Bare Surfaces
Promote Re-Vegetation
Environmentally Friendly
 A broad range of biodegradable natural fibre fabrics, and permanent synthetic mats, to control erosion on vulnerable surfaces and promote vegetation restoration.



Water Margin Erosion Control
Promote Plant Restoration
Natural Fibre Substrates
 Tough and durable dense coconut fibre bio-rolls and pallets that protect and support banks and shorelines whilst providing a stable medium for effective vegetation restoration.

Tel: 01233 720097
 Fax: 01233 720098
sales@hy-tex.co.uk
www.hy-tex.co.uk
Hy-Tex (UK) Limited
 PO Box 97, Aldington, Ashford, Kent TN25 7EA
Committed to Quality, Value & Service

Also suppliers of Newt Barriers, Geotextiles, Root Barriers, Weed Control Fabrics & Turf Meshes

... EVENT TO GO TO



25-27 August
IWA National Festival and Boat Show 2007
St Ives, Cambridgeshire

Be among 30,000 visitors and 600 visiting boats for one of the UK's largest waterways events. Organised by the Environment Agency and the Inland Waterways Association, there are a huge number of entertainments.

Take a ride on a steam boat, relax on the water with a boat trip and browse through all sorts of boats for sale. If you don't fancy trawling the stalls for boat parts or having a boat

maintenance lesson, why not watch one of the gourmet cookery demonstrations or sample some of the delicious food and ales on offer?

And if you're taking children along, there are lots of 'Wild Over Waterways' events happening, plus a cowboy skills show, native American dancing and line dancing. Set in the historic town of St Ives, this promises to be a stellar day out.

Adults £8.50; under-16s free.
www.waterways.org.uk/Events/IWANationalFestival07

Until 2 September
Exhibition: Exposed!
 Climate change photographs by the National Trust and Magnum Photos.
www.nationaltrust.org.uk/expose

15 Sept, London and 23 Sept, Leeds
Fundraiser: Tree-Athlon
 Walk 5km to help tree planting and care in the UK and overseas.
www.tree-athlon.org

21 October
Event: Apple Day
 Celebrate the apple harvest with events across the UK.
www.commonground.org.uk

... TV PROGRAMME TO WATCH



Earth: Power of the Planet
BBC Two
September

What happened during Earth's infancy? What events shaped our planet's history and allowed life to flourish? Using spectacular images and compelling science, this new series from the BBC follows the personal journey of Dr Iain Stewart on his quest to answer these questions.

He takes us back to our planet's birth 4.6 billion years ago and tells the story of the major events that have shaped Earth's history.

Each episode reveals a different force at work – volcanoes, the ocean, the atmosphere and ice. Dr Stewart travels to some of the most remote places on the planet, from abseiling into a lava lake in Ethiopia to cave diving in a meteor crater. He discovers how volcanoes saved the planet, how a rainstorm lasted for thousands of years and how the Mediterranean Sea once dried up.

This landmark new series shows how the world's incredible systems work together to maintain the delicate balance of life on Earth.

The River Cottage Fishing Trip
Channel 4
August
 Foodie and fish-lover Hugh Fearnley Whittingstall takes you on a trip around the British Isles on the trail of delicious, sustainable seafood that won't deplete the nation's fish stocks.

Tommy Walsh's Eco House
Discovery Real Time
October
 DIY handyman Tommy Walsh and his team work through the challenge of building an eco-home in 60 days for £60,000, using only the greenest methods and materials.

Hyder Consulting

BTP Hyder
 10 Medway Road
 The Sundry Research Park
 Glastonbury G13 7AR
 Tel: 01463 535 000
geotechnics@btp-hyder.com

South East Office
 Tel: 01422 678 177

East Midlands Office
 Tel: 01442 865 776

West Midlands Office
 Tel: 01905 794 794

www.btp.com
www.hyderconsulting.com

Contamination giving you a headache?

Complete Remediation Solutions



ONE LAST THING...

PET THREAT

Our furry friends offer comfort, companionship and care, but they can pack a dangerous environmental punch too, says **Penney Poyzer**



British moggies catch up to 275 million prey items a year. The average cat in this country consumes more protein in a day than someone living in sub-Saharan Africa.

ALAMY

I live with a mass murderer called Puzzle. There, I've come clean. And I know for a fact that around 7.5 million other people in the UK are living with one too.

If you own a cat, you are housing a bringer of carnage. The Mammal Society estimates that the UK's cats catch up to 275 million prey items a year, of which 55 million are birds. This forms just part of the tally of crimes against the environment that Puzzle and co. account for.

Cats are not the only criminals: there are around seven million dogs in the UK, producing about 900 tonnes of waste a day. Their faeces can contain *Toxocara canis*, a roundworm damaging to children's eyes. Animal waste really is a nasty business.

It's obvious when you think about it, but the environmental issues arising from our pets rarely come up on the green lifestyle radar. When you also take into consideration the waste from food packaging, the cull of small mammals and birds by cats, and the problem of how to deal with poo in an eco-friendly way, the care of pets takes on a whole new meaning.

Animal madness

Be honest, don't those TV adverts depicting young women practically swooning as they lovingly spoon out premium grade meat products for their understandably smug moggies – and doggies – make you feel just a little embarrassed?

The desire of pet owners to ensure the health and comfort of their pets feeds a mega-bucks industry. The UK pet food market is huge in its own right – worth around £1.5 billion.

Or perhaps you'll be glad to know that you can ensure your dog is properly hydrated by giving them specially formulated mineral water that comes in three 'great' meat flavours. If your dog looks bored, you could always play a CD of songs favoured by dogs. This was compiled by an LA dog 'medium' who surveyed 200 dogs to ascertain their consensus.

