



BOLLINGTON CARBON REVOLUTION

Appendix 4: Reducing Waste

Introduction

How is carbon produced from waste?

Waste management generates carbon dioxide and methane which are both greenhouse gases by:

- Generation of unnecessary packaging
- Transportation of unwanted food
- Transportation of waste material to landfill
- Transportation and reprocessing of waste to be recycled
- Decomposition of waste

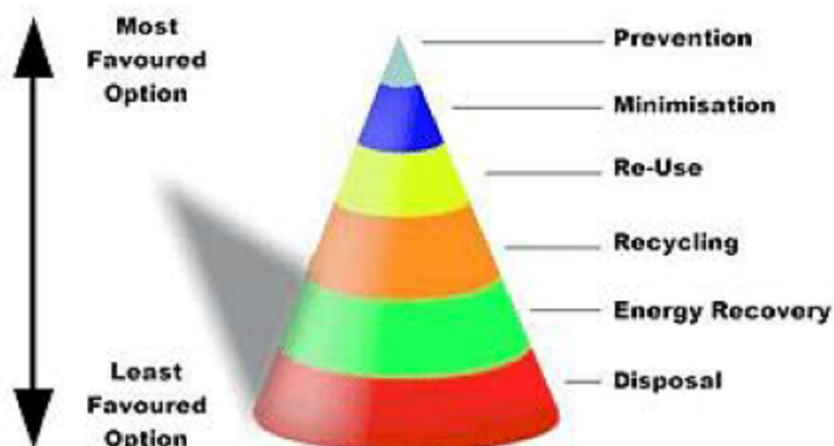
Currently over 70% of waste in the UK is disposed of in landfill, presenting a significant problem with the management and control of the methane emissions. One tonne of biodegradable waste produces between 200 and 400 cubic metres of landfill gas. Landfill gas methane emissions contributed around 25% of total UK methane emissions in 2001, and about 2% of UK total greenhouse gas emissions, reference:

www.environment-agency.gov.uk/yourenv/eff/resources_waste/213982/207743/?lang=e

How should we best manage our waste?

The answer to this question is best illustrated through the waste hierarchy below. The best way to reduce carbon emissions from waste is by preventing the waste being generated in the first place. Following this re-use of products and materials is almost as effective, preventing the return of the carbon within the materials to the environment for as long as possible. Re-use also reduces demand for new raw materials and therefore reduces climatic impacts from this and associated materials transportation. Recycling reduces the need for raw materials, and keeps valuable resources from being disposed of and further contributing to greenhouse gas emissions. However, recycling requires an energy input to reform the materials into different products, and this energy usually comes from burning of fossil fuels and the release of carbon dioxide to the atmosphere. Further down the hierarchy, incineration, or energy recovery, converts energy stored within the materials to useful energy, reducing fossil fuel requirements and so saving on carbon dioxide emissions and other harmful pollutants. The least favourable environmental option in terms of potential climate change emissions is landfill.

Figure 1: Waste hierarchy



Bollington Carbon Revolution will use this waste hierarchy to attempt to reduce the impact of waste in the community.

By sending materials to landfill we are limiting the potential for reuse, recycling or recovery of valuable resources, increasing the demand for new resources and generating more greenhouse gas emissions. This is not sustainable waste management.

Better management of our waste can significantly reduce emissions of greenhouse gases to the atmosphere. By encompassing the principles in the waste hierarchy we can turn waste materials into resources to be valued, reducing the need for increasing extraction of raw materials and fossil fuels.

Emphasising this important link between waste management, greenhouse gas emissions and climate to the general public is central to raising environmental awareness.

How much waste do we produce in Cheshire?

In 2004/05 448,739 tonnes of household waste were produced in Cheshire, which equates to approximately 1.5 tonnes for each household. In recent years waste volumes have increased by 5% per year - this will double the amount of waste produced within 15 years if maintained.

