

Issue 10 2012

junkmail

Devon Community Recycling & Community Composting Network News



Hair composting

*Waste analysis of
Devon's Dustbins*

*Old nappies turned
into new furniture*

Palletopia

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Editorial

This issue has a lot of articles on the changing nature of recycling, as more things from biscuit wrappers and mattresses to disposable nappies and hair start to be recycled and composted. This is all being driven by the rising cost of waste disposal, moves to phase out landfill, technological innovation, and of course the strong demand from the public for more recycling and sustainable lifestyles.

There is also the review of the Devon Waste Strategy which looks forward to 2035 – what will the world be like then? Many of the decisions made now will still have an impact then. How will the economy, consumption, lifestyles, work and transport options have changed and affected waste? How will we have progressed towards zero or minimum waste and resource efficiency in the face of costly fuel and energy, and a changing climate?





UK's first biscuit wrapper recycling scheme

Guilty biscuit habits can now be assuaged by, believe it or not, a biscuit wrapper recycling scheme!

Biscuit manufacturer United Biscuits which produces McVitie's has launched a recycling scheme for biscuit wrappers, the first of its kind in the UK.

McVitie's will pay for any brand biscuit wrappers to be posted to the Terracycle recycling firm in Croydon, where it will then be sent to UK recycling firms to be reprocessed and used to produce items such as park benches and paving. A charity donation for each wrapper received will also be made.

Terracycle specialises in materials for which there is little or no local authority collection infrastructure and according to a company spokesman, 'for which

people see no value.' It already runs similar collection schemes for pens, coffee packaging, yoghurt pots and baby wipe packaging.

In order to recycle any biscuit packaging, consumers are required to register on the TerraCycle website, they can then receive pre-paid packaging to return their wrappers, as well as being able to nominate a charity to which a donation of two pence per wrapper received will be sent.

"We are encouraging retailers and consumers across the UK, who love biscuits, to set up a collection point and help us to save as many biscuit wrappers from landfill as possible, making a difference to both their local environment and raising money for worthy causes."

Quite how the value of recycled biscuit wrappers can cover the high cost of postage and transportation is not clear, or if it is worthwhile in terms of recovering the embodied energy.

www.terracycle.co.uk

Mattresses, carpets and bulky plastics now recycled at most Devon Recycling Centres!

The majority of Devon County Council recycling centres now accept carpets, mattresses and bulky plastics for recycling.

Carpets and bulky plastics are taken to SITA UK's new facility in Greendale, near Exeter for baling and onward transportation. Carpets are processed into a non woven geotextile fleece underlay that is used in land remediation and civil engineering projects. Bulky plastics, such as plastic garden furniture, are taken away for recycling and transformed into new products such as plastic pipes, buckets, bumpers and interior fittings for cars.

Mattresses are also taken back to the SITA UK Exeter facility where they are stripped down into their component parts of springs/sprung steel, foam and fabrics for recycling. Fabrics are recycled into a range of products including use in

the interiors of cars, vans and lorries. Since SITA UK took over the running of the majority of Devon Recycling Centres on the 1st May approximately 60 tonnes of carpets and 32 tonnes of mattresses have been recycled. Previously, this would have all ended up in landfill.

Phil Rudin, SITA UK's Regional Manager for Devon & Cornwall said: "We are really pleased that the introduction of these new materials has got off to such a good start. As word spreads, we hope that more and more people will bring in their old mattresses, carpets and bulky plastics for recycling."

It is estimated that 2 million mattresses are produced every year in the UK, and around 50,000 mattresses would be disposed of each year in Devon. Fortunately mattress recycling plants are now opening around the UK..

Sofa de-manufacture and recycling has yet to be started in the South West. However, RMD Ltd are now offering a service in Kent and Essex to disassemble sofa and recycle the wood, metal and textiles. They are currently charging £65 to collect and recycle a 3 piece suite.