How do you green up your pet without giving them a complex?

1 Get your pet from a rescue centre and have it neutered – we need to manage our pet population.

2 Put a collar and bell on Kitty so birds and mice get a head start when tabby is in hunter mode.

3 Keep your cat indoors when birds are most vulnerable: at least an hour before sunset and an hour after sunrise, especially March–July and December–January.

4 Buy food in the largest box, bag or tin you can: you'll reduce your waste and save pounds.

5 If you buy cat litter, use a product that is made from a recycled material as this reduces the environmental impact.

6 Be responsible for your dog litter and be a legal beagle. Take a biodegradable bag and place the 'gift' in it. Put it in your landfill bin.

7 Biodegradable nappy sacks make excellent, cost-effective dog mess bags.

8 Get a pet loo for the garden. These are tanks that are buried in the garden and safely degrade waste.

9 Feed the birds, but place feeders high off the ground. And make sure they're away from surfaces from which a cat could jump.

10 Look into a vegetarian diet for your pet. It helps to reduce the over-production of meat that contributes to global warming.

We give our creatures comfort and our creatures comfort us. Stroking a cat or dog is medically proven to reduce stress. However, we need to bear in mind the need to reduce the pressure on the planet and all the life forms it is home to – not just our pampered pets.

Useful contacts

www.veggiepets.com

Biodegradable, toilet-flushable, non-toxic litter trays.

www.spiritofnature.co.uk/acatalog/biodegradablenappies

Spirit of Nature biodegradable nappy sacks for dog waste.

www.petstuffonline.co.uk

Armitage Clean Green Dog Loo.

www.petcds.com

A fun site of tunes to tickle your pooches ears.

Devon in the detail

Kitley House Hotel sits on a 600-acre estate in South Devon that boasts diverse wildlife and stunning views. Andrew Huckerby, Director and General Manager, tells us why going green makes business sense

'We're located in the middle of pristine countryside and about 10 years ago, we started to look in detail at going green. We soon realised it would make good business sense and allow us to reduce the impact we made on the local environment.

'We needed a lot of help, which we got through Envision – a project run with the Environment Agency. They did a lot of auditing and research, introduced me to people and were there to give advice.

'The first thing we did was recycling, starting with glassware. We get through an outrageous number of bottles so we converted about 20 per cent to reusable and put in a water bottling facility on site. The ones we can't re-use, we recycle.

'Some of the steps we took cost us money, others didn't. The

cardboard recycling was fairly cash-flow neutral as any expense was offset by using fewer bins.

'We did have to put money into the heating system for the hotel, but we've already saved quite a bit on energy. We've also just started food recycling. We're also looking at renewable energy at the moment, in particular solar heating.

'Kitley House is known as a hotel and conference centre with environmental credentials, and people have that expectation when they come here. I think it's a professional way to run the business, it satisfies the discerning green customer and they're very happy with what they see. People are interested in what we're doing and we get a lot of hits on our website from potential customers.

'If I were giving advice to other small businesses considering going green, I'd say get involved with a scheme like Envision. They'll advise you on all the green steps you can take, and help you reduce your options to a manageable list. Then you can prioritise them and go for what gives the best return. When you've got a bit more money, you can invest in the next phase. For us, that's a fast composter and renewable energy.

'Also, use your local networks: South Devon is very environmentally friendly, so we've been working with local businesses and people like West Country Rivers Trust and Devon Wildlife Trust to get advice and help. Another good tip is to network with colleagues – the people and partnerships you make will help you take the next steps.'

www.envisionsw.org

Factor this...

- Kitley House saves an average of £13,000 a year through managing its environmental impacts better
- It reduced annual CO₂ emission by 115 tonnes last year
- The recycling scheme diverts 260 tonnes of waste a year from landfill
- Putting in heating controls, thermostats and converting from gas to electricity has reduced heating costs by 10 per cent
- By improving its water management, costs dropped by £25,000

NEED TO KNOW...

10 things from *Spotlight* – the Environment Agency's annual business report

1. In 2006, greenhouse gases rose, waste recovery decreased and more water was used by businesses than ever before
2. Businesses are generally becoming more energy efficient, but not fast enough to compensate for our growing economy and 'addiction' to coal
3. Only three per cent of FTSE All-Share companies aimed at low carbon strategies last year
4. The European Union Emissions Trading Scheme (EU ETS) is working in principle but it is not driving down greenhouse gas emissions fast enough
5. Emissions from operators in England and Wales covered by the EU ETS rose from 203.6 million tonnes in 2005 to 211.5 million tonnes in 2006
6. The Environment Agency is starting to deal with 'more serious, prolonged and deliberate criminal behaviour', and environmental crimes are being taken more seriously by the courts
7. Successful prosecutions against companies in 2006 totalled over £3.5million in fines compared to £2.7million in 2005
8. Some 380 individuals were prosecuted last year
9. Of the 29 company directors prosecuted, six were fined over £5,000 and two received custodial sentences totalling 14 months
10. Overall, the environmental performance of industries regulated by the Environment Agency is improving, with operators complying with permit condition and causing fewer serious pollution incidents – a record low of 464 last year

Andrew Huckerby takes a green view of business



Summer floods review calls for a whole new approach

The Environment Agency says different organisations need to work better together to deal with urban flooding

The Environment Agency's initial review of the summer floods has recommended practical changes to help prevent future flooding from rivers and unusually heavy rainfall.

The floods of June and July 2007 were devastating for many thousands of people. Seven people died, some 43,000 houses and 5,000 businesses were flooded and insured losses are estimated to be £3 billion.