74% of Cheshire's waste is sent to landfill and the other 26% is composted or recycled. Cheshire has a government target to increase recycling to 30% from 24% by 2005/06.

How much waste do we produce in Macclesfield?

Macclesfield Borough Council's Waste Management Service collects domestic refuse from over 69,000 properties in the Borough. In 2006 overall the Council recycled and composted 26.30% of its waste in 2005/06 - up from 15.3% the previous year. This exceeded the legally binding target set for the Council by the Government of 24%. Of the 380 kilograms of rubbish the Borough Council collects from each resident - 323 kg is sent to landfill.

Cheshire Council Waste Strategy

In October of 2002 the Cheshire districts and County Council launched their strategy for the management of household waste covering the next 25 years.

Briefly the Strategy has four main policy areas:

- Encourage the reduction of waste through, for example, awareness raising and the promotion of home and community composting.
- Maximise levels of recycling and composting - providing kerbside collections of recyclable materials, improving the household waste and recycling centres and expanding composting facilities.
- Review the need for energy from waste - landfill space is diminishing, especially in northwest England, so we need to investigate alternative disposal methods. The need for energy from waste, using technologies such as incineration, pyrolysis or gasification, will depend on how much waste we recover for recycling and composting.
- Working with neighbouring authorities - the districts of Cheshire with the County Council are investigating the benefits of working more closely together to achieve the aims of the Strategy.

Method of research and list of sources

Research was carried out using the internet, including the following websites:

www.cheshire.gov.uk/waste/strategy.htm

www.macclesfield.gov.uk/standardpage.asp?pageid=11025

www.macclesfield.gov.uk/standardpage.asp?pageid=10209

www.defra.gov.uk/environment/waste/wip/newtech/pdf/ClimateChange3.pdf

www.macclesfield.gov.uk/standardpage.asp?pageid=11365

www.macclesfield.gov.uk/standardpage.asp?pageid=11059

www.edie.net/news/news_story.asp?id=12270

www.recyclenow.com/what_more_can_i_do/reducing_your_rubbish/its_in_the_bag.htm

www.cheshire.gov.uk/waste/Household_Waste_Permit_Scheme.htm

Cross-over with other headings

Food; funding; communication.

List of ideas

The following ideas are worth considering:

- Use one of Cheshire's reusable 'bags for life' when shopping and for carrying goods. These are available from all Cheshire County Council libraries at a cost of £2. Bags for life can also be purchased at all major super markets, and from
- Re-use plastic bags or boxes by taking them to the supermarket when you go shopping, TESCO offer Green Club-Card points for every bag reused at the checkout.
- Stop junk mail by either:
 - Registering with the Mailing Preference Service. This will remove your details from 95% of the UK's direct mailing lists

- Opt out of receiving huge volumes of unaddressed direct mailings by emailing optout@royalmail.co.uk or writing to Door-to-Door Opt Outs, Royal Mail Door to Door, Kingsmead House, Oxpens Road, Oxford. OX1 1RX

WARNING! Opting out of unaddressed deliveries will result in you not getting items that you might like such as Council and Constabulary newsletters.

- Compost at home. A discounted compost bin is available through the County Council, on 0845 077 0757. Quote ref: CHE03RDD1:
 - £4 - 220 litre Convertabin H90cm x W74cm
 - £6 - 330 litre Ecomax bin H103cm x W80cm

Further information at www.cheshire.gov.uk/waste/composting_home.htm

- Use real nappies instead of disposables
- Buy loose fruit and vegetables
- Buy goods to last and learn how to repair rather than dispose
- Hire equipment rather than buy it
- Dispose of bulky household items either:
 - Through the Council
 - Furniture Mine, where they are refurbished and sold or distributed to low income families. A charge of £17.50 (including VAT) is made for up to 10 items such as TVs, furniture and carpet (one piece of carpet counts as one item). For further information please contact refuse@macclesfield.gov.uk or phone 01625 504777 for more information
 - Furnaround also recycle unwanted furniture to needy families. Collection is free and only on Fridays 8.30am to 12.30pm. Call 0777 594 1809 Mondays 10am to 4pm (messages Tuesday – Thursday) www.churchestogetherinmacclesfield.org/furnaround.htm
- Set up a Freecycle Network in Bollington. The Freecycle Network is made up of many individual groups across the globe. It's a grassroots and entirely non-profit movement of people who are giving, and getting, stuff for free in their own towns. Each local group is moderated by a local volunteer.