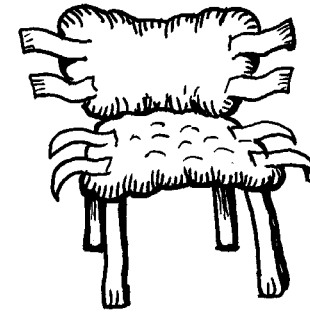


Hair today, gone tomorrow...

Aberdeenshire-based composting firm Keenan Recycling will now be processing human hair at its composting facility, receiving hair collected from hair salons in the area.

Director of Keenan Recycling, Grant Keenan, said: "Human hair has a high nitrogen level, which is proven to

help plants thrive, therefore adding it to the composting process leads to an increase in slow release nitrogen in the compost, which helps to maintain an even and rich growth. Opening up the commercial food waste service to hairdressers adds another dimension to the compost that we produce."



Old nappies turned into furniture under new recycling scheme

Used nappies will be turned into garden furniture, roof tiles and railway sleepers under a new recycling scheme being trialled in Scotland.

Each year some 160 million nappies are sent to Scottish rubbish dumps. Jenny Sim of Zero Waste Scotland said "The average child in Scotland goes through 4,000 nappies before they're potty trained, with more than 90% using disposables, which is an awful lot going to landfill."

Four councils are to trial a kerbside collection scheme for 36,000 homes across Fife, Stirling, Perth and Kinross and North Lanarkshire. The pilot will run for an initial six months to

establish whether it can be rolled out nationwide in the future.

As well as disposable nappies, incontinence products and other related items - like wet wipes, nappy sacks and cotton wool - will also be suitable for the recycling collection. Nappy waste will be sent to a treatment unit where it is heated up to 125 degrees to sterilise and clean it.

"The human waste is put to sewage, and the plastics and celluloids are then converted into useable products such as park benches, road signage, railway sleepers and decking."

In Devon, residual waste analysis has revealed that sanitary waste makes up between 9 and 18% of residual waste, so this type of project could bring significant results.

Bottle deposit return schemes

Could soon be returning to parts of Scotland. The Scottish Government's Zero Waste Scotland will develop pilot 'deposit return' and 'reverse vending' facilities. These systems will reward people for recycling empty bottles and cans through a range of incentives such as money back, discount vouchers or loyalty points.

Focus will be in contexts where traditional recycling systems are less effective, such as retailers, high streets and shopping centres, transport hubs, leisure centres, schools, and events venues. If successful, the systems may be rolled out.

Zero Waste Scotland estimates that around 22,000 tonnes of plastic (PET) drinks bottles currently go to landfill in Scotland annually – material which, if it was recycled, could be worth around £6 million a year to the economy at current market prices.

Scottish environment Minister Richard Lochhead said: "I remember when I was growing up running to our local shop with my glass bottle to get my money back. Now with the help of modern technology, this approach can also be used to recycle the valuable plastic bottles and metal cans we currently send to landfill.

CPRE Campaign for protection of rural England has claimed that a bottle deposit scheme in England could save £342m a year. In England the government's position as stated in their 2011 review of waste policy, says that they have decided not to take this option forward at this point in time and will concentrate on other ways to increase recycling and address litter.



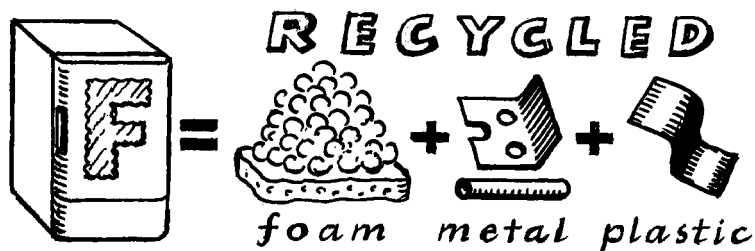
Residual waste analysis of Devon's dustbins

Residual waste has been analysed from 1600 sample households across Devon to see what was in it. There were big variations between Districts, due to different collection arrangements eg weekly food waste collections. So in reality different materials could be targeted in different Districts, but in general the order in the table below holds true. Bearing in mind total household residual waste in Devon amounts to 180,000 tonnes, there are significant quantities of the materials to be recovered by improving capture rates or developing a 'dirty MRF' that screens recyclables from residual waste prior to disposal. There was no residual waste analysis available from Recycling Centres, which might be interesting to know, for

example, what would be the scope for improving source separation by the public, or more dismantling of composite items for recycling such as sofas, armchairs, and a reuse analysis.