The review, which aims to identify the lessons that can be learned from the floods, says that responsibility for surface water drainage is split between too many different authorities and not enough attention has been given to managing urban flooding in a coordinated way.

The review recommends that the Environment Agency should have a strategic overview role for all inland floods, including mapping,

forecasting and warning for surface water flooding, while local authorities should be responsible for co-ordinating action on the ground.

The Environment Agency's Chairman, Sir John Harman, said: 'Five times as many homes and businesses in place like Hull were flooded by overflowing drains and sewers as were affected by river flooding. These areas were overwhelmed by the sheer amount of rainfall.

'Urban flooding is particularly challenging to manage partly because several different organisations are responsible for different aspects of the problem. There needs to be one single national body with responsibility for setting a strategic framework to understand, mitigate and manage urban flood risk.'

Sir John said the national role could include ensuring that plans for sewerage and

drainage are prepared to an acceptable standard. But local authorities would take the lead on local coordination of such issues, working with water companies, developers and the Environment Agency.

But he ruled out creating a single national organisation for floods. 'It would not be workable to have one national organisation wholly responsible for everything to do with flooding because of the huge range of activities involved before, during and after a flood,' he said. 'What is important is that each organisation understands its role when responding to an emergency, and there is effective co-ordination between everyone concerned.'

The review also recommends that new building regulations should include measures to prevent water entering at-risk homes and businesses, and reduce any

damage if it does. This would help ensure a much quicker recovery from any future flooding. Insurance companies could also offer cheaper deals on buildings that include these measures, it says.

Among other measures, the review also recommends an increase in funding for flood defences and changes to the draft Climate Change Bill to ensure that critical infrastructure operators and important public service providers respond to the risks posed by climate change.

'These issues need to be tackled to improve flood risk management outcomes for people and the environment in the face of climate change,' Sir John said.

The review of the summer floods will be completed by the end of 2007 and will feed into the Government's independent review.
www.cabinetoffice.gov.uk

Emissions Monitoring.
We've got a nose for it.



Continuous emissions monitoring



The list of applications that our proven range of gas analysers can work with just keeps on growing.

With increasing legislation and penalties controlling emissions from your plant, compliance is no longer a choice. Our MCerts and TÜV approved systems help you to meet the CEN standards for continuous emissions monitoring.

Take the next steps to ensure compliance and contact our sales team. They have the sharpest noses in the business.

ABB Limited
Hortonwood 37, Telford TF1 7XT
Tel: 01952 670477 Fax: 01952 603065
email: john.p.kelly@gb.abb.com

Power and productivity
for a better world™



CASE STUDY

Paul Howard, Wakefield

What Paul Howard doesn't know about waterproof flooring isn't worth knowing. The 34-year old transport engineer from Knottingley in Wakefield is in the midst of renovating his home after the summer downpours, and top of the list is something dry underfoot.

'We've been flooded three times in the last four years,' says Paul, as he leans against the peeling plasterwork of his kitchen. 'And each time we make more improvements to the house.'

As the only flood warden for the whole of Knottingley, Ferrybridge and Pontefract, Paul has helped hundreds of people prepare for the worst. When the Met Office predicted weeks of extreme weather this summer, he went door-to-door warning people of

the possibility of flooding.

And to pinpoint exactly when the water would come, he set up a series of homemade markers on the field that lies between the local stream and his back door.

'In our house, we've devised a 10-minute plan. It's an exhausting 10 minutes, but it means we can keep everything dry'

When the water reaches a certain point, Paul can alert neighbours to move as much as they can upstairs, out of the reach of the incoming water.

'In our house, we've devised a 10-minute plan', says Paul. 'If we know the water's coming, we can

stack everything in boxes and take it upstairs. It's an exhausting 10 minutes, 10 minutes of hard graft, but it means we can keep everything dry.'

Life immediately after a flood is

stressful – often meaning months of reorganisation, refurbishment and reflection. This year, as well as replacing flooring and furnishings, Paul is taking the opportunity to protect his home further – raising the electrical sockets, kitchen units and appliances to a level where future

floods won't damage them.

But Paul is still keen for the community to do more. 'If the council hasn't got the capacity to work out a solution for our situation, there are plenty of

people in the community that are very well skilled,' he says. 'They can use us, use our knowledge and use our capacity to help us help ourselves.'

Home improvements: Paul Howard (right) is raising sockets, kitchen units and appliances to a level where floods won't damage them



Louise Broom

WPI Water Solutions

Meeting EA and SEPA specifications

Wastewater Treatment - SAF

Bespoke designs, small foot print

- Integral flow balancing tank for commercial applications with variable flows & loads
- Reliable operation and standby facility
- No internal moving parts
- Treats from 20:30:20 to 10:10:2 BOD:SS:NH₄
- Simple tankering
- Flexible supply lead times



60 to 3000 pe

Wastewater Treatment - Domestic

with up to five years de-sludging requirements

- No internal moving parts
- No odours
- 5 year guarantee
- Certified to the new European Standard - EN12566-3
- Irish Agreement Certified
- Conforms to UK Building Regulations
- Low running costs



1 to 55 pe

Rainwater Harvesting

for domestic and irrigational use

- Low cost, simple installation
- 15 year guarantee
- Reduces water bills
- Helps compliance with Building Regs, Part H3
- Robust design
- Low carbon footprint



2700L to 13,000L

For sales, advice or a full list of products: www.wpi.co.uk
Tel: 08454 504819 Email: enquiries@wpi.co.uk

Hessian about on the River Ganges



Who: Hirendra Ghosh, Technical Advisor and Director of the Ganges Jute Private Ltd

What: The first company in India to produce totally organic jute

Where: West Bengal, India

Behind Hirendra Ghosh's softly accented voice, you can hear the distinctive sounds of small-town Indian life – cheerfully honking horns, pattering exhausts and a hubbub of voices. He's speaking from his office in a factory perched on the side of the great River Ganges, 70km (45 miles) south of Kolkata in the region of West Bengal.