When you want to find a new home for something -- whether it's a chair, a fax machine, piano, or an old door -- you simply send an e-mail offering it to members of the local Freecycle group.

Simply respond to a member's offer, and you just might get it. After that, it's up to the giver to decide who receives the gift and to set up a pickup time for passing on the treasure.

The Macclesfield Freecycle® group is open to all who want to "recycle" that special something rather than throw it away. Membership is free. Visit www.groups.yahoo.com/group/macc-freecycle for more information.

- Set up a community composting scheme, like at WyeCycle in Kent. www.wyecycle.net/index.htm

- Tackle packaging. If you are unhappy with excessive packaging on supermarket products, they should unwrap them at the checkout and leave the unwanted rubbish for the shop to deal with.
- Dispose of waste at Bollington's Household Waste Recycling Centre, off Albert Road, Bollington SK10 5HS, 01625 576458:
 - open seven days a week throughout the year except Christmas Day
 - March - April 08:00 - 18:00
 - May - August 08:00 - 20:00
 - September - October 08:00 - 18:00
 - November - February 08:00 - 16:00
- NB it is an offence to deposit trade waste at HWRCs. A permit needs to be handed in each time you use a Cheshire County Council HWRC with any sort of van, pickup, commercial 4x4 or a trailer over 1.2 metres (internal length). If you arrive without a permit in one of these vehicles you will be refused entry to the centre. Permits can be applied for on 0845 002 0134 between 9am and 5pm Monday – Friday or on the web at www.cheshire.gov.uk/waste/Household_Waste_Permit_Scheme.htm Experience shows this service is very quick.
- For an up to date list of facilities which accept trade waste you are advised to contact the Environment Agency on 08708 506 506, or Henshaws Envirocare, 150 Moss Lane, Macclesfield, 01625 425 425, from whom skips are also available
- Businesses can get free advice on how to reduce their waste. See www.envirowise.gov.uk/home.aspx?o=home Helpline 0800 585794 for more information
- RecycleZone is a website for kids / schools / teachers www.recyclezone.org.uk
- Cyler – the rapping robot www.recyclezone.org.uk/cz_signup.aspx is Waste Watch's free educational show for primary schools interested in environmental education. Supported by Biffaward, Cyler raps, dances and sings out the 3Rs message of reduce, reuse and recycle. The interactive assembly has been seen by over 1 million children across the UK
- Communication methods include notice boards for swaps and the Co-op notice board
- Hold regular car boot fairs
- Provide central resource for information eg. collection dates for Bollington, including recycling, via the [Happy Valley website](#)
- Provide information on locations of local civic amenity sites, bottle banks, scrap merchants etc.
- Potential link with the Drop-In Centre
- Advertise local repair services
- Run seminars / fun days or an event looking at waste and the Bollington initiative

Funding required

Funding will be required for:

- Mailshot or door to door communications
- Awareness raising days

Possible funding sources

Funding may be available through government funding streams. The Waste Strategy Manager for Cheshire County Council may be a good contact, Helen De Lemos, 0151 357 4500.

Recommendations for action

- Meet with Helen De Lemos at Cheshire County Council, 0151 357 4500
- Set up website page holding information on how to recycle and reuse in Bollington
- Explore setting up a FreeCycle network
- Consider having a Bollington Recycling Champion
- Promote Robot and RecycleZone communications to the schools
- Consider setting up a community composting scheme

Possible methods of collecting data

We need to collect data to demonstrate impact and improvement. This could be collected through a house-to-house survey, or through the schools.