It is worth noting that total waste collected per person remains high in Devon at 503kg/person compared to the national average of 473kg/person, per household equivalent is over 1 tonne per year per household. There is also a significant variation of 150kg per person in amounts of household waste collected between the lowest district East Devon and the highest North Devon.

Residual waste composition, material type	Max % arising	Minimum % arising	Average % arising	Estimated tonnage average %
Food waste	35	14	23	41,400
Plastics	24	11	15	27,000
Sanitary, nappies etc	18	6	12	23,400
Paper / card	18	9	13	23,400
Garden	12	2	7	12,600
Textiles	7	4	5	9,000
Glass	6	2	4	7,200
Metal	5	3	4	7,200
Fines			3	5,400
Wood			2	3,600
WEEE			2	3,600
Hazardous			1	1,800
Multilayer			1	1,800



Fridge foam recycling pioneers

Lincolnshire based WEEE (waste electrics) recycling firm EnvironCom is pioneering a method to recycle polyurethane foam (PUR) from fridges, an 'industry first' for the UK.

This means its recycling rate for fridges has risen from 86% to 98%, and more than 2,200 tonnes of PUR foam are diverted from landfill to recycling.

PUR foam is the insulation material used in fridges and freezers. As it is so light and voluminous it has presented a big environmental problem to dispose of, previously going to incineration or landfill. Now it can be manufactured into laminate panelling, using specialist equipment installed at Environcom's Grantham facility.

The company said: "Many of the half a million fridges we receive every year from our retail partners and local authorities are in excellent condition for reuse, and can often easily be given a new lease of life by our teams of expert engineers. However, a percentage of them cannot and so we have been looking at how we can exploit them for their raw materials, in order to obtain maximum value and to reduce the amount of waste sent to landfill."

UK to get carton recycling reprocessing facility

As a keen recycler one sometimes wonders if the energy expended in recovering a material for recycling is worth it, for example if a material has to be exported a long way to be recycled. So good news that Tetra pak

type beverage carton reprocessing and recycling is to recommence in the UK for the first time since 2006, following a deal between carton manufacturers and a cardboard packaging paper mill producer in Halifax, Yorkshire.

The facility will be capable of recycling 25,000 tonnes-a-year of cartons sorted from household and commercial waste streams, including cartons collected in Devon.

No UK-based reprocessing facility has existed for cartons since 2006, and used cartons have been exported to countries such as Sweden and Italy for recycling.

Scheme organisers hope bring banks are an 'interim-measure' and that more councils will begin collecting drinks cartons at the kerbside now that a UK market exists to process the material.

Cartons are made up of around 75% cardboard, 21% polyethylene and 4% aluminium, and laminated together in 7 different layers. Only the cardboard fibre element will be reprocessed, but it is hoped that a suitable end use for the aluminium and polyethylene fractions of the cartons can be found. The separation process involves pulping the cartons into slurry which is then diluted to wash away the cardboard fibre from the plastic polymers and aluminium foil.

Take-away packaging - rainforest to rubbish

Greenpeace have challenged take-away food giant KFC to stop using paper pulp from endangered Indonesian tropical rainforests in its take away fast food packaging.

KFC claim that all of its paper packaging is either recycled or from certified sustainable sources. However, Greenpeace found from independent lab tests of KFC packaging and other fast food outlets over 2 years that KFC packaging from the UK, China and Indonesia all contained, in some cases up to 50% mixed tropical hardwood – a clear indicator of rainforest timber. Greenpeace said that in investigating the supply chain, the source of the paperboard was APP Asia Pulp and Paper, one of the worlds most notorious forest destroyers. Bio-diverse habitats and forest peatlands, home to the Sumatran tiger and other endangered species are being destroyed to make disposable single use packaging for fast food.