Since before Indian independence in 1947, Hirendra has worked with jute – a vegetable fibre often known as

hessian that can be spun to produce a 100 per cent biodegradable, recyclable thread. Hirendra is Technical Advisor and Director of the Ganges Jute Company, a position he holds today at the age of 76.

hessian that can be spun to produce a 100 per cent biodegradable, recyclable thread. Hirendra is Technical Advisor and Director of the Ganges Jute Company, a position he holds today at the age of 76.

on a commercial scale. 'We have been fighting all the time to compete against polypropylene and polythene because they are much cheaper backing materials,' he says. 'So I thought that if organic jute could be produced, then we might be able to contend better.'

Local farmers were already producing organic vegetables to sell at the local market, so Hirendra and his financial backer – Barrie Turner of UK company JuteXpo – made the

'The Ganges Company had to spend a lot of time and money – I had a heart bypass operation three months back, but I went to the fields six weeks later to be with the farmers,' he continues. 'I wanted to allay their misgivings. All these things they understood and did properly so that we could get international accreditation. They're fine people once you convince them. And they have the further motivation that the whole

strengthen the thread. 'We are frequently audited by accrediting agencies,' says Hirendra. 'They do surprise checks and interview the farmers. Only when they certify our processes can things go ahead.'

any fertiliser at all. Otherwise it's a law of diminishing return: you add chemicals and productivity goes up fast, but then it gradually goes down,' he says. 'The other big thing is that insects don't attack the healthy, organic plants. That's what I've learned from the farmers themselves and from scientists.'

Bright future

Hirendra modestly describes himself as 'just a middle-class technologist' but it's clear that his passion and enthusiasm for organic jute has driven this project from idea to reality. True to character, he asserts that without a market for his product, there could be no organic jute: 'There were many constraints we couldn't have overcome without the help of our backers and Government textile agencies. They supplied organic seeds that are treated before they're used in the fields,' he says. 'The whole idea is that really organic bags will be made, and that the farmers' quality of life will improve.'

The jute mill that Hirendra manages employs about 8,000 people. It's one of many mills located on the Ganges – the fibre used to be transported to Europe from there by barge. Now that container ships are the name of the game, the jute is

loaded into containers in the mill and taken to a larger dock to be exported. 'So many turmoils have passed that would take a long time to tell you,' Hirendra says, 'but we are still surviving. I'm just a common man, but I love this industry.'

While the farmers concentrate on meeting stringent international standards, Hirendra has his eyes on wider markets: 'The future is tremendous. I'm reading in magazines that millions of hectares of land are going over to organic production,' he says. 'In big shops you always see an organic counter, so if people in Norway, Holland and the UK, for example, know that this bag has been produced according to their standard, they'll have faith in the product.'

And what are the next steps? 'The certifiers are the first hurdle. They know everything,' explains Hirendra. 'And as questions of recycling and carbon footprint come up, we'll face them too. I feel that this environmentally friendly jute bag has really got a future – we cultivated just six hectares this year, but next year I hope to grow five times more. Doing jute textiles means we're stopping environmental erosion and, for the first time, we can compete with polypropylene.'

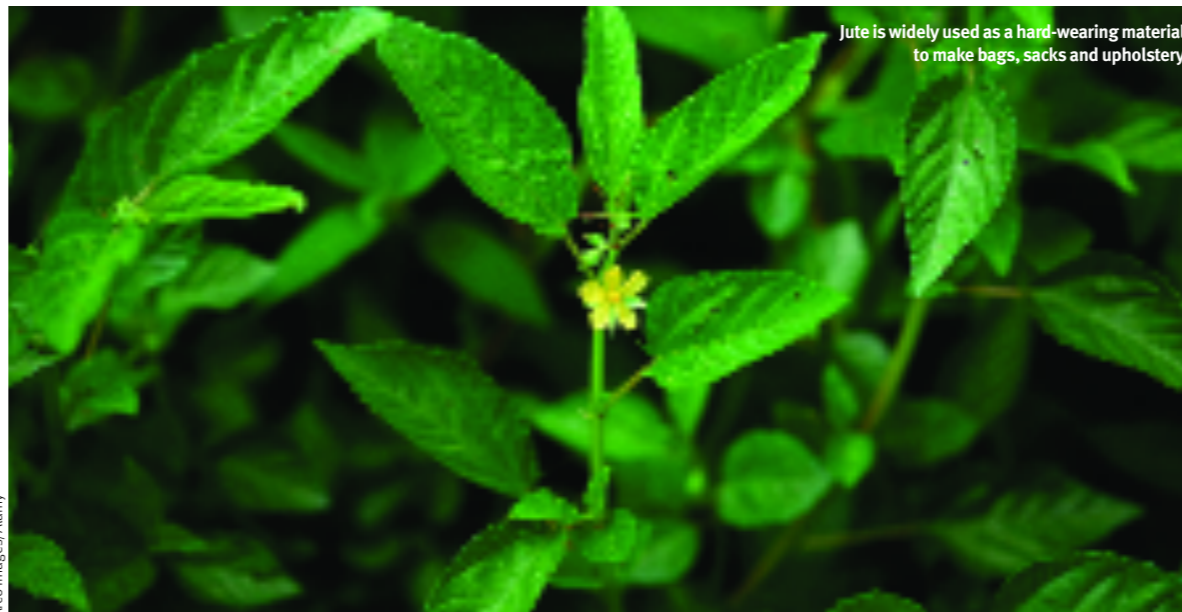
'The whole idea is that really organic bags will be made and the farmers' quality of life will improve'

trip 100km (60 miles) to the mills to speak to them. 'We went to the farmers' houses to convince them to do it,' recounts Hirendra. 'It's not like the UK or America; they have small pieces of land. I told them about not using chemicals and to strictly adhere to the rules, meaning no contaminated water must touch the land, and it rains heavily here.'

scheme is viable, that they'll get some extra price for doing it.'

In order to gain international organic accreditation, the land must go through a conversion period of three years during which no chemicals are allowed to be used. The organic jute is cultivated in blocks of fields using cow dung as fertiliser, neem powder as a compost and disinfectant, and tamarind to

Arco Images/Alamy



PROTECTING THE ENVIRONMENT

Sediment Pollution Management

Trap Stormwater Run-Off Silts
Protect Waterways and Drains
Reduce Water Pollution
Terrastop™ Premium silt filter fence traps harmful suspended solids in construction site stormwater runoff before they pollute the surrounding environment and clog drains.

Trap Disturbed Silts
Protect Aquatic Habitats
Minimise Pollution
Sedimat™ mats provide an effective and practical method to trap sediments disturbed during in-stream construction and maintenance activities without causing water back-up.

Erosion Control and Revegetation

Protect Bare Surfaces
Promote Re-Vegetation
Environmentally Friendly
A broad range of biodegradable natural fibre fabrics, and permanent synthetic mats, to control erosion on vulnerable surfaces and promote vegetation restoration.

Water Margin Erosion Control
Promote Plant Restoration
Natural Fibre Substrates
Tough and durable dense coconut fibre bio-rolls and pallets that protect and support banks and shorelines whilst providing a stable medium for effective vegetation restoration.

Tel: 01233 720097
Fax: 01233 720098
sales@hy-tex.co.uk
www.hy-tex.co.uk

Hy-Tex (UK) Limited
PO Box 97, Aldington, Ashford, Kent TN25 7EA
Committed to Quality, Value & Service

Also suppliers of Newt Barriers, Geotextiles, Root Barriers, Weed Control Fabrics & Turf Meshes

24 hour phone line: 01884 841 387

REMEDICATION • OFTEC TANK SERVICES • GROUND CONTROL

TANK CARE • ENVIRONMENTAL • INCIDENT MANAGEMENT

A nationwide company, with 20 years experience offering a safe pair of hands for all your environmental needs.

Langlands Business Park, Uffculme, Devon, EX15 3DA
www.lcmenvironmental.com

THE REAL STORY

ROOFTOP SOLAR CELLS

Get one step closer to living off-grid by transplanting a raft of solar cells to the top of your home. Sounds easy, but how efficient is it and what's the environmental pay-off?

Attractive alternatives

Solar power is a clean, renewable energy source. The sun is likely to burn for around another five billion years, so it's a good long-term alternative to our current dependence on fossil fuels. By installing photovoltaic cells on your rooftop, you can expect to power many of your basic household appliances and reduce your energy bills.

VERDICT

Ultimately, if you put enough solar cells on your roof, your power meter may eventually stop turning. In the future, this could mean household energy surpluses being fed into the national grid – an idea already being tested out in environmentally progressive countries like Germany through a system of 'feed-in tariffs'. But this means a considerable dent in your bank balance, so if you're serious start saving now.

1%

The modest efficiency of the first photovoltaic cell, which was made by the American Charles Fritts in 1883

FIND OUT MORE:

www.lowcarbonbuildings.org.uk
Feed-in tariffs: accelerating the deployment of renewable energy, Miguel Mendonça, £35, Earthscan 2007



Planetary dust

Domestic photovoltaic cells are usually made from a form of silicon, the second most abundant element in the earth's crust. Manufacturing is expensive, but advances in technology and a leap forward in the capacity of countries like China to produce solar cells may mean future production costs fall.



Up on the roof

The UK Government runs a scheme to help householders install solar tiles. It offers grants up to the value of £2,500 to people with a roof or wall that faces within 90 degrees south. You still have to buy the cells and get them installed, but it can save you money if you're having roofwork done anyway. Solar cells rely on being in sunlight, and any shadow will decrease their output.

What's the pay-off?

Enough solar radiation hits the earth in one day to meet our energy needs for an entire year; harvesting some of it is a great idea. In the UK, householders are responsible for 25 per cent of all carbon emissions, so reducing our domestic energy use will have a big impact. Photovoltaic systems generate no greenhouse gases, saving about 455kg of carbon dioxide emissions a year. However, producing solar cells uses finite raw materials and has its own indirect carbon footprint – they're only truly efficient if the energy they save outweighs the energy used to make them.

ANORAK'S CORNER

PAVING THE WAY

It's been called the 'holy grail of environmental site design' and could be our answer to stormwater management nightmares. We take a closer look at what's soaking up trouble

If you stepped out any time during June or July this year, you were almost guaranteed a good soaking. As the rain fell and fell then fell some more it ran straight off driveways, roads and car parks into overwhelmed drains, and fast eroding streams and rivers.

One solution is to go holey, and paving experts are deep into the quest for cheap, durable materials that allow water and air to move through them.

So far, porous paving materials are no more difficult or expensive to install than the usual surfaces. If you want a smart-looking, eco-

friendly driveway, open-jointed blocks made of concrete are a good choice. They allow water to run between the cracks so it can replenish the water table, be harvested for plant watering or even pumped back to a tank for toilet flushing.