Greenpeace have already persuaded global brands Mattel, Nestle, Xerox, Unilever, Danone and many others to ditch APP and implement zero deforestation policies for their supply chains.

www.greenpeace.org.uk

Devon's Waste Education Strategy

2011 – 2014

How much waste do Devon schools produce and how much do schools spend on waste?

Devon Local Authorities have been progressive in taking the waste and sustainability agenda into schools and now aim to go much further. As part of the current waste strategy review here is the approach to schools, taken from the website: http://www.devon.gov.uk/waste_education_strategy_2011-14.pdf

Aim of the strategy:

To promote and encourage the 3Rs of waste in Devon's Schools

Objectives

- 1 To enable 100% of Devon schools to recycle or compost four material streams by 2014.
- 2 To help Devon schools reduce their waste to landfill by 10% per pupil head by 2014.
- 3 To increase pupil's awareness of the need to reduce, reuse and recycle waste by 2014.
- 4 To broaden the scope of the strategy to make specific links to the broader sustainable agenda.
- 5 To update the strategy by 2014 and identify external funding to support 10% of policy delivery.
- 6 Maintain accurate and reliable data and disseminate good practice to Devon educators.



Typical schools waste composition (WRAP 2008)

Material type	Primary schools	Secondary schools
Organic (Food/ Garden Waste)	51%	32%
Paper & card	30%	39%
Plastic	9%	17%
Other	6%	6%
Metal	2%	4%
Glass	1%	1%
Textiles	1%	1%
TOTAL	100%	100%

It is not known how much schools spend on waste, nor what is the current recycling rate for schools. The national average for school waste arisings is 72g per pupil per day for primary and 42g per pupil per day for secondary schools (Wrap's Food Waste in Schools report, Jan 2011). With around 95,000 state school pupils in Devon, that's around 1,100 tonnes of food waste per year.

Devon leads the way in schools composting



One hundred and fifty four schools on our database have food waste composting systems. A massive drive over the last three years, assisted by Resource Futures and funded through the sale of Exeter Airport, has enabled eight learning communities, that's the secondary school or community college with all its 'feeder' primary schools, to set up composting systems. Sadly neither Plymouth nor Torbay were able to take advantage

of the airport money but alongside the airport money, funding for schools, outside of the eight learning communities, has also been available through the 'Cutting your Wasteline' grant and this does include Torbay and Plymouth and so schools here have also been involved. In fact we are currently working with schools in Plymouth and Torbay and hope to have exemplar schools in both authorities set up next term. The experience gained through this project has enabled us to modify and enhance our composting systems and advice to schools; and has thrown up a range of sometimes challenging issues. For instance; how do you persuade a school that composting food waste is a good idea in the first place? Teachers are very busy people and cannot take on any extra activities in their already overstretched day. Composting is often rather negatively seen as a, smelly, fly blown, rat attracting, process. Furthermore, although some grant money is available, the schools often have to find some more to purchase the equipment they need.

The best schools have a wonderful enlightened attitude where they can see the benefits of: reducing the amount of waste in their landfill bins, thus saving them money, producing their own compost, saving buying in so much, developing their school gardens and having children working outside and starting to grow their own

food. Making compost is the start of a joined up cycle of activity in the school involving food, growing, waste, and it is a wonderfully inclusive activity that gets children outside and learning in new ways. These are some of the positive benefits that follow from starting composting, rather than having smelly landfill bins, instead there are really good composting systems producing lovely compost to be used in the school gardens.

A new booklet has been produced for schools, which explains in great detail, how to set up and run a food waste composting system in your school. Much of the advice is also suitable for small businesses that have space to make and use the compost they generate on site.

See www.dccn.org.uk and look for the downloads on the right hand side of the home page to get this copy of the Compost Special.

Eco schools – save money!

More than 222 Devon schools have joined the national eco-schools programme. The website is often updated so do look at what new opportunities and seriously good ideas there are for reducing costs, waste, energy use etc. There is LED lighting, the 'green button' software to

reduce IT energy use, biomass boilers and the RHI (renewable heat incentive subsidy), energy supplier brokering to reduce bills, a green cleaning products scheme, and sources of funding. Hertfordshire have rolled out the green cleaning scheme to 253 schools among many others.