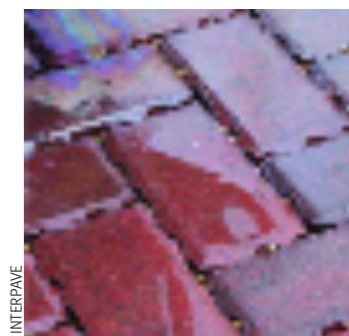
On a larger scale, small particles of aggregate are being used in road construction to improve the porosity of asphalt and concrete. They have the two-fold benefit of holding water and vehicle contaminants close to the road – allowing naturally occurring micro-organisms to digest car oils –

as well as removing water from the road surface.

But the best permeable paver in existence, and the cheapest, is single-sized aggregate. Although it can only be used in low-traffic settings, it's the most porous and, if there's enough of it about, reduces the urban heat island effect. As the planet warms up and rainfall becomes more erratic, making space for this precious resource may be the answer to our urban water woes.

FIND OUT MORE

www.ciria.org/suds



Root of the problem: this concrete open-jointed block pavement allows urban trees the rooting space to grow to their full size and lets vital air and water into their rooting systems

Get off to a good start... Choose an IEMA Approved Course

Give your career the IEMA stamp of approval.

For a wide range of environmental courses delivered by approved IEMA training course providers please visit www.iema.net, email info@iema.net or call 01522 540069



iema

INSTITUTE OF ENVIRONMENTAL
MANAGEMENT & ASSESSMENT

A profession for environmental practitioners
Professional Development • Best Practice • Networking

St. Nicholas House, 70 Newport, Lincoln, LN1 3DP, UK Tel: +44 (0) 1522 540069 Fax: +44 (0) 1522 540090
Email: info@iema.net Web: www.iema.net

GREEN CHALLENGE

THE WEEKLY SHOP

We challenged three Environment Agency colleagues to be as environmentally friendly as possibly buying their weekly food. Then we added a few tricky conditions...



FAIRTRADE AND ORGANIC
Cost: £72.50
Hassle: 1
Conscience: 5

FAIRTRADE & ORGANIC

Name: Pete Drury
Occupation: Technical Officer (Climate Change)
Usual shop: £50 from local shops and the supermarket
The challenge: shop anywhere, buying Fairtrade and organic only

I like to use local traders as much as possible to help keep independent shops going, then buy any extras from the

supermarket. I tried to get most things in my local shops, but it was hard. To buy organic and Fairtrade, I had to do most of my shopping in the supermarket nearest to me, which was within walking distance.

It was easy to buy organic and Fairtrade fruit, vegetables, coffee and tea, but hard to get pasta and most other foodstuffs. The cost of an organic and Fairtrade shop is about 20 per

cent more than a normal one, so it's far more expensive, there's less choice and a lot of organic goods are flown in from Europe.

My best buy was a bottle of Fairtrade ale from my local shop for £1.69 and my worst buy was olive oil, which cost £6.99 and tasted worse than the usual one I buy. However, it was easier on my conscience and is generally helping to change people's buying behaviour.

SUPERMARKET SWITCH

Name: Matt Georges
Occupation: Policy Advisor
Usual shop: a veg box costing £13.80 from a local provider
The challenge: shop in a supermarket, buying 'green' products only to replace veg box

My usual shop is pretty green already – I use high-street shops weekly, have a veg box and milk delivered, and only go to the

supermarket for essentials about once a month. My partner and I had just done a big shop, so I compared our veg box for the challenge.

Going to the supermarket to pick up my weekly fruit and veg meant a drive of about two miles and a hectic, impersonal experience. Compared to my usual deliveries, the supermarket goods were smaller, more expensive,

possibly air-freighted and used tons of unnecessary packaging.

Although I got everything I wanted, there were some seasonal vegetables in my usual veg box that the supermarket didn't stock. There was a wide range of organic goods, but they were mostly overpriced and lower quality than local produce.

All in all, shopping took me more time than usual and I won't be changing the way I do things.



SUPERMARKET SHOPPING
Cost: £18.65
Hassle: 10
Conscience: 8



GOING LOCAL
Cost: £20
Hassle: 1
Conscience: 3

GOING LOCAL

Name: Molly Anderson
Occupation: Policy Advisor (Climate Change)
Usual shop: £60 from a supermarket
The challenge: shop locally, buying 'green' products only

I usually shop in the supermarket nearest to me, which is a short walk from my house, but for this challenge I went to three local shops – two

delis and a grocers. The week before, my partner and I had done a big shop, so we only needed a few bits.

It took me about 20 minutes by bike to do all my shopping and this was one of the major advantages: I got to explore my environment. The local shops were also a nicer place to do my shopping than the supermarket.

I did find it hard to get 'green' vegetables, but it was

easy to get organic and Fairtrade juice, chocolate, and organic fresh bread and wine.

But there was a much smaller selection of foods available and it's hard to get everything locally if you're working full-time and just want to get home, cook dinner and hit the sack.

It'd be very hard to do a full shop locally every week, but it's fine for stocking up on odd bits.

KEY

Hassle rating:

1 = no trouble

10 = pain in the neck

Conscience rating:

1 = Mother Earth is loving me

10 = I'm bad news for the planet

AMAZING IDEAS

SUN SCOOTER

Imagine powering your way across Route 66 – the wind in your hair, sun on your face – and never having to stop to fuel up. Well, these dreams of easy riding aren't quite a reality yet, but Spanish design firm SUN-RED is taking giant steps towards getting us there.

The Moto Solar Urbana is a futuristic-looking bike that uses 3m² of photovoltaic panels to power you for up to 13 miles. The cells slide backwards to allow a rider access to the seat and continue charging up while in motion.