See: www.eco-schools.org.uk
Eco-Schools Energy LED lighting offers schools the chance to switch their current lighting to low-energy LED lighting and reduce their energy use, carbon emissions and electricity costs.

Schools can expect to;

- Save between 50% and 80% of their existing lighting costs using LED lighting to offset against predicted dwindling government pupil budgets
- Reduce their carbon emissions from day one
- Invest in the latest flicker-free LED lighting system that improves the learning environment
- Take part in an Eco-Schools Energy carbon credit trading scheme and earn the school some money
- Longer lasting lights that reduce maintenance costs and are ideal for difficult to access places
- An opportunity to link green technologies with learning opportunities as part of a school's Eco-Schools Award

WRAP urges rigid plastics collections



The use of plastic in Western Europe is growing about 4% each year, with over one million tonnes of plastic being used each year in the UK. In Devon, residual waste analysis has shown that plastics make up to 24% of residual waste.

Including non-bottle rigid plastic packaging in recycling collections is a potential 'environmental and economic quick win' and can provide an opportunity for local authorities to boost recycling rates. WRAP (Waste & Resources Action programme) points to studies that have shown that householders are keen to recycle rigid plastic packaging, and where collections are provided, yields of all recyclables increase.

According to WRAP, around 90% of rigid plastic packaging (more than one million tonnes per year) including pots, trays and tubs are not currently being recycled, despite evidence that

these materials are growing in value at around £40 per tonne, and disposal costs are around £100 per tonne.

However, it is worth noting that food waste is worse for the environment than well thought out packaging, and with retailers under pressure to reduce the amount of wasted food, plastic packaging seems to be increasing on many foods from supermarkets. This is also because of 'lightweighting', for example where plastic containers replace glass. Plastic now makes up around 11% of the total household waste stream, and has a high carbon impact (see article on carbon impacts of waste).

Linda Crichton, of WRAP, said: "We know householders want to recycle more of their plastic packaging and that increasing numbers of local authorities want to collect it, the challenge is to collect and recycle it effectively without reducing the quality and value of the plastic bottle stream."

The UK must develop infrastructure to process mixed plastics and film if it is to meet the government's ambitious plastic packaging targets, according to plastics recycling organisation Recoup. In December the government confirmed that plastics packaging recycling targets would be set to rise from 24% at present to 42% in 2017.

Stuart Foster, chief executive at Recoup, said: "If we can get all local authorities to add pots, tubs and trays

then we will hit (the target) but I don't think that's sustainable when quality is such a big issue. We need time for infrastructure to be installed before we can ramp up the collections. That is why I am calling formore action. We are now aiming for 42% and that gives us a huge gap. Household collections will fill part of that gap. Plastic film increase needs to be similar and the demand is there for the bottles."

Sorting facilities for mixed plastics exist at Exeter and Plymouth MRF's (material recycling facilities) and state of the art commercial facilities at TQ Recycling in South Hams, and other bulking points around the county at PWS at North Tawton and at some Local Authority depots.

Mixed messages for mixed plastics

Plastics to diesel – how much diesel can you get from a tonne of waste plastic, or would it be better to recycle it?

As the price of fuel rises, peak oil observers will have noticed the increasing range of fossil fuel derivatives being developed. SITA UK (who run Devon's Recycling Centres) plan to build a total of 10 plastic-to-diesel reprocessing plants around the UK, aiming to process a total of 60,000 tonnes of waste plastics per year. SITA's Bristol Resource Recovery

Park will include the plastic-to-diesel facility which will use a combination of shredding and pyrolysis technology to process around 6,000 tonnes per year of waste plastics from household waste and commercial and industrial sources. Each tonne of plastic processed will be able to produce around 700 litres of diesel. There will also be a gasification facility capable of treating 100,000 tonnes a year of residual waste and an 80,000 tonne capacity materials recycling facility (MRF). There is no information on the type or quality of plastic to be used as feedstock, or the energy intensity of this process, so one would hope that it is plastic not suitable for recycling.