With a top speed of around 30mph, this motor is no chopper, but it looks slick and has an LCD readout on the display dash showing you energy consumption, range and load, as well as the usual information.

The SUN-RED prototype heralds a new phase in solar-powered transport. It's ideal for anyone living in sunny climes and enviously close to work, meaning you can commute conscience-free with zero fuel emissions.



Bright spark: the armadillo-like shell of this moped powers up while you're off doing something more interesting

KNOW YOUR WORLD

Jargon buster

Boiled frog syndrome: An often-used fable relating to the tendency, in addressing complex issues in intergovernmental settings, to postpone taking definite decisions. Meanwhile, in spite of the slow process of climate change, the frog eventually 'boils and dies'.

Carbon footprint: A concept representing the effect human activities have on the climate in terms of the total amount of greenhouse gases produced measured in units of carbon.

Green upgrades: A term referring to voluntary changes in personal lifestyle with the aim of neutralising an individual's share of the waste produced.

Ikea development: A term derived from the economy-oriented do-it-yourself store Ikea and used to describe a grassroots or local approach to development whereby communities solve their own problems with the materials at hand.

Leapfrogging: A process by which, through technology transfer, developing countries adopt technologies designed and tested in industrialised countries without bearing the costs of research and development, or the slow, early stages that gave rise to them.

Definitions from Dictionary & Introduction To Global Environmental Governance, by Richard E Saunier and Richard A Megank, £29.95, Earthscan 2007

FLOODBAGS

FIGHTING AGAINST FLOODING...

Floodbags absorb water to act just like sandbags, but with the glaring difference they don't have to be filled with heavy sand

Floodbags absorb water and then hold it inside. Their semi-porous inner liner has hundreds of absorbent crystals which retain the water against tremendous pressure

Twenty Floodbags (dry vacuum packed) weigh approx. 11 kg and fit in a box 60cm x 35cm x 40cm

www.floodbagdefence.co.uk
For more details call Adam Shorter 01293 549858
or email adam@niton999.co.uk
Distributed by Niton Equipment Limited, PO Box 999, CRAWLEY, RH10 6YG

Just a few reasons why you should choose Floodbags...

- Totally self-contained and biodegradable
- Can be expanded in water anywhere, a bath, a sink, a bucket, a hosepipe or even the floodwater
- Can be stored in anything from an under stairs cupboard to a vast warehouse
- Always there for peace of mind
- Stay expanded for up to 8 weeks
- Thousands can be quickly transported in a vehicle, saving on fuel, wages and manpower
- Can be stored in small depots around the area, not one huge central store so can be taken even more quickly to the scene
- If a flood is imminent and you have Floodbags stored in your home or at work you are in charge of your own fate
- With Floodbags it's a case of grab them and go into action

WATER TRACING DYES

Keyacid Fluorescein Extra High Colour Intensity
Keyacid Fluorescein 40% Liquid Proven Safe Products
Keyacid Rhodamine WT Liquid Small Packs Available

Keystone Europe Ltd
Units 1/2 Beckview Business Parks
Bradley Junction Industrial Estate
Leeds Road • Huddersfield
West Yorkshire • HD2 1UR

Phone 01484 341466
Fax 01484 341544

e.mail info@keystone-europe.co.uk
WWW.DYES.COM

BTP Hyder
10 Medawar Road
The Surney Research Park
Guildford GU2 7AR
Tel: 01483 535 000
geotech@btp-hyder.com

South East Office
Tel: 01622 676 177

East Midlands Office
Tel: 01442 866 776

West Midlands Office
Tel: 01905 794 784

www.btp.com
www.hyderconsulting.com

Contamination giving you a headache?

Complete Remediation Solutions

IF THERE'S ONE...

... BOOK TO GET



The Stone Gods
Jeanette Winterson
£16.99, Hamish Hamilton

On the airwaves, all the talk is of the new blue planet – pristine and habitable, like our own 65 million years ago, before we took it to the edge of destruction. And off the air, Billie and Spike are falling in love. What will happen when their story combines with the world's story, and they whirl into the future?

Jeanette Winterson's latest book takes a long, hard look at those

environmental issues affecting us now, that will make an impact in the future. In her grave, solemn prediction of a world in which people are forced to look to new planets to save themselves, she paints vivid characters that speak for a dying world.

The prose is over-descriptive in patches and there are some confusing leaps between past and present, but the tale weaves together quite well. Regardless of whether or not you like science fiction, this book is a great story – complex, interesting, if a little doom-laden.

ALSO TRY...

Capitalism as if the world matters
Jonathon Porritt

£16.99, revised edition, Earthscan
 Since this book first appeared two years ago, much has happened to warrant a revision: Stern, Gore, Katrina and the growth of China. It's brilliant – containing a wealth of material and argument. Porritt looks at today's world and suggests ways businesses and governments can improve sustainability. The fire of the eco-prophet constantly burns through, making the book both more readable and provocative.
Noel Wheatley, Environment Agency Head of EU/International Relations

Q&A

ECO CONUNDRUMS: Carbon labelling



With **Euan Murray**,
Carbon Footprinting
General Manager at
the Carbon Trust

Q: Lots of companies are putting environmental labels on their packaging now. But what's more important to consider, air freighting or carbon footprint?

A: The jury is still out. For some products aviation is the biggest impact and for others it's not. One good example is a study by Cranfield University for Sainbury's and World Flowers. It compared roses grown in Kenya then airfreighted to the UK against roses cultivated under glass in Holland.

It turned out that the Dutch roses had a carbon footprint almost six times bigger than the Kenyan roses, even when you added air transport. So this tells us that air freight's important, but you may oversimplify the argument if you focus either on aviation or on food miles.

Q: So does that mean that environmental labelling is misleading?

A: Not really – there are lots of people out there with real expertise in carbon calculating, who have a real interest. But every company we've spoken to has said there has to be a single way of measuring the carbon content of a product.

To that end the Carbon Trust has teamed up with Defra and the British Standards Institute (BSI) to create a rigorous standard to measure the carbon content of products and services.

Q: So when will there be a clear set of guidelines available for companies?

A: In the summer of 2008, BSI will publish a 'publicly available specification', which is the first level of standard they deal with. Companies can then use it for internal or external purposes, with the idea that things are done on a consistent basis.

We've clearly not got all the answers yet, but the work we're doing has the potential to be incredibly powerful both in helping companies make reductions in the footprints of their products, and enabling consumers to make informed choices.

... EVENT TO GO TO



National Climate March
Millbank, London
8 December, free

Roll up your sleeves and get ready for some direct action at the National Climate March. It's organised by Global Climate Campaign and coincides with the United Nations climate talks taking place in Bali on 3–14 December.

The lobby group has issued this call to action to get as many people as possible along: 'We demand that world leaders take the urgent action that is needed to prevent the

catastrophic destabilisation of global climate, so that the entire world can move to a stronger emissions reductions treaty which is both equitable and effective in preventing dangerous climate change.'

The demonstration starts with a bicycle rally at Lincoln's Inn Fields, then the march proper kicks off at Millbank at 12noon and ends with a rally at the US Embassy. If you do make it, look out for speakers including Ming Campbell, George Monbiot and Caroline Lucas.
www.campaigncc.org

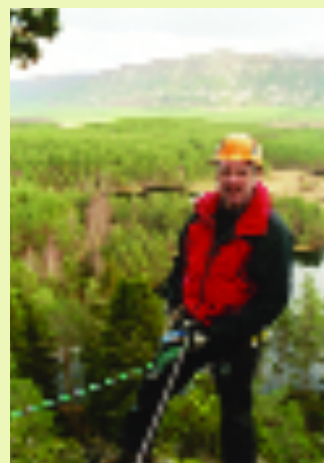
Natural Living Show
Clarendon Suites, Birmingham
3–4 November, £3.50

Offers a range of free workshops and talks on complimentary medicine. Celebrity Toyah Wilcox and Friends of the Earth will be attending.
www.naturalhealthshows.co.uk

Food and climate change
Regents Park Road, London
16 January

Founder of Green&Blacks organic choc Craig Sams discusses food and climate change with a host of top business folk and environmentalists.
www.resurgence.org

... TV PROGRAMME TO WATCH



The Nature of Britain
BBC One
Wednesdays in November at 9pm
(and Sundays on BBC Two at 6pm)

The Nature of Britain continues the BBC's run of series celebrating the UK's beauty. Alan Titchmarsh delves into the unique and fascinating ecology of different landscapes and eco-systems in the UK, and showcases the animals and plants that live in them.

The first few programmes in the series have revealed our island systems, farmland, urban and

freshwater environments. Alan has travelled from the Shetland Isles in the far north to the Somerset Levels, through our cities and onwards in search of the fierce and cannibalistic brown trout in Loch Ness.

In the final four programmes of this enlightening series we're taken along Britain's exposed coastline, through our magical and mysterious forests, out into the wilderness and finally we discover the unexpected wildlife that thrives in secret places like churchyards, roadside verges and gravelpits.

The 11th Hour
Leonardo DiCaprio, Leila Conners Petersen, Nadia O'Conners, 2007
On general release

With the tagline 'it's our generation that gets to change the world... forever', this moving documentary takes a bleak but ultimately optimistic view of what's wrong with the global environment and how we can restore it. Actor Leonardo DiCaprio describes the last moment when changes are possible and how humanity has arrived at that point. Containing soundbites from some prominent environmental commentators, it's well worth a watch.



MARKS & SPENCER

WFD WFD WFD

Water Framework Directive Information Centre

MANAGING OUR WATERS

Stakeholders representing wide interests are involved in the preparation of River Basin Management Plans (RBMP) to implement the WFD.

Liaison Panels in England and Wales (chaired by the Environment Agency) and Advisory Groups and Forums in Scotland (chaired by SEPA) include representatives of the water industry and consumers, as well as agriculture, business and industry, leisure activities, local authorities and environmental NGOs.



For more information on the WFD, public participation, general information on the water cycle, latest news and events and much more visit our website or contact us by email:

WFD
www.euwfd.com
euwfd@fwr.org.uk

Hyder Consulting

BTP Hyder
 10 Medawar Road
 The Surrey Research Park
 Guildford GU2 7AR
 Tel: 01483 535 050
 richard.bettridge@btp-hyder.com

South East Office
 Tel: 01622 878 177

East Midlands Office
 Tel: 01442 856 778

West Midlands Office
 Tel: 01905 794 784

Hyder Consulting Ltd
 25 Bressenden Place
 London SW1E 5DZ
 Tel: 02073 166 000

www.btp.com
 www.hyderconsulting.com

RECYCLING OF MERCURY

- We offer
- Purchase of waste mercury metal.
 - Recycling of mercury wastes, mercury lab smalls, equipment, etc.
 - Recycling of mercury-related wastes diverted from land-fill.
 - Free advice – talk to us first. We are the leading mercury specialists and are always ready to help.

Tim Fynes-Smith B.Sc. (Hons)
Odin Research and Development

Unit 198A, Boughton Industrial Estate,
 Boughton, Newark, Notts NG22 9LD
 Tel: 01623 860170 Fax: 01623 835673
 Email: tim@odin.org.uk www.odin.org.uk