It comes at a time of much debate about how mixed plastic recycling can be increased in the UK, as it seems to be a bit of a chicken and egg situation – currently most plastic collected for recycling is exported. There is a lack of mixed plastic collection, sorting and reprocessing infrastructure and investment, coupled with undeveloped local markets and end uses for reprocessed plastic recycle. This in turn keeps a low market price for mixed plastic collected for recycling. 10% of councils are collecting mixed plastics, compared to 90% who collect plastic bottles and around two thirds of the mixed plastic material collected in the UK is exported for processing abroad.

Palletopia



Bill Callaghan is a man with an inspiring vision and a mission, bringing a new and innovative approach to teaching and learning with young people. Bill trains young people to up-cycle used pallets into beautiful bespoke items such as furniture, and says the response from students is fantastic. He is now working in partnership with Torbay Council, in schools and other organisations to promote the 3R's –

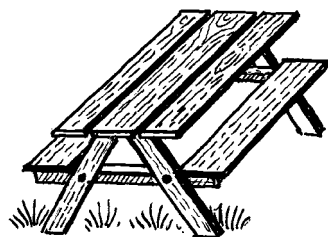


reduce, reuse, recycle! He has set up Palletopia as an enterprise aiming to provide quality products with integrity. "Originally stemming from sourcing

wood to make an 'eco' chicken run for our back garden, **Palletopia** furniture rapidly took over our garden and house. Always being the 'handyman' of the family I quickly discovered I had a thirst not only to build furniture for myself but for others. The simplicity, rusticity and sustainability we achieve from pallets which would otherwise go to waste, is a win-win for all who understand the need to care for our environment and the future of our planet. Our products are all unique, individual, bespoke and above all, eco-friendly. Examples of our work include bird tables and houses, garden planters, tables, chairs, benches, and trailers".

And of course pallets make excellent compost bins!

www.palletopia.com



Grow Chulmleigh

Chulmleigh Community College will create its own 4 acre smallholding with crops and livestock in its grounds. College students and pupils from 4 local primary schools will get first hand experience of tending

sheep, chickens, cows, and growing vegetables and crops. The site will have a polytunnel and timber barn, and use of farm machinery for pupils to learn about agricultural engineering. Composting should be an integral part of the growing system.

Chulmleigh Head, Mr Johnson said, "this is one of the best curriculum innovations that we have made. We have engaged students who have a real interest in farming in a way we have not been able to do before." Students will be able to take a vocational qualification and environmental land based studies in partnership with Bicton College.

Many other schools have made great strides with creating school gardens and vegetable growing areas incorporating composting, and advice can be sourced from Hogco, via CCD Community Council of Devon, see www.hogco-devonrcc.org.uk

Cornucopia of ideas as former estate becomes community centre

Lupton House at Churston Ferrers, near Brixham, is experiencing an exciting transformation at the hands of a team of dedicated volunteers, as they try to turn the rambling Georgian house and grounds into a vibrant multi activity community centre with

sustainability and well being at its heart. New volunteers are always welcomed to get involved in various projects.

Lupton House was last used in 2004 as a school, when it closed the house was boarded up and the grounds overgrown until The Lupton Trust took it over as a Charity in 2009, and the restoration work began. Now it is being re-created as a thriving centre for the wellbeing of the community, a place that can be used by community groups, charities and social enterprises, artisans and craftspeople. It is the base for Bill Callaghans inspiring 'Palletopia' pallet reuse project that works with schools and young people to make items from waste pallets (see article). Bill worked there as a former teacher.

Ideas include a compost centre of excellence, a workshop and events venue, products from the 4 acre orchard, restoration of the Italian garden, its already a wedding venue. The restoration of Lupton House and its grounds "will create a community of hope and opportunity for all who are in need of better health and social support." and aims to be financially self-sustainable through a combination of renting space, support, training, social enterprise, volunteering and events.

<http://www.discoverlupton.com/>



ISSUES RELATING DIRECTLY TO THIS PUBLICATION

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